

SANRAL RRM WORKSHOP

STRUCTURAL SAFETY INSPECTIONS

18TH FEBRUARY 2020

SESSION 3 - PRACTICAL EXAMPLES



EXAMPLE 2: MAJOR CULVERT STRUCTURE

The Phongola Dam Tributary Major Culvert is located in the KwaZulu Natal Province on the National Route N2, Section 31 at km52.00. For this example, you are required to complete a Safety Inspection Sheet and Summary Sheet using the information and photograph log provided below.

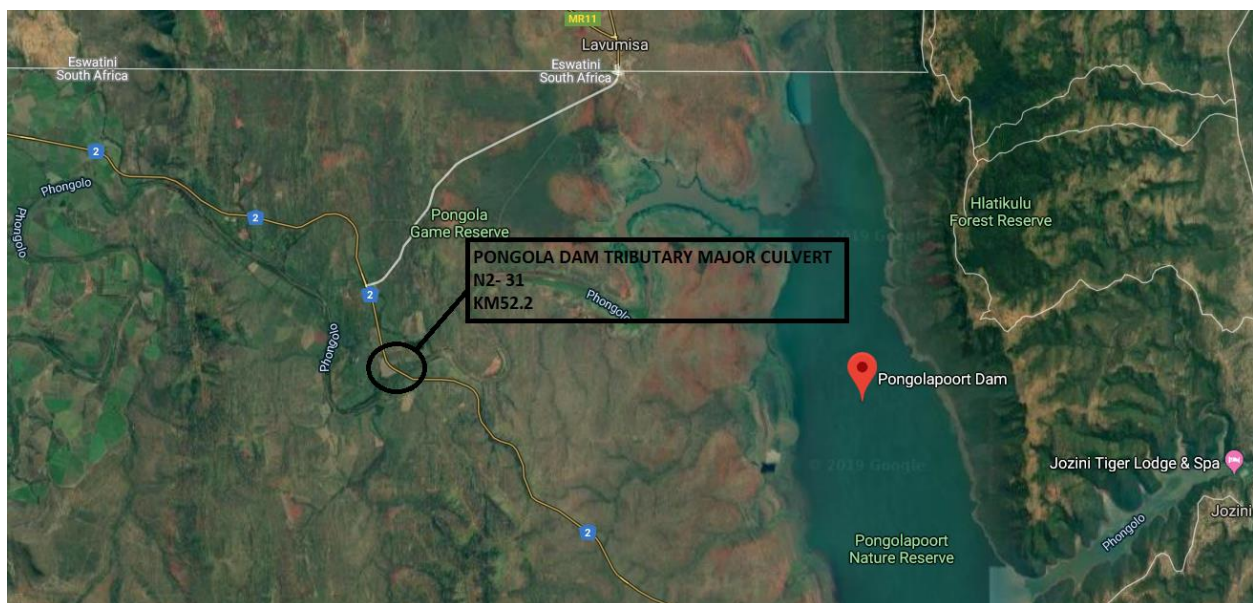



Figure 1.1 Locality of Droer River Bridge

<u>Type of structure:</u>	Reinforced Concrete (Box)
<u>Number of barrels:</u>	1
<u>Start Longitude:</u>	33d 46m 25.2s
<u>Start Latitude:</u>	27d 45m 31.2s
<u>End Longitude:</u>	33d 46m 33.5s
<u>End Latitude:</u>	27d 48m 20.5s

PHOTOGRAPH LOG : INVENTORY

<p><i>Road Above Culvert View 1</i></p> 	<p><u><i>Insert Picture Reference:</i></u></p> <hr/>
<p><i>Road Above Culvert View 2</i></p> 	<p><u><i>Insert Picture Reference:</i></u></p> <hr/>
<p><i>Inlet</i></p> 	<p><u><i>Insert Picture Reference:</i></u></p> <hr/>
<p><i>Outlet</i></p> 	<p><u><i>Insert Picture Reference:</i></u></p> <hr/>
<p><i>Culvert Number</i></p> 	<p><u><i>Insert Picture Reference:</i></u></p> <hr/>

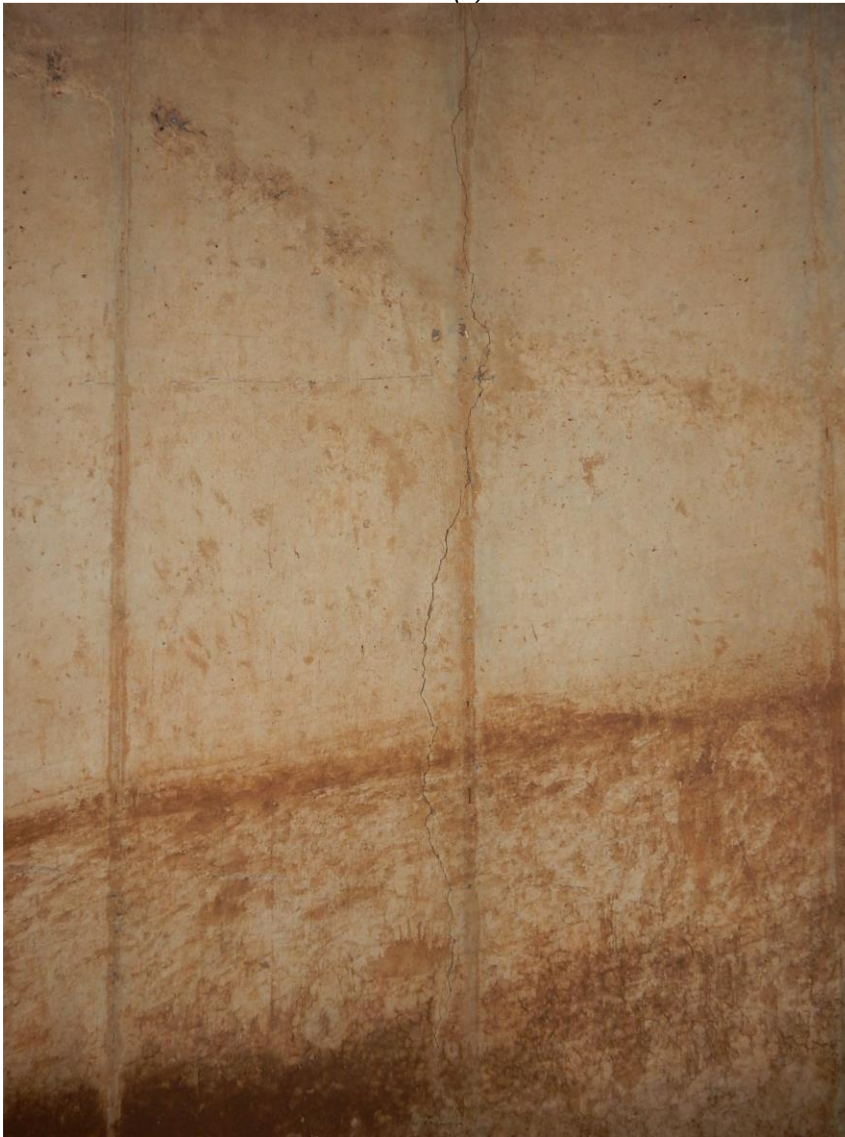
PHOTOGRAPH LOG : OBSERVED DEFECTS

Outlet works



Insert Picture Reference:

Barrel(s)



Insert Picture Reference:

Barrel(s)



Insert Picture Reference:

Retaining wall Southern Approach



Insert Picture Reference:

EXAMPLE 1: SAFETY SHEET

SANRAL		EDMS # 4578657/6	SAFETY INSPECTION FORM i.t.o. Occupational Health and Safety Act (1993) and Construction Regulations (2014)				CULVERTS (Major and Lessor)			
Route		Section			Road km					
Structure No.		Start Latitude (south)			Start Longitude (east)					
No of cells		End Latitude (south)			End Longitude (east)					
Structure Name										
<p>The purpose of this Safety Inspection, to be undertaken by a competent person, is to identify safety related defects that require urgent attention to ensure the structure is safe for continued use. It is not required to record routine maintenance defects. These inspections are to be captured and hard copy and electronic records kept. Data shall also be captured in SANRAL ITIS system. For existing structures inspections shall at 12 months maximum intervals. For new structures they shall be done every 6 months for the first 24 months and at 12 months maximum intervals thereafter.</p>										
INSPECTION (mark with an X as applicable for Defect and Degree)										
Item	Description	Defect?			Degree Rating				Photo No's.	
		Yes	No	N/A	1	2	3	4		
1	Inlet works									
2	Outlet works									
3	Barrel(s)									
4	Waterway									
5	Embankments									
6	Retaining walls									
7	Flood damage?									
8	Impact damage?									
9	Other defects?									
10										
PHOTOGRAPHS										
Photo No.	Inventory Description	Photo No.	Location	Defect Description						
P01	Road above culvert View 1	P11								
P02	Road above culvert View 2	P12								
P03	Inlet	P13								
P04	Outlet	P14								
P05	Culvert number	P15								
P06		P16								
P07		P17								
P08		P18								
P09		P19								
P10		P20								
Urgent Action or Attention required?	Yes	No	If Yes, Urgency?	Immediate	Within 2 months	Within 6 months				
If Yes, specify details:										
Inspector's comments: Generally culvert in good condition apart from severe siltation of the barrel.										
Inspected by				Date						
Signature				Firm						
Degree Rating Description	No Defect	0	Minor	1	Moderate	2	Warning	3	Severe	4

EXAMPLE 1: SUMMARY SHEET

[illegible]