LA No. SLI leptember. Rei Str Quarterly Environmental Quality Monitoring Report for the Landslide Disaster Protection **Project Of the National Road Network** Package -1 (JICA Format) Report No-08 (September 2019) (NOISE LEVEL MONITORING) Buildi remov Shring with the

ાMitugatilon Measures

Noise

1. Construction Stage

ltem	One hour Laeq	Unit	Measured Value	Measured Value	National standards	World Bank		Re	emarks	, , , , , , , , , , , , , , , , , , ,
			(Mean)	(Max)	(Max) *1	Guidelines * 2	Location	Frequency	Implementation	Supervisor
	Day time (7:00 - 22:00)		66.4	71	50/75	55	Diyagala	Construction Stage:	Constructer through	,
Noise *1	Night time (22:00 - 7:00)	dB(A)	45.4	48	40/50	45	Diyagala	4 times / year for 2 years	approved monitoring agency	RDA/ESD

^{*1:} National Environmental (Protection & Quality) Regulations, CEA (2008)

^{*2 :} Residential area IFC EHS general guideline, for General Health and safety (EHS) Guidelines (2007)

s Mitigation (Measures &

Noise

1. Construction Stage

ltem	One hour Laeq	Unit	Measured Value	Measured Value	National standards	World Bank		Ren	narks	
_			(Mean)	(Max)	(Max) *1	Guidelines * 2	Location	Frequency	Implementation	Supervisor
	Day time (7:00 - 22:00)		69.7	70	50/75	55	Nawalapitiya	Construction Stage:	Constructer through	
Noise *1	Night time (22:00 - 7:00)	dB(A)	46.2	51	40/50	45	Nawalapitiya	4 times / year for 2 years	approved monitoring agency	RDA/ESD

^{*1 :} National Environmental (Protection & Quality) Regulations, CEA (2008)

^{*2 :} Residential area IFC EHS general guideline, for General Health and safety (EHS) Guidelines (2007)

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Noise

1. Operation Stage

Item	One hour Laeq	Unit	Measured Value	Measured Value	National standards	World Bank		Rema	rks	
			(Mean)	(Max)	(Max) *1	Guidelines * 2	Location	Frequency	Implementation	Supervisor
Naiss #4	Day time (7:00 - 22:00)		71.0	72	50/75	55	Kothmalegama- 1	Construction Stage:	Constructer through	
Noise *1	Night time (22:00 - 7:00)	dB(A)	48.9	49	40/50	45	Kothmalegama- 1	4 times / year for 2 years	approved monitoring agency	RDA/ESD

^{*1 :} National Environmental (Protection & Quality) Regulations, CEA (2008)

^{*2 :} Residential area IFC EHS general guideline, for General Health and safety (EHS) Guidelines (2007)

Noise

190 peration Stage

ltem	One hour Laeq	Unit	Measured Value	Measured Value	National standards	World Bank		Rema	ırks	
		! 	(Mean)	(Max)	(Max) *1	Guidelines * 2	Location	Frequency	implementation	Supervisor
No: *1	Day time (7:00 - 22:00)	10/4	64.1	67	50/75	55	Kothmalegama- 2	Construction Stage:	Constructer through	
Noise *1	Night time (22:00 - 7:00)	dB(A)	43.1	47	40/50	45	Kothmalegama- 2	4 times / year for 2 years	approved monitoring agency	RDA/ESD

^{*1:} National Environmental (Protection & Quality) Regulations, CEA (2008)

^{*2 :} Residential area IFC EHS general guideline, for General Health and safety (EHS) Guidelines (2007)

Item	One hour Laeq	Unit	Measured Value	Measured Value	National standards	World Bank		Re	emarks	
<u> </u>	·		(Mean)	(Max)	(Max) *1	Guidelines * 2	Location	Frequency	Implementation	Supervisor
Noise *1	Day time (7:00 - 22:00)	-ID/Al	68.1	71	50/75	55	Ramboda	Construction Stage:	Constructer through	
IAOI26 . I	Night time (22:00 - 7:00)	dB(A)	45.6	52	40/50	45	Ramboda	4 times / year for 2 years	approved monitoring agency	RDA/ESD

*1: National Environmental (Protection & Quality) Regulations, CEA (2008)

*2: Residential area IFC EHS general guideline, for General Health and safety (EHS) Guidelines (2007)

Noise should not exceed the levels presented in Table 3 or result in a maximum increase in background levels of 3dBA at the nearest off - site receptor



ltem	One hour Laeq	Unit	Measured Value	Measured Value	National standards	World Bank		Re	emarks	
			(Mean)	(Max)	(Max) *1	Guidelines * 2	Location	Frequency	implementation	Supervisor
	Day time (7:00 - 22:00)	15.4.3	65.8	69	50/75	55	Toppass	Construction Stage:	Constructer through	
Noise *1	Night time (22:00 - 7:00)	dB(A)	47.1	52	40/50	45	Toppass	4 times / year for 2 years	approved monitoring agency	RDA/ESD

^{*1:} National Environmental (Protection & Quality) Regulations, CEA (2008)

^{*2 :} Residential area IFC EHS general guideline, for General Health and safety (EHS) Guidelines (2007)

L Opardon Stage

item	One hour Laeq	Unit	Measured Value	Measured Value	National standards	World Bank		Řer	narks	
			(Mean)	(Max)	(Max) *1	Guidelines * 2	Location	Frequency	Implementation	Supervisor
Ni=: *1	Day time (7:00 - 22:00)	ID/43	68.9	72	50/75	55	Keppetipola	Construction Stage:	Constructer through	
Noise *1	Night time (22:00 - 7:00)	dB(A)	45.3	47	40/50	45	Keppetipola	4 times / year for 2 years	approved monitoring agency	RDA/ESD

^{*1:} National Environmental (Protection & Quality) Regulations, CEA (2008)

^{*2 :} Residential area IFC EHS general guideline, for General Health and safety (EHS) Guidelines (2007)

Mitigation Measures

Noise

1. Operation Stage

ltem	One hour Laeq	Unit	Measured Value	Measured Value	National standards	World Bank		Rem	narks	4
			(Mean)	(Max)	(Max) *1	Guidelines * 2	Location	Frequency	Implementation	Supervisor
.	Day time (7:00 - 22:00)	1=(.)	70.9	73	50/75	55	Ginigathhena	Construction Stage:	Constructer through	
Noise *1	Night time (22:00 - 7:00)	dB(A)	64.7	66	40/50	45	Ginigathhena	4 times / year for 2 years	approved monitoring agency	RDA/ESD

^{*1:} National Environmental (Protection & Quality) Regulations, CEA (2008)

^{*2 :} Residential area IFC EHS general guideline, for General Health and safety (EHS) Guidelines (2007)

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Operation Stage

Item	One hour Laeq	Unit	Measured Value	Measured Value	National stadards	World Bank	<u> </u>	Rema	nrks	
			(Mean)	(Max)	(Max) *1	Guidelines 7	Location	Frequency	Implementation	Supervisor
Noise *1	Day time (7:00 - 22:00)	4D(A)	69.8	72	50/75	55	Pitawala	Construction Stage :	Constructer through	
110136 1	Night time (22:00 - 7:00)	dB(A)	45.4	48	40/50	45	Pitawala	4 times / year for 2	approved monitoring	RDA/ESD
	(22:00 - 7:00)	<u> </u>	· <u></u>		·			years	ager	•

^{*1:} National Environmental (Protection & Quality) Regulations, CEA (2008)

^{*2:} Residential area IFC EHS general guideline, for General Health and safety (EHS) Guidelines (2007)

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Note

1. Operation Stage

One hour Laeq	Unit	Measured Value	Measured Value	National stadards	World Bank		Rema	rks	<u> </u>
		(Mean)	(Max)	(Max) *1	* 2	Location	Frequency	Implementation	Supervisor
Day time (7:00 - 22:00)	-ID(A)	69.8	72	50/75	55	Pitawala	Construction Stage:	Constructer through	
Night time (22:00 - 7:00)	ав(д)	45.4	48	40/50	45	Pitawala	4 times / year for 2	approved monitoring	RDA/ESD
(Day time 7:00 - 22:00) Night time 22:00 - 7:00)	Day time 7:00 - 22:00) dB(A) Night time 22:00 - 7:00)	Day time 7:00 - 22:00) dB(A) Night time 22:00 - 7:00) 45.4	Day time 7:00 - 22:00) Night time 22:00 - 7:00) (Mean) (Max) 69.8 72 45.4 48	(Mean) (Max) statutus (Max) *1 Day time 7:00 - 22:00) dB(A) Night time 22:00 - 7:00) 45.4 48 40/50	Day time 7:00 - 22:00) dB(A) Night time 22:00 - 7:00)	Day time 7:00 - 22:00) Day time General Research Guidelines Location Today time General Research Guidelines Research Rese	Day time 7:00 - 22:00 Onit Value (Max) Value (Max) Stadards (Max) *1 Guidelines *2 Location Frequency	Day time 7:00 - 22:00) Night time 22:00 - 7:00) Night time 22:00 - 7:00) Night time 22:00 - 7:00) Onit Value (Max) Value (Max) stadards (Max) *1 Stadards (Max) *1 Guidelines *2 Location Frequency Implementation Constructer Stage: through approved year for 2 years agency

^{*1:} National Environmental (Protection & Quality) Regulations, CEA (2008)

^{*2 :} Residential area IFC EHS general guideline, for General Health and safety (EHS) Guidelines (2007)

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1. Construction Stage

Item	One hour Laeq	Unit	Measured Value	Measured Value	National stadards	World Bank		Rema	arks	_
			(Mean)	· (Max)	(Max) *1	Guidelines * 2	Location	Frequency	implementation	Supervisor
Nation #4	Day time (7:00 - 22:00)	1-1.1	70.1	71	50/75	55	Theligama	Construction Stage :	Constructer through	
Noise *1	Night time (22:00 - 7:00)	dB(A)	46.6	48	40/50	45	Theligama	4 times / year for 2 years	approved monitoring agency	RDA/ESD

^{*1:} National Environmental (Protection & Quality) Regulations, CEA (2008)

^{*2 :} Residential area IFC EHS general guideline, for General Health and safety (EHS) Guidelines (2007)

Quarterly Environmental Quality Monitoring Report for the Landslide Disaster Protection Project National Road Network Package -1 (JICA Format) Report No-08 (September 2019)

(AIR QUALITY MONITORING)

		II-AILE	Unic	velue	(imex)(31.56	i rave do naline	WHO	公司第八 号	Re	marks	<u> </u>
		24 Hours		((mean))	(max)*1	standards	Guidelines*2	Location	Frequency	Implementation	Supervision
		8 hours	μg/m³			80	20				
10.7	**\$O ₂ ****	1 hour	<u>a</u> μg/m			120					
\vdash		24 hours	+	24	27	200		Diyagala		·	
		8 hours	-	<u> </u>	 	100	<u>-</u>			·	
	NO ₂	1 hour	μg/m³			150	-		7		
				18.3	21	250	200	 Diyagala			
		1year				-	40	Diyagaia	-		
	co	8 hours	3			10000	10000		-\ ·		
		1 hour	μg/m³	3136	3318	30000			<u>Design Stage</u>		
		8 hours				 	30000	Diyagala	1 time as a	}	
	O ₃ =	1-hour	μg/m³	5.4			100		baseline data	Constructer	
-	Lead	24 hours			6	200	-	Diyagala	Construction	through approved monitoring agency	RDA/ESD
	<u> </u>	1 year	μg/m³	0.2	0.2	2			Stage: 4 time / year for	monitoring agency	
		24 hours				0.5	0.5		2 years	ľ	
F	PM ₄	3 hours	μg/m³				20			į	
				23.2	28.2						
	_	1 hour				500					
	<u>. </u>	3 hours	, [142.5	151.4	450		Divingente			
S	SPM 3	8 hours	μg/m³			350		Diyagala			
] :	24 hours	· }						_		
	1	l year	-			300					
No	tional A				Sri Lanka (2	100	- [i

^{*2:} WHO Air Quality guidelines for particulate matter, ozone, nitrogen dioxide and sulfur dioxide (2006)

	الرث : ال المرابع	i Unité	value	Velue Nicesanien		who.		Re	emarks	-
<u> </u>	l bungs		(imean)	((max)File	6. 新新新疆区景	Guidelines*2	Location	Frequency	Implementation	Supervisio
1	24 hours 8 hours				80	20				
SO ₂	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	μg/m³			120	-]		
	1 hour		13.7	15.8	200	_	Nawalapitiya	1		
	24 hours]			100	-	,			
NO ₂	8 hours				150	-	 	-		
	1 hour	μg/m³	15.1	17.1	250	200		1,574		
	1year	' <u> </u>					Nawalapitiya			
	8 hours	<u>-</u>				40	<u> </u>			
CO	1 hour	μg/m³			10000	10000		<u>Design Stage</u>		
	8 hours	<u> </u>	1431	1516	30000	30000	Nawalapitiya	1 time as a		
O ₃ =	<u> </u>	μg/m³			-	100		baseline data	Constructer	ļ
_ <u>-</u>	1 hour		5 ~	6	200	-	Nawalapitiya	Construction	through approved	RDA/ESD
Lead	24 hours	, 3		<0.1	2	-		Stage:	monitoring agency	-
compounds	1 year	μg/m³ -			0.5	0.5		4 time / year for		
	24 hours			 				2 years		
PM ₁₀	3 hours	μg/m³ –		`	1	20				
	1 hour		38.3	37.9			Nawalapitiya			
	3 hours	\			500					
		_	132.8	141.5	450	-	Nawalapitiya	.		
SPM	8 hours	μg/m³			350	-		-		
	24 hours	Γ			300	-			,	
	1 year	•			100					

^{1:} National Ambient Air Quality (NAAQS) of Sri Lanka (2009)

^{*2:} WHO Air Quality guidelines for particulate matter, ozone, nitrogen dioxide and sulfur dioxide (2006)

						23 کام 101 الان ب	Locations	Frequency	Implementation	
					8.0	-20 : 22		inequency	implementation	Supervision
				in San San San	120			1		
	Thous		-242187X-14	21.3	200		Kothmalegama-1	-		
New York	324 hours				100	-	tto time egonia 1	-		
NO ₂	8 hours	1/2/m ³			150	-		-		
	1 hour	μg/m³	18.1	20	250	200	Kothmalegama-1	A gram		
<u> </u>	1year			<u></u> _	-	40	i itotimalegama-1	_		
со	8 hours	μg/m³			10000	10000		Design Stage		
	1 hour	μg/111	1211	1261	30000	30000	Kothmalegama-1	1 time as a		
O ₃ =	8 hours	ua/m³			-	100	Service 2	baseline data	6 1	
	1 hour	μg/m³	5.4-	5.7	200		Kothmalegama-1	uata	Constructer through approved	 RDA/ES
Lead	24 hours	/. 3	0.1	0.1	2		- KosmidicBania-1	Construction Stage:	monitoring agency	
ompounds	1 year	μg/m³			0.5	0.5		4 time / year		
PM ₁₀	24 hours	3				20		for 2 years		
	3 hours	μg/m³	36.5	37.4						
	1 hour	•			500		Kothmalegama-1			
	3 hours	`	129.3	147.3	450		Votherals		ŀ	
SPM	8 hours	μg/m³			350		Kothmalegama-1	*-		
	24 hours				300					
	1 year	- h	-		100					-

^{*2:} WHO Air Quality guidelines for particulate matter, ozone, nitrogen dioxide and sulfur dioxide (2006)

(Komanill Ki	الله المال الم	Utili	là le truesi vellue	lxteegreel vellue	National	WHO		Rema	arks	
and in the	Sull		in (mean)	(max)*1	- staridarus	Guidelines*2	Location	Frequency	Implementation	Supervisio
	24 hours 8 hours	3	Park and the second of		80	20				
SO₂	1 hour	μg/m³			120	<u> </u>				1
<u> </u>	24 hours		13.1	14.5	200	<u> </u>	Kothmalegama-2			
	8 hours		<u> </u>		100	-				
NO ₂	1 hour	μg/m³			150	<u>-</u>		1		1
			16.4	17.1	250	200	Kothmalegama-2		<u> </u>	
<u>.</u>	1year	<u> </u>			_	40		1	•	
со	8 hours	μg/m³			10000	10000]	;	ļ
	1 hour	μ9/111	1568	1602	30000	30000	Kothmalegama-2	<u>Design Stage</u> 1 time as a		
O ₃ .=	8 hours	3			-	100	Rothmalegama-2	baseline data		
O₃ .∓	1 hour.	μg/m³	4	5	200		- Land	<u>Construction</u>	Constructer through approved	RDA/ESD
Lead	24 hours		0.1	0.1	2		Kothmalegama-2	Stage:	monitoring agency	1127 1, 200
ompounds	1 year	μg/m³		- 0.1	0.5	0.5		4 time / year for		
	24 hours							2 years		
PM ₁₀	3 hours	μg/m³ -	24 8			20				
	1 hour	-	31.1	37.4						
	3 hours	-	124.7		500			·		
SPM	0.1		121.7	132.5	430		Kothmalegama-2		j	
211/1	24 hours	μg/m³			350			4 0 1 7-		
-		<u> </u>			300				ļ	
	1 year		IAAQS) of S		100	-			•	

^{*2:} WHO Air Quality guidelines for particulate matter, ozone, nitrogen dioxide and sulfur dioxide (2006)

			11 - Marie -	المستعلقة الما	lacolita()	WHO		P	emarks	
		en de	(fineerg))	velue (max)41	standards	WHO:: Guidelines*2	Location	Frequency	Implementation	T 6
1	20 hours				80	20			- Implementation	Supervision
\$ 505	8 hours +	μg/m³		<u> </u>	120	-		†		
		 	17.3	19.8	200	•	Ramboda			1
	24 hours	1			100		Namboda	+		
NO ₂	8 hours	μg/m³			150	<u> </u>		_		
	1 hour	μg/m	14	16	250	200				1
	1year						Ramboda	ž nev		
60	8 hours			·	10000	40				
CO	1 hour	μg/m³	1134	1450	10000	10000		<u>Design Stage</u>		
	8 hours		1134	1152	30000	30000	Ramboda	1 time as a		
O ₃	1 hour	μg/m³ -				100		baseline data	Constructer	
	24 hours		4.1	5.5	200	-	Ramboda	Construction	through approved	RDA/ESD
Lead ompounds	"	μg/m³ -	0.1 -	<u>0.1</u>	2	-		Stage:	monitoring agency	-
	1 year				0.5	0.5		4 time / year for 2 years		
PM ₁₀	24 hours	3				20		2 years		
	3 hours	μg/m³ -	27.6	29.1						
	1 hour		*	25.1	500		Ramboda	j	1	
	3 hours	. F	111.3	120.4						
SPM	8 hours	μg/m³		120,4	450		Ramboda	ļ		
	24 hours	μ9/111			350					
ŀ	1 year	<u> </u> -			300					
	mbient Air				100					

Air Quality (NAAQS) of Sri Lanka (2009)

^{*2:} WHO Air Quality guidelines for particulate matter, ozone, nitrogen dioxide and sulfur dioxide (2006)

			J101.	n -		New order	-WH©: -Guidelines*2		Re	marks	
	A Serger	includes in		((imean))	((max))=1	80		Location	Frequency	Implementation	
e f	SOF	i i i nours	uo/m	St. State of the last	***	120	20			- Individual of	Supervision
		1 hour		17	1 20	200	- -				
		24 hours		1	20		<u>-</u>	Toppass			1
į	NO ₂	8 hours		 		100	-		_		
	-	1 hour	⊢ μg/m³		-	150			7		
-		1year	-	17.4	20.1	250	200	Toppe			
t		8 hours	 			-	40	Toppass	4	}	
	CO	1 hour	μg/m³			10000	10000				
-		L		1184	1201	30000	30000	<u>-</u>	Design Stage	1	
1	O ₃	8 hours	3			-		Toppass	1 time as a		
L		1 hour	μg/m³	6.6	7.1	 	100		baseline data	Constructer	
	Lead	24 hours	 	£-		200	-	Toppass	Construction	through approved	RDA/ESD
1	compounds	1 year	μg/m ³ -		<0.1	2			Stage:	monitoring agency	, 250
		24 hours				0.5	0.5		4 time / year for 2 years	1	
	PM ₁₀	3 hours	μg/m³ –				20		_ Zyears		
-		1 hour		24.4	27.2				- 1		}
	_					500			1		
	ļ	3 hours	-	119.9	125.1				1		
	SPM [8 hours	µg/m³	-		450		Toppass	{		
	2	24 hours				350	-		• •		
		year	<u>}</u>			300					
[:]	National An	abiout 4:			İ	100					

^{*2:} WHO Air Quality guidelines for particulate matter, ozone, nitrogen dioxide and sulfur dioxide (2006)

		g Saut	i validi.e	value Value	(Newtonal)	WHO Guidelines*2		Rem	arks	
	Skillsower	1 22 3	lf 4 = - : 15	((DEED) FE	Sec. 3.3 P. 77		Location	Frequency	Implementation	Supervision
1 1 2 22	24. hours 8 hours				80	20			 	
President SO₂	1 hour	µg/m³	114.31.34.14.14.1		120	<u>-</u>				Ì
	24 hours	 	17.1	19.2	200		Keppetipola	7		
	8 hours	1			100	-		7		}
NO ₂	<u> </u>	μg/m³			150	-		-		
	1 hour	μ9/111	16.7	18	250	200	Name at least	1 m v me		
	1year					40	Keppetipola	-	İ	
60	8 hours				10000	10000		_		
. C O	1 hour	μg/m³	2635	2677				Design Stage		
	8 hours				30000	30000	Keppetipola	1 time as a		
O ₃ ≈ 3	1 hour	μg/m³				100		baseline data	Constructer	
	24 hours		.5	5	200		Keppetipola	Construction	through approved	RDA/ESD
Lead		μg/m³ -		<0.1	2	-		Stage:	monitoring agency	
compounds	1 year				0.5	0.5	-	4 time / year for 2 years	į	
PM ₁₀	24 hours	, 3				20		2 years	,	
1 10110	3 hours	μg/m³	26.2	29.3			-			
<u> </u>	1 hour		20.2	29.3	F00		Keppetipola			
	3 hours	, -	150	— 	500					
SPM	8 hours		158	162	450	-	Keppetipola			
JF IVI	24 hours	μg/m³			350			_		
		_			300	-				
: National A	1 year	-	•		100			,	<i>`</i> [

^{*1:} National Ambient Air Quality (NAAQS) of Sri Lanka (2009)

^{*2:} WHO Air Quality guidelines for particulate matter, ozone, nitrogen dioxide and sulfur dioxide (2006)

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	e 24 hours		w/www.mean)	#3(max)*1			Location	Frequency	Implementation	
	8 hours	μg/m³		 	80	20				Supervision
SO₂	1 hour	7		<u> </u>	120			7		1
	24 hours		24.2	26	200	<u>-</u>	Ginigathhena	7	1	
NO ₂	8 hours	-	ļ		100		g	-		
	1 hour	μg/m³	<u> </u>		150			7		1
	1year	-	18.7	21	250	200	Ginigathhena	- State		
	8 hours	-	ļI			40	Omgatimena	-		
СО	1 hour	μg/m³	<u> </u>		10000	10000	·	4	1	
<u> </u>	8 hours	 	1622	1669	30000	30000	Ginigathhena	<u>Design Stage</u>		
O ₃	1 hour	μg/m³			-	100	oBattile18	1 time as a		
	24 hours		5.1	6	200	-	Ginigathhena	baseline data	Constructer through	
Lead compounds	1 year	μg/m ³	0.2	0.2	2	-	Omigatimena	Construction	approved	RDA/ESD
	24 hours				0.5	0.5		Stage: 4 time / year for 2	monitoring agency	
PM ₁₀	3 hours	μg/m³ –				20		years		
	/		33.4	42						
}	1 hour		**		500		Ginigathhena	l	1	
	3 hours	. [161	184	450	-				
SPM L	8 hours				350	-	Ginigathhena			
	24 hours	µg/m³ -	-							
	1 year	-			300			-	1	
l: National A	I			-	100	-		1	1	

^{*2:} WHO Air Quality guidelines for particulate matter, ozone, nitrogen dioxide and sulfur dioxide (2006)

			I distribution and	Measúreok	National	who		Ren	marks -	
	litate in		value (mean)	value (max)*1	standards	Guidelines*2	Location	Frequency	Implementation	Supervision
N. A. Daniel	24 hours				80	20				
50	8 hours	μg/m³			120	-				
SO ₂	1 hour		18.5	21	200	-	Pitawala			
	24 hours				100	-	-	7		<u> </u>
NO ₂	8 hours	.ua/m³		*	150	-	· · · · · · · · · · · · · · · · · · ·	7		
	1 hour	μg/m³	21.3	22	250	200	· · · Pitawala	*		
	1year				-	40	2. /			ļ
со	8 hours				10000	10000				
	1 hour	μg/m³	2214	2256	30000	30000	Pitawala	<u>Design Stage</u> 1 time as a baseline		
0	8 hours	*3	7.		-	100		data	Constructer through approved monitoring	BD 4 /FCD
O ₃	1 hour	- ha/m³	, 5	٠ 5	200	-	Pitawala	Construction Stage:	approved monitoring	RDA/ESD
Lead	24 hours	3	0.1	0.1	2	-		4 time / year for 2 years		
compounds	1 year	μg/m³			0.5	0.5	·,-	,0010		
POM ₁₀	24 hours	3		-		20	<u> </u>			
FOIVI10	1 year	μg/m³		V		50			i	•
	1 hour				500	-				•
	3 hours		145.2	177.1	450	-	Pitawala		,	
SPM	8 hours	μg/m³			350	-				
	24 hours	Ī			300	-	 -			
Ī	1 year	Ī			100	_		-		

^{*1:} National Ambient Air Quality (NAAQS) of Sri Lanka (2009)

Mitigation Measures

^{*2:} WHO Air Quality guidelines for particulate matter, ozone, nitrogen dioxide and sulfur dioxide (2006)

dry the		ZNJamera		when the state of	vilte Immist	(Endines	Guidelines 2	Location	Frequency	Implementation	Supplied
வில் சம	h Elme	ZOMOUTS Bhours	jug/m			80	20				Supervision
i i i i sc		1 hour	(All Services		 	120	-				
		24 hours	 	34.9	36	200	-	Theligama			
NO ₂	Γ	8 hours	1	<u> </u>	 	100	-	inchgama	-		
	<u> </u>	1 hour	μg/m³	 	ļ	150					
	[]	lyear		27.1	29	250	200	Theligama			
<u></u> _	8	hours		 			40 .	THOUGHTIB	-		
CO	- -	hour	μg/m³	ļ		10000	10000		-		
		hours		2144	2175	30000	30000	71.0	<u>Design Stage</u>		
O ₃	<u> </u>	hour	μg/m³				100	Theligama	1 time as a baseline data	C	
		hours		6.4	7.3	200			; ;	Constructer through approved monitoring	PDA/ccp
Lead	-	year	μg/m³		· <0.1	2		Theligama	Construction Stage: 4 time / year for 2	agency	RDA/ESD
compound	13	hours				0.5	0.5		years		
POM ₁₀		nour	μg/m³				20				
		our		29.1	33.4		50				
	<u> </u>	ours	1			500 1			}		
SPM	L.	ours		153.4	187.2	450					
J. 101	<u> </u>	hours	μg/m³			350		Theligama	}		
	1 ye		_			300	-			1	
TYTTA	1 - 10			-		100	ioxide and sul		* *		

Quarterly Environmental Quality Monitoring Report for the Landslide Disaster Protection Project National Road Network Package -1 (JICA Format) Report No-08 (September 2019)

(VIBRATION LEVEL MONITORING)

2. The distance from the source (radious / width of corridor) shall be decided by the constructor and RDA.

ltem	Unit	Frequency	Measured Value	Measured Value	National Standards	International		ſ	Remarks	
		Band	(Mean)	(Max.)	(Max.)	Guidelines	Location*2	Frequency	implementation	Supervision
4		0-10 Hz	4		1.0			Every 6 months during		
Vibration	mm/sec	10-50 Hz			2.0			the construction stage, and on complain at the	Constructor through approved monitoring agency	RDA/ESD
		Over 50 Hz	~9.54	0.60	4.0		Diyagala	construction site		

1. National Environmental (Protection & Quality) Regulations, CEA (2008), Category of the structure - "Type C", Type of Vibration - "Intermittent".

2: The distance from the source (radious / width of corridor) shall be decided by the constructor and RDA.

item	Unit	Frequency	Measured Value		National	International		Re	emarks	
rtem	Offic	Band	(Mean)	Value (Max.)	Standards (Max.)	Guidelines	Location*2	Frequency	implementation	Supervision
=	a salam	0-10 Hz	e,		1.0			Every 6 months during		
Vibration	mm/sec	10-50 Hz			2.0			the construction stage, and on complain at the	Constructor through approved monitoring agency	RDA/ESD
		Over 50 Hz	0.53	0.58	4.0		Nawalapitiya	construction site		

Language in the structure - "Type C", Type of Vibration - "Intermittent".

2. The distance from the source (radious / width of corridor) shall be decided by the constructor and RDA.

ltem	Unit	Frequency Band	Measured Value (Mean)	Measured Value (Max.)	National Standards (Max.)	International Guidelines	-	Re	marks	
					(IVIAX.)		Location*2	Frequency	implementation	Supervision
		0-10 Hz		¢.	1.0			Fyon		
ibration	mm/sec	10-50 Hz			2.0			Every 6 months during the construction stage, and on complain at	Constructor through approved	RDA/ESD
·		Over 50 Hz	0.61	-0.66	4.0		Kothmalegama-	the construction site	monitoring agency	

Item	Unit	Frequency Band	Measured Value (Mean)	Measured Value (Max.)	National Standards (Max.)	International Guidelines		Remarks		
	-				((VIAX.)		Location*2 Frequency implement	Supervision		
	=	0-10 Hz			1.0			Fara		
Vibration mm/se	mm/sec	10-50 Hz	•		2.0			Every 6 months during the construction stage, and on complain at	Constructor through approved monitoring	RDA/ESD
		Over 50 Hz	0.54	0.55	4.0		Kothmalegama- 2	the construction _site.	agency	

* 1 : National Environmental (Protection & Quality) Regulations, CEA (2008), Category of the structure - "Type C", Type of Vibration - "Intermittent".

* 2 : The distance from the source (radious / width of corridor) shall be decided by the constructor and RDA.

Item	Unit	Frequency Band	Measured Value	Measured Value (Max.)	National Standards (Max.)	International Guidelines	Remarks				
		Sund	(Mean)				Location*2	Frequency	implementation	Supervision	
		0-10 Hz			1.0						
=	المستيمين المستيمين		e.					Every 6 months during			
Vibration	mm/sec	10-50 Hz			2.0		·	the construction stage, and on complain at the	Constructor through approved monitoring	RDA/ESD	
		Over 50 Hz	0.51		4.0			construction site	agency		
j			-				Ramboda	• •			

1. Operation Stage

- * 1: National Environmental (Protection & Quality) Regulations, CEA (2008), Category of the structure "Type C", Type of Vibration "Intermittent".
- * 2 : The distance from the source (radious / width of corridor) shall be decided by the constructor and RDA.

Item	Unit	Frequency Band	Measured Value (Mean)	Measured Value (Max.)	National Standards (Max.)	International Guidelines	Remarks				
							Location*2	Frequency	implementation	Supervision	
\$	· Marie Carlotte	0-10 Hz	c		1.0			Every 6 months during the	Construct		
Vibration	mm/sec	10-50 Hz	***		2.0			construction stage, and on complain at the	Constructor through approved monitoring agency	RDA/ESD	
		Over 50 Hz	0.61	0.64	4.0			construction site			
		Over 30 112		0.64	4.0		Toppass				

1 s National Environmental (Protection & Quality) Regulations, CEA (2008), Category of the structure - "Type C", Type of Vibration - "Intermittent". 2: The distance from the source (radious / width of corridor) shall be decided by the constructor and RDA.

ltem	Unit	Unit Frequency Band	equency Value	1	National Standards	International Guidelines	Remarks				
				(Max.)	(Max.)		Location*2	Frequency	implementation	Supervision	
	2	0-10 Hz			1.0			Every 6			
Vibration	mm/sec	10-50 Hz			2.0			months during the construction stage, and on complain at the	Constructor through approved monitoring agency	RDA/ESD	
·		Over 50 Hz	0.55	0.57	~~~4 <u>.</u> 0		Keppetipola	construction site			

2: National Environmental (Protection & Quality) Regulations, CEA (2008), Category of the structure - "Type C", Type of Vibration - "Intermittent". 2: The distance from the source (radious / width of corridor) shall be decided by the constructor and RDA.

ltem Unit	Unit	Unit Frequency Band	Measured Value	Measured Value (Max.)	National Standards (Max.)	International Guidelines		R	emarks	
			(Mean)			Guidelines	Location*2	Frequency	implementation	Supervision
		0-10 Hz			1.0					
	mm/sec	10-50 Hz			2.0			Every 6 months during the construction stage, and on	Constructor through approved	RDA/ESD
			•					complain at the construction site	monitoring agency	,
		Over 50,Hz	0.56	0.61	4.0		Ginigathhena	site		

	Item Unit Band (Measured (Mean)	Frequency	Measured	Measured	National	International	Remarks				
i i i i i i i i i i i i i i i i i i i		Value (Max.)	Standards (Max.)	Guidelines	Location*2	Frequency	implementation	Supervision			
		0-10 Hz			1.0			Every 6 months during the stage,	Constructor through		
Vibration	mm/sec	10-50 Hz			2.0		Pitawala	and on complain at the	approved monitoring	RDA/ESD	
		Over 50 Hz	0.48	0.51	4.0			construction site	agency		

^{* 1:} National Environmental (Protection & Quality) Regulations, CEA (2008), Category of the structure - "Type C", Type of Vibration - "Intermittent".

^{* 2 :} The distance from the source (radious / width of corridor) shall be decided by the constructor and RDA.

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Mitigation Measures

Vibration

1. Construction Stage

Item	Unit	Frequency Band	Measured Value	Measured Value	National Standards	International		Rem	arks			
		 	-	 	(Mean)	(Max.)	(Max.)	Guidelines	Location*2	Frequency	implementation	Supervision
		0-10 Hz			1.0			Every 6 months	Constructor			
'ibration mm/sec	mm/sec				2.0		Theligama	during the stage,	through	DDA/ECO		
	Over 50°- Hz	0:45	Ø:52	4.0		Theligama	at the construction site	monitoring agency	RDA/ESD			

^{* 1:} National Environmental (Protection & Quality) Regulations, CEA (2008), Category of the structure - "Type C", Type of Vibration - "Intermittent".

^{* 2 :} The distance from the source (radious / width of corridor) shall be decided by the constructor and RDA.

Quarterly Environmental Quality Monitoring
Report for the Landslide Disaster Protection Project National
Road Network Package -1 (JICA Format)
Report No-08 (September 2019)

(WATER QUALITY MONITORING)

ltem	Unit	Measured Value	Measured Value	National Standards	International		Remar	KS	
F.C.		(Mean)	(Max.)	(Max) *1	Guidelines	Location	Frequency	Implement	
EC	(S/m)	0.029	0.041	-				Implementation	Supervision
рН		6.8	6.9	6.0-8.5	6-9 *2				
DO	(mg/L)	10.7	12.2			4-4			
Turbidity	(mg/L)	0.14	0.19			kothmalegama-1	<u>Design Stage</u> :		
TSS	(mg/L)	12.44	27	50	<0.2*3	hmale		Constructer	
BOD₅	(mg/L)	0.88	1.27	30	50*2 30*2	kot	1 time as a baseline data	through approved	DD 4 (===
Lead	(mg/L)	Not	Not				Construction stage:	monitoring	RDA/ESD
D:1 8		Detected	Detected	0.1	0.01		4 times/year for 2 years	agency	
Oil & grease		0	0	10	10*2	1	years for 2 years		
	1	26	30 ->	40		1	w +-		1
Coliform 1: National E	MPN/100mL nvironmental (Proneral guideline, fo	otection & Qual	ity) Regulation	CEA (2000)					

^{*2:} IFC EHS general guideline, for Sanitary Sewage Discharge (2007)

^{*3:} ADB Guidelines & Standards in Relation to Wastewater Reuse (2011), Main usage – "All pondrinking water uses"

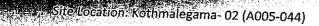
Šitė Location: Diyagala (A007-057)

ltem	Hati	Measured	Measured	National Standard			Remark	:S	
	Unit	Value (Mean)	Value (Max.)	s (Max)	International Guidelines	Location	Frequency	Implementation	Supervis
EC	(S/m)	0.014	0.021	-					011
рН	-	7.2	7.6	6.0-8.5	6-9 *2		[
DO	(mg/L)	9.40	9.65	-	·		<u>Design Stage</u> :		
Turbidity	(m̃8/r)	0.16	0.19		<0.2*3	Diyagala		Constructer	
TSS	(mg/L)	4.32	10.7	50	50*2	بق	1 time as a baseline data	through	
BOD₅	(mg/L)	0.27	0.39	30	30*2		uata	approved	RDA/ESD
Lead	(mg/L)	Not	Not	0.1	3 0.01		Construction stage:	monitoring	
0:1.0	<u> </u>	Detected	Detected	0.1	` 0.01		4 times/year for 2	agency	
Oil & grease	(mg/L)	0.	0	10	10*2		years		
Coliform	MPN/100mL	30	-33	40	400*2		•	1	

^{*1:} National Environmental (Protection & Quality) Regulations, CEA (2008)

^{*2:} IFC EHS general guideline, for Sanitary Sewage Discharge (2007)

^{*3:} ADB Guidelines & Standards in Relation to Wastewater Reuse (2011), Main usage – "All nondrinking water uses"



ltem	Unit	Measured Value	Measured Value	National Standards	International	Remarks					
		(Mean)	(Max.)	(Max) *1	Guidelines	Location	Frequency	Implementation	Supomiele		
EC	(S/m)	0.017	0.024	-				, and the state of	Supervision		
рН	-	7.2	7.4	6.0-8.5	6-9 *2						
DO	(mg/L)	8.80	9.65	-		na 02					
Turbidity	(mg/L)	0.17	0.19		<0.2*3	Kothmalegama 02	<u>Design Stage</u> :	Constructer			
TSS	(mg/L)	7.21	11.5	50	50*2	othma	1 time as a baseline data	through			
BOD₅	(mg/L)	0.36	0.45	30	30*2	ž	a di basciirie data	approved	RDA/ESD		
Lead	(mg/L)	Not	Not				Construction stage:	monitoring			
		Detected	Detected	0.1	0.01		4 times/year for 2 years	agency			
Oil & grease	(mg/L)	0	0	10	10*2		,				
Coliform	MPN/100mL	25	28	40	~400*2						

^{*1:} National Environmental (Protection & Quality) Regulations, CEA (2008)

^{*2:} IFC EHS general guideline, for Sanitary Sewage Discharge (2007)

^{*3:} ADB Guidelines & Standards in Relation to Wastewater Reuse (2011), Main usage – "All nondrinking water uses"

Site Nocation: Ramboda (A005-046)

Item	Unit	Measured Value	Measured Value	National Standards	International		Remar	ks	
EC	(S/m)	(Mean) 0.049	(Max.) 0.051	(Max) *1	Guidelines	Location	Frequency	Implementation	Supervision
PH	-	6.4	7.1	6.0-8.5	6-9 *2		7.1	-	
DO	(mg/L)	11.4	12.2	-					
Turbidity	(mg/L)	0.16	0.18		<0.2*3	Ramboda	Design Stage:		
TSS BOD _s	(mg/L)	15.1	27	50	50*2	Ran	14:	Constructer	
	(mg/L)	1.2	2.2 -	30	30*2		1 time as a baseline data	through approved	RDA/ESD
Lead	(mg/L)	Not Detected	Not	0.1	0.01		Construction stage:	monitoring	NDA/ESD
Oil & grease	(mg/L)	Detected 1.0	Detected		0.01		4 times/year for 2 years	agency	ı
Coliform	MPN/100mL	36	38	10	10*2	.			
	vironmental (Pro			40	400*2	1			

^{*1:} National Environmental (Protection & Quality) Regulations, CEA (2008)

^{*2:} IFC EHS general guideline, for Sanitary Sewage Discharge (2007)

^{*3:} ADB Guidelines & Standards in Relation to Wastewater Reuse (2011), Main usage – "All nondrinking water uses"

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Site Location: Toppass (A005-063)

Item	Unit		Measured Value	National Standards	International	Remarks					
		(Mean)	(Max.)	(Max) *1	Guidelines	Location	Frequency	Implementation	Supervision		
EC	(S/m)	0.084	0.120	-	-		<u> </u>		<u> </u>		
рН	-	6.7	7.1	6.0-8.5	6-9 *2	1					
DO	(mg/L)	9.24	11.2		-	SS	Dosign Stages				
Turbidity	(mg/L)	0.15	0.18		<0.2*3	Toppass	<u>Design Stage</u> :	Constructer			
TSS	(mg/L)	0.47	0.58	50	50 ⁺²	 -	1 time as a baseline data	through			
BOD₅	(mg/L)	1.31	1.52	30	30*2			approved	RDA/ESD		
Lead	(mg/L)	Not Detected	Not Detected	0.1	, 0.01		Construction stage: 4 times/year for 2 years	monitoring agency			
Oil & grease	(mg/L)	0	0	10	10*2						
Coliform	MPN/100mL	30	33	40	400*2						

^{*1:} National Environmental (Protection & Quality) Regulations, CEA (2008)

^{*2:} IFC EHS general guideline, for Sanitary Sewage Discharge (2007)

^{*3:} ADB Guidelines & Standards in Relation to Wastewater Reuse (2011), Main usage — All nondrinking water uses"

Site Location: Keppetipola (A005-091)

ltem	Unit	Measured Value	Measured Value	Measured National Value Standards (Max.) (Max) *1	International	Remarks					
		(Mean)	1		Guidelines	Location	Frequency	Implementation	Supervis		
ĘC .	(S/m)	0.21	0.31	-		<u> </u>	142,7 350		on		
рН	-	6.7	7.2	6.0-8.5	6-9 *2		-				
DO	(mg/L)	12.34	14.15	<u>.</u>		ola	<u>Design Stage</u> :				
Turbidity	(mg/L)	0.04	0.08		<0.2*3	Keppetipola	11.	Constructer			
TSS	(mg/L)	7.11	- 8.84	50	50*2	Керј	1 time as a baseline data	through			
BOD ₅	(mg/L)	3.69	5.5	30	30*2	ļ	data	approved	RDA/ESD		
Lead	(mg/L)	Not Detected	Not Detected	0.1	0.01		Construction stage:	monitoring agency			
Oil & grease	(mg/L)	0.04	0.11	10	10*2		4 times/year for 2 years]			
Coliform	MPN/100mL	`28	30		400*2		-				

^{*1:} National Environmental (Protection & Quality) Regulations, CEA (2008)

^{*2:} IFC EHS general guideline, for Sanitary Sewage Discharge (2007)

^{*3:} ADB Guidelines & Standards in Relation to Wastewater Reuse (2011), Main usage—"All nondrinking water uses"

Site Location: Nawalapitiya (A113-015)

Constructor Construction Const	Item	Unit	Measured Value	Measured Value	National Standards	International		Remark	s	
DO (mg/L) 13.25 14.93 - -						Guidelines	Location	Frequency	Implementation	Supervision
DO (mg/L) 13.25 14.93 Design Stage: Turbidity (mg/L) 0.13 0.16 <	EC	(S/m)	0.04	0.06	-	-	_ -			
Lead (mg/L) Detected 0.1 0.01 4 times/year for 2 years Oil & grease (mg/L) 0.26 0.41 10 10*2	рН	-	7.4	7.7	6.0-8.5	6-9 *2		\$22.4		
Lead (mg/L) Detected 0.1 0.01 4 times/year for 2 years Oil & grease (mg/L) 0.26 0.41 10 10*2	DO	(mg/L)	13.25	14.93	-	-	3-015	Design Stage:		
Lead (mg/L) Detected 0.1 0.01 4 times/year for 2 years Oil & grease (mg/L) 0.26 0.41 10 10*2	Turbidity	(mg/L)	0.13	0.16		<0.2*3	(A11.	<u>besign stage</u> .	Constructer	
Lead (mg/L) Detected 0.1 0.01 4 times/year for 2 years Oil & grease (mg/L) 0.26 0.41 10 10*2	TSS	(mg/L)	8.1	11	50	50 ^{*2}	pitiya	1 time as a baseline data		
Lead (mg/L) Detected 0.1 0.01 4 times/year for 2 years Oil & grease (mg/L) 0.26 0.41 10 10*2	BOD₅	(mg/L)	0.51	0.69	30	30*2	wala			RDA/ESD
	Lead	(mg/L)	[0.1	0.01	N a		<u> </u>	
Coliform MPN/100mL 35 39 40 400*2	Oil & grease	(mg/L)	0.26	0.41	10	10*2	j			
	Coliform	MPN/100mL	35	39	40	400*2				

^{*1:} National Environmental (Protection & Quality) Regulations, CEA (2008)

^{*2:} IFC EHS general guideline, for Sanitary Sewage Discharge (2007)

^{*3:} ADB Guidelines & Standards in Relation to Wastewater Reuse (2011), Main usage – "All nondrinking water uses"

Site Location: Ginigathhena (A007-054)

Item	Unit	Measured Value	Measured Value	National Standards	International		Remark	KS	
FC -	-	(Mean)	(Max.)	(Max) *1	Guidelines	Location	Frequency	Implementation	S
EC	(S/m)	0.128	0.155	-				- Francicacion	Supervision
рН	-	7.0	7.2	6.0-8.5	6-9 *2	•			
DO	(mg/L)	3.2	3.6			054)			
Turbidity	(mg/L)	0.11	0.14		<0.2*3	(A007-054)	<u>Design Stage</u> :		
TSS	(mg/L)	0.57	0.76	50	50 ^{*2}			Constructer	
BOD₅	(mg/L)	1.61	1.85	30	30*2	Ginigathhena	1 time as a baseline data	through approved	RDA/ESD
Lead	(mg/L)	Not	Not			Ginig	Construction stage:	monitoring	NDAY ESD
	. 3.2	Detected	Detected	0.1	0.01	_	4 times/year for 2 years	agency	
Oil & grease	(mg/L)	0	0	10	10*2		, y-u. for 2 years		
Coliform	MPN/100mL	35	-37	40	400*2			1	

^{*1:} National Environmental (Protection & Quality) Regulations, CEA (2008)

^{*2:} IFC EHS general guideline, for Sanitary Sewage Discharge (2007)

^{*3:} ADB Guidelines & Standards in Relation to Wastewater Reuse (2011), Main usage – "All nondrinking water uses"

1) Construction Stage

Site location: Theligama (A007-031)

item	Unit	Measured Value	Measured Value	National Standards	International		Remari	(S	
ļ		(Mean)	(Max.)	(Max) *1	Guidelines	Location	Frequency	Implement	
EC	(S/m)	0.044	0.062	<u>-</u>				Implementation	Supervisio
Hq	-	6.9	7.1	6.0-8.5	6-9 *2				
DO	(mg/L)	2.54	3.19						
Turbidity	(mg/L)	0.13	0.1-7	-	- +2	1)	<u>Design Stage</u> :		
TSS	(mg/L)	3.5	4.9		<0.2*3	7-03		Constructer	
BOD₅	(mg/L)	0.39	0.54	50 30	50*2 30*2	Theligama (A007-031)	1 time as a baseline data	through approved	55.4
Lead	(mg/L)	Not	Note		30 -	ligam	Construction stage:	monitoring	RDA/ESD
011.0		Detected	Detected	0.1	0.01	The	4 times/year for 2 years	agency	
Oil & grease	(mg/L)	0.5 `	0.9	10	10*2		year for 2 years		
Coliform	MPN/100mL	34	36	40	400*2		• •	1	,

^{*1:} National Environmental (Protection & Quality) Regulations, CEA (2008)

^{*2:} IFC EHS general guideline, for Sanitary Sewage Discharge (2007)

ii)), Constitution Stage

Site location: Pitawala (A007-045)

		Measured	Measured	National	International		Remark	s	
ltem	Unit .	Value (Mean)	Value (Max.)	Standards (Max) *1	Guidelines	Location	Frequency	Implementation	Supervision
EC	(S/m)	0.14	0.16	-	-		Viii		
рН	-	6.6	7.1	6.0-8.5	6-9 ^{*2}				
DO	(mg/L)	2.3	3.9	-	-	-045)	Design Stage:	0	
Turbidity	(mg/L)	0.11	0.14		<0.2 ^{*3}	Pitawala (A007-045)		Constructer through	
TSS	(mg/L)	1.29	1: 6 2	50	50 ^{*2}	vala (1 time as a baseline data	approved	RDA/ESD
BOD ₅	(mg/L)	1.9	2.2	30	30 ^{*2}	Pitav		monitoring	-
Lead	(mg/L)	Not Detected	Not Detecetd	0.1	0.01		Construction stage: 4 times/year for 2 years	agency	
Oil & grease	(mg/L)	1.1	2.4	10	10*2				
Coliform	MPN/100mL	34	38	40	400 ^{*2}		·	<u> </u>	

^{*1:} National Environmental (Protection & Quality) Regulations, CEA (2008)

*

^{*2:} IFC EHS general guideline, for Sanitary Sewage Discharge (2007)

^{*3:} ADB Guidelines & Standards in Relation to Wastewater Reuse (2011), Main usage "All nondrinking water uses"

1) Construction Stage

Site location: Pitawala (A007-045)

		Measured	Measured	National	International	••	Remark	s	
ltem	Unit	Value (Mean)	Value (Max.)	Standards (Max) *1	Guidelines	Location	Frequency	Implementation	Supervision
EC	(S/m)	0.14	0.16	-	-		111111111111111111111111111111111111111		
рН	-	6.6	7.1	6.0-8.5	6-9 *2				
DO	(mg/L)	2.3	3.9	_	-	-045)	Design Stage:		
Turbidity	[mg/L]	0.11	0.14		<0.2 ^{*3}	Pitawala (A007-045)		Constructer through	
TSS	(mg/L)	1.29	1:62	50	50 ^{*2}	/ala	1 time as a baseline data	approved	RDA/ESD
BOD ₅	(mg/L)	1.9	2.2	30	30*2	Pitaw		monitoring	1121 1, 202
Lead	(mg/L)	Not Detected	Not Detecetd	0.1	0.01		Construction stage: 4 times/year for 2 years	agency	
Oil & grease	(mg/L)	1.1	2.4	10	10*2				
Coliform	MPN/100mL	34	38	40	400*2				_

^{*1:} National Environmental (Protection & Quality) Regulations, CEA (2008)

^{*2:} IFC EHS general guideline, for Sanitary Sewage Discharge (2007)

^{*3:} ADB Guidelines & Standards in Relation to Wastewater Reuse (2011), Main usage "All nondrinking water uses"

Quarterly Environmental Quality Monitoring Report for the Landslide Disaster Protection Project of the National Road Network Package 2- JICA Format Report No-09 (September 2019)

(Keyling on Monther (Meyling))

Item	Averaging Time	Unit	Measured Value (mean)	measured value	National standards	WHO Guidelines		Remark	s	
	24 hours		(mean)	(max)*1	(max)*1	*2	Location	Frequency	Implementation	T
SO ₂	8 hours	μg/m³		 	80	20			picineittation	Supervision
	1 hour		10	11	120	-		7		
	24 hours		 		200		Walhaputenna-03			
NO₂	8 hours		 		100					
NO ₂	1 hour	μg/m³			150	-		-	·	
	1 year		11	12	250	200	Walhaputenna-03	-		1
	8 hours				-	40		†		
co	1 hour	μg/m³	2016		10000	10000		1	1	
	8 hours		2046	2068	30000	30000	Walhaputenna-03	D-1: 2:		
O ₃	1 hours	μg/m³	<u>-</u> -			100		<u>Design Stage</u> 1 time as a baseline data		
Lead	24 hours		3	4	200	-	Walhaputenna-03	and as a paseinte data	Constructer through approved monitoring	
Compounds		μg/m³		с.	2	_		Constriction stage:	agency agency	RDA/ESD
	1 year				0.5	0.5	Walhaputenna-03	4 time /year for 2 years	-8-110)	
PM ₁₀	24 hours	μg/m³	31	31.6	100	20	187-11			
	1 year				50	50	Walhaputenna-03			
ŕ	1 hour	,			500	- 30				
SPM	3 hours	_	21.3	22.2	450				j	
ŀ	8 hours	μg/m³			350		Walhaputenna-03			
	24 hours				300					
	1 year				100	***				

^{*1:} national Ambient Air Quality (NAAQS) of Sri Lanka (2009)
*2: Who Air Quality guideline for particular matter, ozone, nitrogen dioxide and sulfur dioxide (2006)

Item	Average Time	Unit	Measured Value (mean)	measured	National standards	WHO		Re	marks	
	24 hours		(mean)	value (max)*1	(Max.)*1	Guidelines	Location	P		T
SO₂	8 hours	_ μg/m³	·	 	80	20	10000001	Frequency	Implementation	Supervisio
	1 hours]	17.6	 	120		 	 		
	24 hours		17.0	21	200		Lunugala	- -∤		1
NOz	8 hours]		 	100	-	Lunugaia	<u>-</u> } ≪,∴, «		ł
- 4	1 hours	μg/m³	15	-	150	-	 	- ∤ ′		1
	1 year	1 1	45	20	250	200	 	- -		1
CO	8 hours	, ,				40	Lunugala			[
	1 hours	μg/m³	2043.3		10000	10000	cuiugaia			l
O₃	8 hours		2043.3	2096.6	30000	30000	Lunugala	l l		
	1 hours	μg/m³	3.6		<u> </u>	100	Lunugaia	-	DDA.	
Lead	24 hours			5	200			2 time/year for	RDA through	
Compounds	1 year	-s,πg <u>̃</u> /m₃ -			2			2 years	approved monitoring	RDA/ESD
PM ₁₀	24 hours	μg/m³	55.7		0.5	0,5	Lunuant	-	agency	
. ,,,10	1 year	P5/111	33./	56.2	100	20	Lunugala	-		
	1 hours				50		Lunuari	_	1	
	3 hours	- -	120.2		500		Lunugala	-	1	
SPM	PM 8 hours	μg/m³	120.2	125.2	450	 -		4 1	1	
[24 hours	-			350			4 1		
	1 year	F			300			1 1	1	l
		 !-	<u> </u>		100		Lunugala	4	1	ļ

^{*1:} national Ambient Air Quality (NAAQS) of Sri Lanka (2009)
*2: Who Air Quality guideline for particular matter, ozone, nitrogen dioxide and sulfur dioxide (2006)

ltem	Average Time	Unit	Measured Value (mean)	measured	National standards	WHO		Re	marks	
	24 hours		value (mean)	value (max)*1	(Max.)*1	Guidelines	Location	F==		T
SO ₂	8 hours	μg/m³		 	80	20	1	Frequency	Implementation	Supervisio
	1 hours]	15		120			 -		
	24 hours			16	200	_	Imbulpe			1
NO ₂	8 hours	7			100		- smound	 		ł
	1 hours	μg/m³	12	<u> </u>	150		 			
	1 year	7 1		15	250	200		~- ∤	1	ŀ
co	8 hours					40	Imbulpe			
	1 hours	μg/m³	2190	2245	10000	10000	- sinouipe			
O ₃	8 hours			2246.6	30000	30000	Imbulpe			
<u>-</u>	1 hours	μg/m³	3		<u>-</u>	100		-	RDA through	
Lead	24 hours	, ,		5	200		Imbulpe	2 time/year for	approved monitoring	
ompounds	1 year	μg/m³ –			2		unbalpe	2 years	agency	RDA/ESD
PM ₁₀	24 hours	μg/m³	31.4		0.5	0.5	Imbulpe	-	ogency	
	1 year	٠ الم	31.4	32.4	100	20	mourpe	- [1	
[1 hours	-			50	50	Imbulpe	⊣ 1		
	3 hours	<u> </u> -	115.3		500		mouthe			
SPM	8 hours	μg/m³ 🖰	113,3	115.6	450				ŀ	
[24 hours	<u> </u>	<u>-</u>		350			-		
	1 year	<u> </u>			300	-		-		
					100		Imbulpe	_		

^{*1:} national Ambient Air Quality (NAAQS) of Sri Lanka (2009)
*2: Who Air Quality guideline for particular matter, ozone, nitrogen dioxide and sulfur dioxide (2006)

Item	Average Time	Unit	Measured Value (mean)	measured	National standards	WHO		Re	marks		
	24 hours		value (mean)	value (max)*1	(Max.)*1	Guidelines	Location	_	1	T	
\$O₂	8 hours] μg/m³			80	20	Cocation	Frequency	Implementation	Supervision	
	1 hours]	14	 	120	-	 				
	24 hours			16	200	1	Pussalla				
NOz	8 hours	١١			100		1 dosalia				
	1 hours	μg/m³	10		150		 				
	1 year	7 1		11	250	200	 		1	1	
CO	8 hours					40	Pussalla			[
·	1 hours μg/m ³ 0 ₃ 8 hours μg/m ³	μg/m ³	2633		10000	10000	1 dosalia	- -			
03				3013	30000	30000	Pussalla	- -			
		μg/m³ —	μg/m³	μg/m³ –	3			100	Tussaiia	- -	DDA H
Lead	24 hours			6	200		Pussalla	2 time/year for	RDA through		
ompounds	1 year	μg/m³ –			2		1 dasana	2 years	approved monitoring	RDA/ESD	
PM ₁₀	24 hours	μg/m³	34.3		0.5	0.5	Pussalla	∤	agency		
	1 year	-{FX}	34.3	37.6	100	20	i ussaiia	-	j		
	1 hours		·		50		Pussalla	-			
	3 hours	-	144.5	-	500	-	i ussalla	- 1	j		
SPM [8 hours	μg/m³ -		146.2	450			_			
	24 hours	-			350						
	1 year	 -			300	-		-			
	<u> </u>		<u>-</u>	****	. 100		Pussalla	-			

^{*1:} national Ambient Air Quality (NAAQS) of Sri Lanka (2009)
*2: Who Air Quality guideline for particular matter, ozone, nitrogen dioxide and sulfur dioxide (2006)

அ. igalization Stage

Item	Unit	measured value (mean)	measured value (max)*1	National Standards	International Guidelines	Location	Remar	ks	
EC pH	S/m	0.12	0.140	(max)*1	-		Frequency	Implementation	Supervision
OO Urbidity	mg/L	9.1	9.4	6-8.5	6-9*2	Walhaputenna-03 Walhaputenna-03	-		
SS	mg/L mg/	0.14 Not Detected	0.25		0.2*3	Walhaputenna-03	Design Stage		
OD ₅	mg/L	1.31	Not Detected 1.62	50 30	50*3	Walhaputenna-03 Walhaputenna-03	1 time as a baseline data	Constructer through	
l and grease	mg/L mg/L	Not Detected Not Detected	Not Detected	0.1	30*3 0.01*2	Walhaputenna-03	Constriction stage:	approved monitoring	RDA/ESD
oliform	MPN/100	Not Detected	Not Detected Not Detected	10 40	10*2	Walhaputenna-03 Walhaputenna-03	4 time /year for 2	agency	
coli	MPN/100	Not Detected	Not Detected	40	400*2	Walhaputenna-03 Walhaputenna-03	years		

1). Design and Construction Stage

). Design and Item	Unit	measured value	measured value (max)*1	National Standards	international		Remar	dec	
		(mean)		(max)*1	Guidelines	Location	Frequency		
 H	S/m	0.113	00.119			<u> </u>	requently	Implementation	Supervision
		7.03	7.1	6-8.5	<u>-</u>	Ambepussa		 	
	mg/L	9.9	10.4	0-8.3	6-9*2	Ambepussa			
rbidity	mg/L	0.33	0.52			Ambepussa	Design Stage	1	
S	mg/L	10	13		0.2*3	Ambepussa	1 time as a	1	
)D ₅	mg/L	2,43	2	50	50*3	Ambepussa	baseline data	Constructer through	
ad	mg/L	Not Detected	Not Dot- 1	30	30*3	Ambepussa	Constriction	approved monitoring	RDA/ESD
and grease	mg/L	Not Detected	Not Detected Not Detected	0.1	0.01*2	Ambepussa	Constriction stage: 4 time /year for 2	agency	
iform	MPN/100	47		10	10*2	Ambepussa	years		
oli	MPN/100	Not Detected	120	40	400*2		-		
	-17200	Not Detected	Not Detected			Ambepussa		ļ	
						Ambepussa			

Mittration Measures Water Quality (Effluent/Wastewater)

02). Operation Stage

item	Unit	measured value (mean)	measured value (max)*1	National Standards	International Guidelines	Location	Remar	ks	
<u>С</u> Н	S/m	0.065	0.0.073	(max)*1		Location	Frequency	Implementation	Supervision
0	- 	6.8	7	6-8.5		Lunugala		 	<u> </u>
urbidity	mg/L	8.6	9.1		6-9*2	Lunugala	_		
SS	mg/L	0.27	0.54	<u>-</u>		Lunugala	-		ļ
	mg/L	3.3	08	-	0.2*3	Lunugala		•	•
DD₅	mg/L	0.56	1	50	50*3	Lunugala	─	DD 4 d	
ad	mg/L	Not Detected	Not Detected	30	30*3	Lunugala	2 times/year for 2	RDA though	
l and grease	mg/L	Not Detected		0.1	0.01*2	Lunugala	year	approved monitoring	RDA/ESI
liform	MPN/100	Not Detected	Not Detected	10	10*2			agency	
iloc			Not Detected	40	400*2	Lunugala			
	1 17/100	Not Detected	Not Detected			Lunugala			
						Lunugala	7 1	1	

ltem	Unit	measured value	measured value (max)*1	National Standards	international Guidelines		Remar		
EC	C/	(mean)	<u> </u>	(max)*1	- Gardennes	Location	Frequency	T	
pH	S/m	0.045	0.054		 	<u> </u>	requeitey	Implementation	Supervision
 _		6.5	6.7	. 6-8,5		Imbulpe		 	
DO	mg/L	9.15	9.6	. 0-8.5	6-9*2	Imbulpe	- -		
Turbidity	mg/L	0.04	0.06			Imbulpe		1	
TSS	mg/L	Not Detected			0.2*3	Imbulpe	→]	
BOD₅	mg/L	0.4	Not Detected	50	50*3	imbulpe	2 times/year for 2	RDA though	
-ead	mg/L		0.47	30	30*a		year	approved monitoring	RDA/ESD
Oil and grease		Not Detected	Not Detected	0.1	0.01*2	Imbulpe		agency	KOWESD
oliform	mg/L	Not Detected	Not Detected	10	10*2	imbulpe			•
-coli	MPN/100	Not Detected	Not Detected	40		Imbulpe	7		•
	MPN/100	Not Detected			400*2	Imbulpe			
1: National Env	ironmental (protection an	d Quality) Regu	lation CEA (2)		Imbulpe			

^{*2:}IFC EHS general guideline, for Sanitary Sewage Discharge (2007)

^{*3:} ADB guideline and standards in relation to waste water Reuse (2011), Main usage- "All nondrinking water uses

Mitigation Measures
Water Quality (Effluent/Wastewater)

02). Operation Stage

Item	Unit	measured value (mean)	measured value (max)*1	National Standards	International Guidelines	Location	Remar	·ks	
EC pH	S/m	0.065	0.0.073	(max)*1		Location	Frequency	Implementation	Supervision
DO	mg/L	8.6	9.1	6-8.5	6-9*2	Lunugala			
Turbidity TSS	mg/L	0.27	0.54			Lunugala Lunugala	-		
BOD ₅	mg/L mg/L	3.3 0.56	08	50	0.2*3 50*3	Lunugala	***		
ead	mg/L	Not Detected	Not Detected	30	30*3	Lunugala Lunugala	2 times/year for 2	RDA though approved monitoring	
oil and grease	mg/L MPN/100	Not Detected	Not Detected	10	0.01*2 10*2	Lunugala	year	agency	RDA/ESD
-coli	MPN/100	Not Detected Not Detected	Not Detected Not Detected	40	400*2	Lunugala Lunugala			
	And the second of the second o		Detected			Lunugala	-		

Item EC	Unit	measured value (mean)	measured value (max)*1	National Standards (max)*1	international Guidelines	Location	Remarks			
pH	S/m	0.045	0.054	(max) 1			Frequency	Implementation	Supervision	
DO		6.5	6.7	6-8.5	-	Imbulpe				
Turbidity	mg/L	9.15	9.6	0-8.5	6-9*2	Imbulpe		1		
TSS	mg/L	0.04	0.06			Imbulpe				
	mg/L	Not Detected	Not Detected	50	0.2*3	Imbulpe	-	1		
BOD ₅	mg/L	0.4	0.47		50*3	Imbulpe	2 times/year for 2	RDA though		
ead	mg/L	Not Detected	Not Detected	30	30*3	Imbulpe	year	approved monitoring	RDA/ESD	
il and grease	mg/L	Not Detected	Not Detected	0.1	0.01*2	lmbulpe	-	agency		
oliform	MPN/100	Not Detected	Not Detected	10	10*2	Imbulpe	-		-	
-coli	MPN/100	Not Detail		40	400*2	imbulpe	- -			
1: National Env	vironmental (protoction	d Quality) Regul	ation CEA /2/	200	Imbulpe				

^{*2:}IFC EHS general guideline, for Sanitary Sewage Discharge (2007)

^{*3:} ADB guideline and standards in relation to waste water Reuse (2011), Main usage- "All nondrinking water uses



ltem	Unit	measured value	measured value (max)*1	National Standards	international Guidelines		Remar	ks	
EC	S/m	(mean) 0.138	1-0101	(max)*1		Location	Frequency	Implementation	Supervision
рH		6.75	0.194			Pussalla		 	, = 10,0
00	mg/L	9.85	6.8	6-8.5	6-9*2	Pussalia			
Furbidity	mg/L	0.15	0.19			Pussalla			
rss	mg/L	34.5	46		0.2*3	Pussalla	_		
3OD ₅	· mg/L	0.06	0.09	50	50*3	Pussalia	2 times/year for 2	RDA though approved monitoring	
.ead	mg/L	Not Detected	Not Detected	30	30*3	Pussalla	year	agency	RDA/ESD
Oil and grease	mg/L	1.05	2	0.1	0.01*2	Pussalla	_	"Ballo)	
oliform	MPN/100	1800	1800	10	10*2	Pussalla		1	
-coli	MPN/100	Not Detected	Not Detected	40 .	400*2	Pussalla		j	
		1	HOLDELECTED		.	Pussalla		 -	<u> </u>

^{*1:} National Environmental (protection and Quality) Regulation, CEA (2008)
*2:IFC EHS general guideline, for Sanitary Sewage Discharge (2007)
*3: ADB guideline and standards in relation to waste water Reuse (2011), Main usage- "All nondrinking water us

Mitigation Measures

Noise

1). Design and construction Stage

Item One hour Laeq		Unit	Measured value (mean)	measured value	National	World Bank	Remarks				
			(**************************************	(max)*1	Standards(max)*1	Guideline*2	Location	Frequency	Implementation	Supervision	
Noice#1	Day time (7.00-22.00) Design/Construction		69	72	50/75	55	Walhaputenna- 03	Design Stage 1 time as a baseline data	Constriction	o apervision	
Noise*1	Night time (22.00-7.00) Design/Construction	db(A)	No work	No work	· 40/50	45	Walhaputenna- 03	Constriction stage: 4 time /year for 2 years	through approved monitoring stage	RDA/ESD	

1). Design and construction Stage

ltem	One-hour Laeq	Unit	measured value (mean)	measured value	National	World Bank		Rei	marks	
			**************************************	(max)*1	'Standards(max)*1	Guideline*2	Location	Frequency	Implementation	Supervision
	Day time (7.00-22.00) Design/Construction				50/75	55		Design Stage 1 time as a baseline data		<u> </u>
Noise*1	Night time (22.00-7.00) Design/ Construction	db(A)	No work	No work	40/50	45		Constriction stage: 4 time /year for 2 years	Constriction through approved monitoring stage	RDA/ESD

2). Operation Stage

i			Measured	measured					Remarks	······································
Item	One-hour Laeq	Unit	value (mean)	value (max)*1	National Standards(max)*1	World Bank Guideline*2	Location	Frequency	Implementation	Supervision
	Day time (7.00-22.00)		65	66	50/75	55	Lunugala			
Noise*1	Night time (22.00-7.00)	db(A)	No work	No work	40/50	45		times/year for 2 year	RDA though approved monitoring agency	RDA/ESD

			Measured	measured				F	Remarks	
Item	One-hour Laeq	Unit	value (mean)	value (max)*1	National Standards(max)*1	World Bank Guideline*2	Location	Frequency	Implementation	Supervision
	Day time (7.00-22.00)		45.34	70	50/75	55	Imbulpe			,
Noise*1	Night time (22.00-7.00)	db(A)	No work	No work	40/50	· 45		times/year for 2 year	RDA though approved monitoring agency	RDA/ESD

^{*1:} National Environmental (protection and Quality) Regulation, CEA (2008)
*2: Residential area IFC EHS general guideline, for general health and Safety (EHS) guideline (2007)

			Measured	measured	National			J	Remarks	
Item	One-hour Laeq	Unit	value (mean)	value (max)*1	Standards(max)*1	World Bank Guideline*2	Location	Frequency	Implementation	Supervision
	Day time (7.00-22.00)	-	66.3	68	50/75	55	Pussalla			
Noise*1	Night time (22.00-7.00)	db(A)	No work	No work	40/50	45	-	2 times/year for 2 year	RDA though approved monitoring agency	RDA/ESD

^{*1:} National Environmental (protection and Quality) Regulation, CEA (2008)
*2: Residential area IFC EHS general guideline, for general health and Safety (EHS) guideline (2007)

Mitigation Measures

Vibration

1). Design Stage

		T	, 	,	 _					
ltem	Unit	Frequency	Measured Value	measured value	. National	international		Remar	ks	
		Band	(mean)	(max)	Standards(max)*1	Guidelines	Location	Frequency	Implementation	Supervision
		0-10Hz			1					, = · · · · · · · · · · · · · · · · · ·
Vibration	mm/sec	10-50Hz		·	2			1 time with identification of	Constructer through	
	<u>-</u>	Over 50Hz			4 .			noise barriers requirement	approved monitoring	RDA/ESD
			<u></u> 1			<u> </u>		location	agency	

2). Construction Stage

ltem	Item Unit Frequency		Méasured Value	measured value	National	international		Remarks	;	
			(mean)	(max)	Standards(max)*1	Guidelines	Location	Frequency	Implementation	Supervision
vibration	mm/sec	0-10Hz 10-50Hz		N. ray	2			Every 6 months during stage, and on	Constructer through	
		Over 50Hz	0.66	0.72	4	Selection .	Walhaputenna-03	complain at the construction site	approved monitoring agency	RDA/ESD

^{*1:} National Environment (Protection and quality) Regulations, CES (2008), Category of the Structure: - "Type C" Type of Vibration- "intermittent"

^{*2:} The distance from the source (radius/width of corridor) shall be decided by the constructor and RDA

2). Construction Stage

item	Unit	Frequency Band	Measured Value	measured value	Nationa!	international		Remark	<u> </u>	
			(mean)	(max)	Standards(max)*1	Guidelines	Location	Frequency	Implementation	Supervisio
		0-10Hz			1		 	-	, , , , , , , , , , , , , , , , , , , ,	- Subervisio
vibration	mm/sec	10-50Hz		 	2			Every 6 months during stage, and on		
	Over 50Hz	Over 50Hz	0.48	0.62	4		Ambepussa	complain at the construction site	approved monitoring agency	RDA/ESD

Item	Unit	Frequency Band	Value	measured value	National Standards(max)*1	international		Rem	arks	
			(mean)	(max)		Guidelines	Location	Frequency	Implementation	Supervision
	2 %	0-10Hz			1			Every 6 months		 -
vibration	mm/sec	- "-		٠.			 	during stage, and	PDA Harris	
]	<u>10-50</u> Hz			2			on complain at	RDA through approved	RDA/ESD
		Over 50Hz	0.47	0.52	4			the construction	monitoring agency	NDAYESD
). Operat	tion Stage						Lunugala	1 1	1	

ltem	Unit	Frequency Band	Measured Value (mean)	meäsured value	National Standards(max)*1	international		Rem	arks	
	 	B 450	(mean)	(max)	otalida(max) 1	Guidelines	Location	Frequency	Implementation	Supervision
	_	0-10Hz			1			Every 6 months		
vibration	mm/sec	10-50Hz			2			during stage, and on complain at	RDA through	RDA/ESD
		Over 50Hz	0.5	0.54	4 Ilations, CES (2008),			the construction site	monitoring agency	NOA/ESD

^{*1:} National Environment (Protection and quality) Regulations, CES (2008), Category of the Structure: - "Type C" Type of Vibration- "intermittent"

^{*2:} The distance from the source (radius/width of corridor) shall be decided by the constructor and RDA

Mitigation Measures

Vibration

ltem	Unit	Frequency Band	Measured Value (mean)	measured value (max)	National Standards(max)*1	international Guidelines		Rem	arks	
		0-10Hz					Location	Frequency	Implementation	Supervision
vibration	mm/sec	10-50Hz			1			Every 6 months during stage, and on complain at	KDA through	
		Over 50Hz	0.60	0.66	4		Pussalia	the construction site	approved monitoring agency	RDA/ESD

^{*1:} National Environment (Protection and quality) Regulations, CES (2008), Category of the Structure: - "Type C" Type of Vibration- "intermittent"

^{*2:} The distance from the source (radius/width of corridor) shall be decided by the constructor and RDA

Mitigation Measures

4. Groundwater Level

ltem	Unit	Stage	Measured Value	Measured value (Max)			Remarks	
	1				Location	Frequency	Implementation	Supervisio
Ground Make		Design Stage				2 times during dry and wet season	Constriction through approved monitoring	
ound Water Level	m	Construction Stage			Walhaputhenna 3		stage	RDA/ESD
		Operation Stage				2 times with an interval of 6 months for	DRA through approved monitoring agency	

ltem	Unit	Stage	Measured Value	Measured value (Max)			Remarks	
				value (IVIAX)	Location	Frequency	Implementation	Supervision
Ground Water Level	m	Design Stage Construction Stage		* 0.	Ambepussa	2 times during dry and wet season	Constriction through approved monitoring stage	
		Operation Stage		de Y		2 times with	DRA through approved monitoring agency	

ltem	Unit	Stage	Measured	Measured		an interval of 6 months for 3 year time		
			Value	value (Max)	1000		Remarks	<u> </u>
		Design Stage			Location	Frequency 2 times during dry	Implementation	Supervision
Ground Water Level	m	Construction Stage				and wet season	Constriction through approved monitoring stage	
	}		-			On Complain		RDA/ESD
		Operation Stage	•		Lunugala	2 times with an interval of 6 months for	DRA through approved monitoring agency	

Item	Unit	Stage	Measured Value	Measured value (Max)	Location	T	Remarks	
					Location	- quency	Implementation	Supervisio
Ground Water Level		Design Stage	1 1		1	2 times		oapei vision
						during dry	Constriction through	
		Construction Stage	+		L	and wet	approved monitoring	
	m					stage		
						On Complain		RDA/ESD
		Operation Stage			2 times with	DRA through	, ===	
		·	1 1			an interval of	approved monitoring	
			<u> </u>		[6 months for 3 year time	agency	

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ltem	Unit	Stage	Measured Value	Measured value (Max)	Remarks			
					Location	Frequency	Implementation	Supervision
Ground Water Level	m	Design Stage				2 times during dry and wet season	Constriction through approved monitoring stage DRA through approved monitoring agency	RDA/ESD
		Construction Stage				On Complain		
		Operation Stage			Pussalla	2 times with an interval of 6 months for 3 year time		

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Waste/Spoil Disposals

Monitoring Item	Manitani				
Adequateness of slope drainage design	Monitoring Result during Report Period As per the approved Design				
Protection of drainage outline against score and erosion	Drainage paths were covered by tarpaulin or disturbed by aggregates where possible.				
Complaints on land acquisition and resettlement issue	No Complaints and issues				
Disruption of drinking or irrigation water	Earth works were mostly carried out in dry period. Erosion, canal bank erosic and sedimentation of surface water bodies were minimized through wat pooling, silt traps and temporary drains. Tarpaulin sheets were used for cover the soil when heavy rains occurred. Spills of oil and chemicals from machine and vehicles were avoided through proper and timely maintenance.				
Adequateness of spoil tipping away	Earth removed is used for backfilling and soil that cannot be reused were disposed in an approved disposal yard. Adequate facilities available for quick removal of soil.				

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