



## DEPARTMENT OF WATER AND SANITATION

**DUE AT 11:00 ON**

**CLOSING DATE: 02 JUNE 2023**

**DWS05-0523 WTE**

**DEMOLISH AND REMOVE CONCRETE FOR THE RAISING  
OF CLANWILLIAM DAM PROJECT IN THE WESTERN CAPE  
FOR CONSTRUCTION SOUTH - CIDB CONTRACTOR  
GRADING DESIGNATION OF CIDB 8SE OR HIGHER**

**SUBMIT BID DOCUMENTS TO:**

**POSTAL ADDRESS:**  
DIRECTOR-GENERAL:  
WATER AND SANITATION  
PRIVATE BAG X313  
PRETORIA, 0001

**OR**

**TO BE DEPOSITED IN:**  
THE BID BOX AT THE ENTRANCE  
OF ZWAMADAKA BUILDING  
157 FRANCIS BAARD STREET  
PRETORIA, 0001

Compulsory Briefing Session

Date: 16 May 2023

Time: 10H00

Venue: Contractors Site Office Boardroom - Clanwilliam Dam, Construction South  
Main Security Gate Entrance GPS Coordinates: 32°11'21.25"S and 18° 52' 26.11"E

*BIDDER: (Company Address OR Stamp)*

**COMPILED BY: DEPARTMENT OF WATER AND SANITATION: CONSTRUCTION SOUTH**



## DEPARTMENT OF WATER AND SANITATION

DWS05-0523 WTE

### DEMOLISH AND REMOVE CONCRETE FOR THE RAISING OF CLANWILLIAM DAM PROJECT IN THE WESTERN CAPE FOR CONSTRUCTION SOUTH - CIDB CONTRACTOR GRADING DESIGNATION OF CIDB 8SE OR HIGHER

**Issued by:**

Department of Water and Sanitation  
Zwamadaka building  
157 Francis Baard Street  
Pretoria  
0001

**Prepared by:**

Clanwilliam dam Construction  
Raising of Clanwilliam dam Project  
Construction South  
Department of Water and Sanitation



## DEPARTMENT OF WATER AND SANITATION

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# DEPARTMENT OF WATER AND SANITATION



DWS05-0523 WTE

## DEMOLISH AND REMOVE CONCRETE FOR THE RAISING OF CLANWILLIAM DAM PROJECT IN THE WESTERN CAPE FOR CONSTRUCTION SOUTH - CIDB CONTRACTOR GRADING DESIGNATION OF CIDB 8SE OR HIGHER

### T1.1 INVITATION TO TENDER

It is estimated that Tenderers should have a CIDB Contractor grading designation of CIDB 8SE or higher class of construction works.

Documents may be downloaded from Department of Water and Sanitation website at [www.dws.gov.za](http://www.dws.gov.za) and from National Treasury website at [www.etenders.gov.za](http://www.etenders.gov.za).

Queries relating to the issue of these documents may be addressed in writing to [bidenquirieswte@gov.za](mailto:bidenquirieswte@gov.za) and [RohrsM@dws.gov.za](mailto:RohrsM@dws.gov.za)

A compulsory site clarification meeting with representatives of the Employer will take place at Clanwilliam Dam Site at the Contractor Offices Boardroom (Main Security Gate Entrance GPS Coordinates: 32°11'21.25"S and 18° 52' 26.11"E – see Submission Data for further particulars) on **16 May 2023** starting at 10H00 hrs.

The closing time for receipt of tenders is 11:00 hrs on 02 June 2023. Telegraphic, telephonic, telex, facsimile, e-mail and late tenders will not be accepted.

Tenders may only be submitted on the tender documentation that is issued.

Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the Tender Data.

# DEPARTMENT OF WATER AND SANITATION



DWS05-0523 WTE

## DEMOLISH AND REMOVE CONCRETE FOR THE RAISING OF CLANWILLIAM DAM PROJECT IN THE WESTERN CAPE FOR CONSTRUCTION SOUTH - CIDB CONTRACTOR GRADING DESIGNATION OF CIDB 8SE OR HIGHER

### T1.2 TENDER DATA

#### IMPORTANT INFORMATION:

PLEASE READ CAREFULLY THROUGH THE ENTIRE TENDER DOCUMENT BEFORE COMPLETING THE DOCUMENT.

#### TENDER AND CONTRACT STANDARDS CONDITIONS APPLICABLE TO THIS DOCUMENT

SANS ISO 10845-1: 2022 Ed 2	Processes, methods, and procedures.
SANS ISO 10845-2: 2022 Ed 2	Formatting and compilation of procurement documentation.
SANS ISO 10845-3: 2022 Ed 2	Standard conditions of tender.
GCC 2015 Ed 3	The General Conditions of Contract for Construction Works, 3rd Edition (2015), published by the South African Institution of Civil Engineering.

#### INSTRUCTIONS TO BIDDERS

All recipients of these bid documents, whether they submit a Bid or not, shall treat the details of the documents as PRIVATE AND CONFIDENTIAL.



## T1.2.1 TENDER SPECIFIC DATA

The conditions of tender are those contained in the latest edition of SANS ISO 10845-3: 2022 Ed2, Construction Procurement – Part 3: Standard conditions of tender.

SANS ISO 10845-3:2022 Ed2 makes several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the provisions of SANS ISO 10845-3: 2022 Ed2.

Each item of data given below is cross-referenced to the clause in SANS ISO 10845-3: 2022 Ed2 to which it mainly applies.

Clause number	TENDER DATA
<b>3</b>	<b>TERMS AND DEFINITIONS</b>
3.1	Wherever reference is made in the documentation to Bill of Quantities it shall also mean Pricing Schedule or Schedule of Quantities.
3.19	Whenever reference is made in the documentation to Bidder or Tenderer it shall mean is the person or organization that submits a tender offer. (The successful Bidder will be appointed as Contractor as per GCC 2015- Clause 1.1.1.9)
<b>4</b>	<b>GENERAL REQUIREMENTS</b>
4.1	The Employer is the <b>Department of Water and Sanitation: Construction South</b>
4.2	The tender documents issued by the employer comprise the documents listed on the contents page
4.4	The employer's agent email address is: <a href="mailto:RohrsM@dws.gov.za">RohrsM@dws.gov.za</a>
4.4	The language for communications is English.
<b>5</b>	<b>TENDERER'S OBLIGATIONS</b>
5.1	<p>Only those Tenderers who satisfy the following eligibility criteria and who provide the required evidence in their tender submissions are eligible to submit tenders and have their tenders evaluated:</p> <p><b>An Entity is not eligible to submit a bid if:</b></p> <ul style="list-style-type: none"> <li>(a) the Bidder does not comply with the legal requirements of the Department's Procurement;</li> <li>(b) the Entity submitting the bid is under restrictions or has principals who are under restriction to participate in the Department's procurement due to corrupt or fraudulent practices;</li> <li>(c) the Bidder does not have the legal capacity to enter into the contract;</li> <li>(d) the Entity submitting the bid is insolvent, in receivership, bankrupt or being wound up, has his affairs administered by a court or a judicial officer, has suspended his business activities, or is subject to legal proceedings in respect of the foregoing;</li> <li>(e) the Bidder cannot demonstrate that he possesses the necessary professional and technical qualifications and competent, financial resources, equipment and other physical facilities, managerial capability, personnel, experience and reputation to perform the contract;</li> <li>(f) the Bidder cannot provide proof that he is in good standing with respect to duties, taxes, levies and contributions required in terms of legislation applicable to the work in the contract;</li> <li>(g) the Bidder has failed to perform on any previous contract and has been given a written notice to this effect;</li> <li>(h) the Bidder or a competent authorized representative of the Entity who submitted the tender has not attended the compulsory clarification meeting or site briefing session if applicable;</li> <li>(i) the bid offer is not signed by a person authorized to sign on behalf of the Bidder;</li> </ul>

Clause number	TENDER DATA
5.1	(j) more than one bid has been submitted by a Bidder. Each Bidder shall submit only one bid for the same project, either individually as a Bidder or as a partner in a joint venture. No Entity can be a Sub-contractor while submitting a bid individually or as a partner of a joint venture in the same bidding process. An Entity, if acting in the capacity of Sub-contractor in any bid, may participate in more than one bid, but only in that capacity. A Bidder who submits or participates in more than one bid will cause all the proposals in which the Bidder has participated to be disqualified.
5.1	<p>Only those Tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a Contractor grading designation equal to or higher than a Contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, for a CIDB 8SE or higher class of construction work, are eligible to have their tenders evaluated.</p> <p>All projects of R60m and above must apply the Standard for Indirect Targeting for Enterprise Development.</p> <p>Joint ventures are eligible to submit tenders provided that:</p> <ol style="list-style-type: none"> <li>1. every member of the joint venture is registered with the CIDB;</li> <li>2. the lead partner has a Contractor grading designation in the CIDB 7SE or higher class of construction work; and the combined Contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a Contractor grading designation determined in accordance with the sum tendered for a CIDB 8SE or higher class of construction work or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations.</li> </ol>
5.7	<p>The arrangements for a compulsory site clarification meeting are as stated in the Tender Notice and Invitation to Tender. (Site clarification meeting is also referred to as site briefing session.)</p> <p>The dam site is situated on the Olifants River, immediately next to the N7 and accessed through a controlled gate approximately 2 km South- West of Clanwilliam Town in the Western Cape province. The gravel site access roads is regularly maintained but can get challenging under abnormal rainfall conditions.</p> <p>Personal Protective Equipment (PPE) such as safety boots will be required before entering the site to examine some aspects of the works</p> <p>A full-time employee of the respondent who is involved in the preparation of submissions shall sign the attendance list in the name of the respondent. Addenda will be issued to, and respondents will be evaluated from only from those respondents appearing on the attendance list.</p>
5.10	Tenderers are required to state the rates and currencies in South African Rand (ZAR).
5.11	<p>No alterations, omissions or additions shall be made to this document, but should it be deemed necessary to do so, the Bidder is at liberty to qualify his bid.</p> <p>Bidders shall be deemed to have waived, renounced and abandoned any conditions printed or written upon any stationery used by them for the purpose of or in connection with the submission of bids which are in conflict with the conditions laid down in this document.</p> <p>Bidders shall not make any alterations or additions to the bid documents, except to comply with instructions issued by the Department, or necessary to correct errors made by the Bidder. All signatories to the bid offer shall initial all such alterations. Erasures and the use of masking fluid are prohibited.</p>
5.12	No alternative offer will be accepted.
5.13.1	<p>Parts of each tender offer communicated on paper shall be submitted as an original, plus one (1) copies.</p> <p>The tenderer is requested to also provide a <b>PDF (soft) copy</b> of the complete tender submission in electronic format <b>on a flash disk</b> and to include this in their tender submission.</p>

Clause number	TENDER DATA
5.13.2	<p>An Entity is not eligible to submit a bid if the bid offer is not signed by a person authorized to sign on behalf of the Bidder. Each page of the completed document that will be submitted should be initialled by the Bidder at the bottom of the page.</p> <p>State clearly in Form D under T2.2 returnable documents and schedules, the authorised signatories that are liable on the behalf of the Tenderer, with proof from the employer and or company.</p>
5.13.2	<p>If the bid is submitted by joint venture of more than one person and/or Companies and/or firms it shall be accompanied by the following:</p> <p>(a) The original or a notarial certified copy of the original document under which such joint venture was constituted which must define precisely inter alia the conditions under which the joint venture will function, its period of duration and the participation of the several constituent persons and/or companies and/or firms.</p> <p>(b) A certificate signed by or on behalf of each participating person and/or company and/or firm authorising the person who signed the bid to do so.</p>
5.13.5 5.15	<p>The ORIGINAL printed, completed tender document together with a cover letter and all supporting documents needs to be placed and sealed in an envelope. The enveloped needs to be clearly marked as below indicated.</p> <p>The employer's details and address for delivery of tender offers and identification details that are to be shown on the envelope:</p> <p><b>1) <u>Tender Identical details:</u></b></p> <p>Tender reference number: <b>DWS05 0523 WTE</b></p> <p>Title of Tender: <b>DEMOLISH AND REMOVE CONCRETE FOR THE RAISING OF CLANWILLIAM DAM PROJECT IN THE WESTERN CAPE FOR CONSTRUCTION SOUTH - CIDB CONTRACTOR GRADING DESIGNATION OF CIDB 8SE OR HIGHER</b></p> <p><b>2) <u>The employer's details and address for delivery of tender offers and closing time are:</u></b></p> <p><b>Location of tender box:</b> THE BID BOX AT THE ENTRANCE</p> <p><b>Physical address:</b> ZWAMADAKA BUILDING 157 FRANCIS BAARD STREET, PRETORIA, 0001</p> <p><b>Closing date &amp; time:</b> 02 June 2023 at 11:00 hrs.</p> <p><b>3) <u>Name of the Bidder (shall be clearly shown)</u></b></p>
5.13.5	<p>The "ORIGINAL" and "COPY" are to be submitted as separate packages. The PDF soft copy on USB Flash drive to be submitted together with the "ORIGINAL" packages.</p>
5.13.6	<p>Telephonic, telegraphic, telex, facsimile or e-mailed tender offers shall <b>NOT</b> be accepted.</p>
5.15	<p>The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender.</p>
5.16	<p>The tender offer validity period is 120 days.</p>
5.18	<p>Provide, on request by the employer, any other material that has bearing on the tender offer within 5 working days of request.</p>
5.19	<p>The employer reserve the right to arrange access for the following inspections, tests, and analysis at Bidder's facilities.</p>
5.20	<p>The Tenderer is required to submit with his tender a letter of intent from an approved insurer undertaking to provide the Performance Guarantee to the format included in Part C1.3 of this procurement document. (See also GCC 2015: Clause 6.2 – Security.)</p>
<b>6</b>	<b>EMPLOYER'S UNDERTAKINGS</b>
6.1	<p>The Employer will respond to requests for clarification received up to seven (7) working days before the tender closing time.</p>

Clause number	<b>TENDER DATA</b>
6.2	The employer shall issue addenda until four (4) working days before tender closing time.
6.4	Tenders will be opened immediately after the closing time for tenders at 11:00 hrs
6.11.1	The financial offer will be reduced to a comparative basis using the Tender Assessment Schedule.
6.8	<p><b><u>TEST FOR RESPONSIVENESS:</u></b></p> <p>Bids will be evaluated in accordance with the new Preferential Procurement Regulations, 2022, using 90/10 preference points system as prescribed in the Preferential Procurement Policy Framework Act (PPPFA, Act 5 of 2000. The lowest acceptable bid will score 90 points for price and a maximum of 10 points will be awarded for the specific goals. Maximum of 100 points will be scored for functionality (quality).</p> <p>Bids received will be evaluated on the five (5) phases namely:</p> <ul style="list-style-type: none"> <li>(1) Mandatory Requirements,</li> <li>(2) Administrative Compliance,</li> <li>(3) Functionality (5.11.9),</li> <li>(4) Price &amp; Preference (5.11.7 &amp; 5.11.8), and</li> <li>(5) Evaluation Method 4 (5.11.5).</li> </ul>
6.8	<p><b>1) <u>PHASE 1: MANDATORY REQUIREMENTS:</u></b></p> <p>Failure to submit any of the documents listed below will render your bid non-responsive and the bid will be disqualified.</p> <ul style="list-style-type: none"> <li>• CIDB registration in terms of construction industry development board (CIDB) grade. (As per clause 5.1)</li> <li>• Certificate of attendance at the compulsory site briefing session and or on the attendance register.</li> <li>• Professional Engineer: Having a valid Pr. Eng. Civil Engineer or Mining Engineer registration with ECSA.</li> </ul>

Clause number	<b>TENDER DATA</b>			
6.8	<b>2) <u>PHASE 2: ADMINISTRATIVE COMPLIANCE</u></b> Bidders are required to comply with the following listed below:			
	<b>No</b>	<b>Criteria</b>	<b>Yes</b>	<b>No</b>
	1	Companies must be registered with National Treasury's Central Supplier Database must submit CSD report.		
	2	Tax compliant with SARS. Attach a copy of valid Tax Compliance Status pin page (to be confirmed through SARS).		
	3	Active registration with Company Intellectual Property Commission (to be verified through CSD and CIPC). Attach copy of Bidder's CIPC / CIPRO certificate.		
	4	A valid copy of B-BBEE Status Level Verification Certificate (failure to submit, the Bidder will forfeit the preferential points to be claimed).		
	5	A valid letter of Good Standing with the Compensation Commissioner in terms of the Compensation for Occupational Injuries and Diseases Act No 130 of 1993 and or third parties' insurance registered with Financial Service Board (COID).		
	6	Initial and sign Tender data section (T1 & T2) and all other required documents.		
	7	Letter of appointment of duly authorized person to sign bid. Proof of such authority must be submitted with the bid. If by an individual, must be signed by that individual or by someone on his behalf duly authorised thereto and proof of such authority must be produced. If the bid is by a Company, it must be signed by a person duly authorised thereto by a Resolution of a Board of Directors a copy of which Resolution, duly certified by the Chairman of the Company is to be submitted with the bid.		
	8	Complete, sign, submit SBD1, SBD3.2, SBD4, SBD6.1		
	9	Certificate of completed project for the similar work for the value of R 30 million in the recent 10 years.		
6.8	<b>3) <u>PHASE 3: FUNCTIONALITY COMPLIANCE</u></b> As explained in 6.11.9. The Bidder must score a minimum of 70 points out of 100 to allow them to proceed to the next phase of evaluation.			
6.8	<b>4) <u>PHASE 4: PRICE AND PREFERENCE</u></b> As explained in 6.11.7 & 6.11.8.			

Clause number	TENDER DATA																
6.11.5	<p><b>5) PHASE 5: EVALUATION METHOD</b></p> <p><b>Method 4: Financial offer, quality and preference → This method shall apply for the evaluation of this tender</b></p> <p>The procedure for the evaluation of responsive tenders is Method 4 (Financial offer, quality and preference).</p> <p>The total number of tender evaluation points (<math>T_{EV}</math>) shall be determined in accordance with the following formula:</p> $T_{EV} = f_1 (N_{FO} + N_P) + f_2 N_Q$ <p>Where:</p> <p><math>f_1</math> &amp; <math>f_2</math> are fractions,</p> <p><math>f_1</math> equals 1 minus <math>f_2</math> ; and</p> <p><math>f_2</math> equals 0,5</p> <p><math>N_{FO}</math> → is the number of tender evaluation points awarded for the <u>financial offer</u> made in accordance with SANS ISO 10845-3: 2022 Ed2 clause 6.11.7, (where <math>N_{FO}</math> is maximum 90 points);</p> <p><math>N_P</math> → is the number of tender evaluation points awarded for <u>preference points claimed for specific goals</u> in accordance with SANS ISO 10845-3: 2022 Ed 2 clause 6.11.8, (where <math>N_P</math> is maximum 10 points);</p> <p><math>N_Q</math> → is the number of tender evaluation points awarded for <u>functionality (quality)</u> in accordance with SANS ISO 10845-3:2022 Ed 2 clause 6.11.9, (where <math>N_Q</math> is maximum 100 points).</p> <p><b>Example:</b></p> <p>For example, if a Tenderer scores the following:</p> <p>75 points for pricing (<math>N_{FO}</math>) out of 90;</p> <p>6 points for preferencing (<math>N_P</math>) out of 10; and</p> <p>70 points for functionality (quality) (<math>N_Q</math>) out of 100</p> <p>And the fractions are <math>f_1</math> equals <math>f_2</math> equals 0,5</p> <table border="1" data-bbox="209 1167 1102 1413"> <thead> <tr> <th>Where the weights are:</th> <th>Example values scored</th> </tr> </thead> <tbody> <tr> <td>Total points for financial offer (<math>N_{FO}</math>) → 90</td> <td>75</td> </tr> <tr> <td><math>N_P</math> → 10</td> <td>6</td> </tr> <tr> <td><math>N_Q</math> → 100</td> <td>70</td> </tr> <tr> <th>Calculation:</th> <th>Example of calculation</th> </tr> <tr> <td>Where: <math>f_1 (N_{FO} + N_P)</math></td> <td><math>0.5 * (75 + 6) = 40.5</math></td> </tr> <tr> <td>And where: <math>f_2 N_Q</math></td> <td><math>0.5 * 70 = 35</math></td> </tr> <tr> <td>Total Tender evaluation points (<math>T_{EV}</math>) → 100</td> <td>75.5</td> </tr> </tbody> </table>	Where the weights are:	Example values scored	Total points for financial offer ( $N_{FO}$ ) → 90	75	$N_P$ → 10	6	$N_Q$ → 100	70	Calculation:	Example of calculation	Where: $f_1 (N_{FO} + N_P)$	$0.5 * (75 + 6) = 40.5$	And where: $f_2 N_Q$	$0.5 * 70 = 35$	Total Tender evaluation points ( $T_{EV}$ ) → 100	75.5
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6.11.7	<p><b>Price Score:</b></p> <p>Score for financial offers using the following formula:</p> $N_{FO} = W_1 \times A$ <p>Where:</p> <p><math>N_{FO}</math> → is the number of tender evaluation points awarded for the financial offer;</p> $A = \left( 1 - \left( \frac{P - P_m}{P_m} \right) \right) \quad \text{(As per Preferential Procurement Regulations, 2022)}$ <p><math>P</math> is the comparative offer of the tender offer under consideration;</p> <p><math>P_m</math> is the comparative offer of the most favourable comparative offer; and</p> <p><math>W_1</math> equals 90 where the financial value inclusive of VAT of all responsive tenders received have a value in excess of R50 000 000,00.</p>																

6.11.8

**Preference Score:**

Preferential Procurement Regulations, 2022, will be used to evaluate this proposal as per the applicable threshold value.

Bid proposals will be evaluated based on the 90/10 preference points system in accordance with the PPPFA Act (Act no. 5 of 2000). Where a maximum of 90 points will be awarded in respect of price and a maximum of 10 points will be awarded for specific goals.

**M<sub>p</sub>** shall be calculated to a maximum of 10 points, as claimed in Table 1 below in accordance with Preferential Procurement Regulations, 2022 and described below.

Points claimed will be according to a Tenderer's specific goals as indicated in Table 1 below:

In terms of Regulation 4(2) and 5(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the tenderer's goals claimed as per Table 1 below. The tenderer goal claimed must be supported by proof / documentation as per Table 2 and the special conditions of this tender where applicable.

**Table 1: Specific goals for the tender and points claimed**

The specific goals allocated points in terms of this tender	Number of points allocated (90/10 system)
Women Ownership	2
Disability Ownership	2
Youth Ownership	2
Location of enterprise (local equals province) – Western Cape	1
B-BBEE status level contribution from level 1 to 2 which are QSE or EME	3
<b>TOTAL SCORED POINTS</b>	<b>10</b>

**"Specific goals"** means specific goals as contemplated in section 2(1)(d) of the PPPFA Act which may include contracting with persons, or categories of persons, historically disadvantaged by unfair discrimination on the basis of race, gender and disability including the implementation of programmes of the Reconstruction of Development Programme as published in *Government Gazette* No. 16085 date 23 November 1994.

**"Ownership"** means the percentage ownership and control, exercised by individuals within an enterprise.

**"Disability"** means, in respect of a person, a permanent impairment of a physical, intellectual, or sensory function, which results in restricted, or lack of, ability to perform an activity in the manner, or within the range, considered normal for a human being.

- i. A blind person (in terms of the Blind Persons Act, 1968 (Act no.26 of 1968));
- ii. A deaf person, whose hearing is impaired to such an extent that he/she cannot use it as a primary means of communication;
- iii. A person who, as a result of permanent disability, requires a wheelchair, caliper or crutch to assist him/her to move from one place or another;
- iv. A person who requires an artificial limb; or
- v. A person who suffers from a mental illness (in terms of the Mental Health Act, 1973 (Act no. 18 of 1973)).

**"Youth"** means, in respect of a person younger than 35 years of age.

**"Location of enterprise"** Local equals province. Where a project cuts across more than on province, the bidder may be located in any of the relevant provinces to obtain the points.

**Women, disability, and youth** will be measured by calculating the pro-rata percentage of ownership of the bidding company which meets the criterion. E.g., Company A has five shareholders each of whom own 20% of the company. Three of the five share holders meet the criterion, i.e. they are women/disability/youth. Therefore, this bidder will obtain 60% of the points allowable for this goal.

Clause number	<b>TENDER DATA</b>												
	<p>Documents/ information listed on the below Table 2 must be submitted to support and verify points claimed as per Table 1 above.</p> <p><b>Table 2: Documents required for verification of Tenderer claimed points</b></p> <table border="1" data-bbox="209 389 1433 725"> <thead> <tr> <th data-bbox="209 389 817 434">Specific Goal</th> <th data-bbox="817 389 1433 434">Requires Proof Documents</th> </tr> </thead> <tbody> <tr> <td data-bbox="209 434 817 479">Women Ownership</td> <td data-bbox="817 434 1433 479">Full CSD Report</td> </tr> <tr> <td data-bbox="209 479 817 524">Disability Ownership</td> <td data-bbox="817 479 1433 524">Full CSD Report</td> </tr> <tr> <td data-bbox="209 524 817 568">Youth Ownership</td> <td data-bbox="817 524 1433 568">Full CSD Report</td> </tr> <tr> <td data-bbox="209 568 817 613">Location of enterprise – Western Cape</td> <td data-bbox="817 568 1433 613">Full CSD Report</td> </tr> <tr> <td data-bbox="209 613 817 725">B-BBEE status level contribution from level 1 to 2 which are QSE or EME</td> <td data-bbox="817 613 1433 725"> <ul style="list-style-type: none"> <li>• Valid B-BBEE certificate/sworn affidavit</li> <li>• Consolidated B-BBEE certificate in cases of Joint Ventures</li> <li>• Full CSD Report</li> </ul> </td> </tr> </tbody> </table> <p>Failure on the part of a bidder to submit proof of documentation required in terms of this tender to claim for specific goals with the bid, will be interpreted to mean that preference points for specific goals are not claimed and will not be allocated.</p>	Specific Goal	Requires Proof Documents	Women Ownership	Full CSD Report	Disability Ownership	Full CSD Report	Youth Ownership	Full CSD Report	Location of enterprise – Western Cape	Full CSD Report	B-BBEE status level contribution from level 1 to 2 which are QSE or EME	<ul style="list-style-type: none"> <li>• Valid B-BBEE certificate/sworn affidavit</li> <li>• Consolidated B-BBEE certificate in cases of Joint Ventures</li> <li>• Full CSD Report</li> </ul>
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Clause number	<b>TENDER DATA</b>																						
6.11.9	<p><b>Functionality (Quality) Score:</b></p> <p>The score obtained in 6.11.9 (functionality criteria) will be used for the following formula:</p> $N_Q = W_2 \times \frac{S_0}{M_s}$ <p>Where</p> <p><math>N_Q \rightarrow</math> is the number of tender evaluation points awarded for functionality offered;</p> <p><math>S_0 \rightarrow</math> is the score for functionality criteria (6.11.9) allocated to the submission under consideration; and</p> <p><math>M_s \rightarrow</math> is the maximum possible score for functionality criteria (100).</p> <p>Functionality is the terminology used to define the technical ability of the Tenderer, based on experience, to deliver the required product in accordance with the specialised quality, reliability and functionality.</p> <p>Points allocated for functionality shall be evaluated in accordance with the criteria as listed below table. An overall minimum threshold of 70 (<math>M_s</math>) points out of total 100 (<math>M_s</math>) must be achieved for the tender to be eligible.</p> <p>See T2 returnable annexure (as indicated in table below) for applicable documents with detail on point allocation for the sub-criteria's.</p> <p>The quality criteria and maximum score in respect of each of the criteria are as follows:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;"></th> <th style="width: 40%;">Functionality criteria</th> <th style="width: 35%;">Sub-criteria</th> <th style="width: 20%;">Maximum number of points</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>Company Experience</td> <td>Schedule of similar current and past work undertaken Completion certificates of previous projects completed Contractable client reference letters Proof of the value of work undertaken</td> <td style="text-align: center;">20</td> </tr> <tr> <td style="text-align: center;">2</td> <td>Managerial Capacity</td> <td>Contracts Manager Construction Manager (Site Agent) Foreman Health and Safety officer Environmental Representative</td> <td style="text-align: center;">30</td> </tr> <tr> <td style="text-align: center;">3</td> <td>Preliminary Method statement: Demolishing and removal of concrete</td> <td>Project Program Equipment to be used Methodology Quality management plan Environmental, Health &amp; Safety Plan</td> <td style="text-align: center;">50</td> </tr> <tr> <td colspan="2"><b>Maximum possible score for quality (<math>M_s</math>)</b></td> <td></td> <td style="text-align: center;"><b>100</b></td> </tr> </tbody> </table> <p>Quality shall be scored by not less than three evaluators in accordance with the following schedules:</p> <ul style="list-style-type: none"> <li>• Annexure G &amp; H: Company Experience</li> <li>• Annexure I &amp; J: Managerial Capacity</li> <li>• Annexure L: Schedule of plant and equipment</li> <li>• Annexure M: Preliminary methods statement</li> </ul> <p>The minimum number of evaluation points for functionality (quality) is 70</p>				Functionality criteria	Sub-criteria	Maximum number of points	1	Company Experience	Schedule of similar current and past work undertaken Completion certificates of previous projects completed Contractable client reference letters Proof of the value of work undertaken	20	2	Managerial Capacity	Contracts Manager Construction Manager (Site Agent) Foreman Health and Safety officer Environmental Representative	30	3	Preliminary Method statement: Demolishing and removal of concrete	Project Program Equipment to be used Methodology Quality management plan Environmental, Health & Safety Plan	50	<b>Maximum possible score for quality (<math>M_s</math>)</b>			<b>100</b>
	Functionality criteria	Sub-criteria	Maximum number of points																				
1	Company Experience	Schedule of similar current and past work undertaken Completion certificates of previous projects completed Contractable client reference letters Proof of the value of work undertaken	20																				
2	Managerial Capacity	Contracts Manager Construction Manager (Site Agent) Foreman Health and Safety officer Environmental Representative	30																				
3	Preliminary Method statement: Demolishing and removal of concrete	Project Program Equipment to be used Methodology Quality management plan Environmental, Health & Safety Plan	50																				
<b>Maximum possible score for quality (<math>M_s</math>)</b>			<b>100</b>																				

6.11.9

**SCORING OF FUNCTIONALITY:**

The prompts for judgment and the associated scores used in the evaluation of quality shall be as follows:

Each evaluation criteria will be assessed in terms of five indicators – no response, poor, satisfactory, good and very good. Scores of 0, 40, 70, 90 or 100 will be allocated to no response, poor, satisfactory, good and very good, respectively.

Score	Rating	Qualitative indicator or prompt for judgement		
		Example 1 (Proposed Organization and staffing)	Example 2 (Approach paper)	Example 3 (Knowledge of issues pertinent to the project)
0	No response	Failed to provide information.	Failed to provide information.	Failed to provide information.
40	Poor	The organization chart is sketchy, the staffing plan is weak in important areas. There is no clarity in allocation of tasks and responsibilities.	The technical approach and/or methodology is poor/is unlikely to satisfy project objectives or requirements. The tenderer has misunderstood certain aspects of the scope of work and does not deal with the critical aspects of the project.	Key staff have limited experience of issues pertinent to the project
70	Satisfactory	The organizational chart is complete and detailed, the technical level and composition of the staffing arrangements are adequate.	The approach is generic and not tailored to address the specific project objectives and methodology. The approach does not adequately deal with the critical characteristics of the project. The quality plan, manner in which risk is to be managed, etc. is too generic.	Key staff have reasonable experience of issues pertinent to the project.
90	Good	Besides attaining the “satisfactory” rating, staff are well-balanced, i.e. they show good co-ordination, complimentary skills, clear and defined duties and responsibilities. Some members of the project team have worked together before on limited occasions.	The approach is specifically tailored to address the specific project objectives and methodology and is sufficiently flexible to accommodate changes that might occur during execution. The quality plan and approach to managing risk, etc. is specifically tailored to the critical characteristics of the project.	Key staff have extensive experience of issues pertinent to the project.
100	Very good	Besides attaining the “good” rating, the proposed team is well-integrated and several members have worked together extensively in the past.	Besides attaining the “good” rating, the important issues are approached in an innovative and efficient way, indicating that the tenderer has outstanding knowledge of state-of-the-art approaches. The approach paper details ways to improve the project outcomes and the quality of the outputs.	Key staff have outstanding experience of issues pertinent to the project.

The scores of each of the evaluators will be averaged, weighted and then totalled to obtain the final score for quality.

**EXAMPLE OF EVALUATION:**

Criteria	SCORE (out of 0% - 100%)	WEIGHT (POINTS)	TOTAL (A% score x 5 points)
Sub-Criteria	Score according to SANS ISO 10845-3:2022 ed2 Table A.4	Max allowed points for a (per) sub-criteria.	
<b>Example 1</b>	70 score (=70%): Satisfactory	5	= 5 * 70% = <b>3.5</b>
<b>Example 2</b>	90 score (=90%): Good	20	= 20 * 90% = <b>18</b>

Clause number	TENDER DATA
6.13	<p>Tender offers will only be accepted if:</p> <ul style="list-style-type: none"> <li>a) the Tenderer is registered on the Central Supplier Database (CSD) for the South African government (see <a href="https://secure.csd.gov.za/">https://secure.csd.gov.za/</a>) unless it is a foreign supplier with no local registered entity;</li> <li>b) the Tenderer is in good standing with SARS according to the Central Supplier Database;</li> <li>c) the Tenderer submits a letter of intent from an approved insurer undertaking to provide the Performance guarantee to the format included in Part C1.3 of this procurement document;</li> <li>d) the Tenderer is registered with the Construction Industry Development Board (CIDB) in an appropriate Contractor grading designation;</li> <li>e) the Tenderer or any of its directors/shareholders is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector;</li> <li>f) the Tenderer has not: <ul style="list-style-type: none"> <li>i) abused the Employer's Supply Chain Management System; or</li> <li>ii) failed to perform on any previous contract and has been given a written notice to this effect;</li> </ul> </li> <li>g) the Tenderer has completed the Compulsory Declaration and there are no conflicts of interest which may impact on the Tenderer's ability to perform the contract in the best interests of the employer or potentially compromise the tender process;</li> <li>h) the Tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer;</li> <li>i) the employer is reasonably satisfied that the Tenderer has in terms of the Construction Regulations, 2003, issued in terms of the Occupational Health and Safety Act, 1993, the necessary competencies and resources to carry out the work safely.</li> </ul>
6.17	The number of paper copies of the signed contract to be provided by the employer to the successful Bidder is One (1).



## **DEPARTMENT OF WATER AND SANITATION**

**DWS05-0523 WTE**

# **DEMOLISH AND REMOVE CONCRETE FOR THE RAISING OF CLANWILLIAM DAM PROJECT IN THE WESTERN CAPE FOR CONSTRUCTION SOUTH - CIDB CONTRACTOR GRADING DESIGNATION OF CIDB 8SE OR HIGHER**

## **T2: RETURNABLE DOCUMENTS AND SCHEDULES**

### **CONTENTS**

**T2.1: LIST OF RETURNABLE DOCUMENTS AND SCHEDULES**

**T2.2: RETURNABLE DOCUMENTS AND SCHEDULES**



## T2.1 LIST OF RETURNABLE DOCUMENTS AND SCHEDULES

**THE TENDER DOCUMENT MUST BE SUBMITTED AS A WHOLE** i.e. All volumes (including the fully priced and extended Provisional Bills of Quantities) as is bound together in one single document herein. All forms must be properly completed in black ink as required, and the document shall not be taken apart or altered in any way whatsoever.

Note: Should any of the below-mentioned documents and/or the entire Tender Enquiry Document not be submitted the tender submission may be viewed as NON-RESPONSIVE.

The tendered must complete the following returnable document/schedules:

<b>RETURNABLE SCHEDULES REQUIRED FOR TENDER EVALUATION PURPOSES THAT WILL BE INCORPORATED INTO THE CONTRACT</b>		
<b>Doc. Ref. Nr.</b>	<b>Document/ Schedule</b>	<b>Completed (Tick)</b>
SBD 1	SBD 1: Invitation to Bid	
SBD 3.2	SBD 3.2: Bill of Quantities – Non-Firm Price (Priced and extended Provisional Bill of Quantities - Part C2.2)	
SBD 4	SBD 4: Declaration of Interest	
SBD 6.1	SBD 6.1: Preference Points Claim Form: General Conditions and Definitions	
FORM A	Certificate of Attendance at Compulsory Site Briefing session	
FORM B	Record of Addenda to Tender Documents	
FORM C	Compulsory Declaration	
FORM D	Certificate Authority of Signatory	
FORM F	Annual Financial Statements Declaration	
FORM G	Pro Forma Form of Offer and Acceptance (Part C1.1)	
FORM H	Contract Data (Part C1.2)	
FORM I	Pro Forma Performance Guarantee (Part C1.3)	
FORM J	Contractor's health and safety declaration	
FORM K	Health and Safety Act agreement	
FORM L	Verification Documentation	
ANNEXURE A	Preferencing Schedule for Broad Based Black Economic Empowerment Status, together with original or certified copy of B-BBEE certificate	
ANNEXURE B	A certified copy of Certificate of Contractor Registration issued by the Construction Industry Development Board (CIDB)	
ANNEXURE C	An original or certified copies valid Tax Clearance Certificate or SARS Pin issued by the South African Revenue Services.	



**RETURABLE SCHEDULES REQUIRED FOR TENDER EVALUATION PURPOSES THAT WILL BE INCORPORATED INTO THE CONTRACT**

<b>Doc. Ref. Nr.</b>	<b>Document/ Schedule</b>	<b>Completed (Tick)</b>
ANNEXURE D	Central Supplier Database (CSD) proof of registration containing MAAA number.	
ANNEXURE E	Originally certified copies of Bidder's CIPC company registration documents listing all members with percentages	
ANNEXURE F	Letter of good standing from COIDA (Compensation for Occupational Injuries & Diseases Act)	
ANNEXURE G	Company experience	
ANNEXURE H	Schedule of similar work undertaken	
ANNEXURE I	Managerial Capacity	
ANNEXURE J	Schedule of Qualifications / Experience of key project team members.	
ANNEXURE K	Schedule of Proposed sub-contractor together with a pro-forma sub-contracting agreement signed by both parties	
ANNEXURE L	Schedule of Plant and Equipment	
ANNEXURE M	Preliminary Method Statements: Demolishing and removal of concrete	

**NOTE:** Failure to provide all these listed documents may result in the tender not being evaluated



## T2.2 RETURNABLE DOCUMENTS AND SCHEDULES



**SBD 1  
PART A  
INVITATION TO BID**

<b>YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE (NAME OF DEPARTMENT/ PUBLIC ENTITY)</b>					
BID NUMBER:	DWS05-0523 WTE	CLOSING DATE:	02 JUNE 2023	CLOSING TIME:	11H00
DESCRIPTION	DEMOLISH AND REMOVE CONCRETE FOR THE RAISING OF CLANWILLIAM DAM PROJECT IN THE WESTERN CAPE FOR CONSTRUCTION SOUTH - CIDB CONTRACTOR GRADING DESIGNATION OF CIDB 8SE OR HIGHER				
<b>BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT (STREET ADDRESS)</b>					
<b>BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO</b>			<b>TECHNICAL ENQUIRIES MAY BE DIRECTED TO:</b>		
CONTACT PERSON	Bid Office		CONTACT PERSON	Mr. M. Röhrs	
TELEPHONE NUMBER	012 336-6562/7780/8241/ 7596		TELEPHONE NUMBER	027 050 0871	
FACSIMILE NUMBER			FACSIMILE NUMBER		
E-MAIL ADDRESS	<a href="mailto:bidenquirieswte@dws.gov.za">bidenquirieswte@dws.gov.za</a>		E-MAIL ADDRESS	<a href="mailto:rohsm@dws.gov.za">rohsm@dws.gov.za</a>	
<b>SUPPLIER INFORMATION</b>					
NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS	0871				
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
SUPPLIER COMPLIANCE STATUS	TAX COMPLIANCE SYSTEM PIN:		OR	CENTRAL SUPPLIER DATABASE No:	MAAA
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE	TICK APPLICABLE BOX] <input type="checkbox"/> Yes <input type="checkbox"/> No		B-BBEE STATUS LEVEL SWORN AFFIDAVIT	[TICK APPLICABLE BOX] <input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES &amp; QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]</b>					
ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	<input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES ENCLOSE PROOF]		ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?	<input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES, ANSWER THE QUESTIONNAIRE BELOW ]	
<b>QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS</b>					
IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?			<input type="checkbox"/> YES <input type="checkbox"/> NO		
DOES THE ENTITY HAVE A BRANCH IN THE RSA?			<input type="checkbox"/> YES <input type="checkbox"/> NO		
DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?			<input type="checkbox"/> YES <input type="checkbox"/> NO		
DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?			<input type="checkbox"/> YES <input type="checkbox"/> NO		
IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?			<input type="checkbox"/> YES <input type="checkbox"/> NO		
<b>IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 BELOW.</b>					

**PART B  
TERMS AND CONDITIONS FOR BIDDING**



## SBD 1

<b>1. BID SUBMISSION:</b>	
1.1.	BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
1.2.	<b>ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED–(NOT TO BE RE-TYPED) OR IN THE MANNER PRESCRIBED IN THE BID DOCUMENT.</b>
1.3.	THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.
1.4.	<b>THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (SBD7).</b>
<b>2. TAX COMPLIANCE REQUIREMENTS</b>	
2.1	BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
2.2	BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VERIFY THE TAXPAYER'S PROFILE AND TAX STATUS.
2.3	APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA.
2.4	BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
2.5	IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED; EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
2.6	WHERE NO TCS PIN IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.
2.7	NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE, COMPANIES WITH DIRECTORS WHO ARE PERSONS IN THE SERVICE OF THE STATE, OR CLOSE CORPORATIONS WITH MEMBERS PERSONS IN THE SERVICE OF THE STATE."

**NB: FAILURE TO PROVIDE / OR COMPLY WITH ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.**

SIGNATURE OF BIDDER: .....

CAPACITY UNDER WHICH THIS BID IS SIGNED: .....  
(Proof of authority must be submitted e.g. company resolution)

DATE: .....



**SBD 3.2 PRICING SCHEDULE**

**PRICING SCHEDULE – NON-FIRM PRICES  
(PURCHASES)**

SBD 3.2 is in section – Contract C2, under C2.2

Complete this document and place back into bid at C2.2



## BIDDER'S DISCLOSURE

### 1. PURPOSE OF THE FORM

Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the Bidder to make this declaration in respect of the details required hereunder.

Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

### 2. Bidder's declaration

2.1 Is the Bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest<sup>1</sup> in the enterprise, employed by the state? **YES/NO**

2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in table below.

Full Name	Identity Number	Name of State institution

<sup>1</sup> the power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.



2.2 Do you, or any person connected with the Bidder, have a relationship with any person who is employed by the procuring institution? **YES/NO**

2.2.1 If so, furnish particulars:

.....  
.....

2.3 Does the Bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract? **YES/NO**

2.3.1 If so, furnish particulars:

.....  
.....

**3 DECLARATION**

I, the undersigned, (name).....  
in submitting the accompanying bid, do hereby make the following statements that I certify to be true and complete in every respect:

- 3.1 I have read and I understand the contents of this disclosure;
- 3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;
- 3.3 The Bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium<sup>2</sup> will not be construed as collusive bidding.
- 3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.
- 3.4 The terms of the accompanying bid have not been, and will not be, disclosed by the Bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.

<sup>2</sup> Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

**SBD 4**



- 3.5 There have been no consultations, communications, agreements or arrangements made by the Bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the Bidder was not involved in the drafting of the specifications or terms of reference for this bid.
- 3.6 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT.

I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....  
Signature

.....  
Date

.....  
Position

.....  
Name of Bidder



## PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022

This preference form must form part of all tenders invited. It contains general information and serves as a claim form for preference points for specific goals.

**NB: BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF THE TENDER AND PREFERENTIAL PROCUREMENT REGULATIONS, 2022**

### 1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to invitations to tender:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

#### 1.2 To be completed by the organ of state

a) The applicable preference point system for this tender is the **90/10** preference point system.

1.3 Points for this tender (even in the case of a tender for income-generating contracts) shall be awarded for:

- (a) Price; and
- (b) Specific Goals.

#### 1.4 To be completed by the organ of state:

The maximum points for this tender are allocated as follows:

	POINTS
<b>PRICE</b>	<b>90</b>
<b>SPECIFIC GOALS</b>	<b>10</b>
<b>Total points for Price and SPECIFIC GOALS</b>	<b>100</b>

1.5 Failure on the part of a tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals with the tender, will be interpreted to mean that preference points for specific goals are not claimed.

1.6 The organ of state reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the organ of state.



## 2. DEFINITIONS

- (a) **“tender”** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;
- (b) **“price”** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;
- (c) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;
- (d) **“tender for income-generating contracts”** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and
- (e) **“the Act”** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

## 3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

### 3.1. POINTS AWARDED FOR PRICE

#### 3.1.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

A maximum of 80 or 90 points is allocated for price on the following basis:

$$\begin{array}{ccc}
 \mathbf{80/20} & \mathbf{or} & \mathbf{90/10} \\
 \\
 \mathbf{Ps} = \mathbf{80} \left( \mathbf{1} - \frac{\mathbf{Pt} - \mathbf{Pmin}}{\mathbf{Pmin}} \right) & \mathbf{or} & \mathbf{Ps} = \mathbf{90} \left( \mathbf{1} - \frac{\mathbf{Pt} - \mathbf{Pmin}}{\mathbf{Pmin}} \right)
 \end{array}$$

Where

- Ps = Points scored for price of tender under consideration
- Pt = Price of tender under consideration
- Pmin = Price of lowest acceptable tender



**3.2. FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT**

**3.2.1. POINTS AWARDED FOR PRICE**

A maximum of 80 or 90 points is allocated for price on the following basis:

$$Ps = 80 \left( 1 + \frac{Pt - Pmax}{Pmax} \right) \text{ or } Ps = 90 \left( 1 + \frac{Pt - Pmax}{Pmax} \right)$$

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmax = Price of highest acceptable tender

**4. POINTS AWARDED FOR SPECIFIC GOALS**

4.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:

4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—

(a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or

(b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,

then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.



**Table 1: Specific goals for the tender and points claimed are indicated per the table below.**

*(Note to organs of state: Where either the 90/10 or 80/20 preference point system is applicable, corresponding points must also be indicated as such.*

*Note to tenderers: The tenderer must indicate how they claim points for each preference point system.)*

The specific goals allocated points in terms of this tender	Number of points allocated (90/10 system) (To be completed by the organ of state)	Number of points claimed (90/10 system) (To be completed by the tenderer)
<b>Women Ownership</b>	<b>2</b>	
<b>Disability Ownership</b>	<b>2</b>	
<b>Youth Ownership</b>	<b>2</b>	
<b>Location of enterprise – Western Cape</b>	<b>1</b>	
<b>B-BBEE status level contribution from level 1 to 2 which are QSE or EME</b>	<b>3</b>	

**DECLARATION WITH REGARD TO COMPANY/FIRM**

4.3. Name of company/firm.....

4.4. Company registration number: .....

4.5. TYPE OF COMPANY/ FIRM

- Partnership/Joint Venture / Consortium
- One-person business/sole propriety
- Close corporation
- Public Company
- Personal Liability Company
- (Pty) Limited
- Non-Profit Company
- State Owned Company

[TICK APPLICABLE BOX]

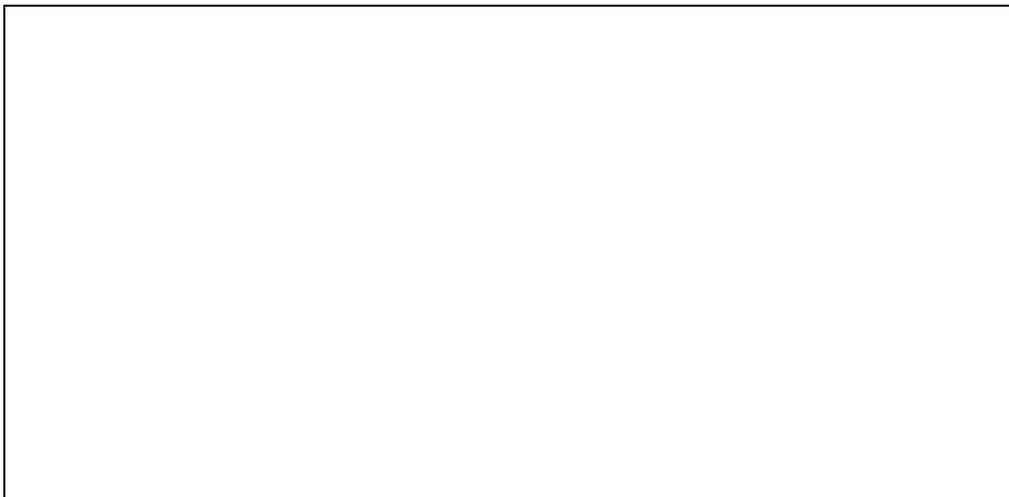
4.6. I, the undersigned, who is duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the specific goals as advised in the tender, qualifies the company/ firm for the preference(s) shown and I acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;

## SBD 6.1



- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;
- iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –
  - (a) disqualify the person from the tendering process;
  - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
  - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
  - (d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
  - (e) forward the matter for criminal prosecution, if deemed necessary.



FORM A



**FORM A CERTIFICATE OF ATTENDANCE AT SITE BRIEFING**

This is to certify that (*Tenderer*) I, .....

was represented by the person of (*Bidder*) .....

of(*address*) .....

Telephone number .....

named below at the compulsory meeting held for all Tenderers at (*location*).....

on(*date*)..... starting at (*time*).....

I acknowledge that the purpose of the meeting was to acquaint myself with the site of the works and / or matters incidental to doing the work specified in the tender documents in order for me to take account of everything necessary when compiling our rates and prices included in the tender.

Having previously studied the documents, I carefully examined the site and equipment. I have made myself familiar with all the equipment likely to influence the work and the cost thereof.

I further certify that I am satisfied with the description of the work and the explanations given by the Department of Water and Sanitation Representative, and I understand perfectly the work to be done, as specified and implied, in the execution of this Contract.

**Particulars of person attending the meeting: (Signed on behalf of Bidder) PRINT NAME & SIGNATURE**

Name: ..... Signature: .....

Capacity: .....

**Attendance of the above person at the meeting is confirmed by the Employer's representative, namely:  
(PRINTED NAME & SIGNATURE)**

Name: ..... Signature: .....

Capacity: ..... Date and Time: .....

FORM B



**FORM B RECORD OF ADDENDA TO TENDER DOCUMENTS**

We confirm that the following communications received from the Employer before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer:

	Date	Title or Details
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		

Attach additional pages if more space is required.

Signed

Date

Name

Position

Tenderer



**FORM C COMPULSORY DECLARATION**

The following particulars must be furnished. In the case of a joint venture, separate declaration in respect of each partner must be completed and submitted.

**Section 1: Enterprise Details**

<b>Name of enterprise:</b>	
<b>Contact person:</b>	
<b>Email:</b>	
<b>Telephone:</b>	
<b>Cell no</b>	
<b>Fax:</b>	
<b>Physical address</b>	
<b>Postal address</b>	

**Section 2: Particulars of companies and close corporations**

<b>Company / Close Corporation registration number</b>	
--	--

**Section 3: SARS Information**

<b>Tax reference number</b>	
<b>VAT registration number:</b>	<i>State Not Registered if not registered for VAT</i>

**Section 4: CIDB registration number**

<b>CIDB Registration number (if applicable)</b>	
---	--

**Section 5: National Treasury Central Supplier Database**

<b>Supplier number</b>	
<b>Unique registration reference number</b>	

**Section 6: Particulars of principals**

**principal:** means a natural person who is a partner in a partnership, a sole proprietor, a director of a company established in terms of the Companies Act of 2008 (Act No. 71 of 2008) or a member of a close corporation registered in terms of the Close Corporation Act, 1984, (Act No. 69 of 1984).

Full name of principal	Identity number	Personal tax reference number

Attach separate page if necessary

# FORM C



**Section 7: Record in the service of the state**

Indicate by marking the relevant boxes with a cross, if any principal is currently or has been within the last 12 months in the service of any of the following:

- a member of any municipal council
- a member of any provincial legislature
- a member of the National Assembly or the National Council of Province
- a member of the board of directors of any municipal entity
- an official of any municipality or municipal entity
- an employee of any department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act of 1999 (Act No. 1 of 1999)
- a member of an accounting authority of any national or provincial public entity
- an employee of Parliament or a provincial legislature

**If any of the above boxes are marked, disclose the following:**

Name of principal	Name of institution, public office, board or organ of state and position held	Status of service <i>(tick appropriate column)</i>	
		Current	Within last 12 months

\*insert separate page if necessary

**Section 8: Record of family member in the service of the state**

**family member:** a person's spouse, whether in a marriage or in a customary union according to indigenous law, domestic partner in a civil union, or child, parent, brother, sister, whether such a relationship results from birth, marriage or adoption

Indicate by marking the relevant boxes with a cross, if any family member of a principal as defined in section 5 is currently or has been within the last 12 months been in the service of any of the following:

- a member of any municipal council
- a member of any provincial legislature
- a member of the National Assembly or the National Council of Province
- a member of the board of directors of any municipal entity
- an official of any municipality or municipal entity
- an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999)
- a member of an accounting authority of any national or provincial public entity
- an employee of Parliament or a provincial legislature

Name of family member	Name of institution, public office, board or organ of state and position held	Status of service <i>(tick appropriate column)</i>	
		Current	Within last 12 months

\*insert separate page if necessary

# FORM C



## Section 9: Record of termination of previous contracts with an organ of state

Was any contract between the tendering entity including any of its joint venture partners terminated during the past 5 years for reasons other than the employer no longer requiring such works or the employer failing to make payment in terms of the contract.

Yes       No (Tick appropriate box)

If yes, provide particulars (insert separate page if necessary)

## Section 10: Declaration

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the tendering entity confirms that the contents of this Declaration are within my personal knowledge, and save where stated otherwise in an attachment hereto, are to the best of my belief both true and correct, and:

- i) neither the name of the tendering entity or any of its principals appears on:
  - a) the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004 (Act No. 12 of 2004)
  - b) National Treasury's Database of Restricted Suppliers (see [www.treasury.gov.za](http://www.treasury.gov.za))
- ii) neither the tendering entity or any of its principals has within the last five years been convicted of fraud or corruption by a court of law (including a court outside of the Republic of South Africa);
- iii) any principal who is presently employed by the state has the necessary permission to undertake remunerative work outside such employment (attach permission to this declaration);
- iv) the tendering entity is not associated, linked or involved with any other tendering entities submitting tender offers
- v) has not engaged in any prohibited restrictive horizontal practices including consultation, communication, agreement, or arrangement with any competing or potential tendering entity regarding prices, geographical areas in which goods and services will be rendered, approaches to determining prices or pricing parameters, intentions to submit a tender or not, the content of the submission (specification, timing, conditions of contract etc) or intention to not win a tender;
- vi) has no other relationship with any of the Tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest;
- vii) neither the Tenderer or any of its principals owes municipal rates and taxes or municipal service charges to any municipality or a municipal entity and are not in arrears for more than 3 months;
- viii) SARS may, on an on-going basis during the term of the contract, disclose the Tenderer's tax compliance status to the Employer and when called upon to do so, obtain the written consent of any subcontractors who are subcontracted to execute a portion of the contract that is entered into in excess of the threshold prescribed by the National Treasury, for SARS to do likewise.

NOTE 1 The Standard Conditions of Tender contained in SANS 10845-3 prohibits anticompetitive practices (clause 3.1) and requires that Tenderers avoid conflicts of interest, only submit a tender offer if the Tenderer or any of his principals is not under any restriction to do business with employer (4.1.1) and submit only one tender either as a single tendering entity or as a member in a joint venture (clause 4.13.1). Clause 5.7 also empowers the Employer to disqualify any Tenderer who engages in fraudulent and corrupt practice. Clause 3.1 also requires Tenderers to comply with all legal obligations.

NOTE 2: Section 30(1) of the Public Service Act, 1994, prohibits an employee (person who is employed in posts on the establishment of departments) from performing or engaging remunerative work outside his or her employment in the relevant department, except with the written permission of the executive authority of the department. When in operation, Section 8(2) of the Public Administration Management Act, 2014, will prohibit an employee of the public administration (i.e. organs of state and all national departments, national government components listed in Part A of Schedule 3 to the Public Service Act, provincial departments including the office of the premier listed in Schedule 1 of the Public Service Act and provincial departments listed in schedule 2 of the Public Service Act, and provincial government components listed in Part B of schedule 3 of the Public Service Act) or persons contracted to executive authorities in accordance with the provisions of section 12A of the Public Service Act of 1994 or persons performing similar functions in organs of state from conducting business with the State or to be a director of a public or private company conducting business with the State. The offence for doing so is a fine or imprisonment for a period not exceeding 5 years or both. It is also a serious misconduct which may result in the termination of employment by the employer.

NOTE 3: Regulation 44 of Supply Chain Management regulations issued in terms of the Municipal Finance Management Act of 2003 requires that organs of state and municipal entities not award a contract to a person who is the service of the state, a director, manager or principal shareholder in the service of the state or who has been in the service of the state in the previous twelve months.

NOTE: 4: Regulation 45 of Supply Chain Management regulations requires a municipality or municipal entity to disclose in the notes to the annual statements particulars of any award made to a close family member in the service of the state.

# FORM C



NOTE: 5 Corrupt activities which give rise to an offence in terms of the Prevention and Combating of Corrupt Activities Act of 2004) include improperly influencing in any way the procurement of any contract, the fixing of the price, consideration or other moneys stipulated or otherwise provided for in any contract and the manipulating by any means of the award of a tender.

NOTE: 6 Section 4 of the Competition Act of 1998 prohibits restrictive horizontal practice including agreements between parties in a horizontal relationship which have the effect of substantially preventing or lessening competition, directly or indirectly fixing prices or dividing markets or constitute collusive tendering. Section 5 also prohibits restrictive vertical practices. Any restrictive practices that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties.

Signed	Date
.....	_____
Name	Position
.....	_____
<i>Tenderer</i>	
.....	

FORM D



**FORM D CERTIFICATE AUTHORITY OF SIGNATORY**

Indicate the status of the Tenderer by ticking the appropriate box hereunder. The Tenderer must complete the certificate set out below for the relevant category. Delete whichever is inapplicable.

A Company	B Partnership	C Joint Venture	D Sole Proprietor	E Close Corporation
--------------	------------------	--------------------	----------------------	------------------------

**A. CERTIFICATE FOR COMPANY**

I, ....., chairperson of the board of directors of  
.....

hereby confirm that by resolution of the board taken on ..... 20.....

Mr/Ms....., acting in the capacity

of ....., was authorised to sign all documents in connection with this tender for

Contract reference number ..... and any contract resulting from it

on behalf of the company.

As witnesses:-

1. ....	.....
Witness	Chairman

2. ....	.....
Witness	Date

**FORM D**



**B. CERTIFICATE FOR PARTNERSHIP**

We, the undersigned, being the key partners in the business trading as

.....

hereby authorise Mr/Ms .....,

acting in the capacity of ..... to sign

all documents in connection with the tender for Contract reference number .....

and any contract resulting from it on our behalf.

NAME	ADDRESS	SIGNATURE	DATE

**NOTE:** This certificate is to be completed and signed by all of the key partners upon whom rests the direction of the affairs of the Partnership as a whole.

**FORM D**



**C. CERTIFICATE FOR JOINT VENTURE**

We, the undersigned, are submitting this tender offer in Joint Venture and hereby authorise Mr/Ms ....., authorised signatory of the company ....., acting in the capacity of lead partner, to sign all documents in connection with the tender offer for Contract reference number..... and any contract resulting from it on our behalf.

This authorisation is evidenced by the attached power of attorney signed by legally authorised signatories of all the partners to the Joint Venture.

<b>NAME OF FIRM</b>	<b>ADDRESS</b>	<b>AUTHORIZING SIGNATURE, NAME &amp; CAPACITY</b>
Lead Partner		
Partner 1		
Partner 2		
Partner 3		
Partner 4		

**FORM D**



**D. CERTIFICATE FOR SOLE PROPRIETOR.**

I, ..... hereby confirm that I am the sole owner of  
the business trading as .....

As witnesses:-

1. ....  
Witness Signature: Sole owner

2. ....  
Witness Date



**FORM D**

**E. CERTIFICATE FOR CLOSE CORPORATION**

We, the undersigned, being the key partners in the business trading as

.....  
.....

hereby authorise Mr/Ms .....,

acting in the capacity of ..... to sign

all documents in connection with the tender for Contract reference number .....

and any contract resulting from it on our behalf.

<b>NAME</b>	<b>ADDRESS</b>	<b>SIGNATURE</b>	<b>DATE</b>

**NOTE:** This certificate is to be completed and signed by all of the key members upon whom rests the direction of the affairs of the Close Corporation as a whole.

# FORM F



## FORM F ANNUAL FINANCIAL STATEMENTS DECLARATION

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the respondent, confirms that:

- 1) The enterprise's financial year end is .....
- 2) The enterprise's financial statements have been prepared in accordance with the provisions of the Companies Act of 2008 or the Close Corporation Act of 1984, as applicable
- 3) The enterprise has compiled its financial accounts [tick one box]:  
 internally  independently
- 4) The following statement applies to the enterprise [tick one box and provide relevant information]  
 enterprise has had its financial statements audited;  
name of auditor .....
- enterprise is required by law to have an independent review of its financial statements  
name of independent reviewer .....
- enterprise has not had its financial statements audited and is not required by law to have an independent review or audit of such statements
- 5) The attached income statement and balance sheet is a true extract from the financial statements complying with applicable legislation for the preceding financial year within 12 months of the financial year end.  
*[Attach the income statement and the balance sheet contained in the financial statement]*
- 6) The annual turnover for the last financial year is R .....
- 7) The total assets as at the end of the last financial year is R .....
- 8) The total liabilities as at the end of the financial year is R .....

I hereby declare that the contents of this Declaration are within my personal knowledge, and save where stated otherwise are to the best of my belief both true and correct.

Signed

Date

.....  
Name

.....  
Position

.....  
*Tender*

## FORM G



### **FORM G PRO FORMA FORM OF OFFER AND ACCEPTANCE**

Pro Forma Form of Offer and Acceptance is in section – Contract C1, under C1.1

Complete this document and place back into bid at C1.1

## FORM H



### FORM H CONTRACT DATA

Contract data is in section – Contract C1, under C1.2

Complete this document and place back into bid at C1.2

## FORM I



### FORM I PRO FORMA PERFORMANCE GUARANTEE

Pro Forma Performance Guarantee is in section – Contract C1, under C1.3

Complete this document and place back into bid at C1.3



## FORM J CONTRACTOR'S HEALTH AND SAFETY DECLARATION

In terms of Clause 4(4) of the OHS Act 1993 Construction Regulations 2003 (referred to as "the Regulations" hereafter), a Contractor may only be appointed to perform construction work if the Employer is satisfied that the Contractor has the necessary competencies and resources to carry out the work safely in accordance with the Occupational Health and Safety Act No 85 of 1993 and the OHS Act 1993 Construction Regulations 2003.

To that effect a person duly authorised by the Tenderer must complete and sign the declaration hereafter in detail.

### Declaration by Tenderer

1. I the undersigned hereby declare and confirm that I am fully conversant with the Occupational Health and Safety Act No 85 of 1993 (as amended by the Occupational Health and Safety Amendment Act No 181 of 1993), and the OHS Act 1993 Construction Regulations 2003.
2. I hereby declare that my company / enterprise has the competence and the necessary resources to safely carry out the construction work under this contract in compliance with the Construction Regulations and the Employer's Health and Safety Specifications.
3. I hereby undertake, if my tender is accepted, to provide a sufficiently documented Health and Safety Plan in accordance with Regulation 5(1) of the Construction Regulations, approved by the Employer or his representative, before I will be allowed to commence with construction work under the contract. I hereby agree that my company/enterprise will not have a claim for compensation for delay or extension of time because of my failure to obtain the necessary approval for the said safety plan.
4. I confirm that copies of my company's approved Health and Safety Plan, the Employer's Safety Specifications as well as the OHS Act 1993 Construction Regulations 2003 will be provided on site and will at all times be available for inspection by the Contractor's personnel, the Employer's personnel, visitors, and officials and inspectors of the Department of Labour.
5. I hereby confirm that adequate provision has been made in my tendered rates and prices in the bill of quantities to cover the cost of all resources, actions, training and all health and safety measures envisaged in the OHS Act 1993 Construction Regulations 2003, including the cost for specific items that may be scheduled in the bill of quantities.
6. I hereby confirm that I will be liable for any penalties that may be applied by the Employer in terms of the said Regulations for failure on my part to comply with the provisions of the Act and the Regulations as set out in Regulation 30 of the Regulations.
7. I agree that my failure to complete and execute this declaration to the satisfaction of the Employer will mean that I am unable to comply with the requirements of the OHS Act 1993 Construction Regulations 2003, and accept that my tender will be prejudiced and may be rejected at the discretion of the Employer.
8. I am aware of the fact that, should I be awarded the contract, I must submit the notification required in terms of Regulation 3 of the OHS Act 1993 Construction Regulations 2003 before I will be allowed to proceed with any work under the contract.

SIGNATURE: ..... DATE: .....  
*(of person authorised to sign on behalf of the Tenderer)*

FORM K



**FORM K HEALTH AND SAFETY ACT AGREEMENT**

**AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, NO. 85 OF 1993**

The Employer and the Contractor hereby agree, in terms of the provisions of Section 37(2) of the Occupational Health and Safety, Act No. 85 of 1993, hereinafter referred to as 'the Act', that the Contractor as an employer in its own right and in its capacity as Contractor for the execution of the works, shall have certain obligations and that the following arrangements shall apply between them to ensure compliance by the Contractor with the provisions of the Act, namely:-

- i) The Contractor undertakes to acquaint the appropriate officials and the employees of the Contractor with all relevant provisions of the Act, and the regulations promulgated in terms of the Act, and
- ii) The Contractor undertake that all relevant duties, obligations and prohibitions imposed in terms of the Act and regulations will be fully complied with, and
- iii) The Contractor hereby accepts sole liability for such due compliance with the relevant duties, obligations and prohibitions imposed by the Act and regulations and expressly absolves the Employer from being obliged to comply with any of the aforesaid duties, obligations and prohibitions.
- iv) The Contractor shall be obliged to report forthwith to the Employer any investigation, complaint, or criminal charge which may arise as a consequence of the provisions of the Act and regulations pursuant to work performed on behalf of the Employer, and shall, on written demand, provide full details in writing of such investigation, complaint or criminal charge.

SIGNED at ..... On this ..... day of ..... 20.....

For and on behalf of the Contractor: Name: \_\_\_\_\_

Company Name: \_\_\_\_\_

AS WITNESSES:

1. \_\_\_\_\_

2. \_\_\_\_\_

for and on behalf of the Employer:

AS WITNESSES:

1. \_\_\_\_\_

2. \_\_\_\_\_

**NOTE: As and when required; the Contractor will be required to sign project specific agreements in terms of section 37(2) of the Occupational Health and Safety Act no 85 of 1993.**



**FORM L VERIFICATION DOCUMENTATION**

**VERIFICATION DOCUMENTATION**

The Tenderer shall attach the following documentation in support of the pre-qualification specification of this bid:

An original and valid B-BBEE Certificate or certified copies thereof. Only B-BBEE Status Level verification certificates from B-BBEE verification agencies accredited by SANAS will be accepted.

A trust, consortium or joint venture (including unincorporated consortia and joint ventures) must submit a consolidated B-BBEE Status Level Verification certificate to substantiate their B-BBEE rating claims.

An EME is required to submit a sworn affidavit confirming their annual total revenue of R10 million or less and level of black ownership to substantiate their EME rating claims.

An EME that is regarded as a Specialized Enterprise is required to submit a sworn affidavit confirming their annual turnover/allocated budget/ gross receipt of R10 million or less and level of percentage of black beneficiaries to substantiate their EME rating claims.

A QSE is required to submit a sworn affidavit confirming their annual total revenue of between R10 million and R50 million and level of black ownership or a B-BBEE level verification certificate to substantiate their QSE rating claims.

**NOTE:** It is a requirement of this contract that the verification documentation of the names of proposed Sub-contractors for the work must be provided with the Tender.

SIGNATURE: .....  
(of person authorised to sign on behalf of the Tenderer)

DATE: .....



## ANNEXURE A B – BBEE STATUS VERIFICATION CERTIFICATE

### Preferencing schedule: Broad Based Black Economic Empowerment Status

#### Preamble

Section 10(b) of the Broad-Based Black Economic Empowerment Act of 2003 (Act No. 53 of 2003) states that “Every organ of state and public entity must take into account and, as far as is reasonably possible, apply any **relevant code of good practice** issued in terms of this Act in developing and implementing a preferential procurement policy.”

A number of codes of good practice have been issued in terms of Section 9(1) of the B-BBEE Act of 2003 including a generic code of good practice and various sector codes. The sector codes vary the metrics, weightings and targets used in the generic code of good practice to establish the overall performance of an entity and its B-BBEE status. The B-BBEE status needs to be assessed in accordance with the applicable code.

#### 1 Conditions associated with the granting of preferences

Tenderers who claim a preference shall provide sufficient evidence of their B-BBEE Status in accordance with the requirements of section 2 in respect of the applicable code as at the closing time for submissions, failing which their claims for preferences will be rejected.

#### 2 Sufficient evidence of qualification

##### 2.1 Exempted micro enterprises

Sufficient evidence of qualification as an Exempted Micro-Enterprise is a :

- Tenderers who qualify as Exempted Micro Enterprises (EME) may submit a valid Sworn Affidavit signed by the EME representative and attested by a Commissioner of Oaths
- Alternatively, the bidder may submit a valid B-BBEE Certificate for Exempted Micro Enterprises issued by the Companies & Intellectual Property Commission (CIPC) on behalf of the Department of Trade and Industry
- Sworn affidavit - B-BBEE Exempted Micro Enterprise (see [www.thedti.gov.za/gazettes/Affidavit\\_EME.pdf](http://www.thedti.gov.za/gazettes/Affidavit_EME.pdf))

##### 2.2 Enterprises other than micro exempted enterprises

Sufficient evidence of B-BBEE Status is:

- Qualifying Small Enterprises (QSE), if the bidding entity is more than 51% black owned, the bidder may submit a valid Sworn Affidavit, signed by the QSE representative and attested by a Commissioner of Oaths.
- If the QSE is less than 51% black owned, then the bidding entity will be required to provide an original and valid B-BBEE Certificate or copies thereof issued by a verification agency accredited by the South African National Accreditation System (SANAS) .
- Sworn affidavit – B-BBEE Qualifying Small Enterprise (see [www.thedti.gov.za/gazettes/BBEE\\_QUALIFYING\\_SMALL\\_ENTERPRISE.pdf](http://www.thedti.gov.za/gazettes/BBEE_QUALIFYING_SMALL_ENTERPRISE.pdf))

#### 3 Declaration

The Tenderer declares that

- the tendering entity is a level contributor as stated in the submitted evidence of qualification as at the closing date for submissions
- the tendering entity has been measured in terms of the following code (*tick applicable box*)
  - Generic code of good practice
  - Other – specify .....
- the contents of the declarations made in terms of a) and b) above are within my personal knowledge and are to the best of my belief both true and correct

## ANNEXURE A



The undersigned, who warrants that he / she is duly authorised to do so on behalf of the Tenderer confirms that he / she understands the conditions under which such preferences are granted and confirms that the Tenderer satisfies the conditions pertaining to the granting of tender preferences.

Signature : .....

Name : .....

Duly authorised to sign on behalf of : .....

Telephone : .....

Fax: ..... Date : .....

Name of witness ..... Signature of witness .....

- Note:** 1) Failure to complete the declaration will lead to the rejection of a claim for a preference  
2) Supporting documentation of the abovementioned claim for a preference must be submitted with the tender submission to be eligible for a preference

### NOTE: ATTACHED TOGETHER WITH PREFERENCING SCHEDULE THE FOLLOWING:

Attached B-BBEE Status level in original or certified copy of B-BBEE certificate issued in accordance with the revised Notice of Clarification published in the Notice 44 of 2015 published in Government Gazette 38799 on 15 May 2015 by the Department of Trade and Industry.

Attached hereto this page is my / our B-BBEE Status Level verification Certificate/s. My failure to submit the certificate/s with my / our tender document may result in the award of 0 (zero) points for specific goals (as per SBD 6.1).

SIGNATURE: .....  
(of person authorised to sign on behalf of the Tenderer)

DATE: .....

## ANNEXURE B



### ANNEXURE B CIDB CERTIFICATE

#### **CONTRACTOR'S CERTIFICATE OF REGISTRATION WITH CIDB**

Attached to this page: certified copy of Certificate of Contractor Registration issued by the Construction Industry Development Board (CIDB).

**Note:** Only certificates for the specified category 8SE or higher class of construction works are acceptable. Applications, or acknowledgement of applications by CIDB, will only be acceptable if it is certain that the application will be successful, and a certificate will be issued before award of the contract.

Attached hereto this page is my / our Certificate of Registration with CIDB. My failure to submit the certificate with my / our tender document will lead to the conclusion that I am / we are not registered with the CIDB and therefore will not be eligible to tender.

SIGNATURE: .....  
(of person authorised to sign on behalf of the Tenderer)

DATE: .....

## ANNEXURE C



# ANNEXURE C TAX CLEARANCE CERTIFICATE

### CONTRACTOR'S TAX COMPLIANCE STATUS

Attach a valid Tax Compliance Status (TCS) Pin code issued by the South African Revenue Services (SARS)

Attached hereto this page is my / our Tax compliance status pin issued SARS. My failure to submit the certificate with my / our tender document may lead to the conclusion that I am / we are not Tax compliant and therefore maybe not eligible to tender.

SIGNATURE: .....  
(of person authorised to sign on behalf of the Tenderer)

DATE: .....

**ANNEXURE D**



**ANNEXURE D CENTRAL SUPPLIER DATABASE**

**CONTRACTOR'S CENTRAL SUPPLIER DATABASE (CSD) PROOF OF REGISTRATION**

Attached to this page: Central Supplier Database (CSD) proof of registration containing MAAA number.

Attached hereto this page is my / our Proof of Registration with National Treasury's Central Supplier Database (CSD).

SIGNATURE: .....  
*(of person authorised to sign on behalf of the Tenderer)*

DATE: .....

ANNEXURE E



**ANNEXURE E COMPANY INTELLECTUAL PROPERTY  
COMMISSION CERTIFICATE**

**CONTRACTOR'S COMPANY INTELLECTUAL PROPERTY COMMISSION (CIPC/CIPRO) PROOF  
OF REGISTRATION**

Attached to this page: Originally certified copies of Bidder's CIPC / CIPRO company registration documents listing all members with percentages.

Attached hereto this page is my / our Proof of CIPC/CIPRO active registration certificate.

SIGNATURE: .....  
(of person authorised to sign on behalf of the Tenderer)

DATE: .....

**ANNEXURE F**



**ANNEXURE F LETTER OF GOOD STANDING FROM COIDA**

**CONTRACTOR'S LETTER OF GOOD STANDING FROM COIDA**

Attached to this page: A valid letter of Good Standing with the Compensation Commissioner in terms of the Compensation for Occupational Injuries and Diseases Act No 130 of 1993 and or third parties insurance registered with Financial Service Board

Attached hereto this page is my / our Letter of Good Standing from COIDA.

SIGNATURE: .....  
*(of person authorised to sign on behalf of the Tenderer)*

DATE: .....



**ANNEXURE G COMPANY EXPERIENCE**

**COMPANY EXPERIENCE**

**[MAX POINTS: 20]**

Attached to this page:

The tenderer to provide at least a minimum of 3 projects:

- Signed completion certificates (Final IPC) together with client reference letters for similar works projects complete; &
- These final signed completion certificates (Final IPC) , must be conducted in the recent 10 years for the value of R 30 million or more.

Tenderer can provide more than 3 signed **completion certificates** for relevant work completed, together with at least 3 client reference letters for 3 of these completion certificates submitted. The three client letters will be used to do reference checks on the contractor.

With proof of value together with completion certificates of previous projects completed, where the value of the projects is stated in other currencies, state the exchange rate at the time of project execution.

The client reference should have the following:

- Description of the project/ title of project,
- Scope of work completed,
- Period of the contract / time frame,
- Contract amount/value of work done,
- Client Name,
- Client contact details (Telephone number, Cell phone number and E-mail Address), &
- Reference letter to be sign by client/employer.

**Only the following will be considered as similar work conducted:**

Completed projects that dealt with demolishing and removal of concrete, for relevant work done, will be accepted for evaluation. The following suggested method and or combination of methods that could have been used are as followed:

- Controlled drilling and blasting techniques,
- Mechanical breaking,
- High-pressure water jetting,
- Concrete sawing; and/or
- Rope-cutting techniques.

This scoring system as indicated Table G.1 shall be used to score these criteria.

## ANNEXURE G



Table G.1: Evaluation of Company Experience

FUNCTIONAL CRITERIA: 1- COMPANY EXPERIENCE	SCORE:
<b>SUB-CRITERIA: Work experience</b>	
Providing of at least 3 x client reference letters (as per above requirements) together with the relevant signed completion certificates for <b>10 or more</b> projects signed completion certificates for similar work completed (as describe above). <span style="float: right;">[20 points]</span>	
Providing of at least 3 x client reference letters (as per above requirements) together with the relevant signed completion certificates for <b>9</b> projects signed completion certificates for similar work completed (as describe above) [18 points]	
Providing of at least 3 x client reference letters (as per above requirements) together with the relevant signed completion certificates for <b>8</b> projects signed completion certificates for similar work completed (as describe above). [16 points]	
Providing of at least 3 x client reference letters (as per above requirements) together with the relevant signed completion certificates for <b>7</b> projects signed completion certificates for similar work completed (as describe above). [14 points]	
<b>Less than 7 project</b> <span style="float: right;">[0 points]</span>	

Attached hereto this page is my / our documents as listed above.

SIGNATURE: .....  
 (of person authorised to sign on behalf of the Tenderer)

DATE: .....





**ANNEXURE I    MANAGERIAL CAPACITY**

**MANAGERIAL CAPACITY**

**[MAX POINTS: 30]**

The Bidder shall attach his proposed management organogram, key personal structure, and human resource plan for the execution of the works.

**Professional Contract Manager:** Must have a valid SACPCMP registration with at least 7 years post registration experience in field building demolition (controlled demolition) → proof of registration, qualifications and certificates together with full CV to be submitted.

**Professional Engineer:** Must have a valid Pr.Eng.in Civil Engineering or Mining Engineering registration with ECSA. With at least 7 years post registration experience in the field of building demolition (controlled demolition) → proof of registration, qualification and certificates together with full CV to be submitted.

**Construction Manager (Site Agent):** Must have 7 years' experience in field of building demolition → proof of any qualifications, registrations and certificates with full CV to be submitted.

**Foreman:** Must have 7 years' experience or more in field of rope cutting and blasting, and or in the methods to be used for concrete demolishing in the method statement, → proof of any qualifications, registrations and certificates with full CV to be submitted.

**Health and Safety officer:** Must have a valid registration with SACPCMP in health and safety with at least 5 years' experience after obtaining registration. → proof of any qualifications, registrations and certificates with full CV to be submitted.

**Environmental Representative:** Must have 5 years' relevant work experience → proof of any qualifications, registrations and certificates with full CV to be submitted.

This scoring system as indicated in Table I.1 shall be used to score this criteria.

Attached hereto this page is my / our documents as listed above.

SIGNATURE: .....      DATE: .....  
*(of person authorised to sign on behalf of the Tenderer)*

# ANNEXURE I



**Table I.1: Evaluation of Managerial Capacity**

<b>TABLE I.1 FUNCTIONAL CRITERIA: 2- MANAGERIAL CAPACITY</b>	<b>SCORE</b>
<b>SUB-CRITERIA: Contracts Manager (Construction Manager)</b>	
Proof that Contracts Manager has more than 15 years of relevant work experience after registration. <span style="float: right;"><b>[7,5 points]</b></span>	
Proof that Contracts Manager has 10 and more years but less than 15 years of relevant work experience after registration. <span style="float: right;"><b>[6,5 points]</b></span>	
Proof that Contracts Manager has less than 10 years but 7 and more years of relevant work experience after registration. <span style="float: right;"><b>[5 points]</b></span>	
If the Contracts manager has less than 7 years will mean that the Bidder is non-responsive. COMPLETE ANNEXURE I & J AND <b>ATTACHED CV'S (proven relevant experience and SACPCMP registration)</b>	
<b>SUB-CRITERIA: ECSA Registered Professional Engineer (Civil or Mining)</b>	
Proof that Engineer has more than 15 years of relevant work experience after registration. <span style="float: right;"><b>[7.5 points]</b></span>	
Proof that Engineer has 10 years and more but less than 15 years of relevant work experience after registration. <span style="float: right;"><b>[6,5 points]</b></span>	
Proof that Engineer has less than 10 years but 7 years and more of relevant work experience after registration. <span style="float: right;"><b>[5 points]</b></span>	
If the Engineer has less than 7 years will mean that the Bidder is non-responsive. COMPLETE ANNEXURE I & J AND <b>ATTACHED CV'S (proven relevant experience and ECSA registration)</b>	
<b>SUB-CRITERIA: Construction Manager (Site Agent)</b>	
Proof that Site Agent has more than 15 years of relevant work experience. <span style="float: right;"><b>[5 points]</b></span>	
Proof that Site Agent has 10 years and more but less than 15 years of relevant work experience. <span style="float: right;"><b>[4 points]</b></span>	
Proof that Site Agent has less than 10 years but 7 and more years of relevant work experience. <span style="float: right;"><b>[3,5 points]</b></span>	
If the Site Agent has less than 7 years will mean that the Bidder is non-responsive. COMPLETE ANNEXURE I & J AND <b>ATTACHED CV'S with proven relevant experience</b>	
<b>SUB-CRITERIA: Foreman</b>	
Proof that Foreman has more than 15 years of relevant work experience. <span style="float: right;"><b>[5 points]</b></span>	
Proof that Foreman has 10 years and more but less than 15 years of relevant work experience. <span style="float: right;"><b>[4 points]</b></span>	
Proof that Foreman has less than 10 years but 7 years and more of relevant work experience. <span style="float: right;"><b>[3,5 points]</b></span>	
If the Foreman has less than 7 years will mean that the Bidder is non-responsive. COMPLETE ANNEXURE I & J AND <b>ATTACHED CV'S with proven relevant experience</b>	
<b>SUB-CRITERIA: Health and Safety Officer (HSO)</b>	
Proof that HSO has more than 10 years of relevant work experience, after receiving SACPCMP registration. <span style="float: right;"><b>[2.5 points]</b></span>	
Proof that HSO has 8 years and more but less than 10 years of relevant work experience, after receiving SACPCMP registration. <span style="float: right;"><b>[2 points]</b></span>	
Proof that HSO has less than 8 years but 5 years and more of relevant work experience, after receiving SACPCMP registration. <span style="float: right;"><b>[1,5 points]</b></span>	
If the HSO has less than 5 years will mean that the Bidder is non-responsive. COMPLETE ANNEXURE I & J <b>ATTACHED CV'S with SACPCMP registration</b>	
<b>SUB-CRITERIA: Environmental Representative</b>	
Proof that Environmental representative has more than 10 years of relevant work experience. <span style="float: right;"><b>[2.5 points]</b></span>	
Proof that Environmental representative has 8 years and more but less than 10 years of relevant work experience. <span style="float: right;"><b>[2 points]</b></span>	
Proof that Environmental representative has less than 8 years but 5 years and more of relevant work experience. <span style="float: right;"><b>[1,5 points]</b></span>	
If the Environmental representative has less than 5 years will mean that the Bidder is non-responsive. COMPLETE ANNEXURE I & J <b>ATTACHED CV'S with all qualification and registrations applicable</b>	
<b>TOTAL</b>	





## ANNEXURE K



**DID YOU ATTACH ORIGINAL AND VALID TAX COMPLIANCE STATUS PIN OF ALL SUB-CONTRACTORS AS LISTED ABOVE?**

YES  NO

**FAILURE BY THE BIDDER TO ATTACH LISTED SUB-CONTRACTORS' VALID TAX COMPLIANCE PIN , THE BID MAY BE REGARDED AS NON-RESPONSIVE**

**DID YOU ATTACH CERTIFIED COPIES OF VALID B-BBEE CERTIFICATES OF ALL SUB-CONTRACTORS' AS LISTED ABOVE?**

YES  NO

**FAILURE BY THE BIDDER TO ATTACH LISTED SUB-CONTRACTORS' VALID B-BEE CERTIFICATES OR IN CASE OF EMEs A SWORN AFFIDAVIT OBTAINABLE FROM THE DEPARTMENT OF TRADE AND INDUSTRY, THE BID MAY BE REGARDED AS NON-RESPONSIVE**

**DID YOU ATTACH CERTIFIED COPIES OF VALID ID DOCUMENTS OF OWNERS OF ALL SUB-CONTRACTORS' AS LISTED ABOVE?**

YES  NO

**FAILURE BY THE BIDDER TO ATTACH LISTED SUB-CONTRACTORS' CERTIFIED COPIES OF VALID ID DOCUMENT, THE BID MAY BE REGARDED AS NON-RESPONSIVE**

**DID YOU ATTACH CERTIFIED COPIES OF INCORPORATION OF THE COMPANY (CIPC CERTIFICATES) OF ALL SUB-CONTRACTORS AS LISTED ABOVE?**

YES  NO

**FAILURE BY THE BIDDER TO ATTACH LISTED SUB-CONTRACTORS' CERTIFIED COPIES OF INCORPORATION OF COMPANY (CIPC CERTIFICATES), THE BID MAY BE REGARDED AS NON-RESPONSIVE**

NAME OF BIDDER: \_\_\_\_\_

COMPANY NAME: \_\_\_\_\_

SIGNATURE OF BIDDER: \_\_\_\_\_

DATE: \_\_\_\_\_

## ANNEXURE L



### ANNEXURE L SCHEDULE OF PLANT AND EQUIPMENT

The following are lists of major items of relevant equipment that I / we presently own or lease and will have available for this contract if my / our tender is accepted.

**(a) Details of major equipment that is owned by me / us and immediately available for this contract.**

DESCRIPTION <i>(type, size, capacity etc)</i>	QUANTITY	YEAR OF MANUFACTURE	PRESENT FINANCIAL LIABILITY

*Attach additional pages if more space is required*

**(b) Details of major equipment that will be hired, or acquired for this contract if my / our tender is accepted**

DESCRIPTION <i>(type, size, capacity etc)</i>	QUANTITY	HOW ACQUIRED	
		HIRE/BUY	SOURCE

*Attach additional pages if more space is required*

The Tenderer undertakes to bring onto site without additional cost to the Employer any additional plant not listed but which may be necessary to complete the contract within the specified contract period.

***Failure to complete this form properly and correctly, will lead to the conclusion that the Tenderer does not have the necessary plant and equipment resources at his disposal, which may prejudice his tender.***

SIGNATURE: .....  
*(of person authorised to sign on behalf of the Tenderer)*

DATE: .....



**ANNEXURE M PRELIMINARY METHOD STATEMENT FOR – DEMOLISHING AND REMOVAL OF CONCRETE**

The attached method statement under this annexure, for demolishing and removal of concrete shall include the 5 sections as show in table M.1. More information on each of these sections is explain below.

Table M.1: Summary of Method statement layout

<b>METHOD STATEMENT FOR CONCRETE DEMOLISHING AND REMOVAL</b>		<b>TOTAL POINTS 50</b>
<b>SUB-CRITERIA (AS EXPLAINED BELOW)</b>		<b>MAXIMUM POINTS</b>
1	Project program	5
2	Equipment to be used for these activities (As indicated in “schedule of plant and equipment list” – Annexure L)	5
3	Methodology – that will be used to do the work	25
4	Quality management plan	5
5	Environmental, Health & Safety	10

Table M.1 will be scored as indicted in Table M3 per the SANS 10845 codes (explained in Tender data T1.2, 6.11.9 on page15)

The evaluators are to score the functionality criteria’s and sub-criteria’s as per the below table (unless otherwise stated). The score allocated needs to be applied as a percentage of total maximum allowed points for the evaluated specific criteria. Table M.3 indicates the evaluation criteria allocated under each sub-criteria.

**METHOD STATEMENT SECTIONS EXPLAINED:**

**1) PROJECT PROGRAM: [MAX: 5 POINTS]**

The tendered shall attached a preliminary programme of works (project program), reflecting the proposed sequence, duration, and milestones of execution of the various activities comprising the work for this contract. This program shall be in line with the methodology.

The programme shall be in accordance with the information provided in the schedule of constructional equipment and with all other relevant aspects of the tender.

An preliminary programme in the form of a Gant chart must be submitted with the tender. The following must be shown:

- a) The proposed sequence of the various activities.
- b) The dependencies that exist between the activities and whether these are time related or resource limited.
- c) Any shutdown periods proposed by the Contractor.
- d) Any slack time built into various activities or sub-phases.
- e) The critical path of the work to be undertaken.

## ANNEXURE M



This programme shall be in sufficient detail so that it can form the basis of a more detailed construction programme to be prepared after the Contract has been awarded.

Nr	Work Place	Start Date	End Date	Working days
1.	Demolishing and Removal of Hydro Power Plant			
2.	Demolishing and removal of Apron			
3.	Demolishing and removal of Right Bank NOC			
4.	Demolishing and removal of Left Bank NOC			
5.	Demolishing and removal of Spillway			
6.	Demolishing and removal of Block 23			

Page limitation: Max – 2 pages writing & 2 Attachment pages

### 2) EQUIPMENT:

[MAX:5 POINTS]

The Tenderer shall indicate **ONLY** equipment that will be used for this project, and for what equipment shall be use, which will be in line with the methodology. Any specialised equipment must be indicated. The storage space for equipment in the Contractor's yard shall be indicated. All these equipment will also be indicated in "Schedule Of Plant And Equipment" – Annexure L.

Provide the location(s) where the plants may be inspected related to contactable references.

Page limitation: Max – 2/3 pages

### 3) METHODOLOGY:

[MAX: 25 POINTS]

It is a requirement that the Tenderer shall attach / submit a preliminary Method Statement, that adequately details all activities, durations and any associated risks in terms of operations envisaged on this contract. With the preliminary method statement for the demolishing and removal of concrete for each section of work (see PS2.2) as part of bid document in which the following is clearly stated:

- Proposed method/s to use for the removal/demolishing of concrete;
- Proposed phases of removal;
- Type of plant/ equipment to be used;
- Proposed human resources to be used;
- Highlight all the risks and the treatments of the risks that may be encountered during the removal activities; and
- The intended method of Measurement.

Page limitation: Max – 6 pages

### 4) QUALITY MANAGEMENT PLAN (QMP)

[MAX: 5 POINTS]

The tenderer shall also attached QMP showing clearly how quality assurance and process control will be manged both at the equipment and on site. The plan will be used to evaluate the tenders as the quality of workmanship is of highest priority in this contract. Any quality certification by recognised international body must be stated.

Inspection and test plan for each activity in which sequence of events are listed with the applicable conformance criteria, standards, specifications, and drawings as well as the frequency and record of inspections with holding points.

Page limitation: Max – 2 pages



**ANNEXURE M**

**5) ENVIRONMENTAL, HEALTH & SAFETY:**

**[MAX: 10 POINTS]**

**ENVIRONMENT:**

**[MAX: 5 POINTS]**

Proposed contract specific Environmental Management System, inclusive of environmental management plan and waste management plan. This shall also contain details of all site layouts and environmental protection measures. Provide environmental plan management system for all the work to be carried out with specific reference to:

- EMP
- CWD 67

**HEALTH & SAFETY:**

**[MAX 5 POINTS]**

Provide Health and Safety management system for all the work to be carried out with specific reference to:

- Organogram and legal appointments,
- Preliminary baseline risk assessment for all activities,
- File structure of documentation,

Page limitation: Max – 3 to 4 page for section 5 – Environmental, Health & Safety.

The above method statement must be submitted with the tender to evaluate the ability of the Contractor to perform the work according to specification.

Attached hereto this page is my / our Preliminary Method Statement for the Demolishing and removal of concrete.

SIGNATURE: .....  
(of person authorised to sign on behalf of the Tenderer)

DATE: .....

**Tabel M.3: Point allocation for each section**

<b>(4) FUNCTIONAL CRITERIA- METHOD STATEMENT: DEMOLISHING AND REMOVAL OF CONCRETE (TOTAL 50)</b> <b>(ref T1: 5.11.8 &amp; 5.11.9)</b>			
A fully completed and signed with the following sections:			
<b>SUB-CRITERIA:1 - PROJECT PROGRAM</b>	<b>SCORE out of 0-100%</b>	<b>WEIGHT (POINTS)</b>	<b>TOTAL (% score x 5 points)</b>
A fully completed and signed program for each section and the entire project which have: [Max 5 / Min 2] <ul style="list-style-type: none"> <li>• Gantt Chart with timeline, deliverables, milestones, dependencies</li> <li>• Time taken to complete the entire project within 42 months</li> <li>• Deliverables: Activities and their chronological order for the execution of the project</li> <li>• Dependencies: such as equipment delivery waiting periods</li> <li>• Any slack time built into various activities or sub-phases.</li> <li>• The critical path of the work to be undertaken.</li> </ul>		5	
<b>SUB-CRITERIA:2 - PLANT AND EQUIPMENT</b>	<b>SCORE out of 0-100%</b>	<b>WEIGHT (POINTS)</b>	<b>TOTAL (% score x 5 points)</b>
A fully completed and signed schedule list of items of relevant equipment or plant (Annexure L) that are in good working condition that the Bidder own or will hire and have for this contract must be provided. The equipment to be used as per Annexure L to be listed together with methodology and other requirements in Annexure M. [Max 5 / Min 2,5]		5	

## ANNEXURE M



<b>SUB-CRITERIA: 3 - METHODOLOGY</b>	<b>SCORE out of 0-100%</b>	<b>WEIGHT (POINTS)</b>	<b>TOTAL (% score x 20 points)</b>
<p>It is a requirement that the Tenderer shall attach / submit a preliminary Method Statement, that adequately details all activities, durations and any associated risks in terms of operations envisaged on this contract in line with the requirements as described under nr.3 Methodology on the above page. With the preliminary method statement for the demolishing and removal of concrete for each section of work as part of bid document (see PS2.2): [Max 25 / Min 20]</p> <ul style="list-style-type: none"> <li>▪ Right Bank NOC Cantilever's</li> <li>▪ Block 23</li> <li>▪ Hydro - Power Plant</li> <li>▪ Concrete Apron</li> <li>▪ Training Wall – Right Bank</li> <li>▪ Spillway Blocks 10, 12 &amp; 14</li> <li>▪ Remaining Spillway Blocks</li> <li>▪ Left Bank NOC Cantilever's</li> </ul> <p>NB: Highlight all the risks and the treatments of the risks that may be encountered during the demolishing and removal activities</p>		25	
<b>SUB-CRITERIA: 4 - QUALITY MANAGEMENT</b>	<b>SCORE out of 0-100%</b>	<b>WEIGHT (POINTS)</b>	<b>TOTAL (% score x 5 points)</b>
<p>Attached QMP plan, and clearly explained. And provide sample of record sheets. [Max 5 / Min 3]</p>		5	
<b>SUB-CRITERIA: 5 – ENVIRONMENTAL, HEATH &amp; SAFETY</b>	<b>SCORE out of 0-100%</b>	<b>WEIGHT (POINTS)</b>	<b>TOTAL (% score x 5 points)</b>
<p>Proposed contract specific Environmental Management System, inclusive of environmental management plan and waste management plan, with reference to CWD 67 &amp; EMP [ Max 5 / Min 3,5]</p> <p>Provide Health and Safety management system for all the work to be carried out with specific reference to: [Max 5 / Min 3,5]</p> <ul style="list-style-type: none"> <li>• Organogram and legal appointments,</li> <li>• Preliminary baseline risk assessment for all activities,</li> <li>• File structure of documentation,</li> <li>• Safe handling,</li> <li>• Risk Assessment</li> </ul>		10	

SIGNATURE: .....  
(of person authorised to sign on behalf of the Tenderer)

DATE: .....

**Tender**  
**Part T2: Returnable documents**

**T2.2**  
**Preliminary Method Statement: Demolishing Concrete**  
**Page | 70**



## **DEPARTMENT OF WATER AND SANITATION**

**DWS05-0523 WTE**

### **DEMOLISH AND REMOVE CONCRETE FOR THE RAISING OF CLANWILLIAM DAM PROJECT IN THE WESTERN CAPE FOR CONSTRUCTION SOUTH - CIDB CONTRACTOR GRADING DESIGNATION OF CIDB 8SE OR HIGHER**

#### **C1: AGREEMENT AND CONTRACT DATA**

##### **CONTENTS**

##### **C1.1 PRO FORMA FORM OF OFFER AND ACCEPTANCE**

##### **C.1.2 CONTRACT DATA**

##### **C 1.2.1 GENERAL CONDITIONS OF CONTRACT**

##### **C 1.2.2 SPECIAL CONDITIONS OF CONTRACT**

##### **C 1.2.3 CONTRACT SPECIFIC DATA**

##### **C1.3 PRO FORMA FORM OF GUARANTEE**



**FORM G – PRO FORMA FORM OF OFFER AND ACCEPTANCE**

**C1.1 PRO FORMA FORM OF OFFER AND ACCEPTANCE - RENDERING OF SERVICES (as per GCC 2015)**

**OFFER**

The Employer, identified in the acceptance signature block, has solicited offers to enter into a contract in respect of the following works:

**DEMOLISH AND REMOVE CONCRETE FOR THE RAISING OF CLANWILLIAM DAM PROJECT IN THE WESTERN CAPE FOR CONSTRUCTION SOUTH - CIDB CONTRACTOR GRADING DESIGNATION OF CIDB 8SE OR HIGHER**

The Tenderer, identified in the Offer signature block below, has examined the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, and by submitting this Offer has accepted the Conditions of Tender.

By the representative of the Tenderer, deemed to be duly authorised, signing this part of this Form of Offer and Acceptance, the Tenderer offers to perform all of the obligations and liabilities of the Contractor under the Contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the Conditions of Contract identified in the Contract Data.

**THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VALUE ADDED TAX IS**

.....

.....Rand (in words); R ..... (in figures)

This Offer may be accepted by the Employer by signing the Acceptance part of this Form of Offer and Acceptance and returning one copy of this document to the Tenderer before the end of the period of validity stated in the Tender Data, whereupon the Tenderer becomes the party named as the Contractor in the Conditions of Contract identified in the Contract Data.

**For the Tenderer:**

**Signature(s):** \_\_\_\_\_

**Name(s):** \_\_\_\_\_

**Capacity:** \_\_\_\_\_

**Date:** \_\_\_\_\_

# FORM G



**Name and address of organisation:**

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**Signature and names of witness:**

**Signature(s):** \_\_\_\_\_

**Name(s):** \_\_\_\_\_

**Capacity:** \_\_\_\_\_

**Date:** \_\_\_\_\_

## **ACCEPTANCE**

By signing this part of this Form of Offer and Acceptance, the Employer identified below accepts the Tenderer's offer. In consideration thereof, the Employer shall pay the Contractor the amount due in accordance with the Conditions of Contract identified in the Contract Data. Acceptance of the Tenderer's offer shall form an agreement, between the Employer and the Tenderer upon the terms and conditions contained in this Agreement and in the Contract that is the subject of this Agreement.

The terms of the contract, are contained in

- Part T1: Tender Data
- Part T2: Returnable Schedules and Documents
- Part C1: Contract Data
- Part C2: Pricing Data
- Part C3: Scope of Work
- Part C4: Site Information

and drawings and documents or parts thereof, which may be incorporated by reference into Part T1 to Part C4 above.

# FORM G



Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules as well as any changes to the terms of the Offer agreed by the Tenderer and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Agreement. No amendments to or deviations from said documents are valid unless contained in this Schedule, which must be duly signed by the authorised representative(s) of both parties.

The Tenderer shall within two weeks after receiving a completed copy of this Agreement, including the schedule of deviations (if any), contact the Employer's agent (whose details are given in the Contract Data) to arrange the delivery of any bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the Conditions of Contract identified in the Contract Data at, or just after, the date this Agreement comes into effect. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this Agreement.

Notwithstanding anything contained herein, this Agreement comes into effect on the date when the Tenderer receives one fully completed original copy of this document, including the schedule of deviations (if any). Unless the Tenderer (now Contractor) within five days of the date of such receipt notifies the Employer in writing of any reason why he cannot accept the contents of this Agreement, this agreement shall constitute a binding contract between the parties.

**For the Employer:**

**Signature(s):** \_\_\_\_\_

**Name(s):** \_\_\_\_\_

**Capacity:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Name and address of organisation:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# FORM G



**Signature and names of witness:**

**Signature(s):** \_\_\_\_\_

**Name(s):** \_\_\_\_\_

**Capacity:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**SCHEDULE OF DEVIATIONS**

Notes:

1. The extent of deviations from the tender documents issued by the Employer prior to the tender closing date is limited to those permitted in terms of the Conditions of Tender;
2. A Tenderer's covering letter shall not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid become the subject of agreements reached during the process of, offer and acceptance, the outcome of such agreement shall be recorded here;
3. Any other matter arising from the process of offer and acceptance either as a confirmation, clarification or change to the tender documents and which it is agreed by the Parties becomes an obligation of the contract shall also be recorded here;
4. Any change or addition to the tender documents arising from the above agreements and recorded here, shall also be incorporated into the final draft of the Contract.

1. **Subject:** \_\_\_\_\_

Details \_\_\_\_\_

2. **Subject:** \_\_\_\_\_

Details \_\_\_\_\_

By the duly authorised representatives signing this Agreement, the Employer and the Tenderer agree to and accept the foregoing schedule of deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the Tender schedules, as well as

# FORM G



any confirmation, clarification or change to the terms of the offer agreed by the Tenderer and the Employer during this process of offer and acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the Tenderer of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this Agreement.

## FOR THE TENDERER:

## FOR THE EMPLOYER

\_\_\_\_\_

Signature(s)

\_\_\_\_\_

\_\_\_\_\_

Name(s)

\_\_\_\_\_

\_\_\_\_\_

Capacity

\_\_\_\_\_

Name and address of organisation

Name and address of organisation

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Witness signature

\_\_\_\_\_

\_\_\_\_\_

Witness Name

\_\_\_\_\_

\_\_\_\_\_

Date

\_\_\_\_\_

## **C1.2 CONTRACT DATA**

### **C1.2.1 GENERAL CONDITIONS OF CONTRACT**

The Contract shall be governed by the "General Conditions of Contract for Construction works, Third Edition, 2015, published by the South African Institution of Civil Engineering, Private Bag X200, Halfway House, 1685 and is obtainable from [www.saice.org.za](http://www.saice.org.za). It is supplemented with the Special Conditions of contract for the GCC and the Contract Data for GCC.

The only variations from these General Conditions of Contract shall be given in the Special conditions of Contract below. Whenever there is a conflict, the provisions in the Special Conditions and contract specific data of Contract shall prevail.

### **C1.2.2 SPECIAL CONDITIONS OF CONTRACT**

#### **C1.2.2.1 GENERAL**

These Special Conditions of Contract (SCC) form an integral part of the Contract. The Special Conditions of Contract shall amplify, modify or supersede, as the case may be, to the extent specified below, and shall take precedence and shall govern.

#### **C1.2.2.2 AMENDMENT TO THE GENERAL CONDITIONS OF CONTRACT FOR CONSTRUCTION WORKS. (3rd Edition 2015) (GCC)**

The clauses of the Special Conditions hereafter are numbered "SCC" followed in each case by the number of the applicable clause or sub clause in the General Conditions of Contract for Construction Works (3rd Edition 2015), and the applicable heading. A new special condition, that has no relation to the existing clauses, is introduced by a number that follows after the last clause number in the General Conditions, and an appropriate heading.

The pro forma annexures included in the General Conditions of Contract for Construction Works (3rd Edition 2015) are deleted for the purpose of this Contract and are replaced with the forms bound into this document

#### **SCC 1(1) Definitions**

The definitions contained in Clause 1(1) are hereby amended and/or supplemented as follows:

SCC 1.1.1 In the contract defined as:  
**DWS05-0523 WTE**

**DEMOLISH AND REMOVE CONCRETE FOR THE RAISING OF CLANWILLIAM DAM PROJECT IN THE WESTERN CAPE FOR CONSTRUCTION SOUTH - CIDB CONTRACTOR GRADING DESIGNATION OF CIDB 8SE OR HIGHER**

the following words and expressions shall have the meanings hereby assigned to them except where the context otherwise requires:

SCC1.1.1.15 "Employer" means the Department of Water and Sanitation acting on behalf of the Government of the Republic of South African and shall include the Employer's duly authorised representative.

SCC1.1.1.16 "Employers Agent" means Contract Manager Department of Water and Sanitation: Construction South or any other person appointed from time to time by him and notified in writing to the Contractor.

SCC 6.5 Day works: Delete in entirety

- SCC 8.6.1 Change paragraph to read “Except if provided otherwise in the Contract Data, the Contractor, without limiting his obligations in terms of the Contract, shall as part of the documentation required before commencing with the works in accordance with Clause 5.3.1, at his own cost, effect and maintain the following insurances in the name of the Contractor.”
- SCC 8.6.1.1 Delete
- SCC 8.6.1.1.1 Delete with sub-clauses
- SCC 8.6.1.3 Change paragraph to read “Liability insurance that covers the Contractor against its respective liability for the death of, or injury to any person, or loss of, or damage to property arising from or in the course of the fulfilment of the Contract, from the Commencement Date to the issue of the Certificate of Completion for a limit of indemnity covering the risks of the Contractor for an amount not less than stated in the Contract Data.”
- SCC 8.6.7 Delete

## C1.2.3 CONTRACT SPECIFIC DATA

The General Conditions of Contract for Construction Works, Third Edition, 2015 published by the South African Institution of Civil Engineering, Private Bag X200, Halfway House, 1685, is applicable to this Contract and copies of these Conditions of Contract may be obtained from the South African Institution of Civil Engineering (Tel 011 805 5947), [www.saice.org.za](http://www.saice.org.za).

The General Conditions of Contract make several references to the Contract Data for specific data, which together with these conditions collectively describe the risks, liabilities and obligations of the contracting parties and the procedures for the administration of the Contract. The Contract Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the General Conditions of Contract.

The following contract specific data, referring to the General Conditions of Contract for Construction Works Third Edition (2015), are applicable to this Contract:

### PART 1 COMPULSORY DATA PROVIDED BY THE EMPLOYER

Clause	Description	Information
1.1.1.13	Defects and liability period	12 Months
1.1.1.14	The time for practical Completion	42 Months from commencement date
1.1.1.15	The name of Employer	Department of Water and Sanitation
1.2.1.2	The address of the Employer	Department of Water and Sanitation Private Bag X313 Pretoria 0001 Email: <a href="mailto:Bidenquirieswte@dws.gov.za">Bidenquirieswte@dws.gov.za</a>
1.1.1.16	The name of the Employers Agent.	Contract Manager - Department of Water and Sanitation - Construction South
1.2.1.2	The address of the Employers Agent.	Department of Water and Sanitation Construction South 4-6 Alkmaar Str. Paarl
1.1.1.26	The Pricing Strategy	Re-measurable
3.2.3	Specific approval of the Employer required	5.7.3 Acceleration 5.12.3 Extension of Time 6.3.1 Variations 9.1 Termination of Contract 9.2 Termination by Employer 10 Claims and Disputes
5.1.1.1	Special non-working days	1. Statuary holidays as declared by National or Regional Government. 2. Three weeks annual Builders holiday December to January (dates to be confirmed) 3. The last Friday of every month.

5.8.1	The non-working days	Sundays
5.3.1	The documentation required before commencement with works execution:	Health and Safety plan (Clause 4.3) Initial programme (Clause 5.6) Security (Clause 6.2) Insurance (Clause 8.6) Method Statements (as required by the applicable Specifications) Environmental Plan Other documents as specified in C3
5.3.2	The time to submit the documentation required before commencement with Works execution	28 days
5.4.2	The access and possession of the Site	Shall not be exclusive to the Contractor but as set out in the Site Information
5.13.1	The penalty for failing to complete the Works	R25 000,00 per working day
5.14.1	Requirements for practical completion	On submission and signed records and reports of scheduled work.
5.16.3	The latent defect period	10 years
6.2	Security	Security will be provided to the value of 10% of the contract value.
6.8.2	The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule with the following values: $(1 - x) \left[ \frac{aL_t}{L_o} + \frac{bP_t}{P_o} + \frac{cM_t}{M_o} + \frac{dF_t}{F_o} - 1 \right]$	x = 0,10 (Fixed) Values of coefficients are: a = 0.15 Labour b = 0.30 Contractors Equipment c = 0.45 Material d = 0.10 Fuel Total of all coefficients must equal 1.0
6.8.2	The definition and source of: "L <sub>t</sub> " is the "labour Index",  "P <sub>t</sub> " is the "Plant Index"  "M <sub>t</sub> " is the "Materials Index"	The Consumer Price Index for the urban area nearest to the Site, in the Western Cape Province, as stated in the Contract Data, and as published in the Statistical News Release, P0141, Additional Tables: Table A "CPI- all items according to area" of Statistics South Africa and published by SAFCEC from time to time.  Producer Price Index applicable to the appropriate Construction equipment as stated in the Contract Data and as published in the Statistical Release P0151.1, Plant (Civil) Table 4 of Statistics South Africa and published by SAFCEC from time to time.  Producer Price Index applicable to the appropriate materials as stated in the Contract Data and as published in the Statistical Release P0151.1, Material (Civil) Table 6 of Statistics South Africa

	"F <sub>t</sub> " is the Fuel Index	and published by SAFCEC from time to time. Producer Price Index for Diesel at wholesale level for the coastal area as stated in the Contract Data and as published in the Statistical Release P0142.1 Diesel Fuel Coastal, Table 1 of Statistics South Africa and published by SAFCEC from time to time.
6.8.2	The base month	The base month used for the calculation will be 30 days before the closing date of the bid.
6.5.1.2.3	The percentage allowance on the net cost of materials actually used in completed work	Should not exceed 15%
6.10.1.5	The percentage advance on materials not yet built into the Permanent Works	0%
6.10.3	The limit of retention money	<b>5%</b> of the Contract Value
8.6.1.1.2	Value of plant and materials supplied by the employer to be included in the insurance sum	0
8.6.1.1.3	Amount cover professional fees for repairing damage and loss to be included in the insurance sum	R 10 000 000,00
8.6.1.3	The limit of indemnity for liability insurance	R 250 000 000,00
10.5.3	The number of Adjudication Members to be appointed by the Contractor	Three (3)
10.7.1	The determination of disputes	Legal Process

<b>FORM H CONTRACT DATA</b>		
<b>C1.2 CONTRACT DATA</b>		
<b>PART 2: DATA PROVIDED BY THE CONTRACTOR</b>		
<b>Clause</b>	<b>Description</b>	<b>Information</b>
1.1.1.9	The name of the Contractor	
1.2.1.2	The address of the Contractor	Physical address:  Postal address:  E-mail address:
6.2.1	The security to be provided by the Contractor	Performance guarantee of 10% of Contract sum.
6.8.3	Price adjustments for variations in the costs of special materials are allowed	Special Material(s) Unit Rate ..... ..... ..... .....

(End of Section C1)



**C1.3 PRO FORMA PERFORMANCE GUARANTEE**

**Tender Reference No: .....**

**General Conditions of Contract for Construction Works, Third Edition (2015)**

**PRO FORMA  
PERFORMANCE GUARANTEE**

For use with the General Conditions of Contract for Construction Works, Third Edition (2015).

**GUARANTOR DETAILS AND DEFINITIONS**

"Guarantor" means: .....

Physical address: .....

"Employer" means: .....

"Contractor" means: .....

"Employer's Agent" means: .....

"Works" means: .....

"Site" means: .....

"Contract" means: The Agreement made in terms of the Form of Offer and Acceptance and such amendments or additions to the Contract as may be agreed in writing between the parties.

"Contract Sum" means: The accepted amount inclusive of tax of R .....

Amount in words: .....

"Guaranteed Sum" means: The maximum aggregate amount of R .....

Amount in words: .....

Type of Performance Guarantee: ..... (*Insert Variable or Fixed*)

"Expiry Date" means: ..... (*Give date*) or any other later date set by the

Contractor and/or Employer provided such instruction is received prior to the Expiry Date as indicated here.

**CONTRACT DETAILS**

Employer's Agent issues: Interim Payment Certificates, Final Payment Certificate and the Certificate of Completion of the Works as defined in the Contract.

**1. VARIABLE PERFORMANCE GUARANTEE**

1.1 Where a Variable Performance Guarantee has been selected, the Guarantor's liability shall be limited during the following periods to diminishing amounts of the Guaranteed Sum as follows:

1.1.1 From and including the date of signing the Performance Guarantee up to and including the date of the interim payment certificate certifying, for the first time, more than 50% of the Contract Sum:

R.....(Amount in words.....)

1.1.2 From the day following the date of the said interim payment certificate up to and including the Expiry Date, or the date of issue by the Employer's Agent of the Certificate of Completion of the Works, whichever occurs first:

R.....(Amount in words.....)

1.2 The Employer's Agent and/or the Employer shall advise the Guarantor in writing of the date on which the interim payment certificate certifying, for the first time, more than 50% of the Contract Sum, has been issued and the date on which the Certificate of Completion of the Works has been issued.

**2. FIXED PERFORMANCE GUARANTEE**

2.1 Where a Fixed Performance Guarantee has been selected, the Guarantor's liability shall be limited to the amount of the Guaranteed Sum.

2.2 The Guarantor's period of liability shall be from and including the date on which the Performance Guarantee is signed, up to and including the Expiry Date, or the date of issue by the Employer's Agent of the Certificate of Completion of the Works, or the date of payment in full of the Guaranteed Sum, whichever occurs first.

2.3 The Employer's Agent and/or the Employer shall advise the Guarantor in writing of the date on which the Certificate of Completion of the Works has been issued.

**3. CONDITIONS APPLICABLE TO VARIABLE AND FIXED PERFORMANCE GUARANTEES**

3.1 The Guarantor hereby acknowledges that:

3.1.1 Any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship.

3.1.2 Its obligation under this Performance Guarantee is restricted to the payment of money.

3.2 Subject to the Guarantor's maximum liability referred to in 1.1 or 2.1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 3.2.1 to 3.2.3:

3.2.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Employer's Agent in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 3.2.2;

3.2.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 3.2.1 and the sum certified has still not been paid;

3.2.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 3.2.

3.3 Subject to the Guarantor's maximum liability referred to in 1.1 or 2.1, the Guarantor undertakes to pay to the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee, such demand stating that:

3.3.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 3.3; or

- 3.3.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 3.3; and
- 3.3.3 the aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.
- 3.4 It is recorded that the aggregate amount of payments. required to be made by the Guarantor in terms of 3.2 and 3.3 shall not exceed the Guarantor's maximum liability in terms of 1.1 or 2.1.
- 3.5 Where the Guarantor has made payment in terms of 3.3, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Performance Guarantee shall bear interest at the prime overdraft rate of the Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.
- 3.6 Payment by the Guarantor in terms of 3.2 or 3.3 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
- 3.7 Payment by the Guarantor in terms of 3.3 will only be made against the return of the original Performance Guarantee by the Employer.
- 3.8 The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may consider fit and the Guarantor shall not have the right to claim his release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.
- 3.9 The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.
- 3.10 This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 1.1.2 or 2.2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.
- 3.11 This Performance Guarantee, with the required demand notices in terms of 3.2 or 3.3, shall be regarded as a liquid document for the purposes of obtaining a court order.
- 3.12 Where this Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrates' Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.

**Signed at:** .....

**Date:** .....

**Guarantor's signatory (1):** .....

**Capacity:** .....

**Guarantor's signatory (2):** .....

**Capacity:** .....

**Witness signatory (1):** .....

**Witness signatory (2):** .....



## **DEPARTMENT OF WATER AND SANITATION**

**DWS05-0523 WTE**

# **DEMOLISH AND REMOVE CONCRETE FOR THE RAISING OF CLANWILLIAM DAM PROJECT IN THE WESTERN CAPE FOR CONSTRUCTION SOUTH - CIDB CONTRACTOR GRADING DESIGNATION OF CIDB 8SE OR HIGHER**

## **C2 PRICING DATA**

### **CONTENTS**

**C2.1 PRICING INSTRUCTIONS**

**C2.2 BILL OF QUANTITIES**

## **C2.1 PRICING INSTRUCTIONS**

### **1. GENERAL**

The Bill of Quantities forms part of the Contract Documents and must be read and priced in conjunction with all the other documents comprising the Tender Documents which include the Conditions of Tender, Conditions of Contract, the Specifications (including the Project Specification), and the Drawings.

### **2. DESCRIPTION OF ITEMS IN THE SCHEDULE**

The Bill of Quantities has been drawn up generally in accordance with the Standards System of Measuring Builders work 6<sup>th</sup> Edition as an issue by the Association, which has been drawn up in accordance with the project and particular specifications.

The short descriptions of the items in the Bill of Quantities are for identification purposes only and the measurement and payment clause of the Standardised Specifications and each Particular Specification, read together with the relevant clauses of the Project Specification and directives on the drawings, set out what ancillary or associated work and activities are included in the rates for the operations specified.

### **3. QUANTITIES REFLECTED IN THE SCHEDULE**

The quantities given in the Bill of Quantities are estimated quantities only and will be subject to re-measuring during the execution of the work. Where quantities or sums are indicated as "Provisional, the Employer reserves the right to adjust the quantity or sum upwards or downwards as necessary, or the item can be omitted altogether. The Contractor shall obtain the Employers Agent's detailed instructions for all work before ordering any materials or executing work or making arrangements for it.

The Works as finally completed in accordance with the Contract shall be measured and paid for as specified in the Bill of Quantities, and the contract price for the completed contract shall be computed at the relevant unit rates and prices, all in accordance with the General and Special Conditions of Contract, the Specifications and Project Specifications, and the Drawings, et.. Unless otherwise stated, items are measured net in accordance with the Drawings, and no allowance has been made for waste.

The validity of the contract will in no way be affected by differences between the quantities in the Bill of Quantities and the quantities finally certified for payment.

### **4. PRICING OF THE SCHEDULE**

The prices and rates to be inserted by the Tenderer in the Bill of Quantities shall be the full inclusive prices to be paid by the Employer for the work described under the several items, and shall include full compensation for all costs and expenses that may be required in and for the completion and maintenance during the defects liability period of all the work described and as shown on the drawings as well as all overheads, profits, incidentals and the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the Tender is based. Reasonable unit rates and prices shall be entered in the Bill of Quantities as these will be used for the assessment of payment for any additional work that may have to be carried out.

Each item shall be priced and extended to the "Total" column by the Tenderer, with the exception of the items for which "rate only" is required or items which already have Prime Cost or Provisional Sums affixed thereto. If the Contractor omits to price any items in the Bill of Quantities, then these items will be considered to have a nil rate or price.

All items for which terminology such as "inclusive" or "not applicable" have been added by the Tenderer will be regarded as having a nil rate which shall be valid irrespective of any change in quantities during the execution of the Contract.

All rates and amounts quoted in the Bill of Quantities shall be in Rand and shall include all levies and taxes (other than VAT). VAT will be added in the summary of the Bill of Quantities.

### **5. CORRECTION OF ENTRIES**

Incorrect entries shall not be erased or obliterated with correction fluid but must be crossed out neatly. The correct figures must be entered above or adjacent to the deleted entry, and the alteration must be initialled by the Tenderer.

## 6. MONTHLY PAYMENTS

Unless otherwise specified in the Specifications and Project Specifications, progress payments in Interim Certificates, referred to in Clause 6.10 of the General Conditions of Contract 2015 (Third edition), in respect of "sum" items in the Schedule of Quantities shall be by means of interim progress instalments assessed by the Employers Agent and based on the measure in which the work actually carried out relates to the extent of the work to be done by the Contractor.

## 7. UNITS OF MEASUREMENT

The units of measurement described in the Bill of Quantities are metric units for which standard international abbreviations are used. Abbreviations used in the Bill of Quantities, including some non-standard abbreviations, are as follows:

Non-Standard Abbreviations	
%	percent
No.	number
Prov sum	Provisional sum
R/only	Rate only
sum	lump sum
Standard Abbreviations	
kPa	kilopascal
m	metre
m <sup>2</sup>	square metre
m <sup>3</sup>	cubic metre
MN	meganewton
MN.m	meganewton-metre
MPa	megapascal
t	ton (1000 kg)

For the purpose of this Bill of Quantities, the following words shall have the meanings hereby assigned to them:

Unit:	The unit of measurement for each item of work
Quantity:	The number of units of work for each item.
Rate:	The agreed payment per unit of measurement.
Amount:	The product of the quantity and the agreed rate for an item.
Lump-sum:	An agreed amount for an item, the extent of which is described in the Bills of Quantities but the quantity of work of which is not measured in any units.

## 8. ARITHMETICAL ERRORS

Where there is a discrepancy between the amounts in figures and in words, the amount in words shall govern.

If a bill of quantities (or schedule of quantities or schedule of rates) applies and there is a discrepancy between the unit rate and the line-item total resulting from multiplying the unit rate by the quantity, the line item total shall govern and the rate shall be corrected. However, in exceptional cases where, in the opinion of the Employer, there is an obviously gross misplacement of the decimal point in either the unit rate or line total, or where the error was obviously not a result of incorrect arithmetic but rather the result of a writing error, the Employer reserves the right to correct either the tendered rate or the line total as the case may be, subject to clarification in terms of SANS 10845 -3 Clause 4.10.

Where there is an error in the total of the prices, either as a result of other corrections required by this checking process or in the Tenderer's addition of prices, the total of the prices shall be adjusted to obtain the correct tender value.

DEPARTMENT OF WATER AND SANITATION

DWS05-0523 WTE



DEMOLISH AND REMOVE CONCRETE FOR THE RAISING OF CLANWILLIAM D- CIDB  
 CONTRACTOR GRADING DESIGNATION OF CIDB 8SE OR HIGHER AM PROJECT IN  
 THE WESTERN CAPE FOR CONSTRUCTION SOUTH

C2.2 BILL OF QUANTITIES

SBD 3.2

PRICING SCHEDULE – NON-FIRM PRICES  
 (PURCHASES)

NOTE: PRICE ADJUSTMENTS WILL BE ALLOWED AT THE PERIODS AND TIMES SPECIFIED  
 IN THE BIDDING DOCUMENTS.

IN CASES WHERE DIFFERENT DELIVERY POINTS INFLUENCE THE PRICING, A SEPARATE  
 PRICING SCHEDULE MUST BE SUBMITTED FOR EACH DELIVERY POINT

Name of Bidder.....	Bid number: <b>DWS05-0523 WTE</b>
Closing Time 11:00 .....	Closing date : <b>02 June 2023</b>

1. OFFER TO BE VALID FOR 120 DAYS FROM CLOSING DATE OF BID

ITEM NO	PAY REF	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>A1 - FIXED-CHARGE ITEMS (CWD 01 SC 5.3)</b>						
A1	10	CWD01SC 5.3.1	Establishment of Facilities for Contractor on Site.	Sum	1	.....
A1	20	CWD01SC 5.3.2	Removal of Site Establishment (final de-establishment of facilities etc.)	Sum	1	.....
A1	30	CWD01SC 5.3.3	Temporary de-establishment (de-establishment after a specific part of the works is demolished -See PS2.1 General)	Sum	4	.....
A1	40	CWD01SC 5.3.4	Re-establishment after temporary de-establishment (establishment for the next part of the works to be demolished - See PS2.1 General )	Sum	4	.....
<b>Sub Total A1 forward to Summary:</b>						.....

ITEM NO	PAY REF	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>A2 - TIME-RELATED ITEMS (CWD01SC 5.4)</b>						
A2	10	CWD01SC 5.4.1	Health and Safety and Environment	Sum	1	.....
A2	20	CWD01SC 5.4.2	Supervision for Duration of Contract	Sum	1	.....
<b>Sub Total A2 forward to Summary:</b>						.....

ITEM NO	PAY REF	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>SECTION B: Demolishing and Removal of Spillway</b>						
B	10	CWD01SC 5.2 & PS 2.1	Vertical Crest Gates	Nr	13	.....
B	20	CWD01SC 5.2 & PS 2.1	Existing Piers	m <sup>3</sup>	905	.....
B	30	CWD01SC 5.2 & PS 2.1	Existing Robert Splitters & Steps	m <sup>3</sup>	505	.....
B	40	CWD01SC 5.2 & PS 2.1	Bridge Deck and Balustrades	m <sup>3</sup>	520	.....
B	50	CWD01SC 5.2 & PS 2.1	Mechanical Equipment	-	-	Sum
B	60	CWD01SC 5.2 & PS 2.1	Existing concrete between Block 9 and 7	m <sup>3</sup>	31	.....
B	70	CWD01SC 5.2 & PS 2.1	Training Walls	m <sup>3</sup>	420	.....
<b>Sub Total B forward to Summary:</b>						.....

ITEM NO	PAY REF	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>SECTION C: Demolishing and Removal Block 23 ( Refer Drg CWD 1351 &amp; CWD 1352)</b>						
C	10	CWD01SC 5.2	Demolishing of existing apron	m <sup>3</sup>	Rate Only	..... Rate Only
<b>Sub Total (C) forward to Summary:</b>						.....

ITEM NO	PAY REF	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>SECTION D: Demolishing and Removal Hydro-power Plant (Refer Drg CWD 4589)</b>						
D	10	<b>CWD01SC 5.2</b>	Hydropower Plant	m <sup>3</sup>	600	.....
<b>Sub Total (D) forward to Summary:</b>						.....

ITEM NO	PAY REF	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>SECTION E: Demolishing and Removal Spillway: Concrete Apron (Refer Drg CWD 2104)</b>						
E	10	<b><u>CWD01SC 5.2</u></b>	Block 23	m <sup>3</sup>	550	.....
<b>Sub Total (E) forward to Summary:</b>						.....

ITEM NO	PAY REF	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>SECTION F - Provisional Sums</b>						
PS 1		Instructions by Employers Agent	Prov. Sum	1	10 000 000	10 000 000
PS 2		Percentage Mark up on PS 1	%	1	.....	.....
<b>Sub Total (F) forward to Summary:</b>						.....

**SUMMARY OF BILL OF QUANTITIES**

<b>ITEM NO</b>	<b>PAY REF</b>	<b>DESCRIPTION</b>	<b>AMOUNT</b>
A1	CWD01SC 5.3 & CWD01SC 5.4	FIXED CHARGES (SUB TOTAL A1)	.....
A2	CWD01SC 5.3 & CWD01SC 5.4	TIME RELATED CHARGES (SUB TOTAL A2)	.....
<b>SUB TOTAL Section A (A1+A2):</b>			.....
B	CWD01SC 5.2	DEMOLISING AND REMOVAL (SUB TOTAL B)	.....
C	CWD01SC 5.2	DEMOLISING AND REMOVAL (SUB TOTAL C)	RATE ONLY
D	CWD01SC 5.2	DEMOLISING AND REMOVAL (SUB TOTAL D)	.....
E	CWD01SC 5.2	DEMOLISING AND REMOVAL (SUB TOTAL E)	.....
<b>SUB TOTAL Section (B+C+D+E):</b>			.....
F	<b>PROVISIONAL SUMS (SUB TOTAL F):</b>		.....
G	<b>SUB TOTAL FOR TOTAL A + B + C + D + E + F</b>		.....
H	<b>15 % CONTINGENCIES ON SUB TOTAL G</b>		.....
I	<b>SUB TOTAL I (G+H)</b>		.....
J	<b>20 % ESCALATION ON SUB TOTAL I</b>		.....
K	<b>SUB TOTAL K (I+J)</b>		.....
		<b>15 % VAT</b>	.....
		<b>TOTAL</b>	.....

**PRICE ADJUSTMENTS**

**A NON-FIRM PRICES SUBJECT TO ESCALATION**

- 1. IN CASES OF PERIOD CONTRACTS, NON-FIRM PRICES WILL BE ADJUSTED (LOADED) WITH THE ASSESSED CONTRACT PRICE ADJUSTMENTS IMPLICIT IN NON-FIRM PRICES WHEN CALCULATING THE COMPARATIVE PRICES
- 2. IN THIS CATEGORY PRICE ESCALATIONS WILL ONLY BE CONSIDERED IN TERMS OF THE FOLLOWING FORMULA:

$$(1 - x) \left[ \frac{aL_t}{L_o} + \frac{bP_t}{P_o} + \frac{cM_t}{M_o} + \frac{dF_t}{F_o} - 1 \right]$$

Where:

- X = Fixed 10% (0,10) of the original bid price. Is portion of the bid price remains firm, it is not subject to any price escalations.
- a = Factor of the bid price for Labour
- b = Factor of the bid price for Contractors Equipment
- c = Factor of the bid price for Material
- d = Factor of the bid price for Fuel

The total of the various factors “a”, “b”, “c”, “d” must add up to 100%

- “Lt”, “Pt” , “Mt” & “Ft” = Index figure obtained from a Statistics South Africa and published by SAFCEC from time to time **(As defined in C1.2.3 – Clause 6.8.2)**
- “Lo”, “Po” “Mo”, “Fo” = Index figures at time of bidding

- 3. The following index/indices must be used to calculate your bid price: **(As per C1.2.3 Contract data: THE INDICES BASED DATE WILL BE 30 DAYS BEFORE TENDER CLOSING DATE- CLAUSE 6.8.2)**

Index Lo = ..... Dated.....  
 Index Po = ..... Dated.....  
 Index Mo = ..... Dated.....  
 Index Fo = ..... Dated.....

- 4. FURNISH A BREAKDOWN OF PRICE IN TERMS OF ABOVE-MENTIONED FORMULA. THE TOTAL OF THE VARIOUS FACTORS MUST ADD UP TO 100%.

FACTORS (“a”, “b”, “c” & “d”)	PERCENTAGE OF BID PRICE
a	15%
b	30%
c	45%
d	10%
<b>TOTAL</b>	100%

**B PRICES SUBJECT TO RATE OF EXCHANGE VARIATIONS**

1. Please furnish full particulars of your financial institution, state the currencies used in the conversion of the prices of the items to South African currency, which portion of the price is subject to rate of exchange variations and the amounts remitted abroad.

<b>PARTICULARS OF FINANCIAL INSTITUTION</b>	<b>ITEM NO</b>	<b>PRICE</b>	<b>CURRENCY</b>	<b>RATE</b>	<b>PORTION OF PRICE SUBJECT TO ROE</b>	<b>AMOUNT IN FOREIGN CURRENCY REMITTED ABROAD</b>
				ZAR=		
				ZAR=		
				ZAR=		
				ZAR=		
				ZAR=		
				ZAR=		

2. Adjustments for rate of exchange variations during the contract period will be calculated by using the average monthly exchange rates as issued by your commercial bank for the periods indicated hereunder: (Proof from bank required)

<b>AVERAGE MONTHLY EXCHANGE RATES FOR THE PERIOD:</b>	<b>DATE DOCUMENTATION MUST BE SUBMITTED TO THIS OFFICE</b>	<b>DATE FROM WHICH NEW CALCULATED PRICES WILL BECOME EFFECTIVE</b>	<b>DATE UNTIL WHICH NEW CALCULATED PRICE WILL BE EFFECTIVE</b>



## **DEPARTMENT OF WATER AND SANITATION**

**DWS05-0523 WTE**

# **DEMOLISH AND REMOVE CONCRETE FOR THE RAISING OF CLANWILLIAM DAM PROJECT IN THE WESTERN CAPE FOR CONSTRUCTION SOUTH - CIDB CONTRACTOR GRADING DESIGNATION OF CIDB 8SE OR HIGHER**

## **C3: SCOPE OF WORKS**

### **CONTENTS**

**C3.1 STANDARD SPECIFICATION**

**C3.2 PROJECT SPECIFICATION**

**C3.3 PARTICULAR SPECIFICATIONS**

**C3.4 VARIATIONS AND ADDITIONS TO SPECIFICATIONS**

## **C3.1 STANDARD SPECIFICATION**

### **SS 1 APPLICABLE STANDARD SPECIFICATIONS**

In the event of any discrepancy between a part or parts of the Standardised or Particular Specifications and the Project Specifications, the Project Specifications and Particular Specifications shall take precedence. In the event of a discrepancy between the Specifications, (including the Project Specifications) and the drawings and / or the Bill of Quantities, the discrepancy shall be resolved by the Employers Agent before the execution of the work under the relevant item.

The applicable standard specifications are mentioned in the Project Specification and Particular specification.

List of Standard Specifications applicable, but not, limited to:

- SANS 10400
- SANS 1200 C (where applicable)

(All work shall be done in accordance with the specifications listed in the Project Specification, the Particular Specifications and Drawings.)

## **C3.2 PROJECT SPECIFICATION**

### **CONTENT**

- PS 1 DESCRIPTION OF THE PROJECT**
- PS 2 SCOPE OF THE WORK**
  - PS 2.1 General
  - PS 2.2 Demolition / Removal
- PS 3 THE SITE**
  - PS 3.1 Location and access to site
  - PS 3.2 Weather
  - PS3.3 General Geological Conditions
- PS 4 FACILITIES PROVIDED BY EMPLOYERS AGENT to CONTRACTOR**
  - PS 4.1 Contractors Yard
- PS 5 FACILITIES PROVIDED BY CONTRACTOR FOR WORKS**
  - PS 5.1 Electrical Power and Distribution
  - PS 5.2 Water Supply
  - PS 5.3 Communications
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  - PS 5.5 Storing of Explosives
  - PS 5.6 Resting and eating areas
  - PS 5.7 Sanitation and cleaning
  - PS 5.8 Access control and security
- PS 6 WORKING TIMES**
  - PS 6.1 Standard Official Working Times
  - PS 6.2 Work at Night
  - PS 6.3 Sunday Working
  - PS 6.4 Last Friday of Month
- PS 7 CLIMATIC CONDITIONS**
  - PS 7.1 Rainfall data
  - PS 7.2 Extension of time arising from abnormal rainfall
- PS 8 PROGRAMMING REQUIREMENTS**
  - PS 8.1 Tendered Contract Programme
  - PS 8.2 Contract Programme Maintenance and Progress Monitoring
  - PS 8.3 Progress Meetings
- PS 9 CONSTRUCTION MATTERS**
  - PS 9.1 General Responsibilities
  - PS 9.2 Contractors Methods and Materials
  - PS 9.3 Quality Management
  - PS 9.4 Competence of Workmen
  - PS 9.5 Contractor's Returns
- PS 10 LOCAL SOCIO-ECONOMIC DEVELOPMENT PARTICIPATION OBJECTIVES**
  - PS 10.1 Appointment of Labour
  - PS 10.2 Local Procurement
  - PS10.3 Training and Skills Development
- PS 11 HEALTH AND SAFETY**
  - PS 11.1 General
  - PS 11.2 Audits
  - PS 11.3 Works Health and Safety Committee
  - PS 11.4 Health and Safety Officers

- PS 11.5 First Aid Provisions
- PS 11.6 Accident Reporting
- PS 11.7 Workman's Compensation Act

**PS 12. ENVIRONMENTAL REQUIREMENTS**

- PS 12.1 General
- PS 12.2 Temporary Services and Facilities
- PS 12.3 Protection of Rivers, Streams and Watercourses
- PS 12.4 Refuse and Waste Control
- PS 12.5 Protection of Flora
- PS 12.6 Protection of the Fauna
- PS 12.7 Preservation of Topsoil
- PS 12.8 Erosion Control and Storm water Management

**PS 13. INFORMATION TO BE SUBMITTED BY CONTRACTOR**

## C3.2 PROJECT SPECIFICATION

The applicable Project Specification is as follows:

Olifants-Doorn River Water Resources Project (ODRWRP)  
Raising Of Clanwilliam Dam - Volume 3: C3.2  
Project Specification  
(Will be provided in electronic format.)

All work shall be done in accordance with the specifications listed in the Project Specification, the Particular Specifications and Drawings.

### PS 1. DESCRIPTION OF THE PROJECT

The raising of Clanwilliam Dam, which will be the first phase of the Olifants-Doorn River. Water Resources Project (ODRWRP), will increase the yield of the dam by about 70 Mm<sup>3</sup> per annum to augment the water supplies to the Olifants River irrigation scheme situated in the north-western part of the Western Cape province, as well as to assist in the development of resource-poor farmers.

Clanwilliam Dam is located on the Olifants River, in the Western Cape, approximately 2 km South West of the town of Clanwilliam. The original dam was constructed in 1932-1935 (38m high from the base). The existing structure is a concrete gravity dam, consisting of a controlled ogee gravity spillway with 13 vertical crest gates. The length of the wall is 255 m. The total spillway length is 117,58 m, including the piers between the gates. The dam was raised in 1964 with vertical crest gates. Tensioned cables were supplied to ensure stability of the dam wall.

Currently, water is released downstream via the Olifants River to Bulshoek Weir from where the water is diverted into the dilapidated irrigation canal situated on the left bank. Water is also released from the existing outlet works situated on the right bank into an irrigation canal situated on the right bank, to the pump station on the right bank supplying water to the town of Clanwilliam, and to the hydropower plant situated downstream on the right bank.

The feasibility investigation for raising the dam was completed at the end of 2007 and the Record of Decision (ROD) was issued on 12 May 2009 by the Department of Environmental Affairs. Approval by the Minister for raising the dam by 13 m was issued on 18 August 2010.

In order to comply with current dam safety standards, the Department of Water and Sanitation is also required to implement remedial measures with the raising in the height of the dam wall.

The raised dam wall will be approximately 370 m in length and 49 m in maximum height. At full supply level the reservoir will cover a surface area of approximately 2 022 ha and capacity of 344,3 million cubic metre. The works include addition of concrete on the downstream side, extending the apron, construction of a free standing intake tower, river outlet control house, a power generating house, short tunnel and coffer dam works on the upstream side, as well as various other pipe outlet structures on the downstream side. This work must be done without interfering with the day to day operation of the dam.

### PS 2. SCOPE OF THE CONTRACT

#### PS2.1 General

For the raising of the dam wall certain sections need to be demolished and removed safely, without interfering / damaging the integrity of the dam wall structure or the existing works. The sections to be demolished and removed is explained in **PS2.2" Demolition and removal"**.

See Figure 1 and 2 below for more clarity.



Figure 1 - All blocks in red to be demolished (See more detail under PS 2.2)

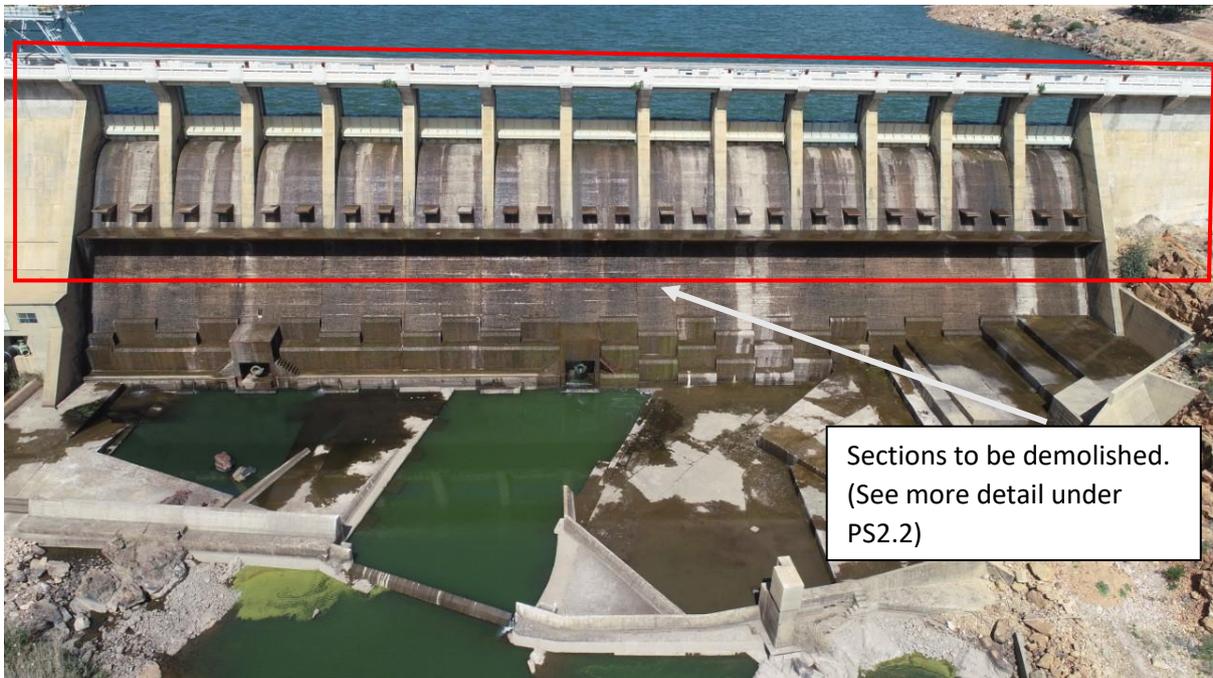


Figure 2 - Spillway and deck section to be demolished. (See more detail under PS 2.2)

The concrete to be demolished was manufactured from local sandstone and all sections are reinforced. Take note that there are no as built reinforcing drawings available and therefore no information is available on the loading of any beams and decks. The following suggested method and or combination of methods to be used, **but not limited to**, to safely demolished and remove of concrete sections are:

- Controlled drilling and blasting techniques
- Mechanical breaking
- High-pressure water jetting
- Concrete sawing; and/or
- Rope-cutting techniques.

If controlled drilling and blasting techniques are used and **pre-approved by the Engineer**, a trial blast will be required, With the trial blast a specification for the maximum allowable vibration can be compiled. See Particular Specification CWD 09 Blasting, paragraph CWD09.9

All sections need be demolished so that they are at maximum of 25mm proud of the existing concrete faces.

All these demolishing works was programmed with specific time periods. Prior arrangements will be made if any of the programmed works might require other (earlier) dates.

The quantities are to be considered and reasonable estimation of the expected work to be done under this contract.

The material to be removed must be spoiled on stockpiles on the upstream side of the embankment. The free haul of material from any point on the works to a disposal point within the 1.5 km radius of the left bank must be included in the rates (see Figure 3 and 4 as per illustration). All material must be smaller than 900mm so that it can be crushed in a crusher.



Figure 3 - Aerial photo from area that will be used for stock piling on upstream left bank embankment



Figure 4 - Overall aerial photo from dam wall and upstream left bank embankment stockpile area

No material whatsoever may be dumped or dropped at any stage directly upstream or downstream of the existing embankment. It will be expected of the Contractor to remove the material that falls even if it is in the water.

The method/s for the demolishing the concrete is for the Contractor to determine. This method/s must be set out in a detailed method statement. Any blasting to be carried out within 100m of any concrete regardless of age shall be done by means of non – explosive blasting techniques or by means of specially designed controlled blasting techniques. **All such blasting shall be designed to keep a recommended Peak Particle Velocities (PPV) to below 12.7m/s and the frequency above 10 HZ. Care being exercised not to damage any of the existing structures, which is to remain in position.** All blasting shall be done in sections and phases according to specification (CWD 09.9) and agreed with the Engineer. A method statement and a blasting plan will be submitted to the Engineer 14 days, before any blasting can commence. All waste material and rubble shall be disposed of as directed by the Engineer. Where the work being demolished contains reinforcement, care shall be exercised to keep the existing reinforcement intact

The contract will consist of one site establishment and four re-establishments to complete the contract. With the information in hand at the moment, it is envisaged that the works will be done in the order as set out below. The order / sequence of the work can change due to the seasonal changes. The detail of the work to be carried out under this contract includes, but is not limited to:

a) The Contractors' Site establishment:

- Including establishment of any equipment and all material required to do the work.
- Right Bank NOC: removal of upstream and downstream cantilevers, including concrete balustrades.
- Demolishing and removal of Block 23 at the right bank.
- Temporary de-establishment.

b) Re-establishment:

- Including establishment of any equipment and all material required to do the work.
- Demolishing and removal of the Hydropower Plant at right bank bottom of the dam wall.
- Demolishing of Apron.
- Demolishing of the Training Wall at the Right Bank.
- Temporary de-establishment.

c) Re-establishment:

- Including establishment of any equipment and all material required to do the work.
- The existing spillway is going to be reduced in size thus spillway blocks 10, 12 & 14 will be removed and will be incorporated in the Left NOC. The work entails: removal of the sill, splitters, piers, and bridge decks including balustrades.
- Demolishing of the Training wall at the Left Bank.
- Temporary de-establishment.

d) Re-establishment:

- Including establishment of any equipment and all material required to do the work.
- Left bank NOC: removal of the upstream and downstream cantilevers including balustrades. It must be noted that the work on the upstream side at the Inlet Tower will be in progress. The timing of the work will have to be coordinated with DWS to ensure that the work can be carried continuing whilst the balustrade is removed at the top.
- Temporary de-establishment.

e) Re-establishment:

- Including establishment of any equipment required to do work and all material required.
- Spillway: removal of the remaining sill, splitters, piers and the bridge decks, inclusive of the vertical bullnose. The bridge decks have concrete balustrades upstream and downstream.
- Permanent De-establishment.

## PS2.2 Demolition and removal

The following is a more specific description of the work to be carried out.

### Right Bank NOC Cantilever's

The freshly placed IV RCC concrete will have been placed to a level of  $\pm$ RL 105.0 – RL 108.0 on the downstream side of the embankment. This can then be used to get a working platform for the removal process. An earth ramp will be placed against the rollcrete by the Employer Agent allowing rough terrain vehicles to access RL105 level. Width of freshly placed concrete will be  $\pm$ 8m. This can then be used to get a working platform for the removal process.

There are two sections that need to be removed. See drawing "Cross section through Dam Wall - Sheet 1 of 3" (attached). These sections are in block lengths of a maximum 10.5m long, with a movement joint between the blocks. The joints used to be sealed on the top with a sealant. The top of the walkway is at RL 110.1

Upstream cantilever section, 1.815m wide x 66m long (plan). There are 8 beams as shown on the drawings that are an integral part of the slab and have to also be removed. The balustrade is 1.3m high.

Downstream cantilever section, 1.815m wide x 66m long. There are 8 beams as shown on the drawings that are an integral part of the slab and have to also be removed. The balustrade is 1.3m high.

## **Block 23**

Drawings CWD1351, CWD 1352 & CWD 0223 of this structure are attached. No as built drawings are available and therefore no information on the amount and type of reinforcing.

### **Hydro - Power Plant**

Layout drawing CWD4589 this structure is attached. No as built drawings are available and therefore no information on the amount and type of reinforcing.

### **Concrete Apron**

The existing apron needs to be demolished before foundation excavation can be done. The existing concrete needs to be removed in a phased approach, from which a slot is excavated and then backfilled with concrete.

### **Training Wall – Right Bank**

Bottom level of training wall closest to the Right Bank is at RL 79.24 and needs to be removed

### **Spillway Blocks 10, 12 & 14**

The access for this work will only be from the bridge deck for personnel and the rest from the ground level RL 85.0. The concrete that will have been placed on the downstream side will stand proud of the surrounding area as these will be three mass concrete blocks.

The concrete will be placed to a level of RL 92.00. Width of newly placed concrete will be  $\pm 14$ m. This can then be used to get a working platform for the removal process.

The following sections must then be removed, :but not limited to

- Sill for the width of the blocks: 28m
- Splitters: six total
- Bridge decks with balustrades both sides: four
- Piers for the bridge: three
- Training wall at Left Bank
- Upstream vertical Bullnose: 10m. This has to be flush with the rest of the concrete on the LHS NOC

The Employers Agent will remove the four mechanical gates.

An overhead tower crane will be in place on the Intake tower and any process that is used to remove concrete must not interfere with the crane movements. The under-hook height of the crane is at RL.135.00. Another Tower crane will be situated on the downstream side as well.

No ramp will be available to the top of the newly placed concrete.

### **Left Bank NOC Cantilever's**

The freshly placed IV RCC concrete will be placed to a level of  $\pm$ RL 105.0 – RL 108.0 on the downstream side of the embankment. Width of newly placed concrete will be  $\pm 8$ m. This can then be used to get a working platform for the removal process.

An overhead tower crane will be in place on the Intake Tower and Downstream. The process that is used to remove concrete must not interfere with the crane movements. The under-hook height of the crane downstream is at RL 135.0. This crane is for DWS only.

An access ramp for rough terrain vehicles will be constructed to the top of the freshly placed IV RCC concrete at RL 105.0 by the Employer Agent. The width of newly placed concrete will be 8m.

The construction of the Intake tower on the upstream side of the NOC will have started. A system will have to be agreed upon, where the safety of the workers working below can receive priority. Whilst work on the removal of the cantilever is carried out.

The work on the left bank NOC is similar to that on the right bank NOC.

Upstream cantilever section, 1.815m wide x 54m long (plan). There are 8 beams as shown on the drawings that are an integral part of the slab and have to also be removed. The balustrade is 1.3m high.

Downstream cantilever section, 1.815m wide x 54m long. There are 8 beams as shown on the drawings that are an integral part of the slab and have to also be removed. The balustrade is 1.3m high.

These sections are in block lengths of a maximum 9.15 m long, with a movement joint between the blocks. The joints used to be sealed on the top with a sealant. The top of the walkway is at RL 110.1.

### Remaining Spillway Blocks

The concrete will be placed to a level of RL 92.0. with a width of ±14m. This can then be used to get a working platform for the removal process.

The following sections must then be removed, but not limited to:

- Sill for the width of the blocks: 90.1m
- Splitters: 20
- Piers for the bridge: 10
- Bridge decks with balustrades both sides: 9
- Upstream vertical Bullnose: 10m. This has to be flush with the rest of the concrete on the RHS NOC

The remaining mechanical gates will then be removed by the Employers Agent. Access will only be from the downstream side of the works.

It must be noted that the bridge deck ( RL 110.11) furthest to the RHS will be in-cast into the concrete of the Right bank NOC (RL 124.75) and must be cut off or broken out when it is removed. The old concrete (RL105.23 – RL 110.11) at the original joint between Block 9 and Block 7 also needs to be removed with the pier.

No ramp will be available to the top of the newly placed concrete.

## PS 3. THE SITE

### PS 3.1 Location and access to site

The dam site is situated on the Olifants River, in the Western Cape, approximately 2 km South- West of Clanwilliam town in the Western Cape province.

The site is immediately next to the N7 and accessed through a controlled gate. The gravel site roads will be regularly maintained but could get challenging under abnormal rainfall conditions.

### PS 3.2 Weather Conditions

The Clanwilliam Dam site is situated in the Western Cape province in the winter rainfall region with hot summers and cold wet winters. Average summer maximum and minimum temperatures are in the order of 39°C and 11°C respectively. Corresponding winter temperatures are 31°C and 4°C.

Relevant detailed meteorological information was obtained for the site from Weather Station No 00846710 at Clanwilliam Dam, situated at RL 103 m. Average monthly minimum and maximum temperatures obtained from that station are listed in Table 1. These records will be used for tender purposes and will be compared to information from a weather station to be installed at the dam site before construction commence. The prevailing wind direction(s) is South East and North West.

Table 1: Average Minimum and Maximum Temperatures (°C) Measured at Clanwilliam

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max	41	40,5	39	37	32	27	26	29	33	35	40	41
Min	13,5	13	11	8	5	3	2	2,5	5	7	10	12

The Clanwilliam Dam catchment has a mean annual precipitation (MAP) of 575 mm. The area has a winter rainfall pattern.

Water levels in Clanwilliam Dam are fluctuating throughout the year. Below figure show the average dam levels in Clanwilliam Dam from January to December.

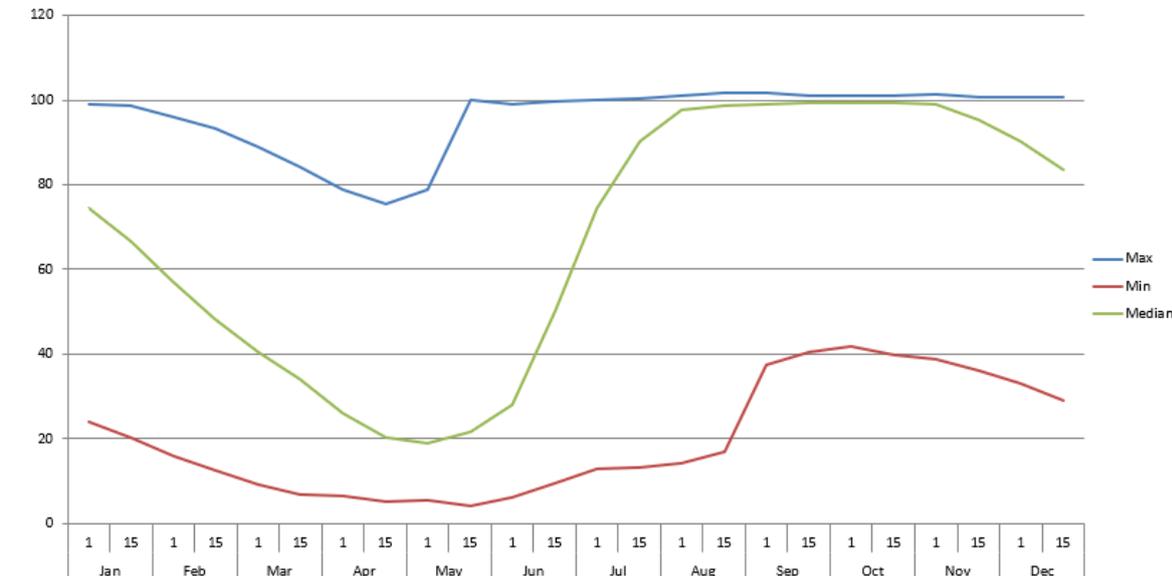


Figure: Average Water Levels in Clanwilliam Dam for January to December.

### PS 3.3 General Geological Conditions

The Clanwilliam Dam is underlain by the Skurweberg Formation, Nardouw Subgroup of the Table Mountain Group, which comprise of thickly bedded, medium to coarse grained sandstone. The dam is located in a major synclinal structure within the western arm of the Cape Fold Belt, which, apart from the history of deformation and folding, is also associated with large scale faulting.

The foundation geology comprises quartzitic sandstone which is characterised by minor interbedded siltstone horizons. The overall structure of the founding rock mass is governed by the bedding which, on the left flank and within the river section, dips at angles between 10° and 20° in a downstream direction, but on the right flank dips slightly out of the slope (also at shallow angles).

On the upper left flank, the rock mass is generally slightly weathered but highly weathered horizons are also present; the mid flanks are mainly slightly weathered, and the strata within the river section generally slightly to moderately weathered, hard rock to very hard rock. The right flank similarly mainly comprises slightly too moderately weathered strata. Numerous highly weathered, medium hard to soft rock and sandstone horizons also occur. The interbedded siltstone horizons typically comprise medium hard rock to soft or very soft rock and are even weathered to clay in places.

Packer (Lugeon) tests revealed the founding rock mass on the left flank to generally be impervious. Highly pervious zones were recognised within the river section, but the rock mass was otherwise impervious.

The right flank is characterised by a number of pervious zones as well as numerous total water losses. The Lugeon pattern further indicates wash-out, presumably relating to the weathered siltstone inter beds. Foundation grouting is necessary; curtain grouting will control foundation seepage as well as erosion of the siltstone inter beds while consolidation grouting of the footprint will contribute to improving the integrity of the founding rock mass and enhancing the stiffness.

For detail information see the Engineering Geological Reports for design of Clanwilliam Dam raising. (Will be provided in electronic format.)

## **PS 4. FACILITIES PROVIDED BY EMPLOYER'S AGENT to CONTRACTOR**

### **PS4.1 Contractors Yard**

A Storage area ,to the west of the N7 will be provided as part of the main site establishment area. If the Contractor requires more area or any other area it must be specified in his document and be negotiated with the Employers Agent.

The Employer's Agent will supply only potable water for human consumption. The Contractor must make arrangements for its own water distribution required in the performance of its duties.

## **PS 5. FACILITIES PROVIDED BY CONTRACTOR FOR WORKS**

### **PS5.1 Electrical Power and Distribution**

The Contractor shall make his own arrangements to provide his own power supply.

Failure or interruption of the power supply shall not relieve the Contractor of any of his obligations under the Contract.

### **PS5.2 Water Supplies**

The Contractor shall be responsible for making his own arrangements for the supply of water that they may require for their purposes. Water quality shall be as per clause CWD23.3.2. Subject to quality, water can be abstracted from the Olifants River. A record of abstraction must be kept on a daily basis and must be submitted on a monthly basis with Contractor's returns.

Failure or interruption of any source of water shall not relieve the Contractor of any of his obligations under the Contract.

### **PS5.3 Communications**

The Contractor shall make his own arrangement with regards to his required communication requirements.

### **PS5.4 Accommodation and Site Facilities**

The Contractor must supply his own offices, storage facilities and workshop. The Employer's Agent will indicate available area for site establishment.

The Contractor shall make his own arrangements for accommodation for his staff. No accommodation is allowed on the site in terms of the Environmental EMP. (Will be provided in electronic format)

### **PS5.5 Storing of Explosives**

No explosives may be stored on site.

### **PS5.6 Resting and eating areas**

The Contractor shall provide sufficient and suitably positioned areas for use by his workers on site during resting and eating periods. Sufficient refuge bins, tables and seating must be provided. Existing and new permanent structures for the raised dam wall may not be used as resting and eating areas.

### **PS5.7 Sanitation and cleaning**

The Contractor shall provide at or within 200m of each work place (As per EMP) chemical toilet facilities with toilet paper, potable water, soap and towels together with industrial soaps and barrier creams as appropriate. The Contractor shall maintain all toilet facilities in a clean and sanitary condition and shall take all necessary precautions to prevent pollution of the Site. The sewage will be disposed of at a registered disposal facility and the disposal certificate will be kept on record.

The Contractor shall ensure that there are adequate and sufficient refuse bins in and around the working area and that these shall be emptied frequently. All refuse bins shall be placed on a concrete base, which shall, from time to time, be sprayed with insecticide. All refuse collection, removal and disposal

on site shall be the responsibility of the Contractor. All refuse shall be disposed of at a licensed landfill site only, and certificates of receipt shall be kept on record.

The Contractor shall clear away and remove all traces of the toilets and restore the sites to their original condition as soon as the toilets are no longer required

#### **PS5.8 Access control and security**

The Employer's Agent will be responsible for access control and security for the site. The Contractor will abide by the access control measures. The Contractor is responsible for the safeguarding and protection of their own Contractor's yard, equipment and plant on site. The Employer's Agent does not take any liability for the Contractor in terms of security what so ever.

### **PS 6. WORKING TIMES**

#### **PS 6.1 Standard Official Working Times for Employers Agent**

Normal Working hours for the Employer's Agent is:

##### **October – March (Summer time)**

- Monday to Thursdays: 06:30 am – 16:15, and
- Friday's : 06:30 – 15:00

##### **April – September (Winter time)**

- Monday to Thursday: 7:00 to 16:45, and
- Friday 7:00 to 15:30

Normal Non - Working days for the Employer's Agent is:

- Every last Friday of the month
- Public Holidays and Sundays
- Builders recess from around 15<sup>th</sup> December till second Monday in January.

#### **PS 6.2 Work at Night**

No work will be permitted at night, whoever, the Contractor could be requested to perform work at night, with written permission. Responsible and qualified supervisory staff shall always be present and sufficient light must be available to conduct the work safely.

#### **PS 6.3 Sunday Working**

Sunday work shall not be permitted except for necessary maintenance, repairs and emergencies and shall only be undertaken with the prior written approval of the Employers Agent.

#### **PS 6.4 Last Friday of Month**

The last Friday of the month is regarded as the pay day of the Employer's Agent personnel. This is a non-working weekend for Employer's Agent personnel, and the Contractor will only be allowed to work with special permission on this day.

### **PS 7. CLIMATIC CONDITIONS**

#### **PS7.1 Rainfall data**

The rainfall data to be used for extension of time arising from abnormal rainfall is presented in the below table: rainfall record.

**Table: Rainfall Record**

Rainfall Station No:00846710 Clanwilliam

Period: 1992-2012

Month	AVE	STD DEV	N DAY RAIN	NUM MON	MAX R DAY	MAX RAIN DATE
January	0,0	0.26	0,05	19	13,8	5/1/2004
February	0,25	0.53	0.11	20	10,8	23/2/2010
March	0,45	0.89	0.14	20	29	26/3/1997
April	0,85	1.38	0.33	20	21.4	26/4/2007
May	2,05	3.05	0.76	19	25	8/5/1998
June	3,03	3.98	1.35	18	54.5	8/6/1997
July	2,67	3.23	1.05	18	29.4	26/7/2007
August	2,03	2.80	0.58	18	27.8	18/8/2003
September	0,95	1.35	0.37	18	11.5	12/9/1996
October	0,52	0.91	0.22	18	12.6	19/10/2011
November	0,67	1.16	0.21	18	29.4	8/11/2009
December	0,52	1.11	0.21	18	19.6	24/12/2007

Explanation of headings:

'AVE' represents the average rainfall for the month = R<sub>n</sub>

STD DEV' represents the standard deviation from the normal

'N DAY RAIN' represents the average number of rain days per month exceeding 10 mm = N<sub>n</sub>

'NUM MON' represents the number of months used in the calculation

'MAX R DAY' represents the maximum rainfall that occurred over a 24-hour period (08:00-08:00)

'MAX RAIN DATE' represents the date on which the maximum 24 hour rainfall occurred

**PS7.2 Extension of time arising from abnormal rainfall**

Extension of time in terms of the Conditions of Contract arising from abnormal rainfall shall be calculated separately for each calendar month or part thereof in accordance with the formula given below. It shall be calculated for the whole period until completion of the contract including any extension thereof:

$$V = (N_w - N_n) + (0,050 \times (R_w - R_n))$$

If V is negative and its absolute value exceeds N<sub>n</sub> then V shall be taken as equal to minus N<sub>n</sub>.

The symbols shall have the following meanings:

V = Extension of time in calendar days in respect of calendar month under consideration.

N<sub>w</sub> = Actual number of days during the calendar month on which a rainfall of 10 mm or more has been recorded.

R<sub>w</sub> = Actual rainfall in mm for the calendar month under consideration.

N<sub>n</sub> = Average number of days, as derived from existing rainfall records provided in Table 1.12.1, on which a rainfall of 10 mm or more has been recorded for the calendar month.

R<sub>n</sub> = Average rainfall in mm for the calendar month, as derived from the rainfall records supplied in Table 1.12.1

The total extension of time shall be the algebraic sum of the monthly totals for the period under consideration. Extensions of time for part of a month shall be calculated using pro rata values of N<sub>n</sub> and R<sub>n</sub>.

The factor (N<sub>w</sub> - N<sub>n</sub>) shall be considered to represent a fair allowance for variations from the average number of days during which rainfall exceeds 10 mm.

The factor 0,050 (R<sub>w</sub> - R<sub>n</sub>) shall be considered to represent a fair allowance for variations from the average in the number of days during which the rainfall does not exceed 10 mm but wet conditions prevented or disrupted work.

Accurate rain gauging shall be taken at the weather station to be supplied by the Employer's Agent at a suitable point on Site.

## **PS 8. PROGRAMMING REQUIREMENTS**

### **PS 8.1 Preliminary Tender Program**

**The Tenderer shall submit a preliminary programme in the form of a Gant chart with the tender. As per requirement in T2 – returnable schedules, Annexure M (for demolishing and removal of concrete).**

**A detailed program will be provided to the Tenderers at the compulsory site briefing session.**  
(Will be provided in electronic format.)

### **PS 8.2 Contract Programme Maintenance and Progress Monitoring**

A detail Contract Programme shall be developed using the latest version of Construction Computer Software for Windows or Microsoft Project for Windows or equal.

Five working days before the monthly progress meeting the Contractor shall submit to the Employers Agent a programme update that reflects the actual progress against current programmes and the effect on future activities.

The Contractor shall also submit a narrative report with each monthly update including a description of current and anticipated programme related problem areas, current and anticipated delaying factors and their impact, and an explanation of corrective actions taken or proposed.

All variances from the Contract Programme shall be promptly reported and the future impact of such variations shall be determined and analysed by the Contractor and necessary corrective measures established, subject to the approval of the Employer.

### **PS 8.3 Progress Meetings**

The Contractor will be required to attend regular site meetings with the Employers Agent where the progress of construction will be reviewed. Such meetings will normally be held monthly. The Contractor shall also attend weekly meetings with the Employers Agent and provide, prior to each meeting as required by the Employers Agent, detailed programmes showing separately the various activities of the Contractor anticipated over the forthcoming two-week period.

## **PS 9. CONSTRUCTION MATTERS**

### **PS9.1 General Responsibilities**

The Site and all services are under the control of the Employer's Agent and therefore the Employer expects the Contractor to liaise regularly with the Employer's Agent in order to ensure smooth execution and integration of activities with the Employer's Agent's activities.

Non-performance of the Employer's Agent shall not relieve the Contractor of any of his obligations under the Contract.

Due to the specialised nature of the Works the Employer's Agent shall ensure that qualified technical staff is available on site to carry out the necessary work. The Contractor must liaise in time with the Employer's Agent on his requirements.

The Construction Permit has been issued for the project in the Departments name and is thus not necessary for Contractor to apply for it.

### **PS9.2 Contractors Methods and Materials**

It is a requirement of this contract that final work procedures must be approved before the commencement of work. Method Statements to be approved by Employees Agent 14 days before any demolishing work can start, unless if otherwise instructed. Other method statements with full details concerning the methods, equipment and materials will be required for the following but not limited to:

- Demolishing of Concrete
- Removal of demolished concrete

The Tenderer shall submit a preliminary Method Statement (including, project program, equipment to be used, methodology to be followed, quality management plan, environmental, health and safety, but not limited to), with the tender. As per requirement in T2 – returnable schedules, Annexure M (for demolishing and removal of concrete).

### **PS9.3 Quality Management**

The Contractor shall be responsible under the Contract for the quality and testing of materials, workmanship and production processes in fulfilment of the Contract. The Contractor shall have a Quality Management system in place which details the following in order to satisfy the Specification relevant to each operation to the works in accordance with the Contract:

- Quality control procedures
- Personnel responsibilities
- Testing procedures, both on and off-site
- Equipment and calibration
- Frequency of testing, calibration, etc.
- Hold points in production for inspection
- Rejection and rectification procedures
- Documentation and communication
- Drawing issue procedures
- Drawing register

As much of the testing as is practicable shall be carried out on Site, including trial, acceptance and routine testing which is the responsibility of the Contractor, and any other tests as instructed by the Employers Agent for any additional investigations required from time to time during the course of the Contract.

### **PS9.4 Competence of Workmen**

The Contractor shall ensure that only competent personnel are employed in operations involving particular skills affecting the quality of the works. Should the competence of any member of the Contractor's workforce be in doubt, the Employers Agent may order that the member be sent for additional training at the Contractor's account and/or that member be replaced with a competent person to perform that work.

### **PS9.5 Contractor's Returns**

Records and returns shall be reported to the Employers Agent in an agreed format:

a) Weekly

The Contractor shall keep accurate daily records detailing work carried out on the works and shall submit them to the Employers Agent prior to the weekly progress meeting or at such other times as the Employers Agent may require. The records shall include the following for each Portion of the Works separately and in sufficiently detail to establish the person- hours and equipment hours expended:

- Extent of work done;
- The numbers of each category of workmen and supervising staff;
- The numbers and types of Contractor's Equipment used;

- The time and duration of any significant delays or breakdowns of any Contractor's Equipment; and
- Any other events relevant to progress of the works.

The Contractor shall also provide such further information as may be requested by the Employers Agent.

b) Day work and Similar Records

Records shall be kept daily of labour, materials and equipment where there is an agreement to pay by day works. Such records shall be valid only when signed by both parties.

In cases where there is any dispute or uncertainty on payment procedure, sheets shall be signed daily by both parties as an agreed record of work done but shall not imply any commitment concerning payment. These sheets shall be annotated "For record purposes only".

## **PS 10. LOCAL SOCIO-ECONOMIC DEVELOPMENT PARTICIPATION OBJECTIVES**

The following shall be applicable to this Contract as per particular specification CWD 68:

The Department of Water and Sanitation (DWS, also referred to as the "Employer") is committed to transformation within the construction industry and water sector through the optimisation of socio-economic benefits within its sphere of business influence in terms of the Broad-Based Black Economic Empowerment Act, (Act No. 53 of 2003). The general principles, upon which the implementation of the Olifants-Doorn River Water Resources Project (ODRWRP) is based, are:

1. Contribute to local and regional economic development by optimising the use of locally available skills, materials and resources - Local Socio-Economic Participation and Development (LSEPD);
2. Promote transformation, technology and skills transfer within the infrastructure development industry through employment creation, preferential procurement, enterprise development, training and skills development objectives - Socio-Economic Empowerment (SEE);
3. Ensure the project is implemented in a socially responsible and sustainable manner, and
4. Ensure economic access for Black people living in rural areas by incorporating them into the mainstream economy.

The Contractor must adhere to the minimum requirements and to report monthly on the implementation and compliance of the performance monitoring criteria of this specification (CWD68). The Employer will audit the Contractor's compliance to this specification and notify the Employer's Agent to direct the Contractor on any non-compliance.

The cost for all personnel recruitment/administration and training in respect to compliance of this specification shall form part of the SAFCEC rates.

### **PS 10.1 Appointment of Labour**

The Labour Desk which will be established by the Employer will be responsible for the recruitment of local labour. The Contractor shall advise the labour desk or CLC – Community liaison Committee in writing of the numbers of each category of temporary workers, which is required, and the period for which they are required.

The Contractor shall pay his employees and shall ensure that his Sub-contractors pay their employees rates of remuneration not less than prescribed by legislation and applicable to the area of the Works and shall observe conditions of employment which are no less favourable than those which are customary in the area in which the works are to be constructed for those trades and occupations involved in the fulfilment by the Sub-Contractor of his obligations under the Contract. The Sub-Contractor shall also practice and ensure that his Sub-contractors practice a policy of equal remuneration, conditions of employment and benefits for people of equal skills and productivity.

Local employment targets for local labour from designated groups to be comply with, as per CWD 68 (Table CWD68.4.1), is as follow:

Designated Groups	Skilled or permanent staff target (%)	Local labour minimum target (%)
Black people	75	90
Women	10	15
Youth	5	20
People with disabilities	2	1

### PS 10.2 Local Procurement

The Contractor is to support Enterprises and Business in the local Clanwilliam Town and in Municipality area, including the township and rural areas, for goods or services.

### PS 10.3 Training and Skills Development

The Employer is committed to the development of labour from the local area as well as elsewhere in SA. To achieve this objective, the Contractor shall implement a formal skills plan by following accredited SETA training programmes.

The Contractor is required to invest a minimum of 0,5% of the accepted Tender Amount on accredited SETA site training and development programmes.

**NOTE:** The Tenderer should acquaint themselves with the requirements of particular specification CWD 68. The Contractor will adhere to these requirements at all times thorough out the contact period.

## PS 11. HEALTH AND SAFETY

### PS 11.1 General

For this contract, the Employer's Agent will be the mandatory of the Employer (Client), as defined in the Act (OHSA 1993), which means that the Contractor, as an employer in his own right in respect of the contract, will be responsible for all the duties and obligations of an employer as set out in the Act (OHSA 1993) and the Construction Regulations 2003. Furthermore, the Contractor shall comply with any additional current statutory requirements of any relevant Government Departments regarding health and safety and specifically environmental health issues.

All work is to be carried out in accordance with the Occupational Health and Safety Act and Regulations (Act 85 of 1993) ( a copy of which must be kept on site), the explosive Material Act (Act 26 of 1956), the Minerals Act (Act of 1991), the Factories Machinery and Building Work Act (No 22 of 1941) and the Labour Act 1992.

Nothing specified in this document shall relieve the Contractor of any obligations or responsibilities with regard to health and safety responsibilities.

Where safety precautions are not being observed, the Employer's Agent may order the Contractor to comply with minimum safety requirements at the Contractor's expense, and compliance with such an order will not absolve the Contractor from any of his responsibilities and obligations under the Contract.

All Covid-19 related regulatory specification needs to be implemented and adhered to by the Contractor.

Before commencement of work under the contract the Contractor shall:

1. Enter into an agreement with the Employer's Agent to confirm his status as mandatory (employer) for the contract under consideration.
2. Submit a Health and Safety Plan to the Employer within 28 days after the Commencement Date. The Contractor shall immediately implement the policy and any amendments and keep it in operation for the full duration of the Contract.

Full health and safety file to be submitted before any work will commence on site (including but not limited to):

- Details of Company Director & Contact Details

- Full-Time Supervisor Appointment Letter
  - Safety Officer / Representative
  - First Aiders Appointment + competent certificates
  - Risk Assessor Appointment+ competent certificates
  - Identification of the risks and hazards;
    - i) Analysis and evaluation of the risks and hazards identified;
    - ii) A documented plan of safe work procedures;
    - iii) A monitoring plan; and
    - iv) A review plan.
  - Registration with Department of Labour (DOL)
  - Valid Letter of Good standing with Compensation Commissioner
  - Valid Letter of Good standing with Department of Employment and Labour
  - Copy Risk Assessment / method statements
  - Copy of Site Safety Inspection Document / Sheet
  - Health and safety plan
  - OHS Act Section 37(2) Mandatory agreements (signed by Company Director)
  - Contractor appointment letter CR7(1)(c)(v)
  - Medical fitness certificates of all staff
  - All staff ID documents
  - CV's of all relevant personal
  - Safe working procedures
  - Emergency procedures
  - Registers
  - Toolbox talks
3. Submit a risk assessment of the contract works as part of the Health and Safety Plan and which is to include;
- Identification of the risks and hazards,
  - Analysis and evaluation of the risks and hazards identified,
  - A documented plan of safe work procedures,
  - ;A monitoring plan; and
  - A review plan.

All vehicles and plant to be operated and maintained according to Construction Regulations 23.

The Contractor is required to keep health and safety records (which shall include audit reports) on site in an orderly filing system which shall be handed over to the Employer's Agent on completion of construction.

Failure by the Contractor to comply with safety requirements will entitle the Employer's Agent to reduce payment of the relevant Bill of Quantity items and/or order a temporary halt of work within the affected

areas until the specified requirements are met, without any extension of time being granted and without any additional payment

Refer to CWD01 HS Health and Safety Specification in the Particular Specification Document.

**A Pro-Forma Health and Safety plan together with required listed documentation must be submitted with the Tender as per requirement in T2 returnable schedule (Annexure M-Demolishing and removal of concrete Method statement).**

### **PS 11.2 Audits**

The Contractor shall arrange for health and safety audits at monthly intervals to be carried out. The results and details of these audits shall be submitted to the Employer's Agent within the first week of the next month.

The Employer will monitor compliance by the Contractor with the Health and Safety Policy by means of Audits, and may give instructions for improvements.

The Contractor shall note that independent health and safety audits (or if considered suitable by the Employer combined audits with the Contractor's auditor) will be carried out as considered necessary by the Employer.

### **PS 11.3 Works Health and Safety Committee**

For the purpose of implementing and monitoring the Health and Safety Plan the Contractor shall put in place a Health and Safety Committee.

The Committee shall meet at least at monthly intervals. Minutes of the meeting shall be kept by the Contractor and copied to Employer within 7 days of the meeting.

### **PS 11.4 Health and Safety Officers**

The Contractor shall appoint a full-time permanent Health and Safety Officer on the commencement of the works. On the commencement of shift working, the Contractor shall appoint at least one deputy with the same duties. The Health and Safety Officer and the deputy (or deputies) shall be employed exclusively on health and safety matters, and at least one of them shall always be available on Site so that Health and Safety matters receive 24-hour coverage for the full duration of the Contract. The Health and Safety Officer or his deputy shall carry out regular and random checks of all parts of the Site where work is taking place.

### **PS 11.5 First Aid Provisions**

The Contractor shall provide a first aid station. The Contractor shall institute and operate a basic first aid training program to ensure that at least each foreman or work crew leader is trained in first aid and possesses a valid certificate to that effect issued by the Red Cross Society of South Africa, or equivalent qualification within 3 months of his appointment. There shall be a person certified in first aid in each work crew.

### **PS 11.6 Accident Reporting**

The Contractor, through the Health and Safety Officer or his deputy, shall keep the Employer's Agent informed at the time, or as soon thereafter as is practical but not later than 12 hours, of any occurrence during the course of work, whether on or off the Site, if the said occurrence affected or may have affected the health or safety of any person employed on the Site or of any member of the public. The Contractor shall submit to the Employer at the end of each month reports and statistics in spreadsheet format approved by the Employer on all accidents involving any person employed on or visiting the works.

### **PS 11.7 Workman's Compensation Act**

By accepting the Contract, the Contractor warrants that all his and his Sub-Contractor's workmen are covered in terms of the Compensation for Occupational Injuries and Diseases Act (Act no 130 of 1993) which covers shall remain in force whilst any workman is present on the Site.

## **PS 12. ENVIRONMENTAL REQUIREMENTS**

The Contractor shall take full responsibility for protecting the natural environment and eliminating or minimising the negative impacts of construction on the environment during construction.

### **PS 12.1 General**

The main project, Raising of Clanwilliam Dam, has been environmentally authorised under a Record of Decision (ROD)/ Environmental Authorization. The ROD requires that all activities conducted by the Employer's Agent and Contractors/Sub-contractors are within the framework of the Environmental Management Plan (EMP) and Rehabilitation Specifications (RS).

The Contractor and his staff must be familiar with the *EMP & RS* and execute the project in such a way that it complies with the requirements of the EMP and RS. The Employers Agent will regularly inspect the Contractor's site. In the event that the Contractor does not comply with the requirements the deviation must be rectified as recommended by the Employers Agent at the Contractor's cost.

The Contractor shall construct and/or implement all the necessary environmental protection measures in each area before any production work will be allowed to proceed. The Employer may suspend the works at any time should the Contractor, fail to implement, operate or maintain any of the environmental protection measures adequately. The costs of such suspension shall be to the Contractor's account.

The Contractor shall submit a Method Statement containing details of all site layouts and environmental protection measures proposed to the Employer for review and approval.

These shall include:

- Pollution prevention measures;
- Settlement pond design and location; and
- Design of access roads outside the works area.

Full Environmental file to be submitted before any work will commence on site (including but not limited to):

- Copy of Site Environmental Inspection Documents / Sheet

### **PS 12.2 Temporary Services and Facilities**

All fuel storage tanks shall be bunded to 110 % of the total storage capacity. Fuel dispensing areas and workshop areas shall be provided with concrete slabs draining to oil separators. This will also apply to other areas with pollution potential.

Vehicle cleaning shall be undertaken in designated wash bays, which have an impermeable floor and are bunded to contain runoff and direct in onto a sump. Oil and diesel will be skimmed off the sump water and recycled or disposed of in the correct manner. The design and layout of this sump shall be submitted to the Employer for approval before construction commences.

When refuelling of vehicles and plant it needs to be done in a banded area, and or if not possible, needs to be done over a secured drip tray.

Vehicles worked on outside the wash bays will have portable drip trays placed under them to catch oil and diesel which may leak from the vehicles.

### **PS 12.3 Protection of Rivers, Streams and Watercourses**

All rivers, streams and watercourses shall be protected from direct or indirect spills of pollutants such as garbage, sewage, cement, oils, fuels, chemicals, aggregate tailings, wash and waste water or organic material resulting from the Contractor's activities. The Contractor shall notify the Engineer immediately of any pollution incidents on Site. Verbal reports must be followed by a written report within 24 hours of the incident. In the event of a spill prompt action shall be taken to clear polluted or affected areas.

The Contractor shall not work within streams, watercourses and wetlands without the written approval or as required for the execution of the work.

#### **PS 12. 4 Refuse and Waste Control**

The management of solid waste on site shall be strictly controlled and monitored. The Contractor shall adhere to and implement the following:

- Labelled recycling bins shall be used and waste separated where possible. In addition, a recycled-material collection schedule shall be established and the bins shall be collected regularly;
- Eating areas for the construction staff shall be designated and supplied with waste bins to control litter;
- No on-site burying or dumping or unauthorised burning of any waste materials, vegetation, litter or refuse shall occur;

Solid waste shall be disposed of off site, at an approved landfill site. The Contractor shall supply the Employer with a certificate of disposal; and waste shall be separated into recycling, domestic waste, building/construction rubble, scrap metal, oil and grease and hazardous waste and dealt with in the following manner:

- a) Recycling  
Suitable recycling bins, all with lids, shall be provided by the Contractor for his own buildings. Recycling shall be collected and removed from all facilities on the Site at least twice per week. Recycling waste shall be transported to the approved refuse disposal site off site in covered containers or covered trucks.
- b) Domestic waste  
Suitable refuse bins, all with lids, shall be provided by the Contractor for his own buildings. Refuse shall be collected and removed from all facilities on the Site at least twice per week. Domestic waste shall be transported to the approved refuse disposal site off site in covered containers or covered trucks.
- b) Organic waste  
Refuse from food preparation and eating areas shall be collected and removed daily. Organic waste shall be disposed of as per Domestic waste.
- c) Building/Construction waste  
Inert building/construction rubble shall be disposed of by burying in the dam basin in borrow pits, at a site and in such a way as approved by the Employer.
- d) Scrap metal  
Scrap metal shall be disposed of offsite.
- e) Used oil and grease  
Used oil and/or grease shall be removed from site and sold to an approved used oil recycling company. The certificated thereof shall be placed on file on site.
- f) Hazardous waste  
All hazardous waste shall be disposed of in an approved hazardous waste disposal site and a disposal certificate supplied to the Employer. The certificated thereof shall be placed on file on site.

#### **PS 12. 5 Protection of Flora**

The removal, damage and disturbance of indigenous flora is prohibited. The Contractor shall request permission before removal of any vegetation on the designated work area and undertake to demarcate and protect flora outside the designated work area.

#### **PS 12. 6 Protection of the Fauna**

The Contractor shall protect fauna living within the Site and shall ensure that fishing, hunting, snaring, poisoning, shooting, nest raiding or egg-collecting and disturbance does not occur. The Contractor is

to ensure that his employees are instructed not to feed wild animals and no domestic pets or livestock are permitted on site.

The use of pesticides is prohibited unless approved by the Employer.

**PS 12. 7 Preservation of Topsoil**

The Contractor shall get approval from the Employer before the removal of any topsoil. The top soils will be stored in designated areas.

**PS 12. 8 Erosion Control and Storm water Management**

The Contractor shall include in his/hers works layout of the site works measures to prevent erosion resulting from his actions on the site. The Contractor shall take appropriate and active measures to prevent erosion resulting from his works, operations and activities which shall be agreed with the Employer even when such potential erosion may take place or occur beyond the limits of the Site because of the actions of the Contractor.

Refer to EMP and CWD 67 Particular Specification Documents.

**A Pro-Forma Environmental plan together with required listed documentation must be submitted with the Tender as per requirement in T2 returnable schedule (Annexure M- Method statement for Demolishing and removal of Concrete).**

**PS 13. INFORMATION TO BE SUBMITTED BY CONTRACTOR**

To be submitted as required in T2 – returnable schedules / documents.

### **C3.3 PARTICULAR SPECIFICATIONS**

**Note:** Particular Specifications are specified in;

- (a) Particular Specification **CWD09 – “BLASTING”**. A copy of the document will be provided during the Compulsory Site Briefing session.
- (b) Civil Project Specifications ( Vol 2.1) PS 20.2.

The specific Project, Particular Specifications, Drawings and other documents (as listed below) will be provided in a electronic format.

Particular Specifications applicable are:

CWD 01SC	General
CWD 09	Blasting
CWD 15	Demolition Work and Surface Preparation
CWD 20	Excavation and Backfill
CWD 23	Drilling
CWD 65	Occupational Health and Safety Specifications
CWD 67	Environmental
CWD 68	Local Socio – Economic Participation and Development
EMP	Environmental Management Plan

Tender Drawings

## **C3.3 PARTICULAR SPECIFICATIONS**

### **CONTENT**

#### **PS 1. DEMOLISHING WORK AND SURFACE PREPERATION (CWD 15)**

##### **PS1.1 PLANT (CWD15.4)**

PS 1.1.1 General (CWD15.4.1)

PS 1.1.2 Transportation (CWD 15.4.2)

##### **PS 1.2 CONSTRUCTION (CWD15.5)**

PS 1.2.1 Safeguarding of Demolitions (CWD15.5.1.1)

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##### **PS 1.3 DEMOLITION WORK (CWD 15.5.5)**

PS 1.3.1 General (CWD15.5.5.1)

PS 1.3.2 Construction (CWD15.5.5.2)

PS 1.3.3 Blasting (CWD 15.5.7)

PS 1.3.3.1 General (CWD 15.5.7.1)

PS 1.3.3.2 Monitoring and Designing for Blasting Vibrations (CWD20.5.4.7)

## **PS 1 DEMOLISHING WORK AND SURFACE PREPERATION (CWD 15)**

### **PS1.1 PLANT (CWD 15.4)**

#### **PS 1.1.1 General (CWD15.4.1)**

Plant shall be suitable for the production of the end result required under the conditions applicable to the Site. The removal of concrete shall employ techniques and equipment that do not damage the remaining or adjacent concrete. All equipment shall be handled, stored and used strictly in accordance with the manufacturer's instructions and latest safety regulations.

#### **PS 1.1.2 Transportation (CWD15.4.2)**

Each vehicle and item of plant provided by the Contractor for the transportation of materials, shall conform to the requirements of the applicable road traffic regulation if the vehicle or item of plant is required to operate on any public highway, road or street or on any private road or parking area that has been surfaced.

Where any of the Contractor's operations or the movement of any of the Contractor's vehicles or mobile plant, or any combination of such activities, causes damage to the drainage structures or surface of any area normally open to the public, the Contractor shall repair such structures or surface as a matter of urgency, and at his own expense.

### **PS 1.2 CONSTRUCTION (CWD15.5)**

#### **PS1.2.1 Safeguard of Demolitions (CWD 15.5.1.1)**

No demolished concrete or other rubble shall be allowed to be dumped upstream of the dam wall or downstream in the Olifants River. No slurry from the surface preparations shall be allowed to contaminate the water upstream or downstream of the dam wall. All wastewater, slurry and concrete emanating from the surface preparation process shall be contained in ponds and removed from the construction site to approved spoil areas.

#### **PS 1.2.2 Explosives (CWD15.5.1.2)**

No blasting will be allowed on the existing dam wall. Demolition work on the existing dam wall will be carried out by mechanical breakers, wire cutting or hand breaking.

Should blasting be necessary, the Contractor shall take every precaution to protect the Works and persons, animals and property in the vicinity of the Site. The Contractor shall be held responsible for any injury or damage caused by any blasting operations and shall, at his own expense, make good such damage. The transportation, storage and use of explosives shall fully comply with the requirements of the applicable laws and regulations. The Contractor shall provide the Engineer with copies of each and every permit issued by the authorities.

When blasting to specified profiles, the Contractor shall so arrange the holes and charges that the resulting exposed surfaces are as sound as the nature of the material permits. The Contractor shall make good at his own expense any additional demolition necessitated by the shattering of concrete in excess of that specified.

The Contractor shall at all times provide full facilities for the Engineer to check all stages of the drilling and blasting operations.

### **PS 1.3 Demolition Work (CWD 15.5.5)**

#### **PS 1.3.1 General (CWD 15.5.5.1)**

Demolition work on the existing dam wall shall be carried out using mechanical or hand held breakers, wire cutting or other approved non-destructive methods. No blasting will be allowed on the existing dam wall, refer CWD15.5.1.2 Explosives . Blasting may be permitted on other structures downstream of the dam wall, after obtaining the Engineer's approval.

•

### **PS 1.3.2 Construction (CWD15.5.5.2)**

Demolition work will be done in phases during the construction period. The Contractor shall take this staging into account when programming his activities.

Steel items will be removed to designated storage areas on Site. Should the Employer decide that the items must be transported from the storage areas to Depots elsewhere, it will be done on a Dayworks basis.

Damage to the existing dam wall must be prevented.

All concrete and other rubble from the demolition work will be removed by the Contractor to designated spoil areas. No rubble may be deposited into the Clanwilliam Dam directly upstream from the dam wall. The Contractor shall take all necessary measures to ensure that all rubble from the demolition works is intercepted and removed. Where possible, wire cutting should be used to remove structural elements from the dam wall without damaging adjacent areas

### **PS 1.3.3 Blasting (CWD 15.5.7)**

#### **PS 1.3.3.1 General (CWD15.5.7.1)**

Before the first blasting commences, the Contractor shall prepare a detailed photographic report of the condition of all structures including residential within 500 m of the proposed blast site.

Contact with the local community shall be limited to informing only the affected parties of the blasting planned. Vibration monitoring shall include results of all infrastructure in the vicinity (See CWD20.5.4.7). All records shall be kept and copied to the Engineer.

#### **PS 1.3.3.2 Monitoring and Designing for Blasting Vibrations (CWD20.5.4.7)**

The Contractor shall supply and operate two approved recording tri-axial particle velocity meters which shall be used as and where directed by the Engineer. The Contractor shall design his blasting operations such as to ensure that the peak particle velocity does not exceed potentially damaging values in any permanent structure, as approved or directed by the Engineer.

**NB: Also see Civil Project Specifications ( Vol 2.1) - PS 20.2.**

**Blasting Adjacent or near to Structures** - Blasting to be carried out within 100m of any concrete and/or grouting regardless of age, shall be done by means of Gas-Induced Fracture Technology (GIFT) using None, or by means of controlled blasting techniques, to the approval of the Engineer. All such blasting shall be designed to keep peak particle velocities (PPV) to below 12.7 mm/s and the frequency above 10 Hz.

## **C3.4 VARIATIONS AND ADDITIONS TO SPECIFICATIONS**

### **General**

The variations and addition to clauses in Section C2.1 and C2.2 are lettered and numbered using the alphabetic identification of the applicable standardised specifications or the numeric identification of the applicable particular specifications. The number of the clauses is prefixed with the letter PS.

For example, variations and addition clauses are numbered as follows:

- For SABS 1200 A specification the clauses are lettered PSA.
- For specification CWD 15 the clauses are lettered PS15.

### **PS 01-SC      PARTICULAR SPECIFICATION CWD01-SC GENERAL**

CWD 01 SC 5.3 –

5.3.3 – as determine by Engineer

5.3.4 - as determine by Engineer

### **PS 09      PARTICULAR SPECIFICATION CWD09 - BLASTING**

CWD 09.3

No explosives of any kind shall be stored on site.



## **DEPARTMENT OF WATER AND SANITATION**

**DWS05-0523 WTE**

**DEMOLISH AND REMOVE CONCRETE FOR THE RAISING  
OF CLANWILLIAM DAM PROJECT IN THE WESTERN CAPE  
FOR CONSTRUCTION SOUTH - CIDB CONTRACTOR  
GRADING DESIGNATION OF CIDB 8SE OR HIGHER**

### **C4: SITE INFORMATION**

#### **CONTENTS**

##### **C4.1: TENDER DRAWINGS**

## C4.1 TENDER DRAWINGS

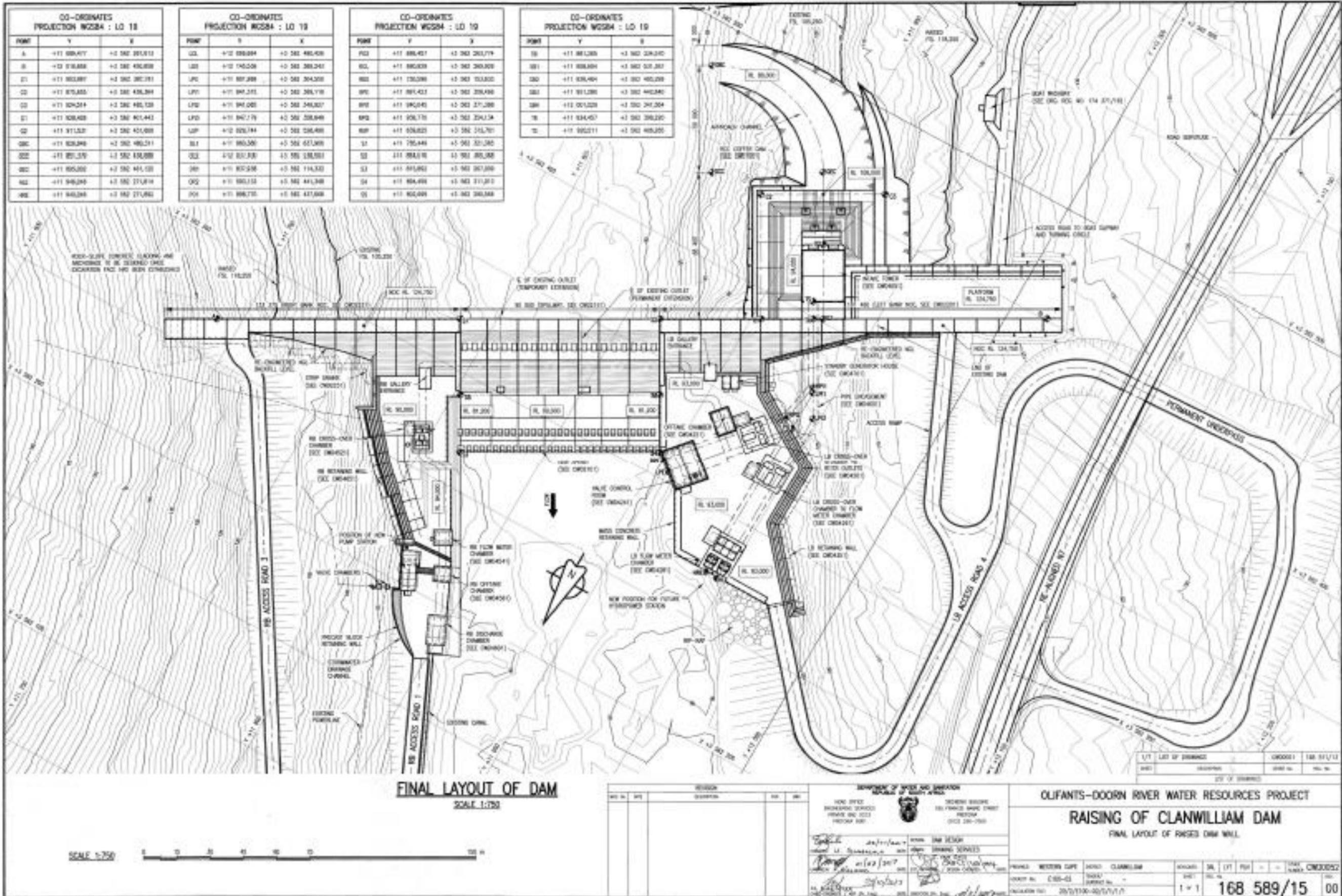
The tender drawings listed below are for **tender purposes only**. All work shall be done in accordance to the final approved construction drawings, that will be issued after signing of the contract.

The list of drawings annexure to this document is as follows:

Number	Drawing Title	CWD Reference number	Revision
4.1.1	Final Layout of Raised Dam Wall	CWD 0052	00
4.1.2	Schematic Layout of Raised Dam Wall	CWD 0102	00
4.1.3	Construction Site Layout	CWD 0103	00
4.1.4	Right Bank NOC, Excavation Details, Plan view	CWD 1351	01
4.1.5	Right Bank NOC, Excavation Details, Long Section	CWD 1352	01
4.1.6	Right Bank NOC, Excavation Details, Section 02-02	CWD 1353	01
4.1.7	Left Bank NOC Excavation, Plan View	CWD 1341	03
4.1.8	Left Bank NOC Excavation, Downstream Elevation	CWD 1342	00
4.1.9	Left Bank NOC Excavation, Section 01 - 01	CWD 1343	00
4.1.10	Left Bank NOC Excavation, Section 02 - 02	CWD 1344	00
4.1.11	Left Bank NOC Excavation, Section 03 - 03	CWD 1345	00
4.1.12	Left Bank NOC Excavation, Section 04 - 04	CWD 1346	00
4.1.13	Spillway Excavation, Downstream elevation	CWD 1371	02
4.1.14	Spillway, Excavation Drawings, Section 01-01	CWD 1372	01
4.1.15	Spillway, Excavation Drawings, Section 02-02	CWD 1373	01
4.1.16	Spillway, Excavation Drawings, Section 03-03	CWD 1374	01
4.1.17	Right Bank NOC, Stepped Concrete Infill Details	CWD 2234	00
4.1.18	Spillway Section 02-02 at CH 170m	CWD 2153	00
4.1.19	Existing Outlet Works Phase 3 – Plan View	CWD 4589	00
4.1.20	Downstream View Of Clanwilliam Dam -Terrestrial View	106552/90	00

4.1.21	Detail Cross Section Trough Dam Wall Sheet 1 of 3	00000/98	00
4.1.22	Detail Cross Section Trough Dam Wall Sheet 2 of 3	00000/98	00
4.1.23	Detail Cross Section Trough Dam Wall Sheet 3 of 3	00000/98	00
4.1.24	Spillway Apron Section	CWD 2104	01

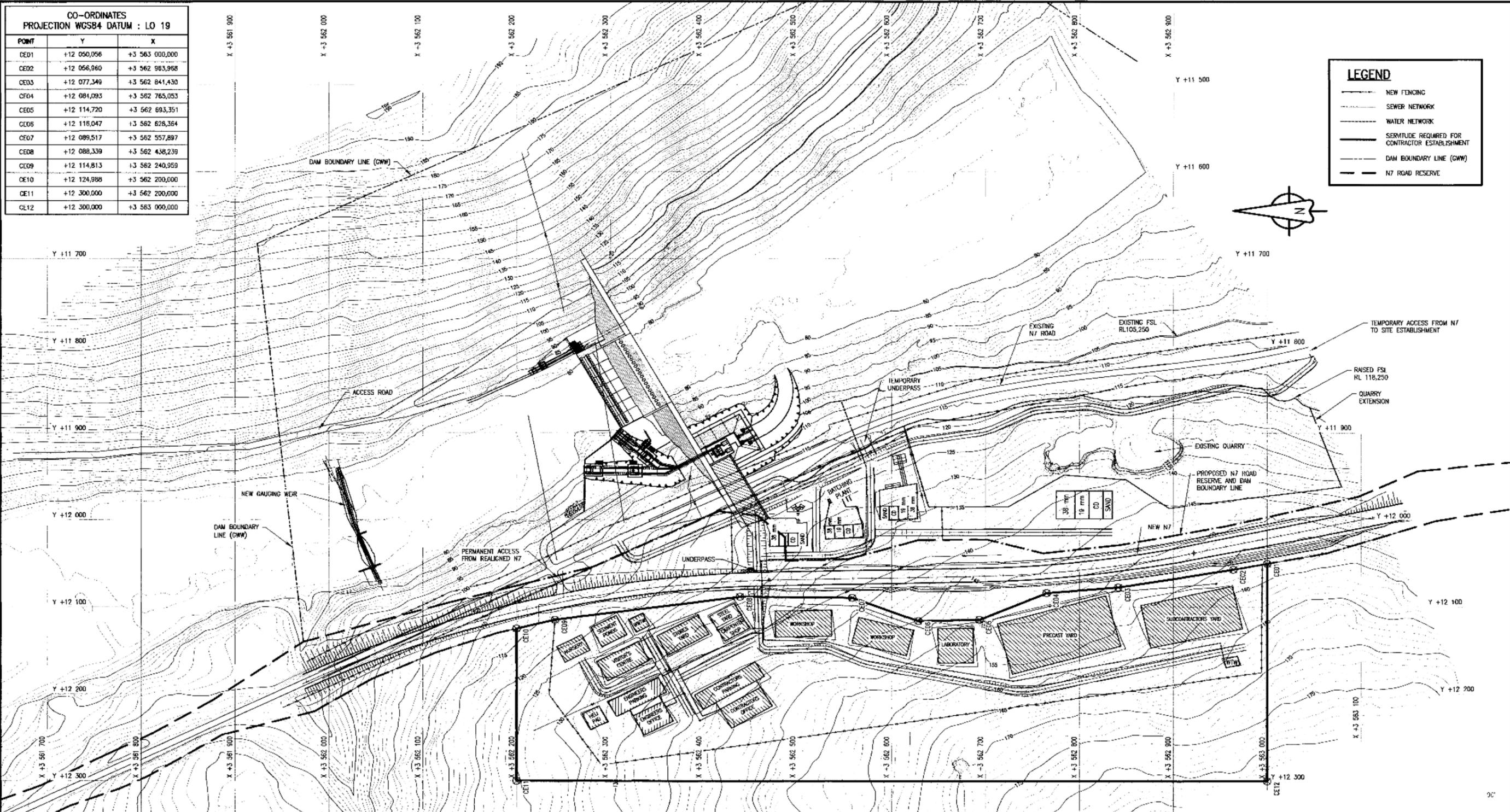
Note: (Will be provided in electronic format.)





CO-ORDINATES PROJECTION WGS84 DATUM : LO 19		
POINT	Y	X
CE01	+12 050,056	+3 563 000,000
CE02	+12 066,960	+3 562 983,958
CE03	+12 077,349	+3 562 841,430
CE04	+12 084,093	+3 562 765,053
CE05	+12 114,720	+3 562 693,351
CE06	+12 118,047	+3 562 628,364
CE07	+12 089,517	+3 562 557,897
CE08	+12 088,339	+3 562 438,239
CE09	+12 114,813	+3 562 240,959
CE10	+12 124,988	+3 562 200,000
CE11	+12 300,000	+3 562 200,000
CE12	+12 300,000	+3 563 000,000

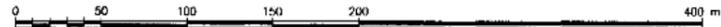
LEGEND	
	NEW FENCING
	SEWER NETWORK
	WATER NETWORK
	SERMITUDE REQUIRED FOR CONTRACTOR ESTABLISHMENT
	DAM BOUNDARY LINE (GWW)
	N7 ROAD RESERVE



**CONSTRUCTION SITE LAYOUT**

SCALE 1:2 000

SCALE 1:2 000



1/5 LIST OF DRAWINGS	CWD0001	168 571/13
SHEET	DESCRIPTION	OTHER No. / RIA No.
LIST OF DRAWINGS		

MOD. NO.	DATE	REVISION DESCRIPTION	FOR	BY

DEPARTMENT OF WATER AFFAIRS  
REPUBLIC OF SOUTH AFRICA

HEAD OFFICE: CIVIL ENGINEERING, PRIVATE BAG X313, PRETORIA 0001

SHOWING BUILDING: 185 FRANCIS BAARD STREET, PRETORIA (012) 338-7500

M. SIRENYA, DIRECTOR GENERAL

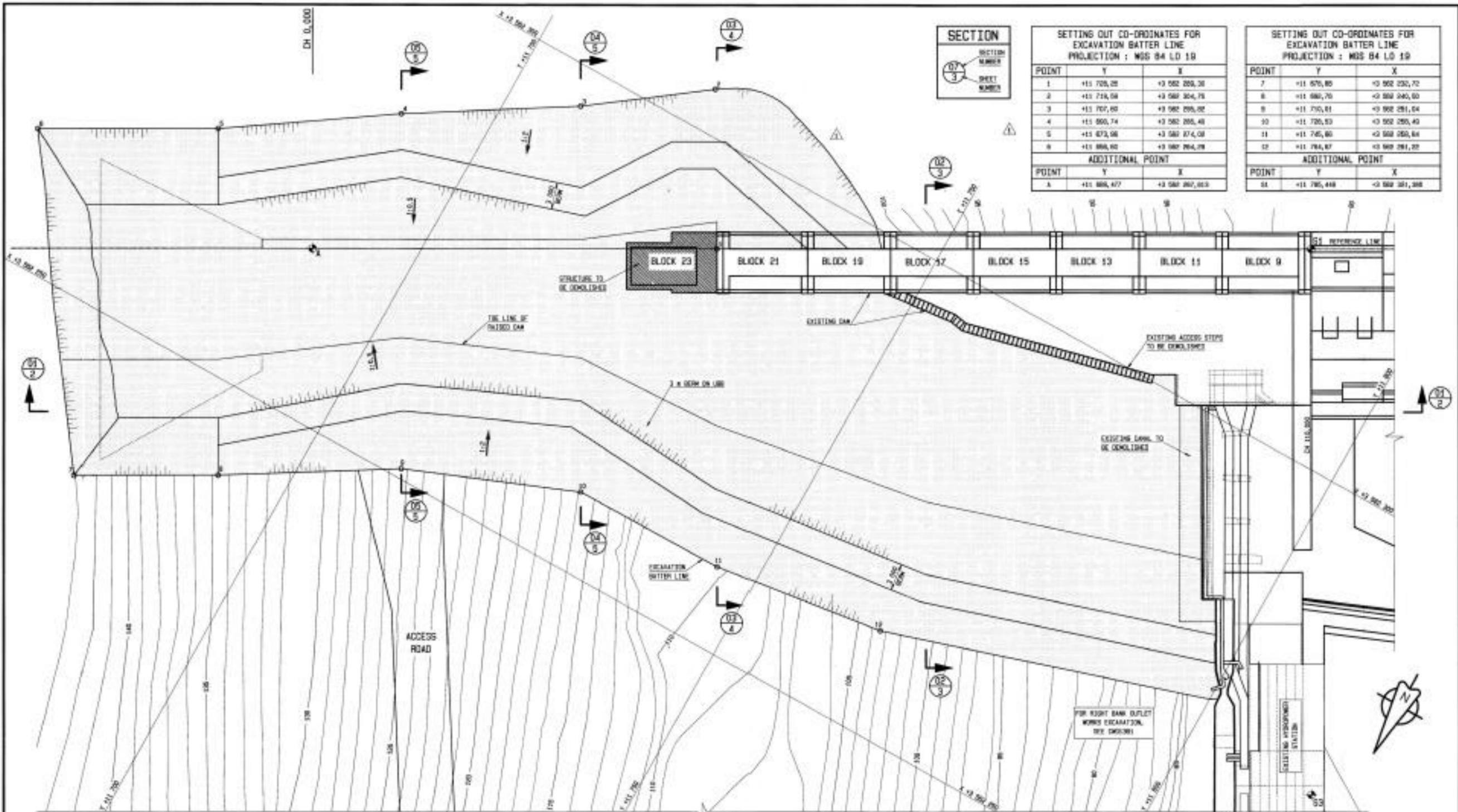
PROJECT: DAM DESIGN  
DATE: 2014/02/16  
DRAWN: DRAWING SERVICES

PROFESSIONAL ENGINEER: [Signature] DATE: 2014/02/16

CHIEF ENGINEER / REP. (P. ENG.): [Signature] DATE: 2014/02/16

**OLIFANTS-DOORN RIVER WATER RESOURCES PROJECT**  
**RAISING OF CLANWILLIAM DAM**  
CONSTRUCTION SITE LAYOUT

PROVINCE: WESTERN CAPE	DISTRICT: CLANWILLIAM	KEYCODES: DAL, LYD, PMS, -	GENR. NUMBER: CWD0103
LOCALITY No.: E100-102	SP/SH/17/ CONTRACT No.:	1 of 1	168 580/14
CALCULATION REF.: X	DATE:	REV.:	00



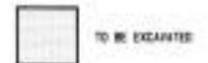
SECTION	SECTION NUMBER	SHEET NUMBER
01	1	1

SETTING OUT CO-ORDINATES FOR EXCAVATION BATTER LINE PROJECTION : MGS 84 LD 19			
POINT	Y	X	
1	+11 709,28	+3 982 209,30	
2	+11 719,58	+3 989 304,78	
3	+11 707,60	+3 982 299,82	
4	+11 800,74	+3 982 265,48	
5	+11 873,58	+3 980 274,08	
6	+11 886,80	+3 989 264,78	
ADDITIONAL POINT			
POINT	Y	X	
7	+11 888,477	+3 989 267,853	

SETTING OUT CO-ORDINATES FOR EXCAVATION BATTER LINE PROJECTION : MGS 84 LD 19			
POINT	Y	X	
7	+11 870,80	+3 982 230,72	
8	+11 880,70	+3 989 240,50	
9	+11 750,81	+3 982 281,64	
10	+11 780,53	+3 982 250,40	
11	+11 740,80	+3 982 260,64	
12	+11 784,87	+3 989 281,32	
ADDITIONAL POINT			
POINT	Y	X	
13	+11 785,418	+3 989 281,388	

**NOTES:**

- ROUTED 1:200 YEAR FLOOD LEVEL WITH 10 GATES OPEN IS R. 100,050
- BLOCK 9 EXISTING BUTLET WORKS TO BE PROTECTED AGAINST ROCK DEBRIS DURING EXCAVATION



**EXCAVATION LAYOUT OF RIGHT BANK**

SCALE 1:200

REV. NO.	DATE	REVISION	BY	CHK
01/18		KLIPES EXCAVATION	JH2	

DEPARTMENT OF WATER AND SANITATION  
REPUBLIC OF SOUTH AFRICA

HEAD OFFICE  
CIVIL ENGINEERING  
PRIVATE BAG 3323  
PRETORIA 0001

REGIONAL OFFICE  
WESTERN CAPE  
100 PRINCE ALBERT STREET  
PRETORIA  
0151 236-7000

D. M. MASHITIMBE  
DIRECTOR GENERAL

F. E. WILDER  
F. E. WILDER

OLIFANTS-DOORN RIVER WATER RESOURCES PROJECT

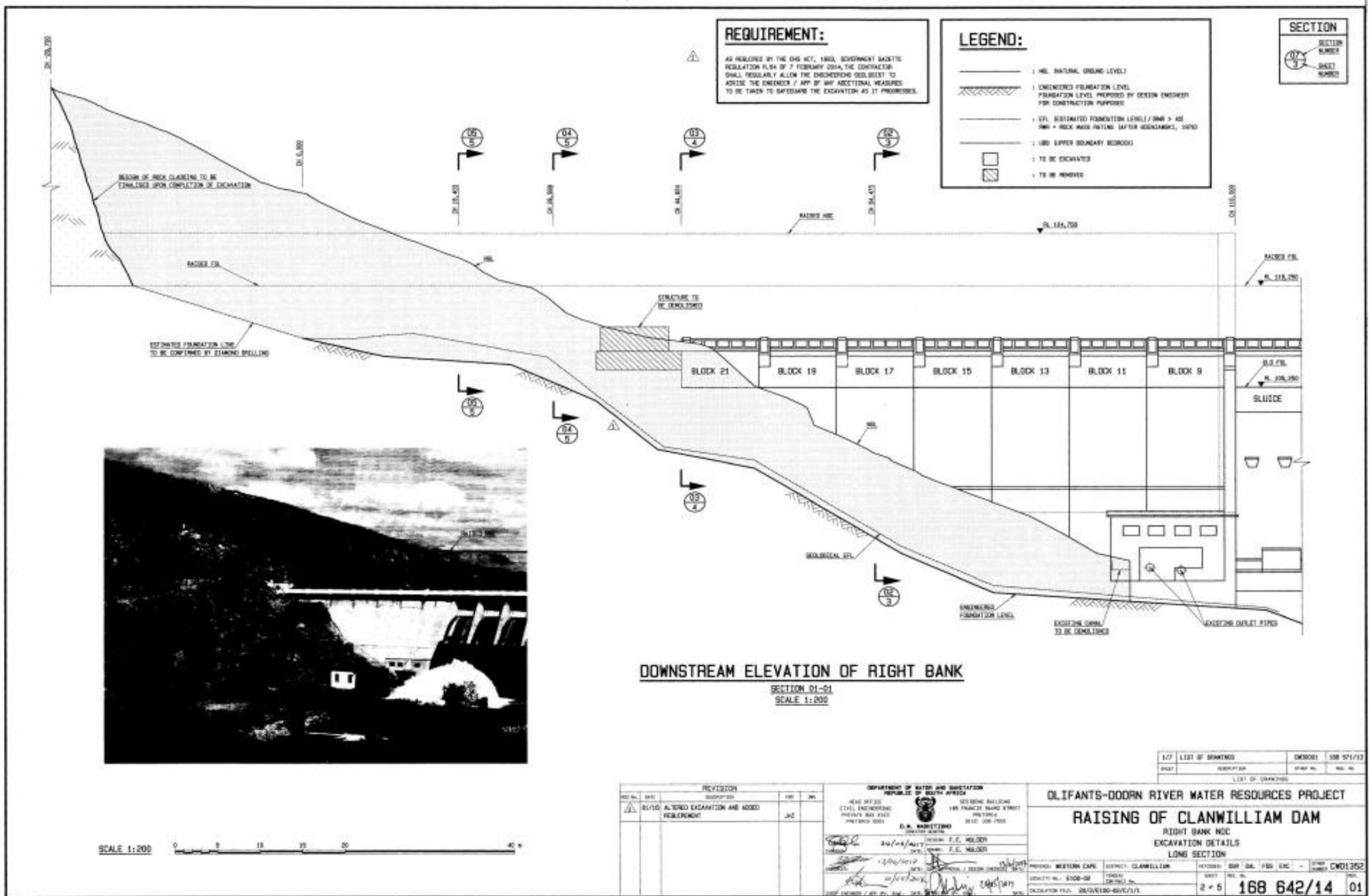
**RAISING OF CLANWILLIAM DAM**

RIGHT BANK NOC  
EXCAVATION DETAILS  
PLAN VIEW

REVISION: WESTERN CAPE  
DRAWN: CLANWILLIAM  
CHECKED: [Signature]  
DATE: 20/01/14

168 641/14 01

NO.	DESCRIPTION	DATE	BY
1/7	LIST OF DRAWINGS	08/08/13	188 571/13

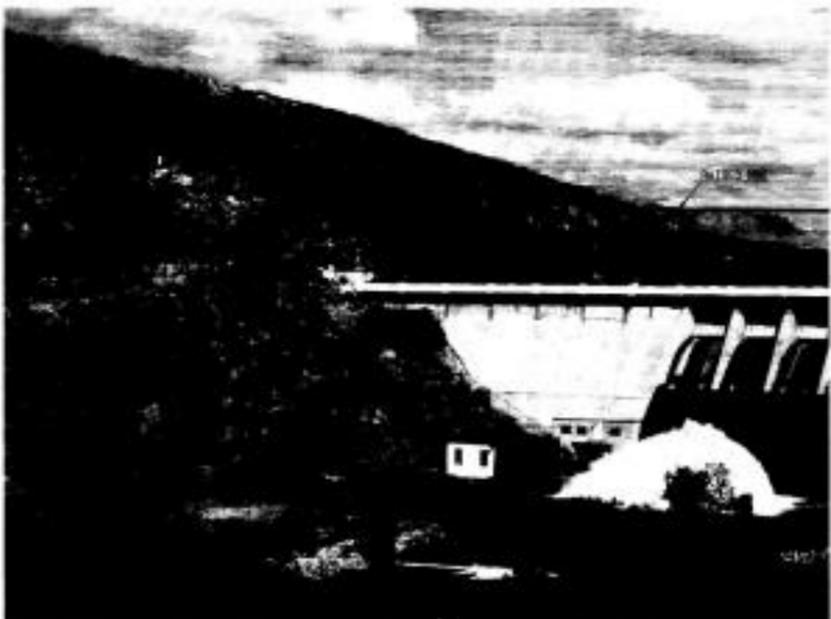


**REQUIREMENT:**  
 AS REQUIRED BY THE DHS ACT, 1993, GOVERNMENT GAZETTE REGULATION R.54 OF 7 FEBRUARY 2004, THE CONTRACTOR SHALL REGULARLY ALLOW THE ENGINEERING GEOLOGIST TO ADVISE THE ENGINEER / APP BY ANY ADDITIONAL MEASURES TO BE TAKEN TO SAFEGUARD THE EXCAVATION AS IT PROGRESSES.

**LEGEND:**

- NGL: NATURAL GROUND LEVEL
- ENGINEERING FOUNDATION LEVEL PROPOSED BY DESIGN ENGINEER FOR CONSTRUCTION PURPOSES
- EFL: ESTIMATED FOUNDATION LEVEL / 99% > 40% 99% = ROCK MASS FACING SAFETY DEMANDS, 10% SD
- UBS: UPPER BOUNDARY BEDROCK
- TO BE EXCAVATED
- ▨ TO BE REMOVED

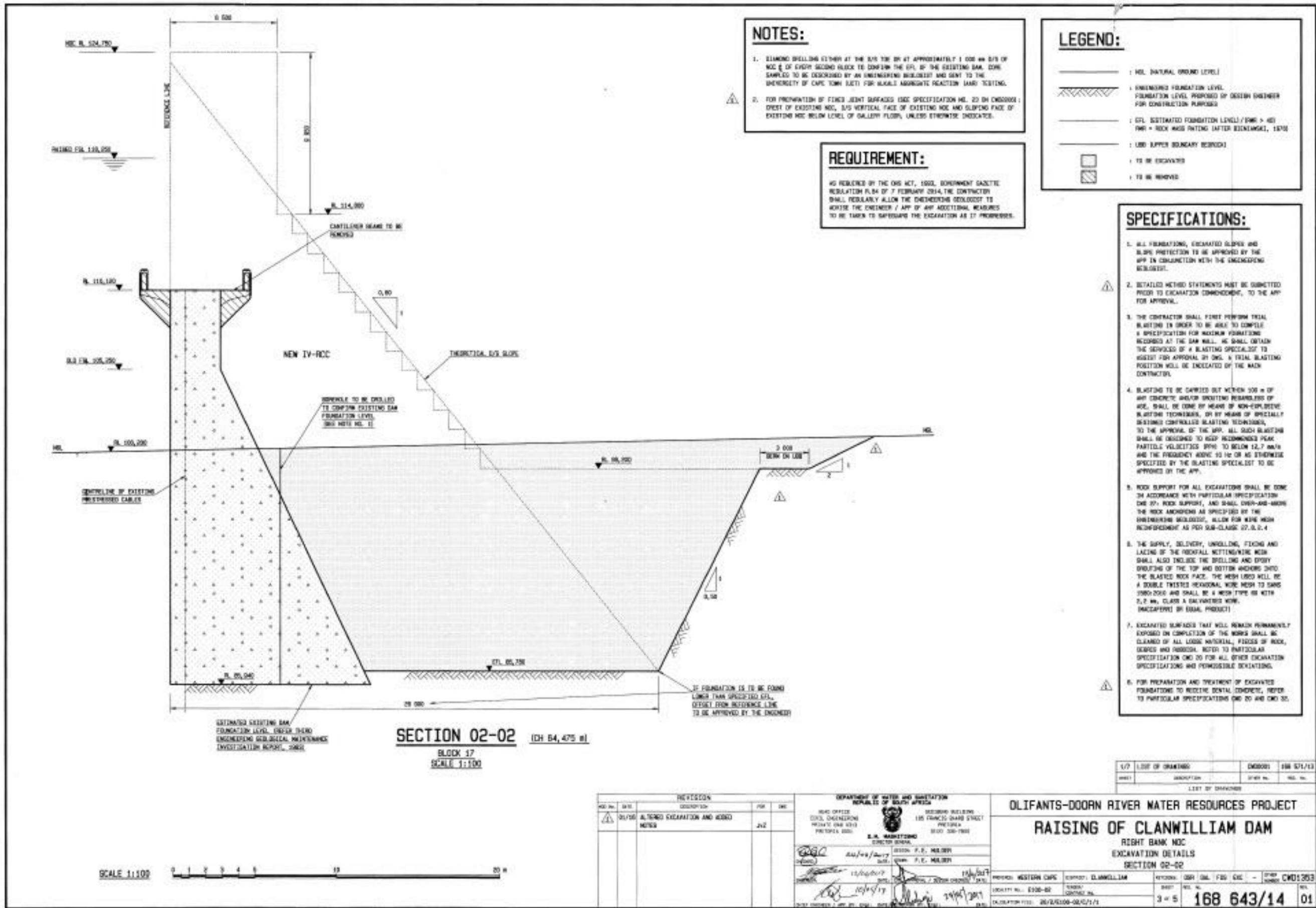
**SECTION**  
 SECTION NUMBER  
 SHEET NUMBER



**DOWNSTREAM ELEVATION OF RIGHT BANK**  
 SECTION 01-01  
 SCALE 1:200



<table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>REVISION</th> </tr> </thead> <tbody> <tr> <td>01/10</td> <td></td> <td>ALTERED EXCAVATION AND ADDED REVISIONS</td> </tr> </tbody> </table>		NO.	DATE	REVISION	01/10		ALTERED EXCAVATION AND ADDED REVISIONS	DEPARTMENT OF WATER AND SANITATION REPUBLIC OF SOUTH AFRICA HEAD OFFICE CIVIL ENGINEERING PRIVATE BAG 3342 PRETORIA 0001 D. N. MASHITSHI CONSULTANT 24/06/2017 F. E. MELOER F. E. MELOER	1/7 LIST OF DRAWINGS SHEET DESCRIPTION LIST OF DRAWINGS DW0001 108 07/1/13 DWP NO. REL. NO.
NO.	DATE	REVISION							
01/10		ALTERED EXCAVATION AND ADDED REVISIONS							
<b>OLIFANTS-ODORN RIVER WATER RESOURCES PROJECT</b> <b>RAISING OF CLANWILLIAM DAM</b> RIGHT BANK NSC EXCAVATION DETAILS LONG SECTION									
PROJECT: WESTERN CAPS DISTRICT: CLANWILLIAM LOCALITY NO.: 6100-02 TRACT: 1 EXCAVATION PLOT: 08/0/6100-02/C/1/1	REGION: GBR DIST: FES SHEET NO.: 168 642/14 NO. OF SHEETS: 5	OTHER SHEETS: CWD1352 DWG NO.: 168 642/14 SHEET NO.: 01							



**NOTES:**

1. DIAMOND DRILLING (D/D) AT THE S/S TO BE AT APPROXIMATELY 1.000 MM S/S OF NOC & OF EVERY SECOND BLOCK TO CONFIRM THE EPL OF THE EXISTING DAM. CORE SAMPLES TO BE DESCRIBED BY AN ENGINEERING GEOLOGIST AND SENT TO THE UNIVERSITY OF CAPE TOWN (UCT) FOR WALKER ABRASIVE REACTION (AAR) TESTING.
2. FOR PREPARATION OF FINED Joints SURFACES (SEE SPECIFICATION NO. 20 ON CMO0008) DREST OF EXISTING NOC, S/S VERTICAL FACE OF EXISTING NOC AND SLOPING FACE OF EXISTING NOC BELOW LEVEL OF GALLERY FLOOR, UNLESS OTHERWISE INDICATES.

**REQUIREMENT:**

AS REQUIRED BY THE OHS ACT, 1994, GOVERNMENT GAZETTE REGULATION FL 84 OF 7 FEBRUARY 2014, THE CONTRACTOR SHALL REGULARLY ALLOW THE ENGINEERING GEOLOGIST TO ADVISE THE ENGINEER / APP OF ANY ADDITIONAL MEASURES TO BE TAKEN TO SAFEGUARD THE EXCAVATION AS IT PROGRESSES.

**LEGEND:**

- NGL (NATURAL GROUND LEVEL)
- ENGINEERING FOUNDATION LEVEL (FOUNDATION LEVEL PROPOSED BY DESIGN ENGINEER FOR CONSTRUCTION PURPOSES)
- CGL (ESTIMATED FOUNDATION LEVEL) (DMS + 40) (M4) = ROCK MASS FINING (AFTER REINFORCING, 15%)
- (Hatched pattern) (LSD UPPER BOUNDARY RECORD)
- (White box) TO BE EXCAVATED
- ▨ (Hatched box) TO BE REMOVED

**SPECIFICATIONS:**

1. ALL FOUNDATIONS, EXCAVATED SLOPES AND SLOPE PROTECTION TO BE APPROVED BY THE APP IN CONJUNCTION WITH THE ENGINEERING GEOLOGIST.
2. DETAILED METHOD STATEMENTS MUST BE SUBMITTED PRIOR TO EXCAVATION COMMENCEMENT, TO THE APP FOR APPROVAL.
3. THE CONTRACTOR SHALL FIRST PERFORM TRIAL BLASTING IN ORDER TO BE ABLE TO COMPLETE A SPECIFICATION FOR MAXIMUM VIBRATIONS RECORDED AT THE DAM WALL. HE SHALL OBTAIN THE SERVICES OF A BLASTING SPECIALIST TO ASSIST FOR APPROVAL BY DMS. A TRIAL BLASTING POSITION WILL BE INDICATED BY THE MAIN CONTRACTOR.
4. BLASTING TO BE CARRIED OUT WHEN 500 mm OF ANY CONCRETE AND/OR BRICKWORK REMAINS OF NOC. SHALL BE DONE BY MEANS OF NON-EXPLOSIVE BLASTING TECHNIQUES, OR BY MEANS OF SPECIALLY DESIGNED CONTROLLED BLASTING TECHNIQUES, TO THE APPROVAL OF THE APP. ALL SUCH BLASTING SHALL BE DESIGNED TO KEEP RECOMMENDED PEAK PARTICLE VELOCITIES (PPV) TO BELOW 12.7 mm/s AND THE FREQUENCY ABOVE 10 Hz OR AS OTHERWISE SPECIFIED BY THE BLASTING SPECIALIST TO BE APPROVED BY THE APP.
5. ROCK SUPPORT FOR ALL EXCAVATIONS SHALL BE DONE IN ACCORDANCE WITH PARTICULAR SPECIFICATION CMO 07. ROCK SUPPORT, AND SHALL OVER-AND-ABOVE THE ROCK ANCHORS AS SPECIFIED BY THE ENGINEERING GEOLOGIST. ALLOW FOR WIDE MESH REINFORCEMENT AS PER SUB-CLASSIC 07.0.2.4
6. THE SUPPLY, DELIVERY, UNROLLING, FIXING AND LACING OF THE ROCKFALL NETTING/WIRE MESH SHALL ALSO INCLUDE THE DRILLING AND EPOXY GROUTING OF THE TOP AND BOTTOM ANCHORS INTO THE BLASTED ROCK FACE. THE MESH USED WILL BE A DOUBLE TWISTED HEXAGONAL WIRE MESH TO SANS 5980:2005 AND SHALL BE A MESH TYPE 66 WITH 2,2 mm CLASS A GALVANIZED WIRE (MAGAPREX) OR EQUAL PRODUCT.
7. EXCAVATED SURFACES THAT WILL REMAIN PERMANENTLY EXPOSED ON COMPLETION OF THE WORKS SHALL BE CLEANED OF ALL LOOSE MATERIAL, PIECES OF ROCK, DEBRIS AND RUBBISH. REFER TO PARTICULAR SPECIFICATION CMO 20 FOR ALL OTHER EXCAVATION SPECIFICATIONS AND PERMISSIBLE DEVIATIONS.
8. FOR PREPARATION AND TREATMENT OF EXCAVATED FOUNDATIONS TO RECEIVE DENTAL CONCRETE, REFER TO PARTICULAR SPECIFICATIONS CMO 20 AND CMO 35.

**SECTION 02-02** (DH 54, 475 m)  
BLOCK 17  
SCALE 1:100



REVISION				
NO.	DATE	DESCRIPTION	FOR	BY
01/10	12/04/2017	ALTERED EXCAVATION AND ADDD NOTES	JLZ	

DEPARTMENT OF WATER AND SANITATION  
REPUBLIC OF SOUTH AFRICA

HEAD OFFICE  
CIVIL ENGINEERING  
PRIVATE BAG 9473  
PRETORIA 0001

REGIONAL BUILDING  
105 FRANCIS DAVID STREET  
PRETORIA  
0001 300-7800

S.A. MASHININGO  
DIRECTOR GENERAL

DESIGN: P. E. MHLBEN  
DRAWN: P. E. MHLBEN

DATE: 12/04/2017

DATE: 12/04/2017

DATE: 12/04/2017

1/7 LIST OF DRAWINGS

NO.	DESCRIPTION	DATE	REV. NO.
01	EXCAVATION	12/04/2017	01

LIST OF DRAWINGS

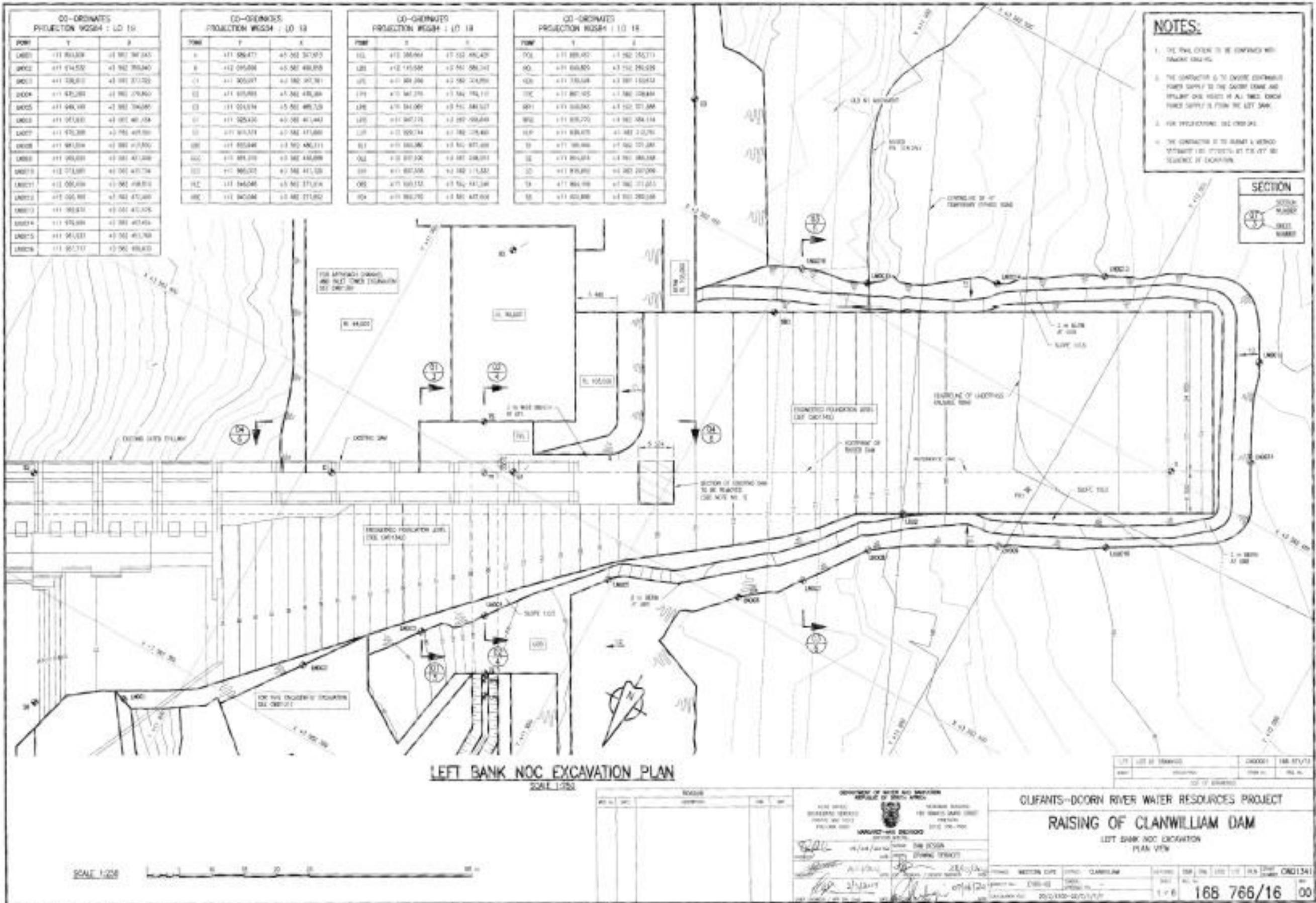
**OLIFANTS-DOORN RIVER WATER RESOURCES PROJECT**

**RAISING OF CLANWILLIAM DAM**

RIGHT BANK NOC  
EXCAVATION DETAILS  
SECTION 02-02

PROJECT: WESTERN CAPS	CONTRACT: CLANWILLIAM	REGION: ORR	DEL. F20	EXT.:	OTHER: CMO 003
PROJECT NO.: E100-02	TENDER/CONTRACT NO.:	BLK: 17	NO.:	3	5
EXCAVATION FILE: 26/2/2008-02/17/1					

168 643/14 01



CO-ORDINATES  
PROJECTION WGS84 : LD 18

POINT	X	Y
LD001	411 861.00	41 982 347.85
LD002	411 874.50	41 982 360.80
LD003	411 888.00	41 982 373.75
LD004	411 901.50	41 982 386.70
LD005	411 915.00	41 982 399.65
LD006	411 928.50	41 982 412.60
LD007	411 942.00	41 982 425.55
LD008	411 955.50	41 982 438.50
LD009	411 969.00	41 982 451.45
LD010	411 982.50	41 982 464.40
LD011	411 996.00	41 982 477.35
LD012	412 009.50	41 982 490.30
LD013	412 023.00	41 982 503.25
LD014	412 036.50	41 982 516.20
LD015	412 050.00	41 982 529.15
LD016	412 063.50	41 982 542.10

CO-ORDINATES  
PROJECTION WGS84 : LD 18

POINT	X	Y
LD017	412 077.00	41 982 555.05
LD018	412 090.50	41 982 567.95
LD019	412 104.00	41 982 580.85
LD020	412 117.50	41 982 593.75
LD021	412 131.00	41 982 606.65
LD022	412 144.50	41 982 619.55
LD023	412 158.00	41 982 632.45
LD024	412 171.50	41 982 645.35
LD025	412 185.00	41 982 658.25
LD026	412 198.50	41 982 671.15
LD027	412 212.00	41 982 684.05
LD028	412 225.50	41 982 696.95
LD029	412 239.00	41 982 709.85
LD030	412 252.50	41 982 722.75
LD031	412 266.00	41 982 735.65
LD032	412 279.50	41 982 748.55
LD033	412 293.00	41 982 761.45
LD034	412 306.50	41 982 774.35
LD035	412 320.00	41 982 787.25
LD036	412 333.50	41 982 799.15
LD037	412 347.00	41 982 812.05
LD038	412 360.50	41 982 824.95
LD039	412 374.00	41 982 837.85
LD040	412 387.50	41 982 850.75
LD041	412 401.00	41 982 863.65
LD042	412 414.50	41 982 876.55
LD043	412 428.00	41 982 889.45
LD044	412 441.50	41 982 902.35
LD045	412 455.00	41 982 915.25
LD046	412 468.50	41 982 928.15
LD047	412 482.00	41 982 941.05
LD048	412 495.50	41 982 953.95
LD049	412 509.00	41 982 966.85
LD050	412 522.50	41 982 979.75

CO-ORDINATES  
PROJECTION WGS84 : LD 18

POINT	X	Y
LD051	412 536.00	41 982 992.60
LD052	412 549.50	41 982 1005.50
LD053	412 563.00	41 982 1018.40
LD054	412 576.50	41 982 1031.30
LD055	412 590.00	41 982 1044.20
LD056	412 603.50	41 982 1057.10
LD057	412 617.00	41 982 1070.00
LD058	412 630.50	41 982 1082.90
LD059	412 644.00	41 982 1095.80
LD060	412 657.50	41 982 1108.70
LD061	412 671.00	41 982 1121.60
LD062	412 684.50	41 982 1134.50
LD063	412 698.00	41 982 1147.40
LD064	412 711.50	41 982 1160.30
LD065	412 725.00	41 982 1173.20
LD066	412 738.50	41 982 1186.10
LD067	412 752.00	41 982 1199.00
LD068	412 765.50	41 982 1211.90
LD069	412 779.00	41 982 1224.80
LD070	412 792.50	41 982 1237.70
LD071	412 806.00	41 982 1250.60
LD072	412 819.50	41 982 1263.50
LD073	412 833.00	41 982 1276.40
LD074	412 846.50	41 982 1289.30
LD075	412 860.00	41 982 1302.20
LD076	412 873.50	41 982 1315.10
LD077	412 887.00	41 982 1328.00
LD078	412 900.50	41 982 1340.90
LD079	412 914.00	41 982 1353.80
LD080	412 927.50	41 982 1366.70
LD081	412 941.00	41 982 1379.60
LD082	412 954.50	41 982 1392.50
LD083	412 968.00	41 982 1405.40
LD084	412 981.50	41 982 1418.30
LD085	412 995.00	41 982 1431.20
LD086	413 008.50	41 982 1444.10
LD087	413 022.00	41 982 1457.00
LD088	413 035.50	41 982 1469.90
LD089	413 049.00	41 982 1482.80
LD090	413 062.50	41 982 1495.70
LD091	413 076.00	41 982 1508.60
LD092	413 089.50	41 982 1521.50
LD093	413 103.00	41 982 1534.40
LD094	413 116.50	41 982 1547.30
LD095	413 130.00	41 982 1560.20
LD096	413 143.50	41 982 1573.10
LD097	413 157.00	41 982 1586.00
LD098	413 170.50	41 982 1598.90
LD099	413 184.00	41 982 1611.80
LD100	413 197.50	41 982 1624.70

CO-ORDINATES  
PROJECTION WGS84 : LD 18

POINT	X	Y
LD101	413 211.00	41 982 1637.60
LD102	413 224.50	41 982 1650.50
LD103	413 238.00	41 982 1663.40
LD104	413 251.50	41 982 1676.30
LD105	413 265.00	41 982 1689.20
LD106	413 278.50	41 982 1702.10
LD107	413 292.00	41 982 1715.00
LD108	413 305.50	41 982 1727.90
LD109	413 319.00	41 982 1740.80
LD110	413 332.50	41 982 1753.70
LD111	413 346.00	41 982 1766.60
LD112	413 359.50	41 982 1779.50
LD113	413 373.00	41 982 1792.40
LD114	413 386.50	41 982 1805.30
LD115	413 400.00	41 982 1818.20
LD116	413 413.50	41 982 1831.10
LD117	413 427.00	41 982 1844.00
LD118	413 440.50	41 982 1856.90
LD119	413 454.00	41 982 1869.80
LD120	413 467.50	41 982 1882.70
LD121	413 481.00	41 982 1895.60
LD122	413 494.50	41 982 1908.50
LD123	413 508.00	41 982 1921.40
LD124	413 521.50	41 982 1934.30
LD125	413 535.00	41 982 1947.20
LD126	413 548.50	41 982 1960.10
LD127	413 562.00	41 982 1973.00
LD128	413 575.50	41 982 1985.90
LD129	413 589.00	41 982 1998.80
LD130	413 602.50	41 982 2011.70
LD131	413 616.00	41 982 2024.60
LD132	413 629.50	41 982 2037.50
LD133	413 643.00	41 982 2050.40
LD134	413 656.50	41 982 2063.30
LD135	413 670.00	41 982 2076.20
LD136	413 683.50	41 982 2089.10
LD137	413 697.00	41 982 2102.00
LD138	413 710.50	41 982 2114.90
LD139	413 724.00	41 982 2127.80
LD140	413 737.50	41 982 2140.70
LD141	413 751.00	41 982 2153.60
LD142	413 764.50	41 982 2166.50
LD143	413 778.00	41 982 2179.40
LD144	413 791.50	41 982 2192.30
LD145	413 805.00	41 982 2205.20
LD146	413 818.50	41 982 2218.10
LD147	413 832.00	41 982 2231.00
LD148	413 845.50	41 982 2243.90
LD149	413 859.00	41 982 2256.80
LD150	413 872.50	41 982 2269.70

- NOTES:**
1. THE FINAL CONTRACT TO BE SIGNED WITH CONTRACTOR.
  2. THE CONTRACTOR IS TO ENSURE CONTINUOUS POWER SUPPLY TO THE DAM SITE AND MAINTAIN ONE ROAD AT ALL TIMES. CHECK POWER SUPPLY TO THE SITE DAM.
  3. FOR PROTECTING THE DAM.
  4. THE CONTRACTOR IS TO MAINTAIN A RECORD OF ALL THE WORK AT THE SITE IN THE SEQUENCE OF EXCAVATION.



**LEFT BANK NOC EXCAVATION PLAN**  
SCALE 1:250

DATE	1/11/2010	PROJECT NO.	168 766/16
SCALE	1:250	SHEET NO.	00

RAISING OF CLANWILLIAM DAM  
LEFT BANK NOC EXCAVATION  
PLAN VIEW

168 766/16 00

**REQUIREMENT:**  
 AS REQUIRED BY THE CIVIL ACT, 1960, GOVERNMENT GAZETTE REGULATION NO. 94 OF 7 FEBRUARY 2014, THE CONTRACTOR SHALL REGULARLY ALLOW THE ENGINEERING GEOLOGIST TO VISIT THE EXCAVATION / WORK AT ANY ADDITIONAL REASONS TO BE TAKEN TO SAFEGUARD THE EXCAVATION AS IT PROGRESSES.

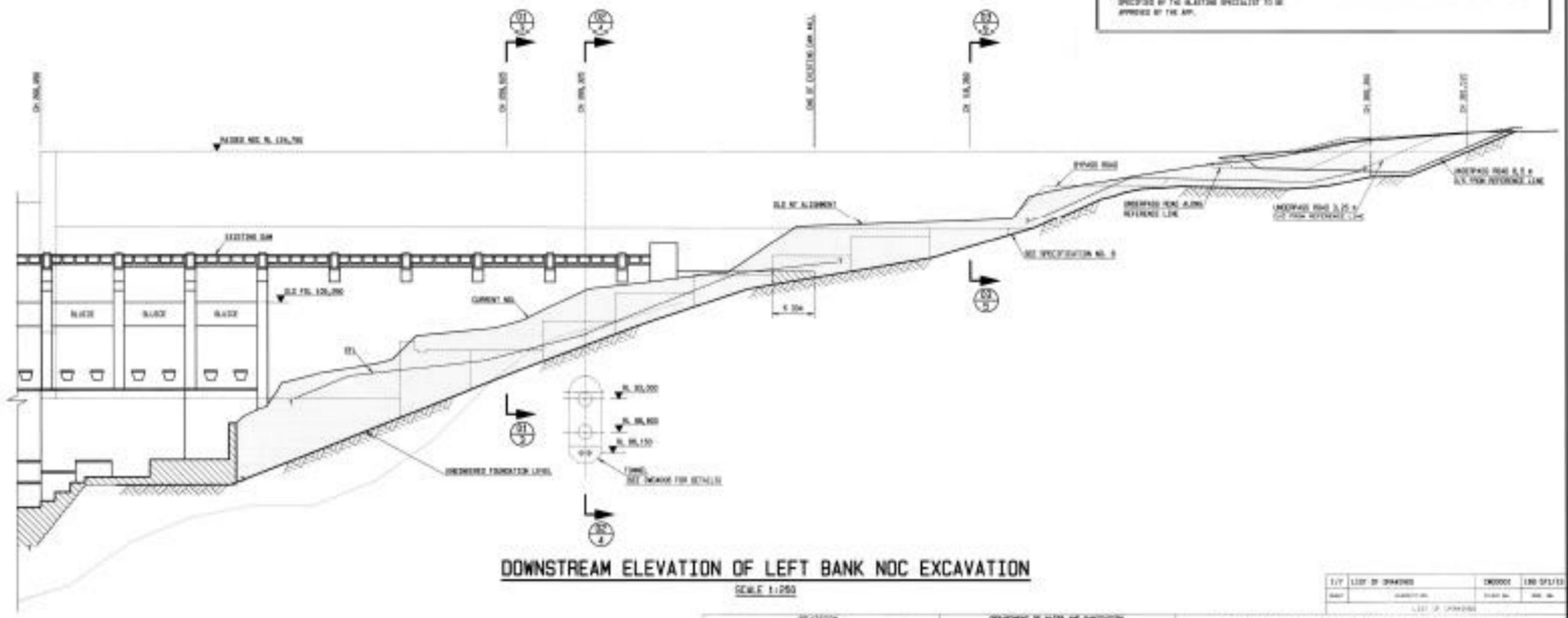
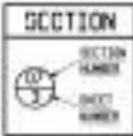
**NOTES:**  
 1. THE CONTRACTOR IS TO SUBMIT A METHOD STATEMENT FOR APPROVAL BY THE APP FOR COMMENCEMENT OF EXCAVATION AND TO CONCRETE PLACEMENT. THE EXCAVATION AND BACKFILLING WITH THE CONCRETE FOR THE BLOCK IMMEDIATELY ABOVE THE TUNNEL AND THE BLOCKS ON EITHER SIDE OF THAT BLOCK, SHALL BE DONE PRIOR TO TUNNEL EXCAVATION.

**LEGEND:**

- REL. NATURAL GROUND LEVEL
- ENGINEERED FOUNDATION LEVEL PROPOSED BY DESIGN ENGINEER FOR CONSTRUCTION PURPOSES
- SPL. ESTIMATED FOUNDATION LEVEL / 2MM ± 400 MM - ROCK MASS RATING IN TOP 200MM ONLY
- TO BE EXCAVATED
- ▨ TO BE BLENDED

**SPECIFICATIONS:**

1. ALL FOUNDATIONAL EXCAVATED SLOPES AND SLOPE PROTECTION TO BE APPROVED BY THE APP IN CONSULTATION WITH THE ENGINEERING GEOLOGIST.
2. DETAILED METHOD STATEMENTS MUST BE SUBMITTED PRIOR TO EXCAVATION COMMENCEMENT, TO THE APP FOR APPROVAL.
3. THE CONTRACTOR SHALL FIRST PERFORM TIE-IN BLASTING IN ORDER TO BE ABLE TO COMPLY WITH SPECIFICATION FOR BLENDED ROCK/ROCK RECORDS OF THE DAM WALL. HE SHALL OBTAIN THE SERVICES OF A BLASTING SPECIALIST TO ASSIST FOR APPROVAL OF THE TIE-IN BLASTING POSITION WILL BE INDICATED BY THE MAIN CONTRACTOR.
4. BLASTING TO BE CARRIED OUT EITHER 100% OF ANY CONCRETE AND/OR GROUTING REGARDLESS OF AGE, SHALL BE DONE BY MEANS OF NON-EXPLOSIVE BLASTING TECHNIQUES, OR BY MEANS OF SPECIALTY CONTROLLED BLASTING TECHNIQUES, TO THE APPROVAL OF THE APP. ALL SUCH BLASTING SHALL BE DESIGNED TO KEEP RECOMMENDED MAX PARTICLE VELOCITIES UP TO BELOW 10.1 MM/S AND THE FREQUENCY ABOVE 44 Hz OR AS OTHERWISE SPECIFIED BY THE BLASTING SPECIALIST TO BE APPROVED BY THE APP.
5. ROCK SUPPORT FOR ALL EXCAVATIONS SHALL BE DONE IN ACCORDANCE WITH PARTICULAR SPECIFICATION AND (1) ROCK SUPPORT, AND SHALL OVER-AND-ABOVE THE ROCK ANCHORS AS SPECIFIED BY THE ENGINEERING GEOLOGIST. ALLOW FOR WORK WITH REINFORCEMENT AS PER SUB-CLASS ST. 5.2.4
6. THE SUPPLY, DELIVERY, INSTALLATION, FIXING AND LACING OF THE REINFORCEMENT ATTACHMENT WORK SHALL ALSO INCLUDE THE DRILLING AND EPOXY GROUTING OF THE TOP AND BOTTOM ANCHORS INTO THE BLASTED ROCK FACE. THE REINFORCEMENT SHALL BE 4 BARRED TYPICAL NOMINAL AREA MUST BE 2000MM<sup>2</sup> AND SHALL BE A MIN 1750 OR WITH 2.7 MM CLASS 3 GALVANIZED WIRE. INCREASES OF BARR PRODUCT.
7. EXCAVATED SURFACES THAT WILL REMAIN PERMANENTLY EXPOSED ON COMPLETION OF THE WORK SHALL BE CLEARED OF ALL LOOSE MATERIAL, PILES OF ROCK, DEBRIS AND RUBBISH. REFER TO PARTICULAR SPECIFICATION AND TO FOR ALL OTHER EXCAVATION SPECIFICATIONS AND PERMISSIBLE DEVIATIONS.
8. FOR PREPARATION AND TREATMENT OF EXCAVATED FOUNDATIONS TO RECEIVE BENTONITE CONCRETE, REFER TO PARTICULAR SPECIFICATIONS AND TO AND ONE TO BE APPROVED BY THE APP.

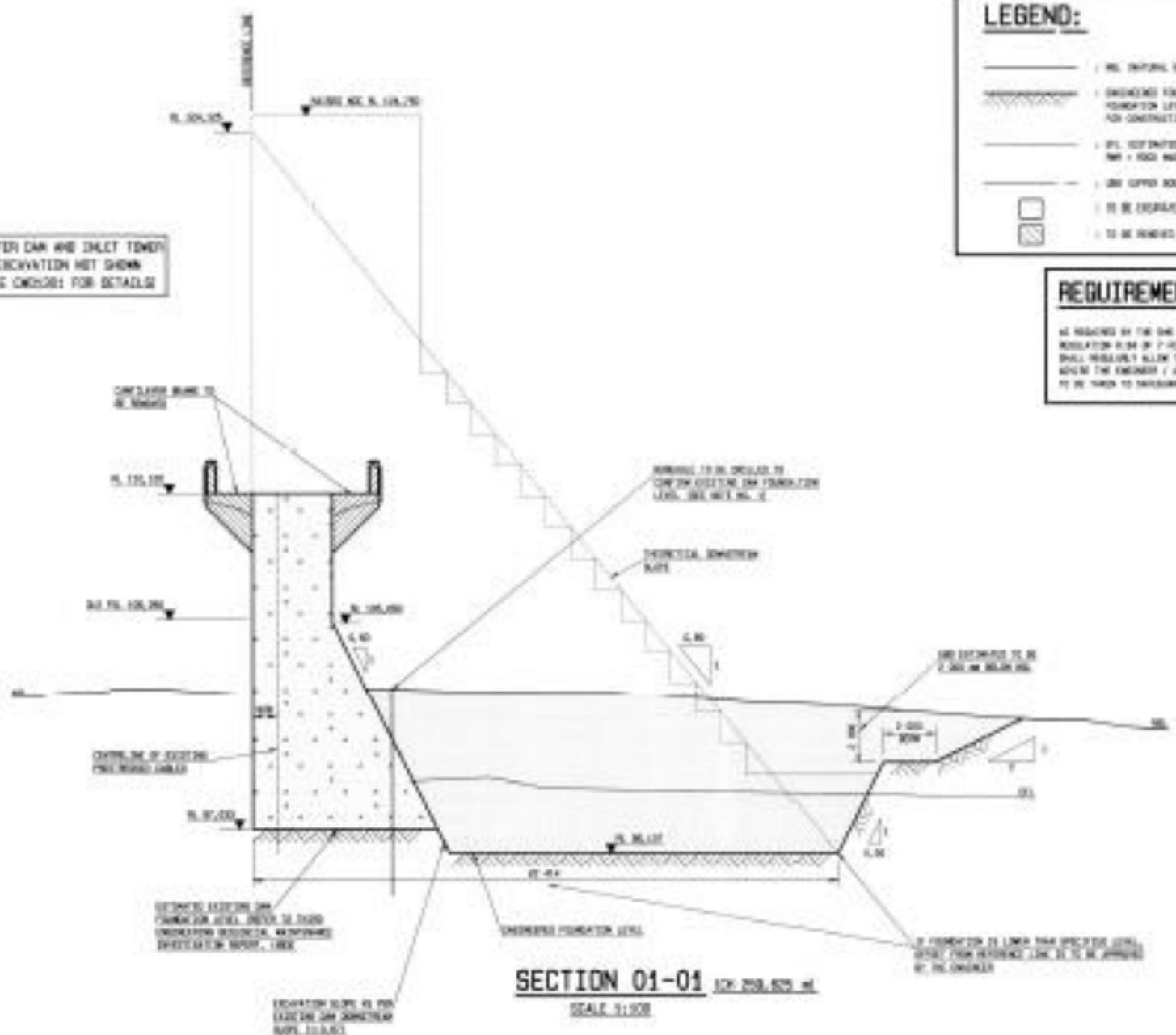


**DOWNSTREAM ELEVATION OF LEFT BANK NDC EXCAVATION**  
 SCALE 1:250



<b>REVISION</b> NO.   DATE   DESCRIPTION   BY   CHK.		DEPARTMENT OF WATER AND SANITATION REPUBLIC OF SOUTH AFRICA WATER AND SANITATION WATER AND SANITATION WATER AND SANITATION		<b>OLIFANTS-DOORN RIVER WATER RESOURCES PROJECT</b> <b>RAISING OF CLANWILLIAM DAM</b> LEFT BANK NDC EXCAVATION DOWNSTREAM ELEVATION	
NAME: MATHON DIPS ADDRESS: 1130-00 PHONE: 011-234-1111 FAX: 011-234-1111		PROJECT: CLANWILLIAM DRAWING NO.: 168 767/16 DATE: 15/01/2017 SCALE: 1:250		DRAWN BY: MATHON DIPS CHECKED BY: MATHON DIPS APPROVED BY: MATHON DIPS DATE: 15/01/2017	

COFFER DAM AND INLET TOWER EXCAVATION NOT SHOWN (SEE CWD001 FOR DETAILS)



**LEGEND:**

- ORIGINAL GROUND LEVEL
- ▨ ENGINEERED FOUNDATION LEVEL PROPOSED BY DESIGN ENGINEER FOR CONSTRUCTION PURPOSES
- EST. EXISTING FOUNDATION LEVEL (1991) + 40 MM + 100 MM MATCH AFTER REMOVAL LANE
- - - NEW UPPER BOUNDARY BERM
- TO BE EXCAVATED
- ▨ TO BE FINISHED

**REQUIREMENT:**

AS REQUIRED BY THE ONE METRE WALL EXCAVATION GUIDE REGULATION 8.34 OF 7 FEBRUARY 2014, THE CONTRACTOR SHALL PROVIDE ALL THE EXCAVATION REQUIRED TO ACHIEVE THE EXCAVATED 1:1 AND 1:2 SLOPES, INCLUDING TO BE TAKEN TO INSURE THE EXCAVATION AS IT PROCEEDS.

**NOTES:**

1. EXISTING SLOPE EITHER OF THE SLOPE OR AT APPROXIMATELY 1:1 OR 1:2 OR 1:3 OF EVERY SECOND BAY TO CONFORM THE 1:1 OF THE EXISTING DAM. DAM DAMPTED TO BE EXCAVATED BY AN UNDERPAID SLOPE AND NOT TO THE UNDERSIDE OF COFFER DAM. SEE FOR EXACT ADDRESS REACTION DAMS SYSTEM.
2. FOR PREPARATION OF FIRST JOINT CONCRETE (SEE SPECIFICATION NO. 10 ON DAM)
  - A.1. FIRST JOINT SURFACE FOR NEW: ONE OF EXISTING DAM, BUT VERTICAL FACE OF EXISTING DAM AND SURFACE FACE OF EXISTING DAM BELOW LEVEL OF FILLER FLOOR, UNLESS OTHERWISE SPECIFIED.
  - A.2. FIRST JOINT SURFACE FOR EXISTING: NOT SAME AS EXISTING DAM, BUT FOR APPROXIMATELY THE POSITION OF THE EXISTING DAM SURFACE THAT NOT TO BE EXCAVATED AND NOT SLOPE OF EXISTING SLOPE BELOW THE LEVEL OF PROPOSED FILLER FLOOR.

**SPECIFICATIONS:**

1. ALL FOUNDATIONS, EXCAVATED SLOPE AND SLOPE PROTECTION TO BE APPROVED BY THE OFF IN CONNECTION WITH THE ENGINEERING DESIGNER.
2. DETAILED METHOD STATEMENTS MUST BE SUBMITTED PRIOR TO EXCAVATION COMMENCING, TO THE OFF FOR APPROVAL.
3. ALL FOUNDATIONS SHALL BEAT MINIMUM 1:1 SLOPE IN ORDER TO BE ABLE TO COMPLETE A SPECIFICATION FOR MINIMUM EXCAVATION REQUIRED BY THE DAM WALL. ALL SHALL BEATIN THE SERVICES OF A QUALITY SPECIALIST TO ASSESS FOR APPROVAL BY THE OFF. A FINAL SLOPE PROTECTION SHALL BE PROVIDED BY THE MAIN CONTRACTOR.
4. SLOPING TO BE LARGED BY 45 DEGREE FOR 40% OF ANY CONCRETE WITHIN EXCAVATION REMOVED BY ALL, SHALL BE DONE BY MEANS OF NON-EXPLOSIVE BLASTING TECHNIQUE, OR BY MEANS OF SPECIALLY DESIGNED CONTROLLED BLASTING TECHNIQUE, TO THE APPROVAL OF THE OFF. ALL SUCH BLASTING SHALL BE DESIGNED TO KEEP EXCAVATION PLAN PERFECTLY VERTICAL UP TO 100MM FROM DAM WALL AND THE PROBABLY 500MM TO 100MM FROM EXCAVATION (SPECIFIED BY THE SLOPING SPECIALIST TO BE APPROVED BY THE OFF).
5. WORK SUPPORT FOR ALL EXCAVATION SHALL BE DONE IN ACCORDANCE WITH RELEVANT SPECIFICATION AND ST. WORK SUPPORT, AND SHALL OVER-AND-UNDER THE WORK AND BE APPROVED BY THE ENGINEERING DESIGNER. ALLOW FOR NEW WITH REINFORCEMENT AS PER SPEC-CLASS 07, S.3.5.
6. THE SUPPLY, DELIVERY, INSTALLATION, FIXING AND LACING OF THE REINFORCING, WITHIN AND OUTSIDE SHALL ALSO INCLUDE THE DRILLING AND SPOTTING OF THE TOP AND BOTTOM ANCHORS INTO THE BLASTED ROCK FACE. THE REINFORCING SHALL BE A DOUBLE TENDED REINFORCING, WITH REINFORCING AND SHALL BE 1:1 WITH 100MM TO 150MM (SEE SPEC-CLASS 07, S.3.5) AND SHALL BE 1:1 WITH 100MM TO 150MM (SEE SPEC-CLASS 07, S.3.5) AND SHALL BE 1:1 WITH 100MM TO 150MM (SEE SPEC-CLASS 07, S.3.5).
7. EXCAVATED SURFACES THAT ALL REMAIN FORMERLY EXPOSED ON COMPLETION OF THE WORK SHALL BE SLOPED BY ALL LOOSE MATERIAL, ROCKS OF ROCK, SANDS AND RUBBISH WITH TO PARTICULAR SPECIFICATION AND TO THE OFF. OTHER EXCAVATION SPECIFICATION AND TO THE OFF. OTHER EXCAVATION SPECIFICATION AND TO THE OFF.
8. FOR PREPARATION AND TREATMENT OF EXCAVATED FOUNDATIONS TO RECEIVE CONCRETE, REFER TO PARTICULAR SPECIFICATION AND TO THE OFF.



NO.	REV.	DESCRIPTION	DATE	BY

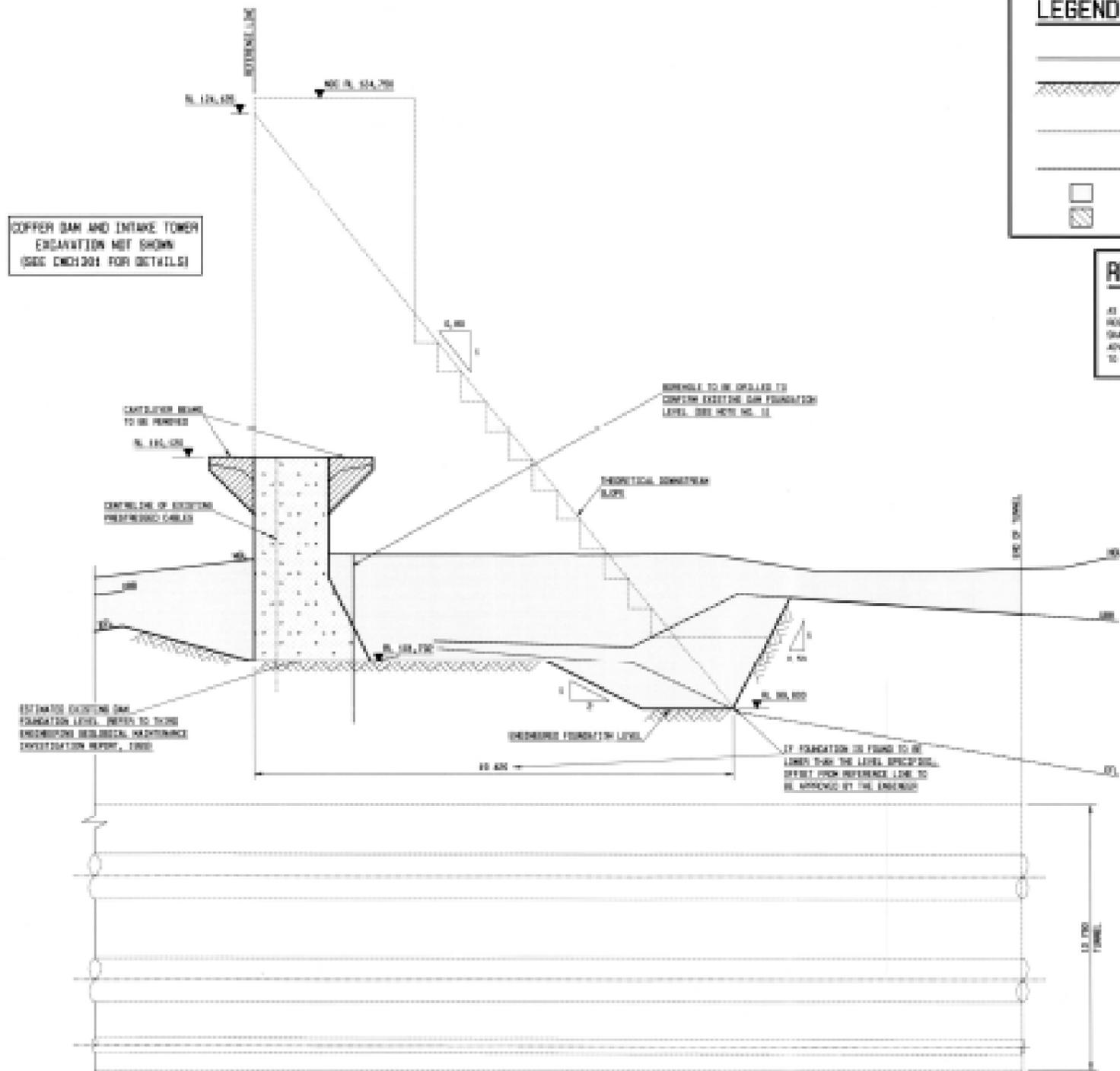
REPUBLIC OF SOUTH AFRICA  
 DEPARTMENT OF WATER AND SANITATION  
 RAISING OF CLANMILLIAM DAM  
 LEFT BANK NOC EXCAVATION  
 SECTION 01-01

DESIGNED BY: [Signature]  
 CHECKED BY: [Signature]  
 APPROVED BY: [Signature]

DLIFANTS-COORN RIVER WATER RESOURCES PROJECT  
**RAISING OF CLANMILLIAM DAM**  
 LEFT BANK NOC EXCAVATION  
 SECTION 01-01

PROJECT: RAISING OF CLANMILLIAM DAM  
 DRAWING NO: 168 768/16  
 DATE: 2016

COPPER BAR AND INTAKE TOWER EXCAVATION NOT SHOWN (SEE CHN1301 FOR DETAILS)



**LEGEND:**

- NGL, NATURAL GROUND LEVEL
- ENGINEERED FOUNDATION LEVEL, PROPOSED BY DESIGN ENGINEER FOR CONSTRUCTION PURPOSES
- EFL, ESTIMATED FOUNDATION LEVEL (EFL = 40' MIN - ROCK MASS WITH 10% WATER REDUCTION, 14MPa)
- 100% UPPER BOUNDARY BENCHMARK
- TO BE EXCAVATED
- ▨ TO BE REMOVED

- NOTES:**
1. OBTAIN SWELLING TESTS AT THE SITE TO BE AT APPROXIMATELY 1000 MM DIA OF NO. 2 OF EVERY SECOND BLOCK TO DETERMINE THE EFL OF THE EXISTING DAM. CORE SAMPLES TO BE OBTAINED BY AN ENGINEERING GEOLOGIST AND SENT TO THE AUTHORITY OF DAM TOWN HALL FOR ANAL. APPROXIMATE REACTION TIME TESTING.
  2. FOR PREPARATION OF FINE JOINT SURFACE SEE SPECIFICATION NO. 23 ON DRAWING.
  - 2.1. FINE JOINT SURFACE FOR ROC: SLOPE OF EXISTING ROC, 1/2% VERTICAL FACE OF EXISTING ROC AND SLOPE FACE OF EXISTING ROC BELOW LEVEL OF GALLERY FLOOR, UNLESS OTHERWISE INDICATED.
  - 2.2. FINE JOINT SURFACE FOR SPALLWAY: SLOPE OF EXISTING SPALLWAY FROM THE REFERENCE LINE CORRESPOND TO THE POSITION OF THE CURRENT ROBERTS WALLS THAT NEED TO BE DEMOLISHED AND 1/2% SLOPE OF EXISTING SPALLWAY BELOW THE LEVEL OF PROPOSED GALLERY FLOOR.

**REQUIREMENT:**

AS REQUIRED BY THE OHS ACT, 1985, GOVERNMENT SHEETS REGULATION 8.04 OF 7 FEBRUARY 2004, THE CONTRACTOR SHALL REGULARLY ALLOW THE ENGINEERING GEOLOGIST TO ADVISE THE ENGINEER / JPP OF ANY ADDITIONAL MEASURES TO BE TAKEN TO SAFEGUARD THE EXCAVATION AS IT PROGRESSES.

- SPECIFICATIONS:**
1. ALL FOUNDATIONS, EXCAVATED SLOPES AND SLOPE PROTECTION TO BE APPROVED BY THE JPP IN CONJUNCTION WITH THE ENGINEERING GEOLOGIST.
  2. DETAILED METHOD STATEMENTS MUST BE SUBMITTED PRIOR TO EXCAVATION COMMENCEMENT, TO THE JPP FOR APPROVAL.
  3. THE CONTRACTOR SHALL FIRST PERFORM TEST BLASTING IN ORDER TO BE ABLE TO COMPLETE A SPECIFICATION FOR WATERM PROTECTION REQUIRED AT THE DAM WALL. HE SHALL OBTAIN THE SERVICES OF A BLASTING SPECIALIST TO ASSIST FOR APPROVAL BY DMS. A TEST BLASTING POSITION WILL BE INDICATED BY THE MAIN CONTRACTOR.
  4. BLASTING TO BE CARRIED OUT WITHIN 500 M OF ANY TUNNEL AND/OR EXISTING INFRASTRUCTURE OF THE DAM SHALL BE DONE BY MEANS OF NON-EXPLOSIVE BLASTING TECHNIQUES, OR BY MEANS OF SPECIALLY DESIGNED CONTROLLED BLASTING TECHNIQUES, TO THE APPROVAL OF THE JPP. ALL SUCH BLASTING SHALL BE DESIGNED TO KEEP RECOMMENDED PEAK PARTICLE VELOCITIES (PPV) TO BELOW 12.7 MM/S AND THE FREQUENCY ABOVE 10 Hz OR AS OTHERWISE SPECIFIED BY THE BLASTING SPECIALIST TO BE APPROVED BY THE JPP.
  5. ROCK SUPPORT FOR ALL EXCAVATIONS SHALL BE DONE IN ACCORDANCE WITH PARTICULAR SPECIFICATION AND 27. ROCK SUPPORT, AND SHALL OVER-LAP ABOVE THE ROCK ANCHORS AS SPECIFIED BY THE ENGINEERING GEOLOGIST. ALLOW FOR MORE ROCK REINFORCEMENT AS PER SUB-CLAUSE 27.3.1.4
  6. THE SUPPLY, COLLECT, UNLOADING, FIXING AND LACING IN THE ROCKWALL RETENTION WALL SHALL ALSO INCLUDE THE BRACING AND OTHER BRACING OF THE TOP AND BOTTOM ANCHORS INTO THE BLASTED ROCK FACE. THE HIGH LEGS WILL BE A DOUBLE FRINGE BRACING AND HIGH TO DAM TOPPED AND SHALL BE A HIGH TYPE 90 WITH 1.2 M CLAS A GALVANIZED STEEL BRACING (OR EQUAL, PRESET)
  7. EXCAVATED SURFACE THAT WILL REMAIN PERMANENTLY EXPOSED ON COMPLETION OF THE WORK SHALL BE CLEANED OF ALL LOOSE MATERIAL, PIECES OF ROCK, DEBRIS AND RUBBISH. REFER TO PARTICULAR SPECIFICATION AND 23 FOR ALL OTHER EXCAVATION SPECIFICATIONS AND POSSIBLE DEVIATIONS.
  8. FOR PREPARATION AND TREATMENT OF EXCAVATED FOUNDATIONS TO RECEIVE DEPTH CONCRETE, REFER TO PARTICULAR SPECIFICATIONS AND 23 AND 28.30.

**SECTION 02-02** CHN 2058, 2025 M  
SCALE 1:100



REV. NO.	DATE	DESCRIPTION	BY	CHK

DEPARTMENT OF WATER AND SEWERAGE  
TOWN OF CLANWILLIAM  
WATER SUPPLY  
CLANWILLIAM WATER TREATMENT PLANT  
CLANWILLIAM

DESIGNED BY: J. B. BENTON  
CHECKED BY: J. B. BENTON  
DATE: 10/10/2017

CLIFANTS-DOORN RIVER WATER RESOURCES PROJECT  
**RAISING OF CLANWILLIAM DAM**  
LEFT BANK ROC EXCAVATION  
SECTION 02-02

PROJECT NO. 1688-02	PROJECT NAME: CLANWILLIAM	PROJECT NO. 1688-02	PROJECT NAME: CLANWILLIAM
DATE: 26/07/2017	DATE: 26/07/2017	DATE: 26/07/2017	DATE: 26/07/2017

SCALE: 1:100



**SECTION**  
SECTION NUMBER  
SHEET NUMBER

**REQUIREMENT:**

AS REQUIRED BY THE CIVIL ACT, 1992, GOVERNMENT GAZETTE REGULATION 1, 24 OF 7 FEBRUARY 2004, THE CONTRACTOR SHALL PROBABLY ALLOW THE ENGINEERING DESIGNS TO ADVISE THE ENGINEER / JAPP OF ANY ADDITIONAL MEASURES TO BE TAKEN TO SAFEGUARD THE EXCAVATION AS IT PROGRESSES.

**NOTES:**

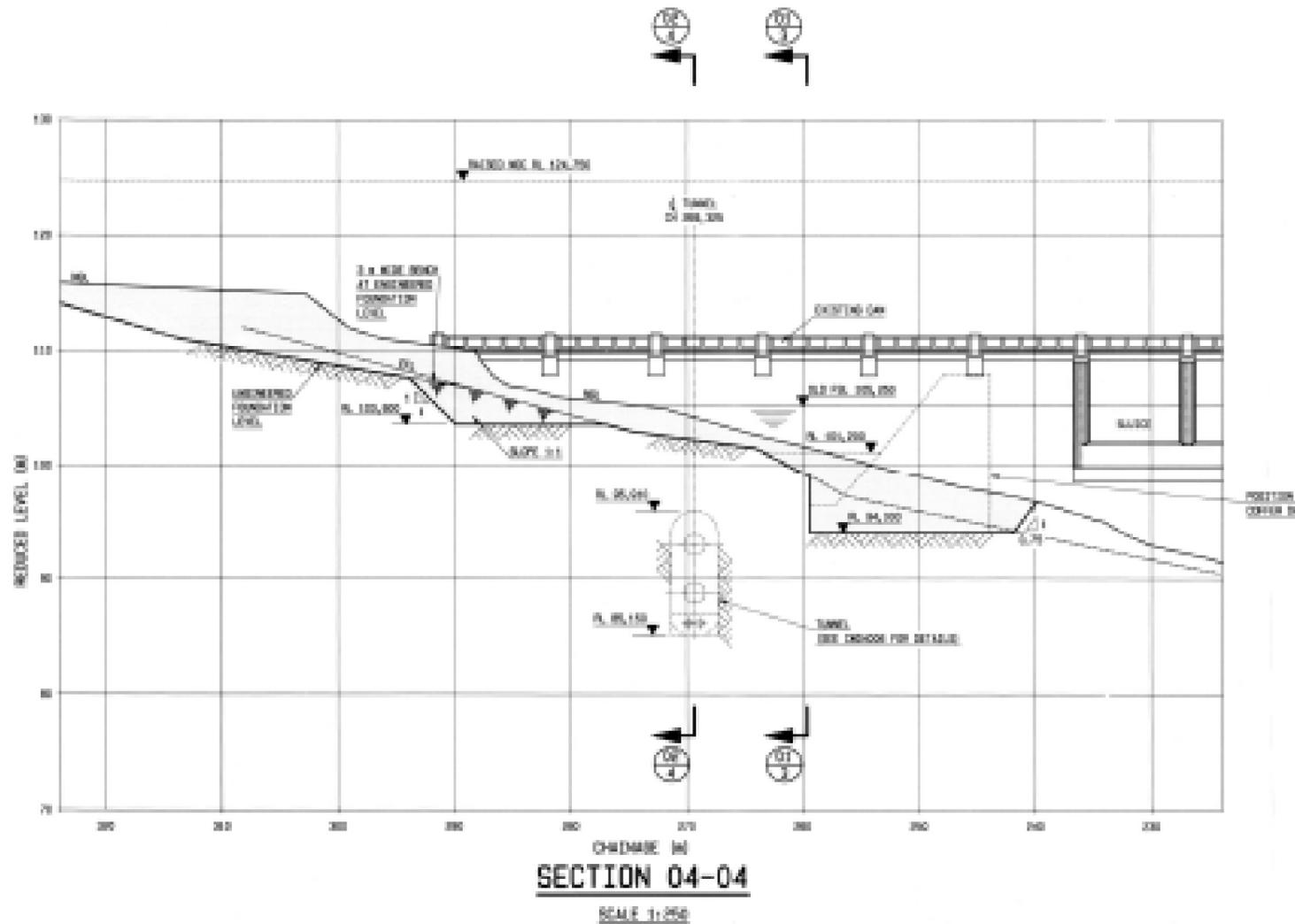
1. THE CONTRACTOR IS TO SUBMIT A METHOD STATEMENT FOR APPROVAL BY THE JPP FOR SEQUENCE OF EXCAVATION AND FOR CONCRETE PLACEMENT. THE EXCAVATION AND BACKFILLING WITH THE CONCRETE FOR THE BLOCKS IMMEDIATELY ABOVE THE TUNNEL AND THE BLOCKS ON EITHER SIDE OF THAT BLOCK, SHALL BE DONE PRIOR TO TUNNEL EXCAVATION.

**LEGEND:**

- ORIGINAL GROUND LEVEL
- ENGINEERED FOUNDATION LEVEL, FOUNDATION LEVEL PROPOSED BY DESIGN ENGINEER FOR CONSTRUCTION PURPOSES
- ESTIMATED FOUNDATION LEVEL / 1000 ± 400 MM ± ROCK MASS RATING LEFT BANK ROCKLAND, 1480
- URBAN UPPER BOUNDARY RECORD
- TO BE EXCAVATED
- ▨ TO BE REWORKED

**SPECIFICATIONS:**

1. ALL FOUNDATIONS, EXCAVATED SLOPES AND SLURRY PROTECTION TO BE APPROVED BY THE JPP IN CONJUNCTION WITH THE ENGINEERING DESIGNS.
2. DETAILED METHOD STATEMENTS MUST BE SUBMITTED PRIOR TO EXCAVATION COMMENCEMENT, TO THE JPP FOR APPROVAL.
3. THE CONTRACTOR SHALL SUBMIT PROPOSED BLASTING IN ORDER TO BE ABLE TO COMPLETE A SPECIFICATION FOR NUCLEAR VIBRATION RECORDS AT THE DAM WALL. HE SHALL OBTAIN THE SERVICES OF A BLASTING SPECIALIST TO ASSIST FOR APPROVAL BY EMS. A TRIAL BLASTING POSITION WILL BE INDICATED BY THE MAIN CONTRACTOR.
4. BLASTING TO BE CARRIED OUT WITHIN 100 m OF ANY CONCRETE WORKER OPERATING REGARDLESS OF AGE, SHALL BE DONE BY MEANS OF NON-EXPLOSIVE BLASTING TECHNIQUES, OR BY MEANS OF SPECIALLY DESIGNED CONTROLLED BLASTING TECHNIQUES. TO THE APPROVAL OF THE JPP, ALL SUCH BLASTING SHALL BE DESIGNED TO KEEP RECOMMENDED PEAK PARTICULATE VELOCITY (PPV) TO BELOW 12,7 mm/s AND THE FREQUENCY ABOVE 10 Hz OR AN EQUIVALENT SPEED BY THE BLASTING SPECIALIST TO BE APPROVED BY THE JPP.
5. ROCK SUPPORT FOR ALL EXCAVATIONS SHALL BE DONE IN ACCORDANCE WITH PARTICULAR SPECIFICATION AND CIVIL ROCK SUPPORT, AND SHALL OVER-AND-ABOVE THE ROCK ANCHORS AS SPECIFIED BY THE ENGINEERING DESIGNS, SLIDING FOR MORE MASS REINFORCEMENT AS PER SUB-CLAUSE 07.0.2.4.
6. THE SUPPLY, DELIVERY, UNWINDING, TENDING AND LACING OF THE ROCKWALL WITHTENDING WIRE SHALL ALSO INCLUDE THE DRILLING AND EPOXY ANCHORING OF THE TOP AND BOTTOM ANCHORS INTO THE BLASTED ROCK FACE. THE WIRE USED WILL BE A GALVANIZED TWISTED HEAVYWIRE WIRE WITH TO HAVE 1000,000 AND SHALL BE A HIGH TENSILE WIRE WITH 0.2% ELONGATION & GALVANIZED WIRE. (MATERIALS IN EQUAL PROPORTION)
7. EXCAVATED SURFACES THAT WILL REMAIN PERMANENTLY EXPOSED ON COMPLETION OF THE WORKS SHALL BE CLEARED OF ALL LOOSE MATERIAL, PIECES OF ROCK, DEBRIS AND RUBBISH. REFER TO PARTICULAR SPECIFICATION AND SO FOR ALL OTHER EXCAVATION SPECIFICATIONS AND PARTICULAR SPECIFICATIONS.
8. FOR PREPARATION AND TREATMENT OF EXCAVATED FOUNDATIONS TO RECEIVE CONCRETE, REFER TO PARTICULAR SPECIFICATIONS AND SO AND END OF.



**SECTION 04-04**

SCALE 1:250

SCALE 1:250



LIST	LIST OF DRAWINGS	000004	000 00/0/0
DATE	DESCRIPTION	DATE	NO.

LIST OF REVISIONS

NO.	DATE	REVISION	BY	CHK

DEPARTMENT OF WATER AND SANITATION  
REPUBLIC OF SOUTH AFRICA

WATER SUPPLY AND FLOOD CONTROL  
PRETORIA 0001  
TELEPHONE 012 300-5000

WARRANTY AND GUARANTEE  
SECTION 100

ENGINEER: G. WESTER  
SUPERVISOR: G. DIBALELA

DATE: 07/04/16

OLIFANTS-DOORN RIVER WATER RESOURCES PROJECT

**RAISING OF CLANWILLIAM DAM**  
LEFT BANK NOC EXCAVATION  
SECTION 04-04

PROJECT NUMBER: 000004	PROJECT: CLANWILLIAM	PROJECT: DAM	DATE: 07/04/16
PROJECT NO: 0000-02	PROJECT: CLANWILLIAM	PROJECT: DAM	DATE: 07/04/16
PROJECT NO: 0000-02	PROJECT: CLANWILLIAM	PROJECT: DAM	DATE: 07/04/16

168 771/16 00

**NOTES:**

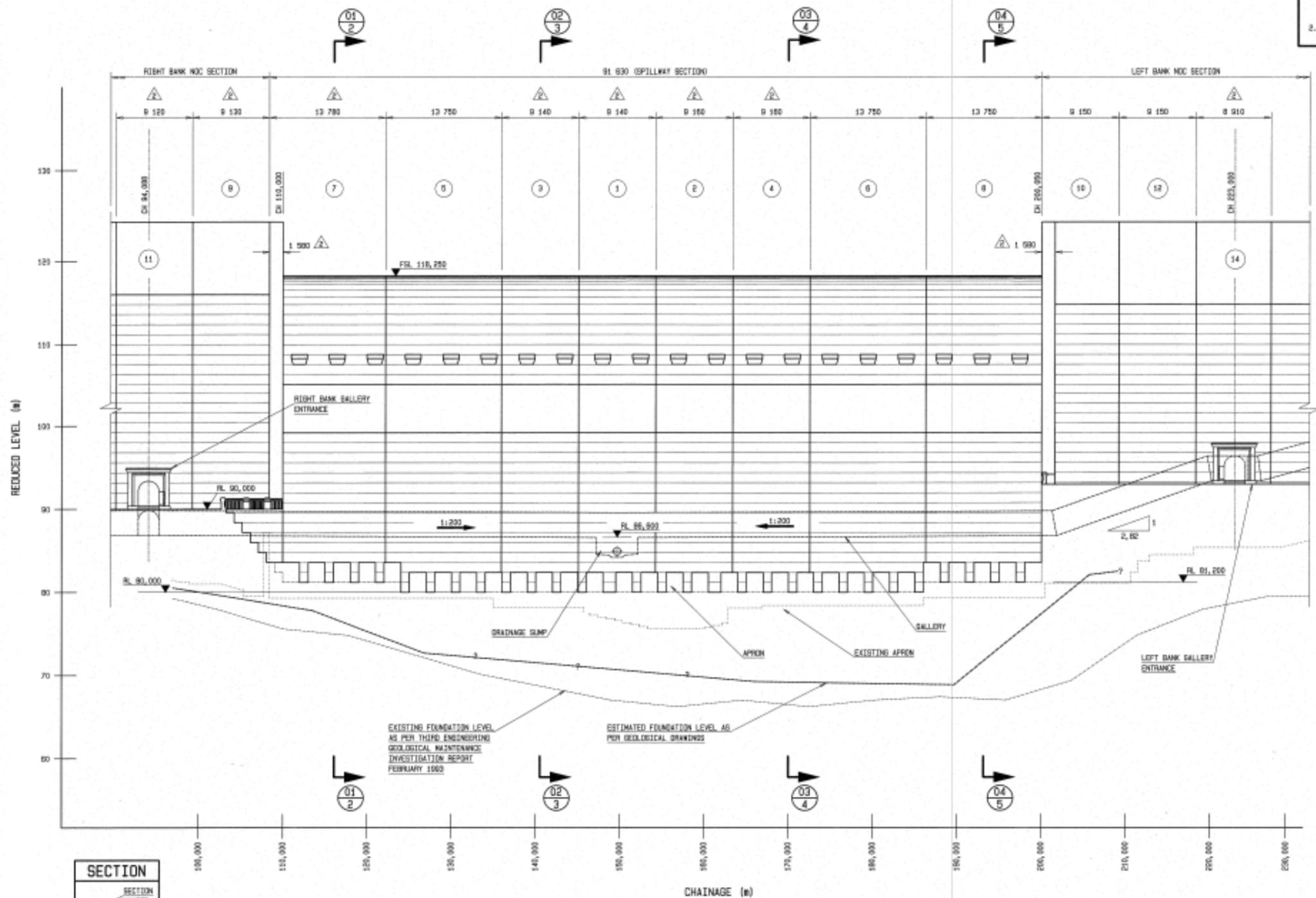
- DIAMOND DRILLING EITHER AT THE 0/5 TOE OR AT APPROXIMATELY 1 000 mm O/S OF N/C & OF EVERY SECOND BLOCK TO CONFORM THE EFL OF THE EXISTING DAM CORE SAMPLES TO BE DESCRIBED BY AN ENGINEERING GEOLOGIST AND SENT TO THE UNIVERSITY OF CAPE TOWN (UCT) FOR ALKALI AGGREGATE REACTION (AAR) TESTING.
- FOR EXISTING DOWNSTREAM SURFACE PREPARATION SEE CWD0152

**SPECIFICATIONS:**

- ALL FOUNDATIONS, EXCAVATED SLOPES AND SLOPE PROTECTION TO BE APPROVED BY THE APP IN CONJUNCTION WITH THE ENGINEERING GEOLOGIST.
- DETAILED METHOD STATEMENTS MUST BE SUBMITTED PRIOR TO EXCAVATION COMMENCEMENT, TO THE APP FOR APPROVAL.
- THE CONTRACTOR SHALL FIRST PERFORM TRIAL BLASTING IN ORDER TO BE ABLE TO COMPLETE A SPECIFICATION FOR MAXIMUM VIBRATIONS RECORDED AT THE DAM WALL. HE SHALL OBTAIN THE SERVICES OF A BLASTING SPECIALIST TO ASSIST FOR APPROVAL, BY DMS. A TRIAL BLASTING POSITION WILL BE INDICATED BY THE MAIN CONTRACTOR.
- BLASTING TO BE CARRIED OUT WITHIN 100 m OF ANY CONCRETE AND/OR GROUTING REGARDLESS OF AGE, SHALL BE DONE BY MEANS OF NON-EXPLOSIVE BLASTING TECHNIQUES, OR BY MEANS OF SPECIALLY DESIGNED CONTROLLED BLASTING TECHNIQUES, TO THE APPROVAL OF THE APPROVED PROFESSIONAL PERSON. ALL SUCH BLASTING SHALL BE DESIGNED TO KEEP A RECOMMENDED PEAK PARTICLE VELOCITY (PPV) TO BELOW 12.7 mm/s AND THE PROXIMITY ABOVE 10 Hz AS OTHERWISE SPECIFIED BY THE BLASTING SPECIALIST TO BE APPROVED BY THE APP.
- ROCK SUPPORT FOR ALL EXCAVATIONS SHALL BE DONE IN ACCORDANCE WITH PARTICULAR SPECIFICATION (CWS7) ROCK SUPPORT, AND SHALL OVER-AND-ABOVE THE ROCK ANCHORING AS SPECIFIED BY THE ENGINEERING GEOLOGIST, ALLOW FOR MINE MESH REINFORCEMENT AS PER SUB-CLAUSE 27.8.2.4
- THE SUPPLY, DELIVERY, UNROLLING, FIXING AND LACING OF THE ROCKFALL NETTING/WIRE MESH SHALL ALSO INCLUDE THE DRILLING AND EPOXY GROUTING OF THE TOP AND BOTTOM ANCHORS INTO THE BLASTED ROCK FACE, THE MESH USED WILL BE A DOUBLE TWISTED HEXAGONAL WIRE MESH TO SABS 1880:2001 AND SHALL BE A MESH TYPE 60 WITH 2,2 mm, CLASS A GALVANIZED WIRE. (UNACCEPTED OR EQUAL PRODUCT)
- EXCAVATED SURFACES THAT WILL REMAIN PERMANENTLY EXPOSED ON COMPLETION OF THE WORKS SHALL BE CLEARED OF ALL LOOSE MATERIAL, PIECES OF ROCK, DEBRIS AND RUBBISH. REFER TO PARTICULAR SPECIFICATION CWS6 FOR ALL OTHER EXCAVATION SPECIFICATIONS AND PERMISSIBLE DEVIATIONS.
- FOR PREPARATION AND TREATMENT OF EXCAVATED FOUNDATIONS TO RECEIVE DENTAL CONCRETE, REFER TO PARTICULAR SPECIFICATIONS CWS 20 AND CWS 32.

**REQUIREMENT:**

AS REQUIRED BY THE DMS ACT, 1993, GOVERNMENT GAZETTE REGULATION R.84 OF 7 FEBRUARY 2014, THE CONTRACTOR SHALL REGULARLY ALLOW THE ENGINEERING GEOLOGIST TO ADVISE THE ENGINEER / APP OF ANY ADDITIONAL MEASURES TO BE TAKEN TO SAFEGUARD THE EXCAVATION AS IT PROGRESSES.



**SECTION**  
SECTION NUMBER: 07/3  
SHEET NUMBER: 3

**DOWNSTREAM ELEVATION**  
SCALE 1:250



NO.	DATE	REVISION	FOR	BY
01	05/18	ADDED LABELS AND SPECIFICATIONS	HD	
02	12/20	AMENDED DAM WALL BLOCKS AND TRAINING WALLS	REL	

DEPARTMENT OF WATER AND SANITATION  
REPUBLIC OF SOUTH AFRICA

HEAD OFFICE  
CIVIL ENGINEERING  
PRIVATE BAG 2312  
PRETORIA 0001

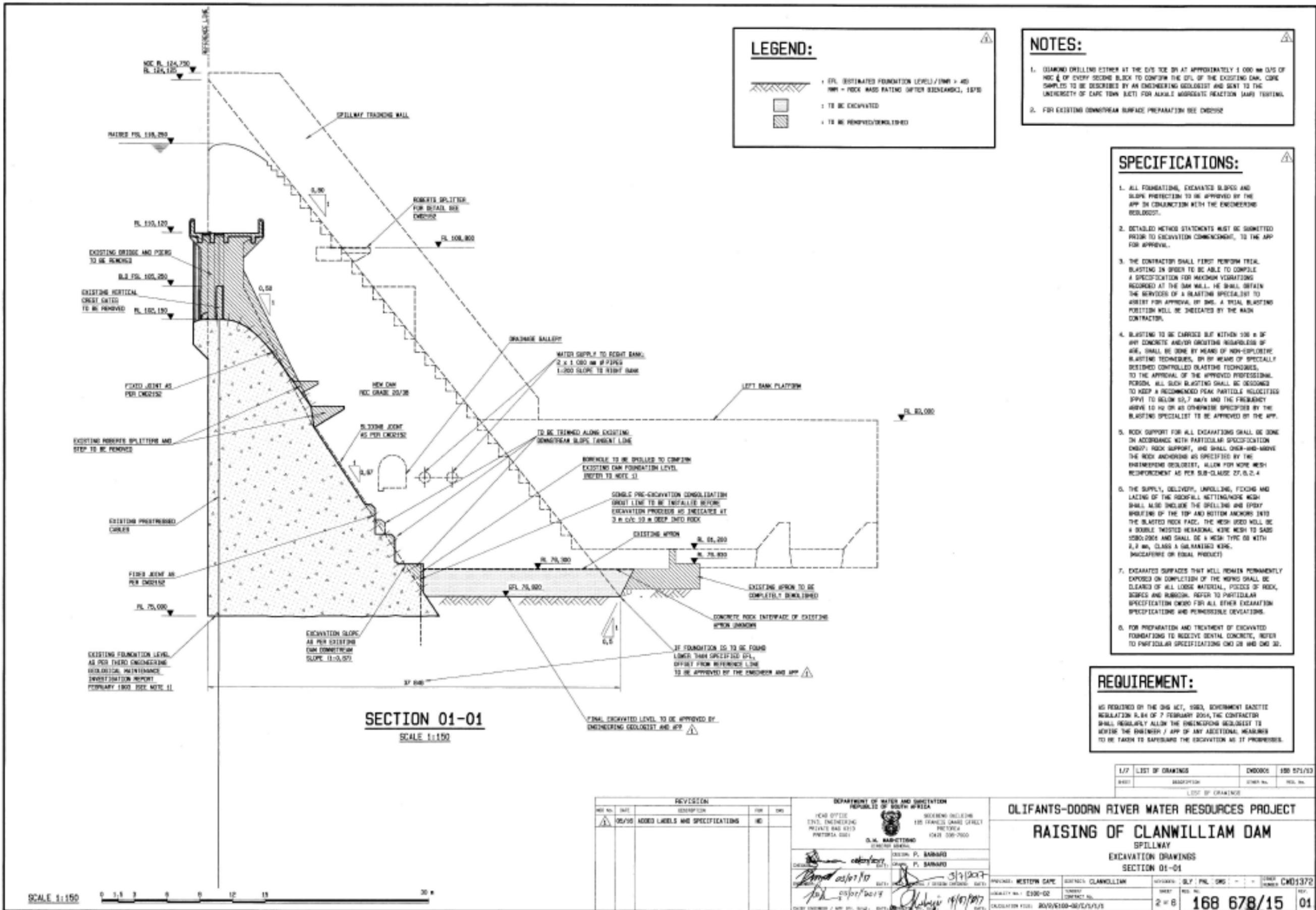
DESIGNER: P. BARNARD  
CHECKED: P. BARNARD  
ENGINEER: E. LILLIE  
DATE: 21/08/2021

**OLIFANTS-DOORN RIVER WATER RESOURCES PROJECT**  
**RAISING OF CLANWILLIAM DAM**  
SPILLWAY EXCAVATION  
DOWNSTREAM ELEVATION

PROVINCE: WESTERN CAPE DISTRICT: CLANWILLIAM  
LOCALITY No.: E300-02 SHEET: 1 OF 8  
DRAWING FILE: 20/2/100-02/C/1/1/1

REVISION: DLT PNL DMS  
SHEET NO.: 168 677/15  
REV. NO.: 02

NO.	LIST OF DRAWINGS	CWD0001	100 571/13
1	DESCRIPTION	OTHER NO.	REV. NO.



**LEGEND:**

- ▨ (diagonal lines) : EFL ESTIMATED FOUNDATION LEVEL / (DMS) + 400 MM - ROCK MASS RATING (UPON DEMAND), 1978
- ▨ (cross-hatch) : TO BE EXCAVATED
- ▨ (horizontal lines) : TO BE REMOVED/DEMOLISHED

**NOTES:**

- DIAMOND DRILLING EITHER AT THE D/S TOE OR AT APPROXIMATELY 1 000 mm D/S OF HOC & OF EVERY SECOND BLOCK TO CONFIRM THE EFL OF THE EXISTING DAM. CORE SAMPLES TO BE DESCRIBED BY AN ENGINEERING GEOLOGIST AND SENT TO THE UNIVERSITY OF CAPE TOWN SACTI FOR AXIAL COMPRESSIVE STRENGTH (AC) TESTING.
- FOR EXISTING DOWNSTREAM SURFACE PREPARATION SEE CHD202

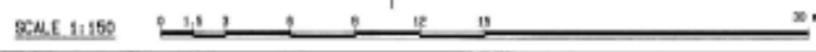
**SPECIFICATIONS:**

- ALL FOUNDATIONS, EXCAVATED SLOPES AND SLOPE PROTECTION TO BE APPROVED BY THE APP IN CONJUNCTION WITH THE ENGINEERING GEOLOGIST.
- DETAILED METHOD STATEMENTS MUST BE SUBMITTED PRIOR TO EXCAVATION COMMENCEMENT, TO THE APP FOR APPROVAL.
- THE CONTRACTOR SHALL FIRST PERFORM TRIAL BLASTING IN ORDER TO BE ABLE TO COMPLETE A SPECIFICATION FOR MAXIMUM VIBRATIONS RECORDED AT THE DAM WALL. HE SHALL OBTAIN THE SERVICES OF A BLASTING SPECIALIST TO ASSIST FOR APPROVAL BY DMS. A TRIAL BLASTING POSITION WILL BE INDICATED BY THE MAIN CONTRACTOR.
- BLASTING TO BE CARRIED OUT WITHIN 100 m OF ANY CONCRETE AND/OR GROUTING REGARDLESS OF AGE, SHALL BE DONE BY MEANS OF NON-EXPLOSIVE BLASTING TECHNIQUES, BY MEANS OF SPECIALLY DESIGNED CONTROLLED BLASTING TECHNIQUES, TO THE APPROVAL OF THE APPROVED PROFESSIONAL PERSON. ALL SUCH BLASTING SHALL BE DESIGNED TO KEEP A RECOMMENDED PEAK PARTICLE VELOCITY (PPV) TO BELOW 52,7 mm/s AND THE FREQUENCY ABOVE 10 Hz OR AS OTHERWISE SPECIFIED BY THE BLASTING SPECIALIST TO BE APPROVED BY THE APP.
- ROCK SUPPORT FOR ALL EXCAVATIONS SHALL BE DONE IN ACCORDANCE WITH PARTICULAR SPECIFICATION CHD07. ROCK SUPPORT, AND SHALL OVER-AND-MOVE THE ROCK ANCHORS AS SPECIFIED BY THE ENGINEERING GEOLOGIST, ALLOW FOR MORE MESH REINFORCEMENT AS PER SUB-CLAUSE 27.6.2.4
- THE SUPPLY, DELIVERY, UNROLLING, FIXING AND LACING OF THE ROCKWALL NETTING/MESH SHALL ALSO INCLUDE THE DRILLING AND (EPoxy) ANCHORS OF THE TOP AND BOTTOM ANCHORS INTO THE BLASTED ROCK FACE. THE MESH USED SHALL BE A DOUBLE TWISTED HEXAGONAL WIRE MESH TO SABS 500/2004 AND SHALL BE A MESH TYPE 08 WITH 2,8 mm CLASS A GALVANIZED WIRE. (MAGNIFERRE OR EQUAL PRODUCT)
- EXCAVATED SURFACES THAT WILL REMAIN PERMANENTLY EXPOSED ON COMPLETION OF THE WORKS SHALL BE CLEARED OF ALL LOOSE MATERIAL, PIECES OF ROCK, SCRAPES AND RUBBISH. REFER TO PARTICULAR SPECIFICATION CHD08 FOR ALL OTHER EXCAVATION SPECIFICATIONS AND PERMISSIBLE DEVIATIONS.
- FOR PREPARATION AND TREATMENT OF EXCAVATED FOUNDATIONS TO RECEIVE BENTON CONCRETE, REFER TO PARTICULAR SPECIFICATIONS CHD 08 AND CHD 32.

**REQUIREMENT:**

AS REQUIRED BY THE DMS ACT, 1983, GOVERNMENT GAZETTE REGULATION 6.84 OF 7 FEBRUARY 2004, THE CONTRACTOR SHALL REGULARLY ALLOW THE ENGINEERING GEOLOGIST TO VISIT THE EXCAVATION / APP OF ANY ADDITIONAL MEASURES TO BE TAKEN TO SAFEGUARD THE EXCAVATION AS IT PROGRESSES.

**SECTION 01-01**  
SCALE 1:150



REV. NO.	DATE	DESCRIPTION	FOR	BY
01/01	02/07/2017	ADDED LABELS AND SPECIFICATIONS	ME	

DEPARTMENT OF WATER AND SANITATION  
REPUBLIC OF SOUTH AFRICA

HEAD OFFICE  
CIVIL ENGINEERING  
PRIVATE BAG 6113  
VICTORIA STATION

REGIONAL OFFICE  
185 FRANCIS BAARD STREET  
PRETORIA  
0181 300-7000

D.M. MATHIBANE  
GENERAL MANAGER

DESIGN: P. BARBARO  
CHECKED: P. BARBARO

DATE: 02/07/2017

OLIFANTS-ODORN RIVER WATER RESOURCES PROJECT

**RAISING OF CLANWILLIAM DAM**

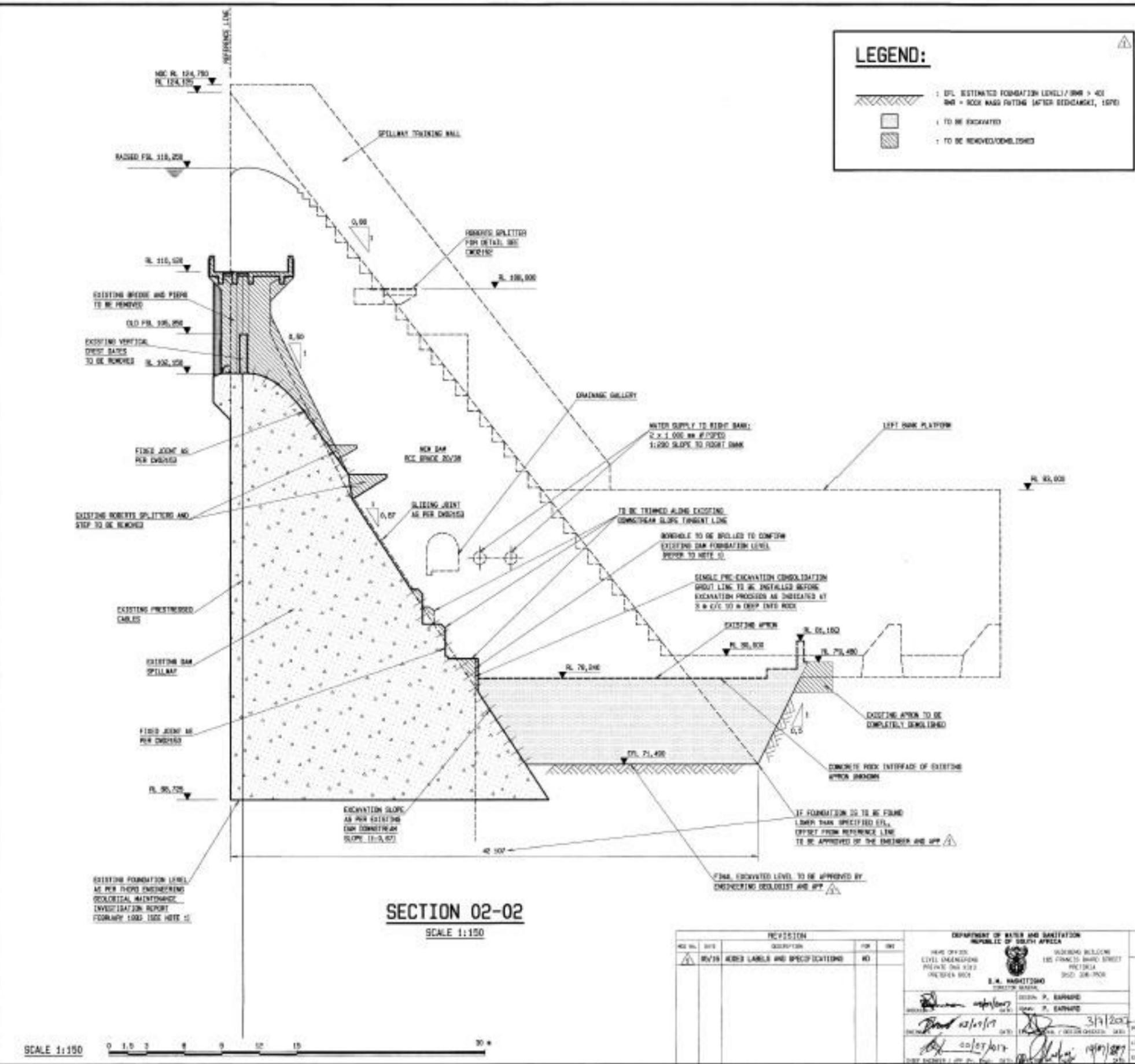
SPILLWAY  
EXCAVATION DRAWINGS  
SECTION 01-01

PROJECT: WESTERN CAPE | CONTRACT: CLANWILLIAM | DRAWING: SLY / PNL / DMS | SHEET NUMBER: CHD1372

DESIGNER: E130-02 | CHECKED: [Signature] | DATE: 02/07/2017

CALCULATOR: 20/05/100-00/CL/SL/LS

SHEET NO. 2 of 8 | DRAWING NO. 168 678/15 | REV. 01

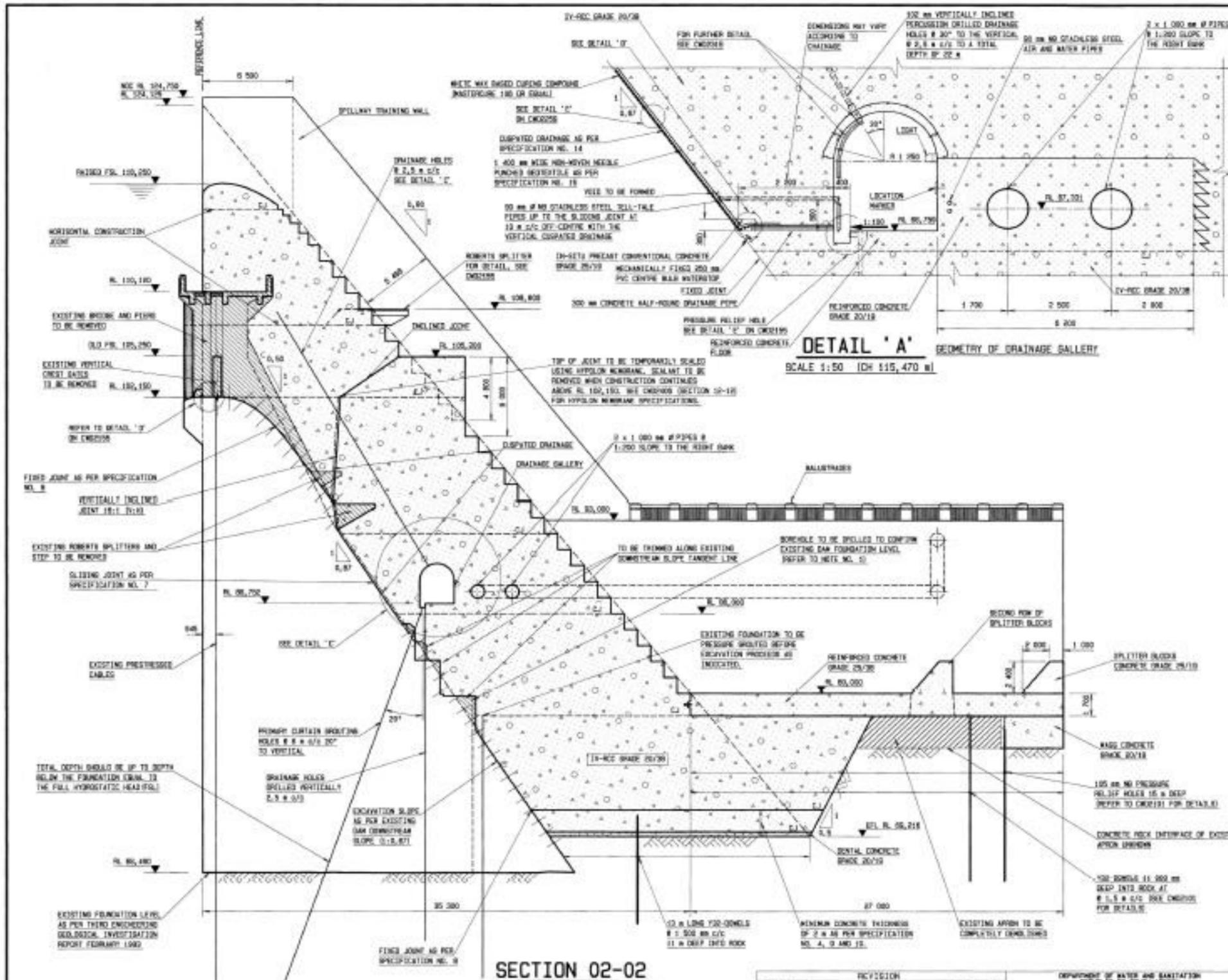


S/7	LIST OF DRAWINGS	000001	188 671/13
SHEET	REVISION	OTHER NO.	REV. NO.
LIST OF DRAWINGS			

<b>REVISION</b> NO. DATE DESCRIPTION FOR BY		DEPARTMENT OF WATER AND SANITATION REPUBLIC OF SOUTH AFRICA WATER OFFICE LEVEL 04/05 PRENSBURG ROAD PRETORIA 0001 011 234 1234		WORKING BUILDING 185 FRANCIS BAARD STREET PRETORIA 0001 011 234 1234	
APPROVED: [Signature] DATE: 12/01/15		APPROVED: [Signature] DATE: 3/1/2015		PROJECT: WESTERN CAPE DISTRICT: CLANWILLIAM DRAWING NO: E100-02 SHEET: 3 OF 6 TITLE: RAISING OF CLANWILLIAM DAM EXCAVATION DRAWINGS SECTION 02-02	
SCALE 1:150		PROJECT NO: 168 679/15		SHEET NO: 01	





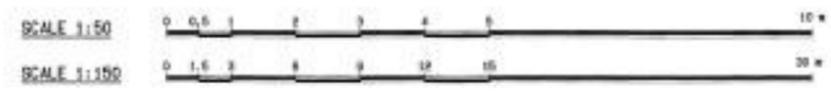


- ### SPECIFICATIONS:
- A DETAIL METHOD STATEMENT TO BE SUBMITTED FOR THE DEMOLITION AND DISPOSAL OF PILES AND BRIDGE DECK, BALLASTRADES AND CHUTEPIERS AS WELL AS THE TEMPORARY STORAGE OF THE VERTICAL CRIST GATES AND MECHANICAL EQUIPMENT IN ACCORDANCE WITH ALLOWABLE FIBRATION AND ENVIRONMENTAL REQUISITEMENTS (EMP).
  - EXCAVATION OF THE TOE OF THE SPILLWAY TO BE DONE DURING LOW DAM WATER LEVELS IN ALTERNATING BLOCKS ACCORDING TO THE EXISTING CONSTRUCTION JOINTS NOT WIDER THAN 14 m AND ONLY ONE BLOCK AT A TIME.
  - DENTAL CONCRETE GRADE 20/18 ON TOP OF THE ESTIMATED FOUNDATION TO BE PLACED LEVEL UP TO A REDUCED LEVEL SPECIFIED BY THE ENGINEER.
  - BASE CONCRETE GRADE 20/18 WITH A MINIMUM THICKNESS NOT LESS THAN 2 m AS SPECIFIED.
  - 19-REC RAISING: GRADE 20/18 CONCRETE OF NOT SPECIFIED STRENGTH.
  - PIPE ENCASMENT AND S/S BATTERY SIDE TO BE REINFORCED CONCRETE GRADE 20/18 AND GRADE 20/18 LIVE BY GALLERY AS SPECIFIED IN DETAIL 'A'.
  - SLIDING JOINT AS SPECIFIED ON DRAWING.
    - THE APP TO SPECIFY LEVELS OF JOINT ON SITE.
    - ALL LARGE MATERIAL AND AMP PRODUCTS AT THE DOWNSTREAM FACE TO BE REMOVED BY SANDBLASTING BY SPECIAL METHOD.
    - AN APPROVED WHITE-PIGMENTED WAX-BASED CURING COMPOUND TO BE USED FOR WHITE-WASHING OF DOWNSTREAM FACE FOLLOWING REMOVAL OF SURFACE LAYER.
    - DRAINAGE OF SLIDING JOINT AS SPECIFIED IN DETAIL 'A' ON CHANGES.
    - WHERE THE SLIDING JOINT IS LESS THAN 2 m IN HEIGHT, THE JOINT IS TO BE PILED ON AS DIRECTED BY THE APP.
    - A 250 mm PVC CENTRE BOLD WATERSTOP SHOULD BE MECHANICALLY FIRED BENEATH SLIDING JOINT, SEE DETAIL 'A' ON CHANGES.
  - FIXED JOINTS AS SPECIFIED ON DRAWING:
    - THE DESIGN ENGINEER ON APP TO SPECIFY LEVELS OF JOINT ON SITE.
    - CONCRETE AT DOWNSTREAM FACE TO BE REMOVED BY WIND-BLASTING OR SIMILAR APPROVED METHOD REFER TO SPECIFICATION NO. 3 ON CHANGES.
    - 300 STAINLESS STEEL 130-DOWELS 1,2 m LONG TO BE ANCHORED 600 mm DEEP INTO DOWNSTREAM FACE 1 m c/c.
  - A MINIMUM CONCRETE THICKNESS OF 2 m IS REQUIRED BEFORE CONSOLIDATION BRUITS MAY COMMENCE.
  - PRESSURE GRouting TO BE DONE AS INDICATED AND SPECIFIED ON GRouting DRAWINGS.
  - POSITION OF 130 DOWELS TO BE LAPPED FOR THE PURPOSE OF GRouting AND INSTALLATION OF AMPON DOWELS AND PRESSURE RELIEF HOLES, SEE CHANGES AND CHANGES.
  - 130 DOWELS TO BE FACTORY PAINTED 1 000 mm ON EACH SIDE OF THE RECONCRETE INTERFACE WITH A TWO PART EPOXY PROTECTIVE COATING USING SOLVANT-FREE OR EQUAL. THE COLOUR OF STANDARD-600 COATING TO SPECIFICATION OF THE ENGINEER.
  - EXISTING DRAINAGE HOLES IN DOWNSTREAM TIE: HOLES TO BE REGRILLED, CLEANED AND PLUGGED BEFORE PLACING OF CONCRETE ABOVE THAT LEVEL MAY COMMENCE.
  - 400 mm WIDE HOPE CORRUGATED BISMUTHIC DRAIN WITH A MINIMUM THICKNESS OF 40 mm, POSITIONED DOWNSTREAM OF ALL EXISTING COMPRESSION JOINTS AS WELL AS IN THE CENTRE OF EACH BLOCK OF THE EXISTING DAM WALL ONLY WHERE A SLIDING JOINT WILL BE FORMED (REFER TO CHANGES).
  - HIGH-RISE HEAVY PUNCHING GEOTEXTILE: 575 g/m<sup>2</sup> OR EQUAL: 1 400 mm WIDE.
  - A METHOD STATEMENT TO BE SUBMITTED FOR DEMOLITION OF EXISTING STEPS AT THE O/S THE DAM AT APPROXIMATELY 1 000 mm S/S OF EACH BLOCK TO CONFIRM THE SPL OF EXISTING DAM. CORE SAMPLES TO BE OBTAINED BY AN ENGINEERING GEOLOGIST AND SENT TO THE UNIVERSITY OF CAPE TOWN (UCT) FOR ALKALI ABRASIVE REACTION (AAR) TESTING.
  - FOUNDATION TO BE INSPECTED AND APPROVED BY THE ENGINEERING GEOLOGIST AND APP PRIOR TO ANY PLACEMENT OF CONCRETE.
  - FOR WATERSTOP, CRACK INJECTION AND EARTHING SPECIFICATIONS AND LAYOUT DETAILS SEE CHANGES.
  - THE EXPOSED SURFACE OF THE DOWNSTREAM STEPS OF THE NOE SHALL BE FINISHED TO THE FOLLOWING TOLERANCES (mm):
 

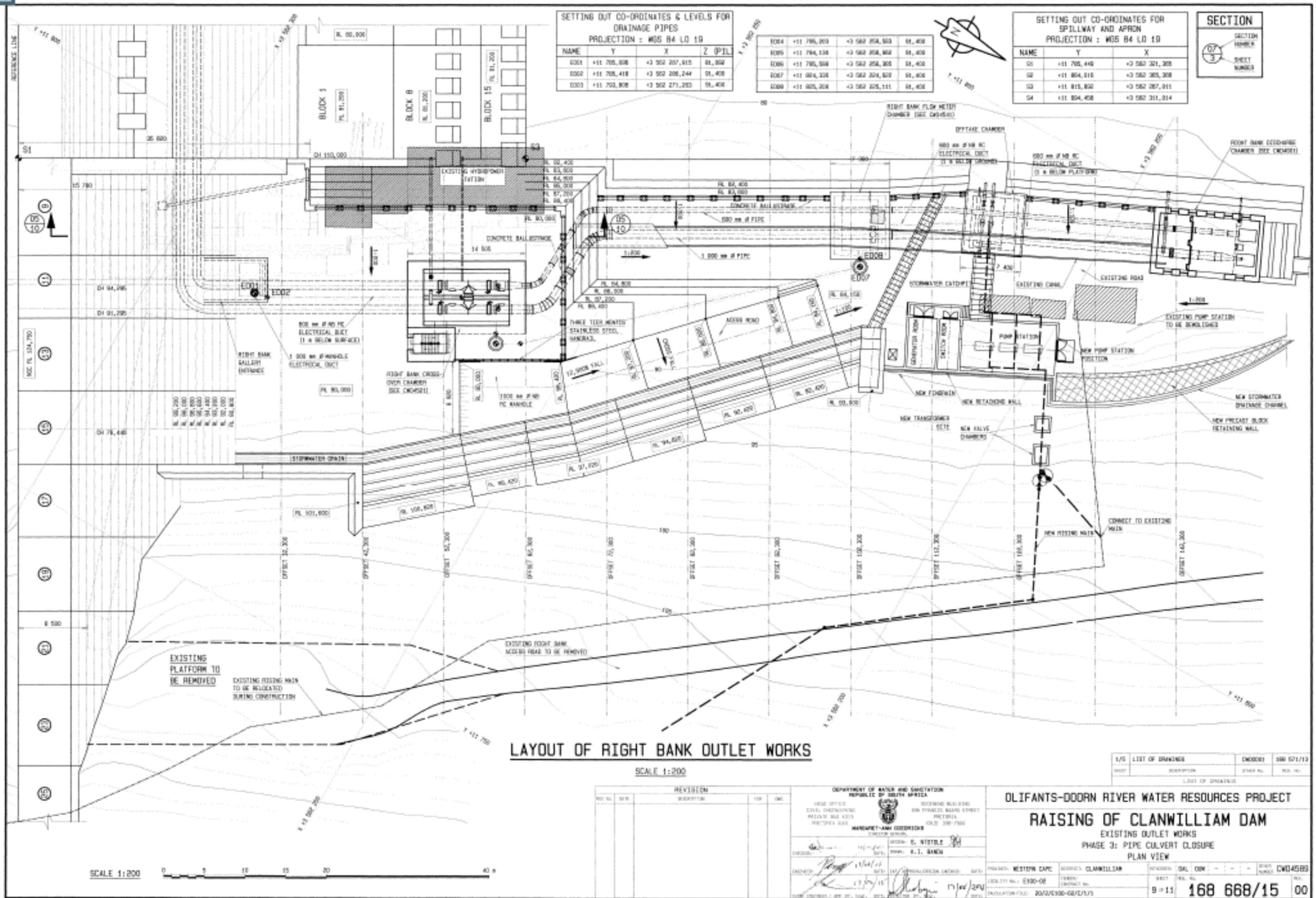
(i) FINISHES OF PLANE SURFACE	15
(ii) ABRUPT CHANGES IN CONTIGUOUS SURFACE	2
  - NOTE: ANY DEVIATION FROM FLATNESS OF A PLANE SURFACE OR ANY ABRUPT CHANGE IN CONTIGUOUS SURFACE WILL BE MEASURED AS THE MAXIMUM DEVIATION OF THE SURFACE FROM ANY STRAIGHT LINE OF LENGTH 3 m JOINING TWO POINTS ON THE SURFACE.
  - SEE SPECIFICATIONS ON CHANGES FOR REQUIRED FINISHES.
  - SEE CHANGES FOR CURVED DRAINAGE DETAILS AND LAYOUT.

**NOTE:**

- REINFORCER TO BE DRILLED AT THE TOE OF EVERY SECOND SPILLWAY BLOCK TO CONFIRM OR AS-BUILT FORMATION OF THE EXISTING DAM.



PRECISION		DEPARTMENT OF WATER AND SANITATION REPUBLIC OF SOUTH AFRICA		OLIFANTS-DOORN RIVER WATER RESOURCES PROJECT	
NO	DATE	DESCRIPTION	FOR	BY	DATE
HEAD OFFICE: CIVIL AND STRUCTURAL PLANNING 500 100 PRETORIA 0004			502 0000 BULLING 500 TRACTE BARD STREET PRETORIA 0001 000 7000		<b>RAISING OF CLANWILLIAM DAM SPILLWAY</b> SECTION 02-02 AT CH 170 m
DESIGNER: P. DUROUARD CHECKED: P. DUROUARD DRAWN: P. DUROUARD APPROVED: P. DUROUARD			PROJECT: WESTERN CAPE CLIENT: CLANWILLIAM DRAWING NO.: E308-02 SHEET NO.: 3 OF 6 DATE: 20/12/2010-02/1/11		
SCALE 1:150 SCALE 1:50				DRAWING NO.: E308-02 SHEET NO.: 3 OF 6 DATE: 20/12/2010-02/1/11	



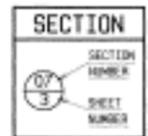
SETTING OUT CO-ORDINATES & LEVELS FOR DRAINAGE PIPES  
PROJECTION : WGS 84 LD 19

NAME	Y	X	Z (PIL)
E001	+11 705,898	+3 562 207,915	01,400
E002	+11 705,418	+3 562 206,244	01,400
E003	+11 703,808	+3 562 271,293	01,400

E004	+11 705,800	+3 562 208,500	01,400
E005	+11 704,150	+3 562 208,500	01,400
E006	+11 705,500	+3 562 208,500	01,400
E007	+11 004,320	+3 562 204,520	01,400
E008	+11 005,200	+3 562 205,111	01,400

SETTING OUT CO-ORDINATES FOR SPILLWAY AND APRON  
PROJECTION : WGS 84 LD 19

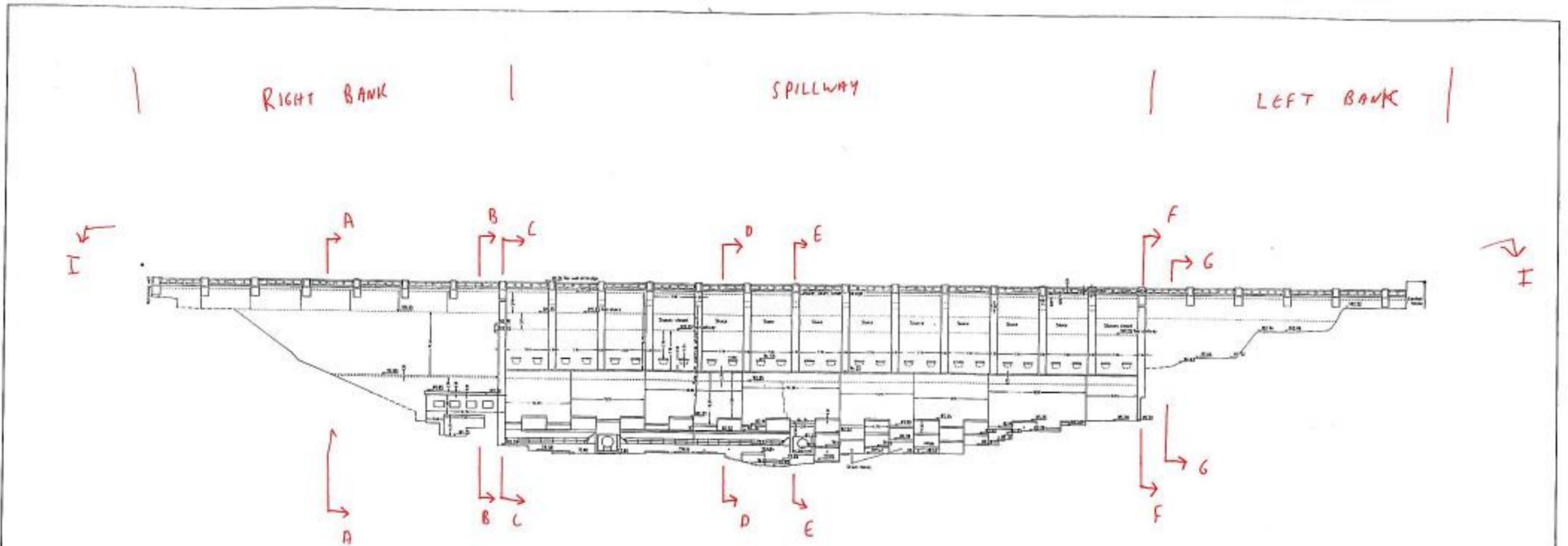
NAME	Y	X
S01	+11 705,418	+3 562 201,308
S02	+11 804,818	+3 562 205,308
S03	+11 815,800	+3 562 207,915
S04	+11 804,408	+3 562 211,814



LAYOUT OF RIGHT BANK OUTLET WORKS  
SCALE 1:200

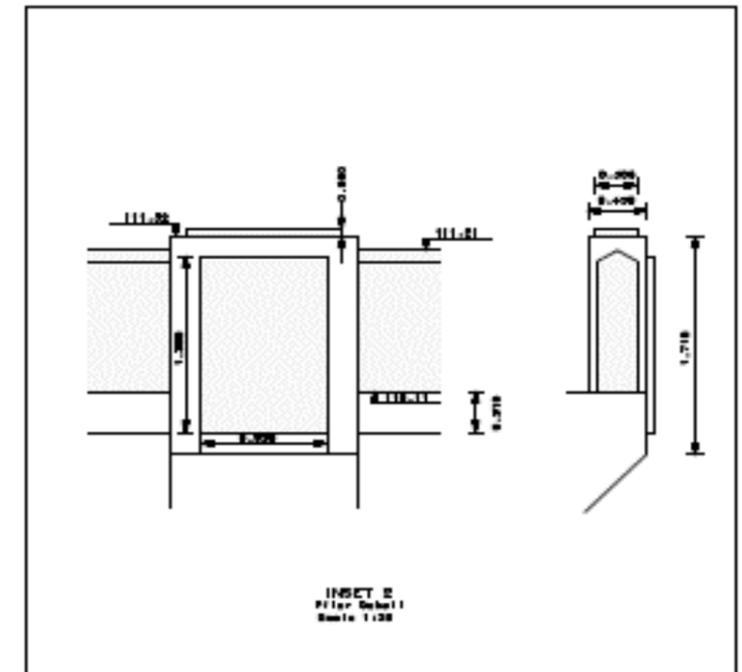
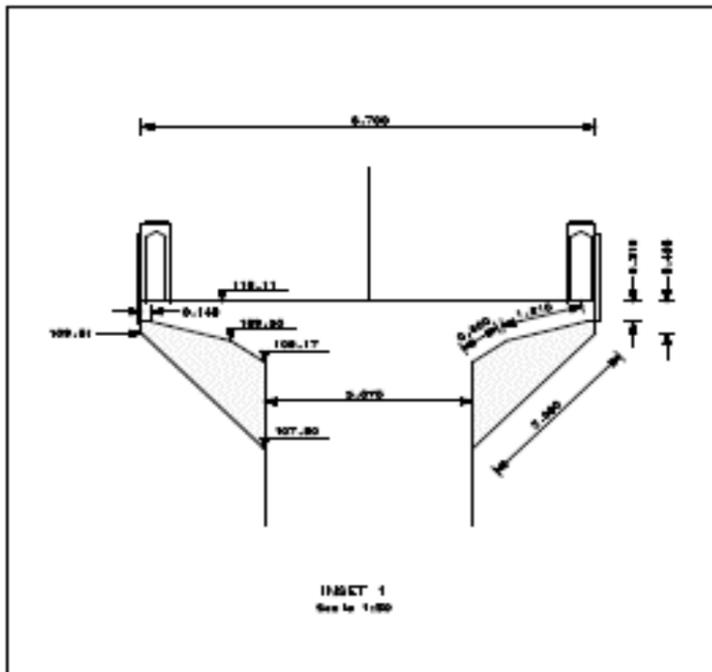
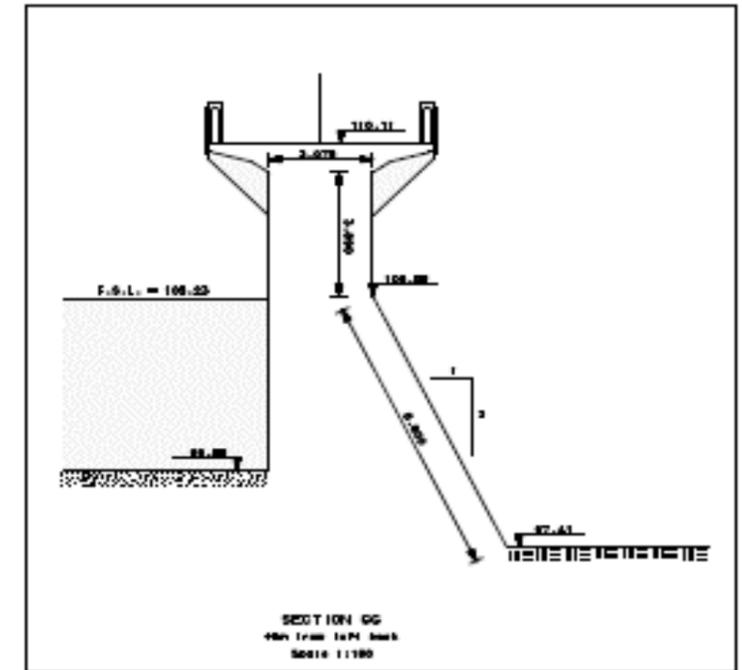
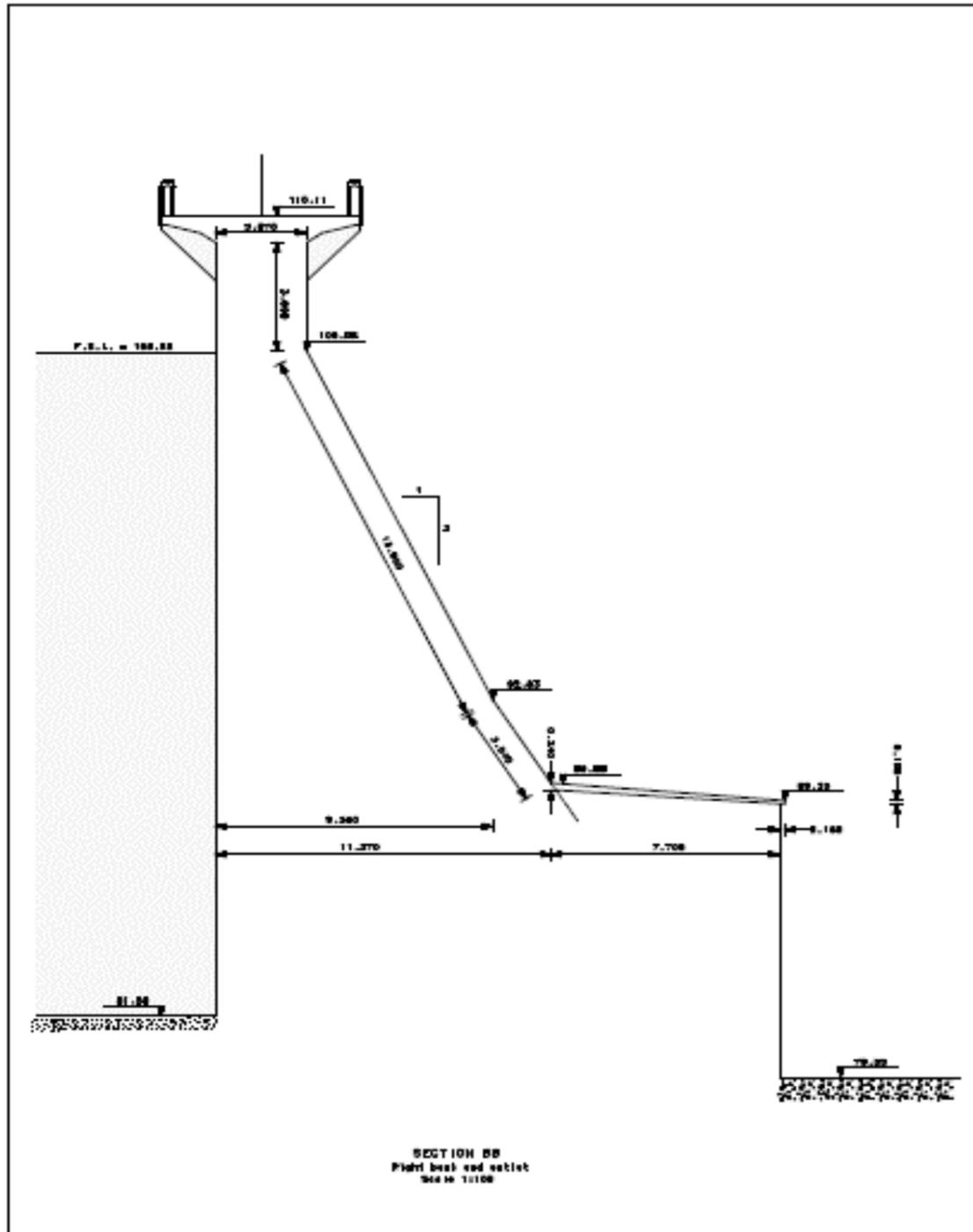
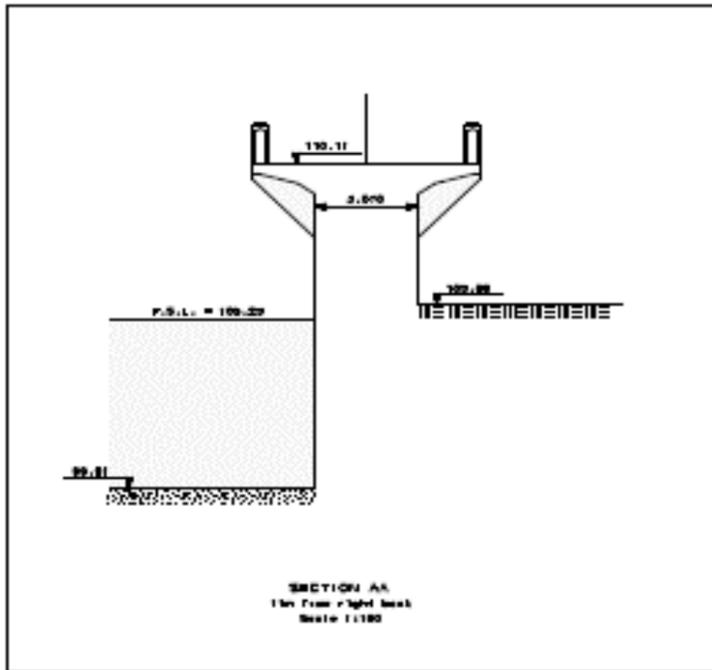


<p>REVISION</p> <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHK.</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		NO.	DATE	DESCRIPTION	BY	CHK.						<p>DEPARTMENT OF WATER AND SANITATION REPUBLIC OF SOUTH AFRICA</p> <p>HEAD OFFICE: CIVIL ENGINEERING PRETORIA 001 PRETORIA 001</p> <p>REGIONAL OFFICE: MAMABET-AMBI COORDINATOR PORT ELIZABETH</p> <p>DESIGNED BY: <i>[Signature]</i> CHECKED BY: <i>[Signature]</i> DATE: 17/07/15</p>	<p>DEPARTMENT OF WATER AND SANITATION REPUBLIC OF SOUTH AFRICA</p> <p>REGIONAL BUILDING 606 FRANCIS BAARD STREET PRETORIA 001 001 200-7500</p> <p>DESIGNED BY: <i>[Signature]</i> CHECKED BY: <i>[Signature]</i> DATE: 17/07/15</p>	<p>OLIFANTS-DOORN RIVER WATER RESOURCES PROJECT <b>RAISING OF CLANWILLIAM DAM</b> EXISTING OUTLET WORKS PHASE 3: PIPE CULVERT CLOSURE PLAN VIEW</p> <p>PROJECT: WESTERN CAPE    REGION: CLANWILLIAM    DRAWING: GAL 004    SHEET: CWD4589 LOCALITY NO.: E190-08    CONTRACT NO.:    DATE: 17/07/15 DRAWING NO.: 20/2/E190-08/E17/15    SCALE: 1:200    SHEET NO.: 168 668/15 00</p>
NO.	DATE	DESCRIPTION	BY	CHK.										



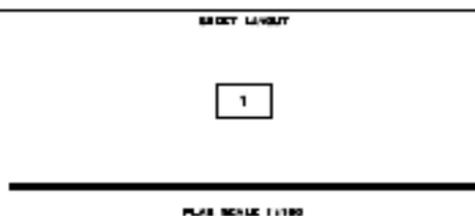
- A-A : Section through Right Bank
- B-B : Section through Right Bank and Outlet Works
- C-C : Section through Right Bank training wall
- D-D : Section through spillway showing ogee and splitter
- E-E : Section through bridge pier
- F-F : Section through Left Bank training wall
- G-G : Section through Left Bank
- H-H : Long section
- I-I : Profile X Canal

BOORMAATSTAFEL NO. 17 1:10000 1:10000 1:10000		1:10000 1:10000 1:10000																	
--	--	-------------------------------	--	-------------------------------	--	-------------------------------	--	-------------------------------	--	-------------------------------	--	-------------------------------	--	-------------------------------	--	-------------------------------	--	-------------------------------	--



CO-ORDINATE SYSTEM TO 1<sup>st</sup> CAPS DAMON  
P.L. FROM S.L. 109.490 METERS ABOVE F.S.L.

STAGIC	Y	X	H.H.	STATION	Y	X	R.L.
▲ S11	11 819.27	2 582 211.77	107.485				
▲ P01	11 819.35	2 582 198.76	107.877				
▲ P02	11 818.28	2 581 942.81	107.329				

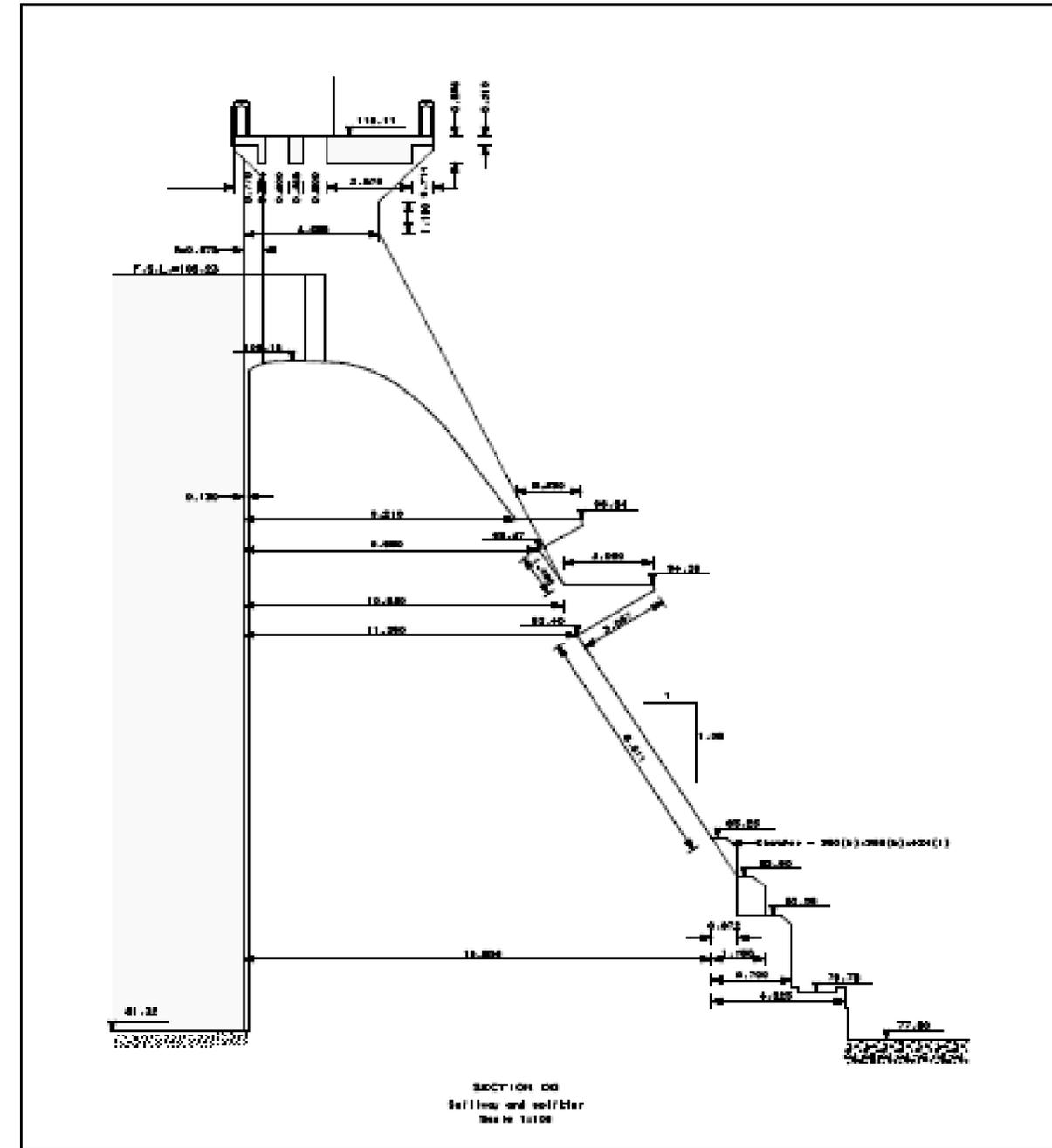
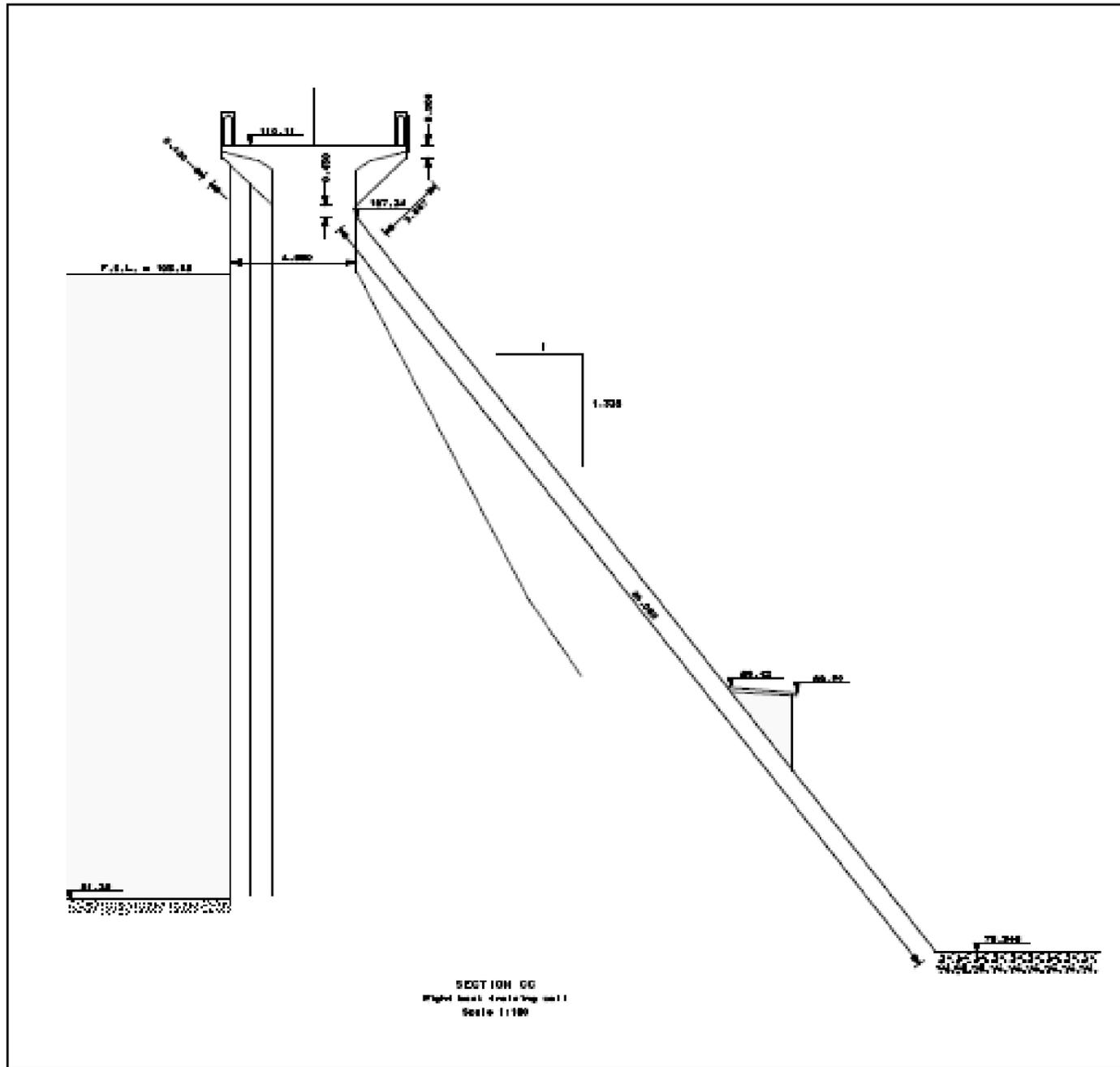


BIPARTITE IDENTITIES

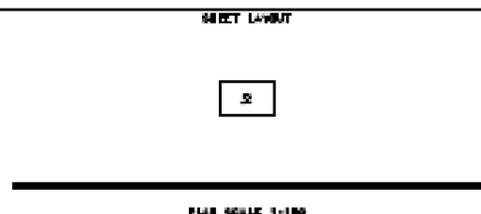
NO.	NAME	DATE	NO.	NAME	DATE

REPUBLIC OF SOUTH AFRICA  
DEPARTMENT OF WATER AFFAIRS & FORESTRY  
CLANWILLIAM DAM  
DETAIL CROSS SECTION THROUGH DAM WALL

DISTRICT CLARE WILIAM SHEET 1 OF 8  
LOG. NO. B100/02  
PG. NO. 00000/98

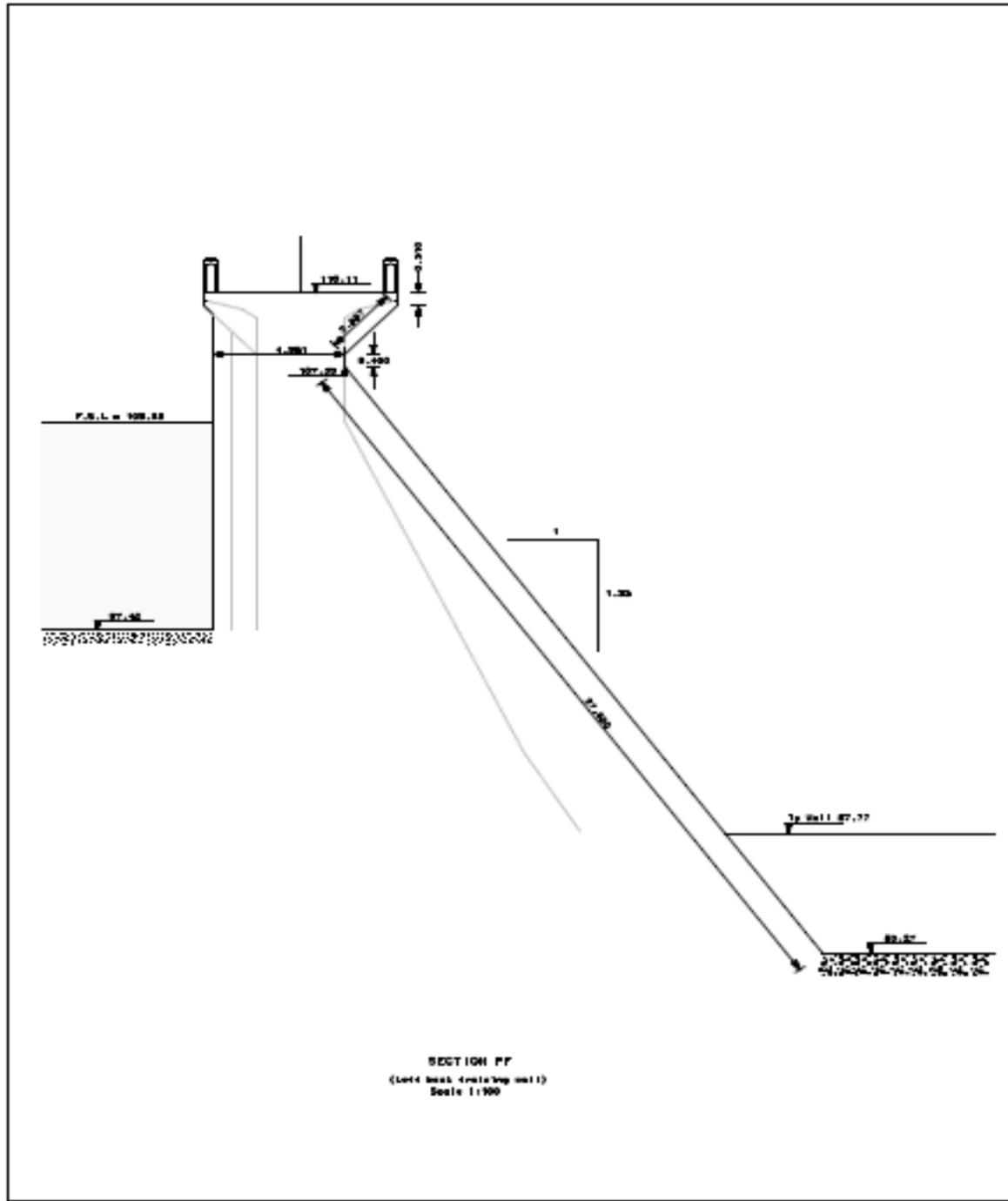
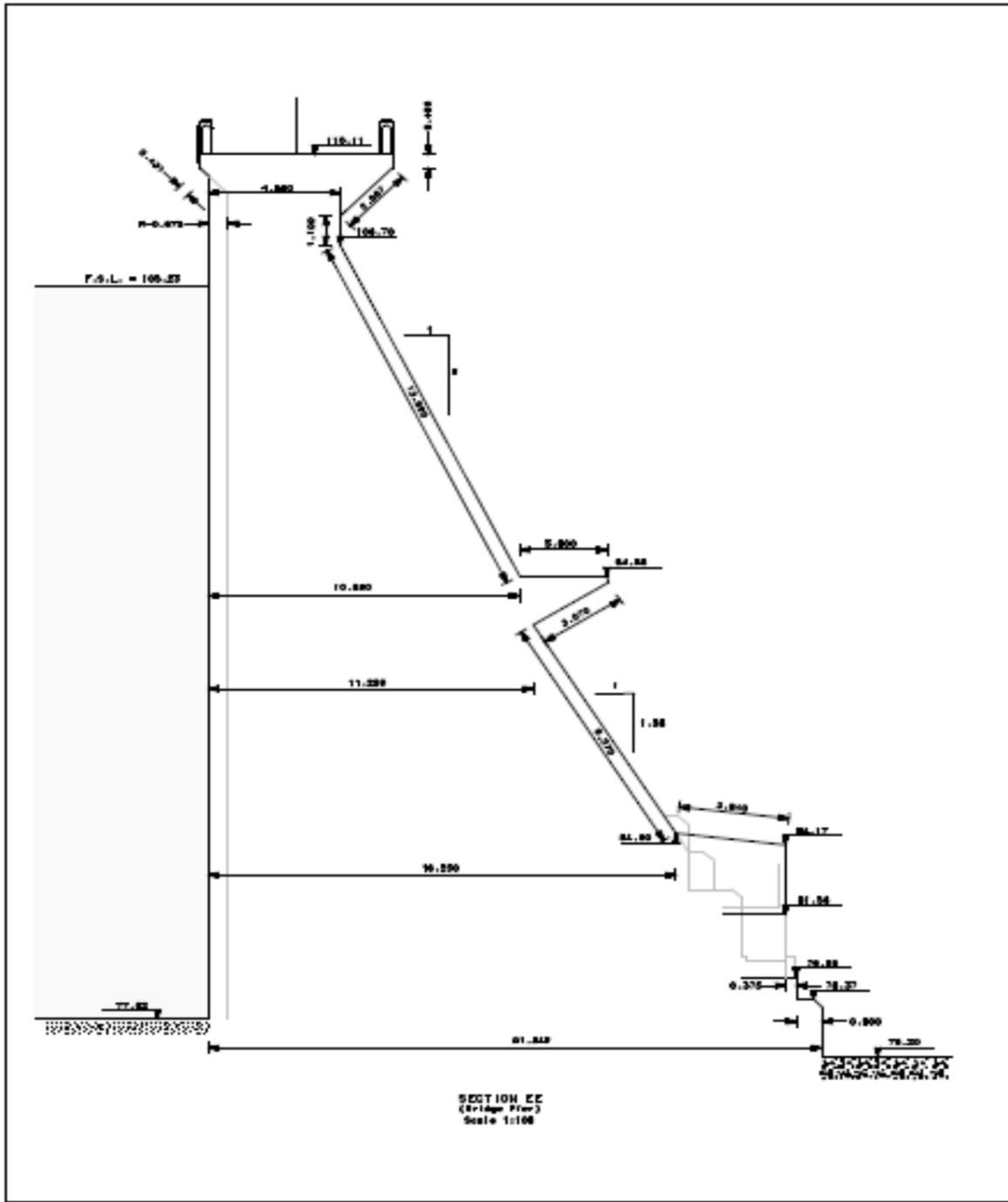


CO-ORDINATE SYSTEM LD 10' CAPE DATUM							
P.L. FROM SGT 100.400 METERS ABOVE M.S.L.							
STABIC	Y	X	H.H.	STATION	Y	X	P.L.
11	878.87	2 282 811.77	188.288				
11	878.82	2 282 128.78	188.277				
11	878.28	2 281 882.81	188.282				

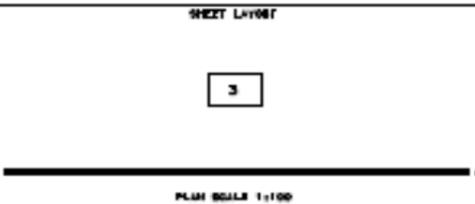


ENGINEERING IDENTIFICATION			
PRIVATE DMS 1018			
PROJECT 14			
DESIGNED EASTERN CAPE	01/18	CHECKED EASTERN CAPE	02/18
DRAWN EASTERN CAPE	02/18	APPROVED	
DATE		DATE	

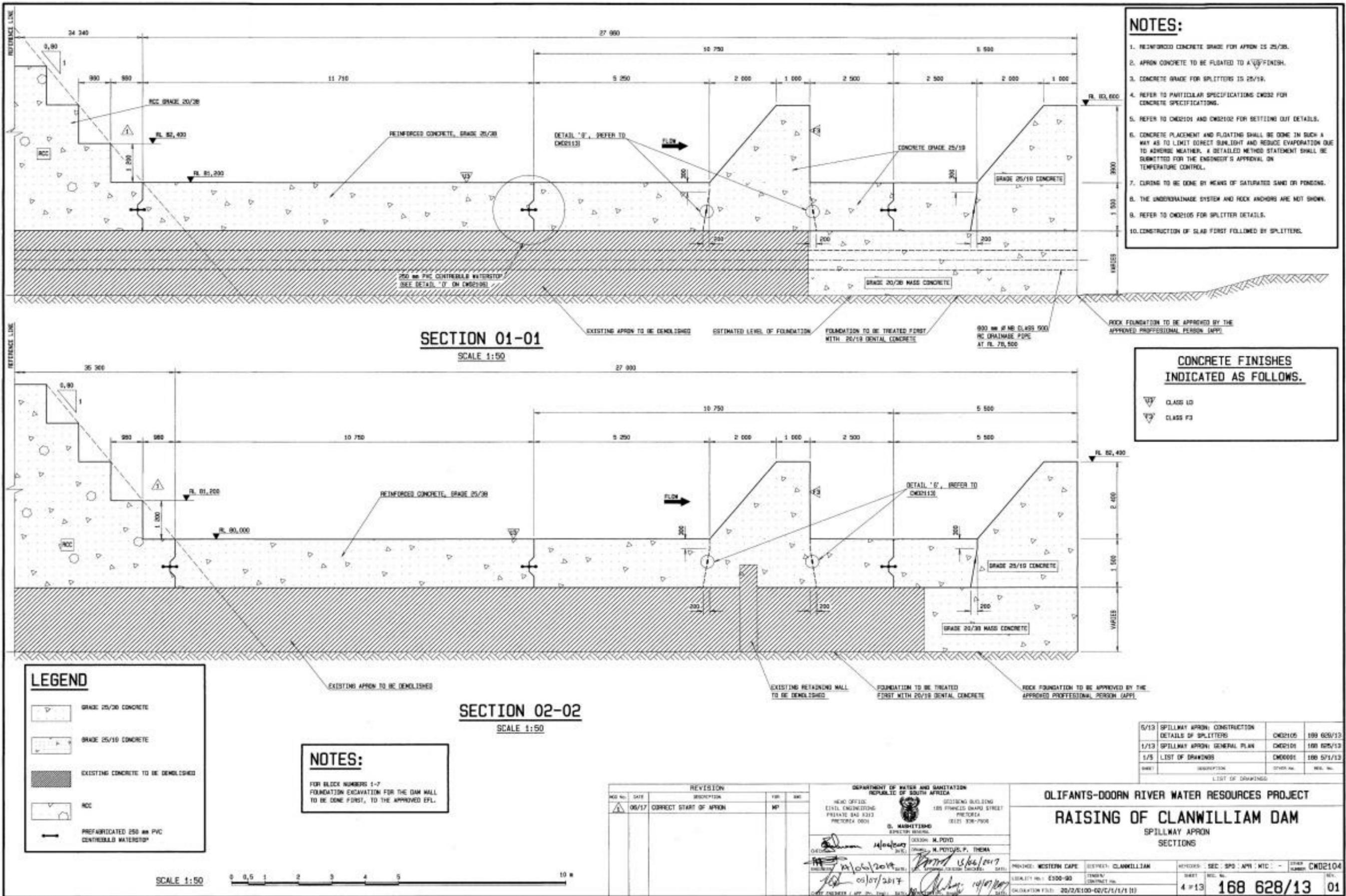
REPUBLIC OF SOUTH AFRICA			
DEPARTMENT OF WATER AFFAIRS & FORESTRY			
CLANWILLIAM DAM			
DETAIL CROSS SECTIONS THROUGH DAM WALL			
DISTRICT	CLAN WILLIAM	SHEETS OF 8	
AREA	No CODE		
LOC. NO.	E100/02	REG. NO.	00000/98



CO-ORDINATE SYSTEM LD 19 CAPE DATUM							
P.L. FROM SL1 106.488 EXTEND ABOVE M.S.L.							
STABIC	Y	X	H.H.	STATION	Y	X	P.L.
101	11 818.97	2 248 811.77	106.830				
102	11 818.80	2 248 126.78	106.817				
103	11 818.48	2 241 821.81	106.808				



DISTRICTS INVOLVED WINDHOLE BAG 1013 PELOTONIA 0001		REPUBLIC OF SOUTH AFRICA DEPARTMENT OF WATER AFFAIRS & FORESTRY					
PROVINCE EASTERN CAPE REGIONAL ENGINEER		PROVINCE EASTERN CAPE REGIONAL ENGINEER					
<b>CLANWILLIAM DAM</b>							
DETAIL CROSS SECTIONS THROUGH DAM WALL							
NO.	REVISED	DATE	DISTRICT	CLAN WILLIAM	SHEETS OF 3	LOC. NO.	RES. NO.
			AREA	No	CODE	E100/02	00000/98



- NOTES:**
1. REINFORCED CONCRETE GRADE FOR APRON IS 25/28.
  2. APRON CONCRETE TO BE FLOATED TO A  $\sqrt{V}$  FINISH.
  3. CONCRETE GRADE FOR SPLITTERS IS 25/19.
  4. REFER TO PARTICULAR SPECIFICATIONS CWD22 FOR CONCRETE SPECIFICATIONS.
  5. REFER TO CWD2101 AND CWD2102 FOR SETTING OUT DETAILS.
  6. CONCRETE PLACEMENT AND FLOATING SHALL BE DONE IN SUCH A WAY AS TO LIMIT DIRECT SUNLIGHT AND REDUCE EVAPORATION DUE TO ADVERSE WEATHER. A DETAILED METHOD STATEMENT SHALL BE SUBMITTED FOR THE ENGINEER'S APPROVAL ON TEMPERATURE CONTROL.
  7. CURING TO BE DONE BY MEANS OF SATURATED SAND OR PONDING.
  8. THE UNDERDRAINAGE SYSTEM AND ROCK ANCHORS ARE NOT SHOWN.
  9. REFER TO CWD2105 FOR SPLITTER DETAILS.
  10. CONSTRUCTION OF SLAB FIRST FOLLOWED BY SPLITTERS.

**CONCRETE FINISHES INDICATED AS FOLLOWS.**

CLASS 10  
 CLASS F3

**LEGEND**

- GRADE 25/28 CONCRETE
- GRADE 25/19 CONCRETE
- EXISTING CONCRETE TO BE DEMOLISHED
- RCC
- PREFABRICATED 250 mm PVC CONTROLLABLE WATERSTOP

**NOTES:**

FOR BLOCK NUMBERS 1-7 FOUNDATION EXCAVATION FOR THE DAM WALL TO BE DONE FIRST, TO THE APPROVED EFL.

NO.	DESCRIPTION	OTHER NO.	REV. NO.
5/13	SPILLWAY APRON: CONSTRUCTION DETAILS OF SPLITTERS	CWD2105	100 628/13
1/13	SPILLWAY APRON: GENERAL PLAN	CWD2106	100 628/13
1/5	LIST OF DRAWINGS	CWD0001	100 571/13

LIST OF DRAWINGS

NO.	DATE	DESCRIPTION	BY	CHK
1	06/17	CORRECT START OF APRON	MP	

DEPARTMENT OF WATER AND SANITATION  
 REPUBLIC OF SOUTH AFRICA  
 HEAD OFFICE: CIVIL ENGINEERING, PRIVATE BAG 3313, PRETORIA 0001  
 G. MASHITZHO, DIRECTOR REGIONAL  
 REGIONAL OFFICE: 105 FRANCIS ONAPO STREET, PRETORIA, (012) 378-7500  
 M. POYO, M. POYOUS, P. THEMBA  
 G. MASHITZHO, DIRECTOR REGIONAL  
 G. MASHITZHO, DIRECTOR REGIONAL  
 G. MASHITZHO, DIRECTOR REGIONAL

**OLIFANTS-DOORN RIVER WATER RESOURCES PROJECT**

**RAISING OF CLANWILLIAM DAM**

SPILLWAY APRON SECTIONS

PROVINCE: WESTERN CAPE | DISTRICT: CLANWILLIAM | SHEET: 4 OF 13 | REV. NO.: 01  
 LOCALITY NO.: E500-90 | CONTRACT NO.: 168 628/13  
 CALCULATION FILE: 20/2/E100-02/C/1/1/13