

## ***Appendix E: Impact Assessment Tables***

**February 2020**

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# E1 PROJECT ASPECTS

**Table E1-1 Project Aspects**

Abstraction of groundwater
Abstraction of water from river or channel
Accidents due to open excavations
Altered drainage pattern
Community dynamics
Community health
Community safety
Community welfare
Damage to third party infrastructure (pipelines, cables and community infrastructure)
Disposal of solid and liquid waste
Disposal of surplus water from working areas and hydrotest water
Disruption to surface water catchments
Disturbance or harm to wildlife
Disturbance or loss of cultural heritage
Disturbance, treatment and disposal of contamination
Dust
Employment
Erosion
Erosion and increased suspended sediment in watercourses
Impeded flow of river or channel
Impeded movement of animals
Introduction of competitive species or plant/animal diseases
Loss of habitat
Loss of habitat and disturbance or harm to wildlife
Loss of habitat for species of conservation importance
Loss of habitat to species of conservation importance and disturbance or harm to wildlife
Loss of soil structure, fertility and seed bank
Loss/ severance of land and disruption to land-based livelihoods
Management of black and grey water
Management of surplus subsoil and aggregate
Management of waste and accidental release of oil or chemicals
Noise

**Table E1-1 Project Aspects**

Open excavations
Project induced in migration
Provision of goods and services
Release of gases, exhausts and vapours to atmosphere
Resettlement
Restriction of access to fisheries
Revenue
Soil compaction
Soil erosion
Temporary road closure
Treatment and disposal of known/unknown contamination
Use of raw materials and natural resources
Use of road network
Vibration
Visual intrusion of project components into landscape

## E2 GENERIC IMPACTS REGISTER

Table E2-1 Generic Impacts Register

Aspect	VEC	Potential Impact	Phase		High Stakeholder Concern	ESIA Section	Pre-mitigation Impact					Management Plan(s)	Residual Impact				
			C	O			M	D	E	S	SS		M	D	E	S	SS
Soil compaction	Habitats of conservation importance	Impaired re-establishment of vegetation after construction	C		–	8.2	4	2	1	3	10	Biodiversity management plan. Soil management plan. Reinstatement plan. Community health, safety and security plan.	2	2	1	3	8
Soil erosion	Habitats of conservation importance	Loss of topsoil through erosion by wind or water causing impaired reinstatement	C		–	8.2	6	3	1	4	14	Soil management plan. Reinstatement plan.	4	3	1	4	12
Soil erosion	Habitats of conservation importance	Reduced primary productivity in watercourses, smothering of invertebrates, lethal or sublethal effects on fish, degradation of spawning habitat	C		–	8.2	6	2	2	3	13	Soil management plan. Reinstatement plan.	4	1	2	3	10
Loss of soil structure, fertility and seed bank	Habitats of conservation importance	Poor recolonisation due to anaerobic conditions in stored soil, reduced fertility and loss of entrained seeds	C		–	8.2	6	2	1	3	12	Soil management plan.	4	2	1	3	10
Impeded flow of river or channel	Habitats of conservation importance	Loss of aquatic and water-margin habitats	C		–	8.2	6	2	4	3	15	Natural resource management plan.	4	1	4	3	12
Loss of habitat	Habitats of conservation importance	Permanent loss of habitat from AGIs and operational RoW	C		–	8.2	6	5	2	3	16	Biodiversity management plan.	4	5	2	4	15
Loss of habitat	Habitats of conservation importance	Temporary loss of habitat from construction activities (RoW, other temporary worksites main camp and pipe yards MCPY)	C		–	8.2	8	3	2	4	17	Biodiversity management plan.	4	3	2	4	13
Loss of habitat	Habitats of conservation importance	Modified habitat structure following habitat reinstatement after construction	C		–	8.2	6	3	2	4	15	Biodiversity management plan.	4	3	2	4	13
Loss of habitat	Habitats of conservation importance	Loss of wetland and riparian habitat through open cut crossing during construction of the RoW	C		–	8.2	8	2	2	5	17	Biodiversity management plan.	6	2	2	5	15

**Table E2-1 Generic Impacts Register**

Aspect	VEC	Potential Impact	Phase		High Stakeholder Concern	ESIA Section	Pre-mitigation Impact					Management Plan(s)	Residual Impact				
			C	O			M	D	E	S	SS		M	D	E	S	SS
Introduction of competitive species or plants/animal diseases	Habitats of conservation importance	Poor re-colonisation by local flora through competition by non-natives following reinstatement	C	O	–	8.2	6	5	2	5	18	Biodiversity management plan.	4	5	2	5	16
Disturbance or harm to wildlife	Habitats of conservation importance	Interaction between construction workers and habitats of conservation importance, especially relating to food and fuel	C		–	8.2	6	2	2	3	13	Biodiversity management plan. Project-induced in-migration plan. Community health, safety and security plan. Occupational health, safety and security plan	4	2	3	5	14
Disturbance or harm to wildlife	Habitats of conservation importance	PIIM to areas around camp causing increased pressure on natural resources (farming, deforestation for fuel)	C		–	8.2	6	5	2	3	16	Project-induced in-migration plan.	4	5	2	3	14
Treatment and disposal of known/unknown contamination	Flora and fauna species of conservation importance (terrestrial and aquatic)	Injury or mortality of flora and fauna due to mobilisation of soil contaminants	C		–	8.3	6	3	2	5	16	Pollution prevention plan.	4	3	2	5	14
Disposal of solid and liquid waste	Flora and fauna species of conservation importance (terrestrial and aquatic)	Mortality of flora and fauna through contamination of food and water supply	C		–	8.3	6	2	1	5	14	Pollution prevention plan. Waste management plan.	2	2	1	5	10
Disposal of solid and liquid waste	Flora and fauna species of conservation importance (terrestrial and aquatic)	Increase in vermin around waste storages and consequent increase in prey availability for carnivorous birds and mammals	C		–	8.3	4	2	1	5	12	Occupational health, safety and security plan. Pollution prevention plan. Waste management plan.	2	2	1	5	10
Disposal of solid and liquid waste	Flora and fauna species of conservation importance (terrestrial and aquatic)	Stress or mortality to flora and fauna from spills of waste	C		–	8.3	4	2	1	5	12	Pollution prevention plan. Waste management plan.	2	2	1	5	10

**Table E2-1 Generic Impacts Register**

Aspect	VEC	Potential Impact	Phase		High Stakeholder Concern	ESIA Section	Pre-mitigation Impact					Management Plan(s)	Residual Impact				
			C	O			M	D	E	S	SS		M	D	E	S	SS
Disposal of surplus water from working areas and hydrotest water	Flora and fauna species of conservation importance (terrestrial and aquatic)	Reduced primary productivity in watercourses, smothering of invertebrates, lethal or sublethal effects on fish, degradation of spawning habitat	C		-	8.3	6	2	3	5	16	Pollution prevention plan. Waste management plan.	4	2	3	5	14
Impeded flow of river or channel	Flora and fauna species of conservation importance (terrestrial and aquatic)	Restriction of fish (ranging from general fish species (nonmigratory) to potamodromous fish) movement and reduced reproductive success, impaired movement and reduced habitat suitability of other aquatic organisms	C		-	8.3	6	2	4	3-5	15-17	Biodiversity management plan. Natural resource management plan.	4	2	4	3	13
Abstraction of water from river or channel	Flora and fauna species of conservation importance (terrestrial and aquatic)	Decreased water level due to water abstraction for project use leading to loss of aquatic and water-margin habitats causing reduced spawning activity	C		-	8.3	6	2	4	3	15	Biodiversity management plan. Natural resource management plan.	2	2	4	3	11
Abstraction of water from river or channel	Flora and fauna species of conservation importance (terrestrial and aquatic)	Mortality to aquatic organisms from the river through direct abstraction	C		-	8.3	4	2	2	4	12	Natural resource management plan.	2	2	2	4	10
Management of black and grey water	Flora and fauna species of conservation importance (terrestrial and aquatic)	Injury or mortality of flora and fauna due to surface water contamination	C	O	-	8.3	6	4	3	4	17	Natural resource management plan. Waste management plan.	2	2	2	4	10
Abstraction of groundwater	Flora and fauna species of conservation importance (terrestrial and aquatic)	Decreased water level due to water abstraction for project use leading to loss of habitat for stygofauna	C		-	8.3	4	2	2	2	10	Natural resource management plan.	2	2	2	2	8

**Table E2-1 Generic Impacts Register**

Aspect	VEC	Potential Impact	Phase		High Stakeholder Concern	ESIA Section	Pre-mitigation Impact					Management Plan(s)	Residual Impact				
			C	O			M	D	E	S	SS		M	D	E	S	SS
Loss of habitat for species of conservation importance	Flora and fauna species of conservation importance (terrestrial and aquatic)	Permanent loss of breeding and foraging habitat for fauna through site clearance before construction	C		–	8.3	6	5	2	2	15	Biodiversity management plan.	4	5	2	4	15
Loss of habitat for species of conservation importance	Flora and fauna species of conservation importance (terrestrial and aquatic)	Temporary loss of breeding and foraging habitat for fauna through site clearance before construction	C		–	8.3	6	2	2	2	12	Biodiversity management plan.	4	2	2	4	12
Loss of habitat for species of conservation importance	Flora and fauna species of conservation importance (terrestrial and aquatic)	Temporary habitat fragmentation causing disrupted species movement during construction of RoW	C		–	8.3	6	3	3	4	16	Biodiversity management plan.	6	2	4	4	16
Introduction of competitive species or plants/animal diseases	Flora and Fauna Species of Conservation Importance (Terrestrial and Aquatic)	Modified habitats due to non-native species establishment leading to increased competition and loss of habitat for breeding and foraging	C	O	–	8.3	6	5	3	5	19	Biodiversity management plan.	4	5	3	5	16
Disturbance or harm to wildlife	Flora and fauna species of conservation importance (terrestrial and aquatic)	Maintenance activities causing minor habitat loss and alteration		O	–	8.3	4	1	1	5	11	Biodiversity management plan.	2	1	1	5	9
Disturbance or harm to wildlife	Flora and fauna species of conservation importance (terrestrial and aquatic)	Increased predation owing to removal of habitat used to shelter and forage	C		–	8.3	6	3	2	5	16	Biodiversity management plan. Labour management plan. Community health, safety and security plan. Stakeholder engagement plan.	4	3	2	5	14



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Aspect	VEC	Potential Impact	Phase		High Stakeholder Concern	ESIA Section	Pre-mitigation Impact					Management Plan(s)	Residual Impact				
			C	O			M	D	E	S	SS		M	D	E	S	SS
Disturbance or harm to wildlife	Flora and fauna species of conservation importance (terrestrial and aquatic)	Increased gathering of flora and hunting of fauna species of conservation importance from PIIM to construction camp, from improved access along new or upgraded project access roads and access provided by RoW during construction and reinstatement.	C		-	8.3	8	5	3	5	21	Project induced in-migration management plan.	6	5	2	4	17
Disturbance or harm to wildlife	Flora and fauna species of conservation importance (terrestrial and aquatic)	Disturbance from activities causing noise, vibration, human and vehicle activity affecting breeding and behaviour of animals	C		-	8.3	6	2	2	5	15	Pollution prevention plan. Biodiversity management plan. Community health, safety and security plan. Occupational health, safety and security plan. Project induced in-migration management plan. Transport and road safety management plan.	4	2	2	5	13
Open excavations	Flora and fauna species of conservation importance (terrestrial and aquatic)	Injury or fatality of fauna from falling into excavations	C		-	8.3	6	2	2	5	15	Biodiversity management plan.	4	2	2	5	13
Use of raw materials and natural resources	Soil	Depletion of natural resources, for example, aggregate	C		-	8.5	4	4	1	1-3	10-12	Waste management plan. Natural resource management plan.	2	2	1	1-3	6-8
Soil compaction	Soil	Anaerobic conditions developing that restrict plant nutrient uptake efficiency and root development Loss of drainage capacity and poor plant establishment causing increased surface water ponding, runoff, soil erosion and decreased productivity	C		-	8.5	8	2	1	1	12-14	Soil management plan. Community health, safety and security plan.	6	1	1	1-3	9-11
Soil erosion	Soil	Loss of topsoil causing reduced fertility and impaired reinstatement	C		-	8.5	8	4	1	1-3	14-16	Soil management plan. Community health, safety and security plan.	6	4	1	1-3	12-14
Soil erosion	Soil	Loss of topsoil causing reduced fertility and impaired reinstatement		O	-	8.5	8	4	1	1-3	14-16	Reinstatement plan. Biodiversity management plan.	6	4	1	1-3	12-14

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Aspect	VEC	Potential Impact	Phase		High Stakeholder Concern	ESIA Section	Pre-mitigation Impact					Management Plan(s)	Residual Impact				
			C	O			M	D	E	S	SS		M	D	E	S	SS
Loss of soil structure, fertility and seed bank	Soil	Development of anaerobic conditions in stored soil Mixing of different soil or soil with foreign materials leading to loss of drainage and fertility	C		-	8.5	4	2	1	1-4	8-11	Soil management plan.	2	2	1	1-4	6-9
Disturbance, treatment and management of contamination	Soil	Mobilisation of soil contaminants	C		-	8.5	4	2	1	3	10	Pollution prevention plan. Reinstatement plan.	2	1	1	3	7
Management of waste and accidental release of oil or chemicals	Soil	Soil contamination	C		-	8.5	4	2	1	3	10	Pollution prevention plan. Waste management plan.	2	1	1	3	7
Management of waste and accidental release of oil or chemicals	Soil	Soil contamination		O	-	8.5	2	4	1	3	10	Pollution prevention plan. Waste management plan.	2	2	1	3	8
Management of surplus subsoil and aggregate	Soil	Loss of soil structure, drainage, fertility and seed bank	C		-	8.5	4	1	1	1-3	7-9	Waste management plan.	2	1	1	1-3	5-7
Erosion	Surface water	Erosion of river or channel banks, scour, sediment contamination of surface waters	C		-	8.6	4	2	2	3-4	11-13	Soil management plan. Reinstatement plan.	2	2	2	3-4	9-10
Management of waste and accidental release of oil or chemicals	Surface water	Contamination of surface water	C		Y	8.6	4	2	2	3-4	11-13	Soil management plan. Reinstatement plan. Waste management plan.	2	1-2	2	3-4	8-10
Impeded flow of river or channel	Surface water	Deterioration of water quality	C		Y	8.6	4	1	1	3-4	9-10	Biodiversity management plan. Soil management plan. Pollution prevention plan.	2	1	1	3-4	7-8
Altered drainage pattern	Surface water	Trench can act as conduit for groundwater, draining higher areas and flooding lower areas	C		Y	8.6	4	1	1	3-4	9-10	Reinstatement plan.	2	2	1	2	7
Management of waste and accidental release of oil or chemicals	Groundwater	Potential for groundwater contamination	C		-	8.7	2	1-2	1-2	5	9-11	Waste management plan. Pollution prevention plan. Natural resource management plan. Emergency preparedness and response plan.	2	1	1-2	5	9-10

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Aspect	VEC	Potential Impact	Phase		High Stakeholder Concern	ESIA Section	Pre-mitigation Impact					Management Plan(s)	Residual Impact				
			C	O			M	D	E	S	SS		M	D	E	S	SS
Visual intrusion of project components into landscape	Landscape	Change of landscape character and views caused by project components	C	O	-	8.8	6	2	2	2-5	12-15	Biodiversity management plan. Reinstatement plan. Soil management plan.	4	2	2	2-5	10-13
Disposal of surplus subsoil and aggregate	Landscape	Permanent change of views as a result of disposal of surplus subsoil and aggregate	C	-	-	8.8	6	5	2	2-5	15-18	Soil management plan. Waste management plan. Reinstatement plan.	4	5	2	2-5	13-16
Release of gases, exhausts and vapours to atmosphere	Air Quality	Reduced air quality from combustion of fuel in construction equipment and vehicles	C		-	8.9	6	2	2	2-5	12-15	Pollution prevention plan.	4	2	2	2-5	10-13
Release of gases, exhausts and vapours to atmosphere	Air Quality	Hydrocarbon vapour emissions from refuelling operations causing reduced air quality	C		-	8.9	4	2	2	1	9	Pollution prevention plan.	2	2	2	1	7
Release of gases, exhausts and vapours to atmosphere	Air Quality	Exhaust emissions from vehicles causing reduced air quality during operation		O	-	8.9	4	4	2	2-5	12-15	Pollution prevention plan.	2	4	2	2-5	10-13
Dust	Air Quality	Nuisance from dust emissions from construction site activities	C		-	8.9	6	2	2	1-3	11-13	Pollution prevention plan. Transport and road safety management plan.	4	2	2	1-3	9-11
Dust	Air Quality	Nuisance from mobilisation of dust by project vehicles		O	-	8.9	4	4	2	1-3	11-13	Pollution prevention plan. Transport and road safety management plan.	2	4	2	1-3	9-11
Noise	Acoustic Environment	Disturbance or nuisance from noise from construction on the RoW	C		-	8.10	10	1	2	4	17	Pollution prevention plan.	4	1	2	4	11
Noise	Acoustic Environment	Disturbance or nuisance from noise from traffic movement	C	O	-	8.10	10	1	2	5	18	Pollution prevention plan. Transport and road safety management plan.	8	1	2	5	16
Vibration	Acoustic Environment	Disturbance, nuisance or cosmetic / structural damage from vibration	C		-	8.10	2-8	1	2	4	9-15	Pollution prevention plan. Stakeholder engagement plan.	4	1	2	4	11
Employment	Economy	The generation of national employment opportunities leading to an increase in household income and an improvement in living standards.	C	O	Y	8.1	B	-	-	-	-	National content plan.	B	-	-	-	-

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			C	O			M	D	E	S	SS		M	D	E	S	SS
Provision of goods and services	Economy	Project procurement providing opportunities for national businesses.	C	O	Y	8.1	B	-	-	-	-	National content plan.	B	-	-	-	-
Revenue	Economy	Contribution to national economy from investment.	C	O	Y	8.1	B	-	-	-	-	-	B	-	-	-	-
Revenue	Economy	Changes to the fiscal balance	C	O	-	8.1	B	-	-	-	-	-	B	-	-	-	-
Employment	Local economy (nonland-based livelihoods)	The generation of project local employment opportunities	C		Y	8.11	B	-	-	-	-	Procurement and supply chain management plan. Labour management plan. Stakeholder engagement plan.	B	-	-	-	-
Employment	Local economy (nonland-based livelihoods)	The provision of training and skill development opportunities within employment.	C		Y	8.11	B	-	-	-	-	Procurement and supply chain management plan. Labour management plan.	B	-	-	-	-
Provision of goods and services	Local economy (nonland-based livelihoods)	Project procurement providing opportunities for local businesses	C		Y	8.11	B	-	-	-	-	Procurement and supply chain management plan. Labour management plan.	B	-	-	-	-
Employment	Local economy (nonland-based livelihoods)	Loss of employment after project construction phase	C		N	8.11	8	2	1	5	16	Procurement and supply chain management plan. Labour management plan. Stakeholder engagement plan.	4	2	1	5	12
Employment	Local economy (nonland-based livelihoods)	Dissatisfaction arising from unmet expectations over the scale and duration of project local employment opportunities	C		Y	8.11	8	2	2	5	17	Project-induced in-migration management plan. Labour management plan. Stakeholder engagement plan.	4	2	3	5	14
Employment	Local economy (nonland-based livelihoods)	Competition over employment opportunities	C		Y	8.11	8	2	2	5	17	Project-induced in-migration management plan. Labour management plan. Stakeholder engagement plan.	4	2	2	5	13
Employment	Local economy (nonland-based livelihoods)	Diversion of workers gaining employment from the project away from existing local businesses or public-sector jobs	C		N	8.11	8	2	2	4	16	Procurement and supply chain management plan. Labour management plan. Stakeholder engagement plan.	4	2	2	4	12

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Aspect	VEC	Potential Impact	Phase		High Stakeholder Concern	ESIA Section	Pre-mitigation Impact					Management Plan(s)	Residual Impact				
			C	O			M	D	E	S	SS		M	D	E	S	SS
Employment	Local economy (nonland-based livelihoods)	School drop outs seeking employment in the project supply chain	C	O	Y	8.11	8	4	1	4	17	Procurement and supply chain management plan. Monitoring and reporting plan. Labour management plan. Stakeholder engagement plan.	4	4	1	4	13
Provision of goods and services	Local economy (nonland-based livelihoods)	Inflation and effects on supply owing to project procurement	C		-	8.11	6	2	3	4	15	Procurement and supply chain management plan.	4	2	3	3	12
Provision of goods and services	Local economy (nonland-based livelihoods)	Restriction of access to small businesses, street vendors and local markets during construction	C		-	8.11	6	1	2	3	12	Transport and road safety management plan. Monitoring and reporting plan. Stakeholder engagement plan.	2	1	2	3	8
Temporary Road Closure	Local economy (nonland-based livelihoods)	Increased transportation costs and travel time with economic consequences	C		-	8.11	6	1	2	5	14	Infrastructure and utilities management plan. Stakeholder engagement plan.	4	1	2	5	12
Impeded movement of animals	Land-based livelihoods	Due to access restrictions, livestock cause damage to crops	C		-	8.12	10	2	1	5	18	Community health, safety and security plan. Stakeholder engagement plan. Monitoring and reporting plan.	6	2	1	5	14
Accidents due to open excavations	Land-based livelihoods	Livestock falling into excavations	C		Y	8.12	6	3	1	5	15	Community health, safety and security plan. Stakeholder engagement plan. Monitoring and reporting plan.	2	3	1	5	11
Loss/severance of land and disruption to land-based livelihoods	Land-based livelihoods	Permanent loss of land used for crop farming	C		Y	8.12	8	5	1	5	19	Pollution prevention plan. Resettlement action plan. Monitoring and reporting plan.	4	2	1	5	12
Loss/severance of land and disruption to land-based livelihoods	Land-based livelihoods	Temporary loss of grazing land	C		Y	8.12	8	2	1	5	16	Pollution prevention plan. Resettlement action plan. Monitoring and reporting plan.	4	2	1	5	12
Loss/severance of land and disruption to land-based livelihoods	Land-based livelihoods	Increased traffic leading to spread of animal diseases	C		-	8.12	8	3	3	4	18	Transport and road safety management plan. Community health, safety and security plan. Biodiversity management plan.	4	3	3	4	14

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Aspect	VEC	Potential Impact	Phase		High Stakeholder Concern	ESIA Section	Pre-mitigation Impact					Management Plan(s)	Residual Impact				
			C	O			M	D	E	S	SS		M	D	E	S	SS
Loss/severance of land and disruption to land-based livelihoods	Land-based livelihoods	Permanent loss of access to artisanal mining sites	C		Y	8.12	10	4	1	4	19	Pollution prevention plan. Resettlement action plan. Monitoring and reporting plan.	4	2	1	4	11
Loss/severance of land and disruption to land-based livelihoods	Land-based livelihoods	Permanent loss of natural resources	C		Y	8.12	4	3	2	2	11	Pollution prevention plan. Resettlement action plan. Monitoring and reporting plan.	2	2	2	2	8
Loss/severance of land and disruption to land-based livelihoods	Land-based livelihoods	Reduction in honey production due to loss of habitat	C		Y	8.12	4	3	1	3	11	Pollution prevention plan. Resettlement action plan. Monitoring and reporting plan.	2	2	1	3	8
Disruption to surface water catchments	Land-based livelihoods	Temporary disruption to surface water	C		Y	8.12	6	2	2	5	15	Infrastructure and utilities management plan. Resettlement action plan.	4	2	2	5	13
Restriction of access to fisheries	River and lake-based livelihoods	Temporary loss of access to fishing grounds (rivers, lakes, dams and ponds) due to temporary road closures and access restrictions across the RoW.	C		-	8.13	6	2	1	4	13	Resettlement action plan. Stakeholder engagement plan.	2	2	1	4	9
Resettlement	River and lake-based livelihoods	Permanent loss of access to ponds used for aquaculture due to project land acquisition	C		Y	8.13	6	5	1	5	17	Resettlement action plan. stakeholder engagement plan. Monitoring and reporting plan.	4	2	1	5	12
Resettlement	Land and property	Permanent loss of private land due to project land acquisition	C		Y	8.14	6	2	1	4	13	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	4	2	1	5	12
Resettlement	Land and property	Land speculation by third parties	C		Y	8.14	8	4	1	5	18	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	6	2	1	5	14
Resettlement	Land and property	Land and property speculation by land owners	C		Y	8.14	6	2	1	4	18	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	4	2	1	4	11

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Aspect	VEC	Potential Impact	Phase		High Stakeholder Concern	ESIA Section	Pre-mitigation Impact					Management Plan(s)	Residual Impact				
			C	O			M	D	E	S	SS		M	D	E	S	SS
Resettlement	Land and property	New disputes and exacerbation of pre-existing disputes and conflict around land and property	C		Y	8.14	8	4	1	5	18	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	6	4	1	5	16
Resettlement	Land and property	Permanent loss of physical structures due to project land acquisition	C		Y	8.14	8	5	1	5	19	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	4	2	1	5	12
Resettlement	Land and property	Permanent loss of local enterprises due to project land acquisition	C		Y	8.14	8	5	1	5	19	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	4	2	1	5	12
Resettlement	Land and property	Loss of community infrastructure (schools, clinics, community halls) due to project land acquisition	C		Y	8.14	4	4	2	4	14	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	2	2	2	4	10
Resettlement	Land and property	Loss of access to informal support networks and social services after physical displacement due to project land acquisition	C		Y	8.14	4	3	1	4	12	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	2	3	1	4	10
Vibration	Land and property	The generation of vibrations during construction works	C		Y	8.14	8	4	1	5	18	Infrastructure and utilities management plan.	4	3	1	5	13
Employment	Workers' health, safety and welfare	An improvement in the health and safety of people employed from disease awareness and reduction programmes	C	O	-	8.15	B					Occupational health safety and security plan.	B				
Employment	Workers' health, safety and welfare	Risk of wildlife interaction/ animal bites and contracting zoonotic diseases	C		-	8.15	8	3	1	5	17	Occupational health safety and security plan.	4	2	1	5	12
Employment	Workers' health, safety and welfare	Other occupational health and safety incidents causing diseases, injuries and mortality	C	O	-	8.15	8	5	1	5	19	Occupational health safety and security plan. Labour management plan. Community health, safety and security plan. Transport and road safety management plan.	6	2	1	5	14

**Table E2-1 Generic Impacts Register**

Aspect	VEC	Potential Impact	Phase		High Stakeholder Concern	ESIA Section	Pre-mitigation Impact					Management Plan(s)	Residual Impact				
			C	O			M	D	E	S	SS		M	D	E	S	SS
Damage to Third Party Infrastructure (Pipelines, Cables and Community Infrastructure)	Social infrastructure and services	Temporary disruption to power supply due to planned outage or accidental damage to cables or other pipelines during pipeline construction	C		–	8.16	4	1	2	2	9	Infrastructure and utilities management plan.	2	1	2	2	7
Use of road network	Social infrastructure and services	Deterioration of road conditions	C		Y	8.16	10	2	2	5	19	Infrastructure and utilities management plan.	6	2	2	5	15
Use of road network	Social infrastructure and services	Traffic congestion leading to delays	C		–	8.16	8	2	2	5	17	Stakeholder engagement plan. Transport and road safety management plan.	4	2	2	3	11
Use of road network	Social infrastructure and services	Disruption of traffic flows	C		–	8.16	4	1	2	5	12	Infrastructure and utilities management plan. Transport and road safety management plan.	4	1	2	2	9
Resettlement	Community health	Resettled households' exposure to areas of higher vector densities, increasing the burden of vector-related diseases	C		Y	8.17	6	4	1	5	16	Resettlement action plan.	4	2	1	5	12
Resettlement	Community health	Resettled households' decreased food security	C		Y	8.17	8	3	1	4	16	Resettlement action plan.	4	2	1	4	11
Community Health	Community health	Project activities leading to an increase in vector-related diseases	C		–	8.17	8	3	3	4	18	Community health, safety and security plan. Occupational health, safety and security plan. Stakeholder engagement plan.	6	2	3	4	15
Noise	Community health	Excessive noise exposure due to project activities	C		–	8.17	4	2	2	4	12	Community health, safety and security plan. Pollution prevention plan. Stakeholder engagement plan.	2	2	2	4	10
Disposal of solid and liquid waste	Community health	Increased pressure on regional waste management facilities due to project activities	C		–	8.17	8	2	2	5	17	Waste management plan.	4	2	2	5	13
Use of road network	Community health	An increase in the burden of disease along the project's transport corridors as a result of drivers spreading communicable diseases	C	O	Y	8.17	8	4	3	5	20	Community health, safety and security plan. Occupational health, safety and security plan. Infrastructure and utilities management plan. Stakeholder engagement plan.	6	4	2	5	17
Community safety	Community safety, security and welfare	Community health and safety incidents associated with construction activities resulting in accidents	C		Y	8.18	10	2	1	5	18	Community health, safety and security plan. Occupational health, safety and security plan. Stakeholder engagement plan.	4	2	1	5	12



**Table E2-1 Generic Impacts Register**

Aspect	VEC	Potential Impact	Phase		High Stakeholder Concern	ESIA Section	Pre-mitigation Impact					Management Plan(s)	Residual Impact				
			C	O			M	D	E	S	SS		M	D	E	S	SS
Community dynamics	Community safety, security and welfare	The capturing of project benefits by men leads to a decrease in quality of life and access to resources for women and children in PACs	C		Y	8.18	8	4	1	5	18	Community health, safety and security plan. Stakeholder engagement plan. Labour management plan. Resettlement action plan.	4	2	1	5	12
Community dynamics	Community safety, security and welfare	Conflict between PACs and project security personnel	C		-	8.18	8	4	2	5	19	Community health, safety and security plan. Stakeholder engagement plan.	4	2	2	5	13
Disturbance or loss of cultural heritage	Tangible and Intangible Cultural Heritage	Increased knowledge of tangible and intangible cultural heritage. Employment of people to survey and investigate cultural heritage affected by the project.	C		Y	8.19	B	-	-	-	-	Cultural heritage management plan.	B	-	-	-	B
Disturbance or loss of cultural heritage	Tangible and Intangible Cultural Heritage	Damage, disturbance or disruption of access of unknown Category 1 and 2 tangible cultural heritage features, such as evidence of previous settlement and graves.	C		TBC	8.19	1-5	1-5	1-2	2-10	5-22	Cultural heritage management plan.	1-3	1-5	1-2	2-8	5-18
Disturbance or loss of cultural heritage	Tangible and Intangible Cultural Heritage	Damage, disturbance or disruption of access of unknown Category 3 intangible cultural heritage, such as meeting places, sacred natural sites, rivers or ceremonial ways, traditional dance, rituals, traditional healing and syncretism	C		TBC	8.19	-	-	-	-	-	Cultural heritage management plan.	-	-	-	-	-
Disturbance or loss of cultural heritage	Tangible and Intangible Cultural Heritage	Damage or disturbance of Category 1 and 2 tangible cultural heritage		O	Y	8.19	1-5	1-5	1-2	2-8	5-20	Cultural heritage management plan.	1-3	1-5	1-2	2-8	5-18
Disturbance or loss of cultural heritage	Tangible and Intangible Cultural Heritage	Damage or disturbance of Category 3 intangible cultural heritage		O	Y	8.19	-	-	-	-	-	Cultural heritage management plan.	-	-	-	-	-

### E3 LOCATION-SPECIFIC IMPACTS REGISTER

Table E3-1 Location-Specific Impacts Register

KP Start	KP End	Location	District	Aspect	VEC	Potential Impact	Impact Detail	Phase		High Stakeholder Concern	ESIA Section	Pre-Mitigation Impact					Management Plan(s)	Residual Impacts				
								C	O			M	D	E	S	SS		M	D	E	S	SS
21	94	Wetland forest (scattered fragments between KP21 to 94)	Buliisa Hoima	Loss of habitat	Habitats of conservation importance	Loss of natural habitat wetland forest (i.e. riverine forest)		C		-	8.2	4	5	3	4	16	Biodiversity management plan.	2	5	3	4	14
0	54	Habitat for cranes (valley habitats)	Buliisa Hoima	Loss of Habitat to Species of Conservation Importance and Disturbance or Harm to Wildlife	Flora and fauna species of conservation importance (terrestrial and aquatic)	Loss of breeding and foraging habitat and disturbance (noise, vibration and visual) which supports grey crowned cranes		C		-	8.3	6	2	4	5	17	Biodiversity management plan. Reinstatement plan.	4	2	4	5	15
0	95	Tilenga route wide	Buliisa Hoima	Loss of Habitat to Species of Conservation Importance and Disturbance or Harm to Wildlife	Flora and fauna species of conservation importance (terrestrial and aquatic)	Disturbance and loss of habitat that support wide ranging bird species		C		-	8.3	6	2	2	5	15	Biodiversity management plan.	4	2	2	5	13
27	38	Adjacent Bugungu WR	Buliisa	Loss of Habitat to Species of Conservation Importance	Flora and fauna species of conservation importance (terrestrial and aquatic)	Loss of breeding and forage habitat for fauna assemblage in supporting habitat for Bugungu WR.		C		-	8.3	6	2	3	5	16	Biodiversity management plan.	4	2	3	5	14
27	28	Adjacent Bugungu WR	Buliisa	Disturbance or Harm to Wildlife	Flora and fauna species of conservation importance (terrestrial and aquatic)	Disturbance (noise and visual) to species using the WR resulting in temporary restriction to species' distribution		C		-	8.3	6	2	3	5	16	Biodiversity management plan.	4	2	3	5	14
89	89	Wambabya River	Hoima	Disturbance or Harm to Wildlife	Flora and fauna species of conservation importance (terrestrial and aquatic)	Disturbance to chimpanzee		C		-	8.3	6	2	4	5	17	Biodiversity management plan.	4	1	4	5	14
89	89	Wambabya River	Hoima	Loss of Habitat to Species of Conservation Importance	Flora and fauna species of conservation importance (terrestrial and aquatic)	Loss of chimpanzee habitat trees		C		-	8.3	8	4	4	5	22	Biodiversity management plan. Reinstatement plan.	4	3	4	5	16
28	34	Sonso and Waisoke Rivers	Buliisa	Disturbance or Harm to Wildlife	Flora and fauna species of conservation importance (terrestrial and aquatic)	Mortality to Ugandan shrew		C		-	8.3	6	4	2	4	16	Biodiversity management plan.	4	4	2	4	14
21	22	Location <i>Cyperus papyrus</i> dominated swamp	Buliisa	Loss of Habitat to Species of Conservation Importance	Flora and fauna species of conservation importance (terrestrial and aquatic)	Temporary and permanent loss of swamp habitat supporting <i>Nymphaea nouchali</i>		C		-	8.3	6	5	1	4	16	Biodiversity management plan.	4	5	1	4	14

**Table E3-1 Location-Specific Impacts Register**

KP Start	KP End	Location	District	Aspect	VEC	Potential Impact	Impact Detail	Phase		High Stakeholder Concern	ESIA Section	Pre-Mitigation Impact					Management Plan(s)	Residual Impacts				
								C	O			M	D	E	S	SS		M	D	E	S	SS
81	82	Location dry acacia woodland	Hoima	Loss of Habitat to Species of Conservation Importance	Flora and fauna species of conservation importance (terrestrial and aquatic)	Loss of dry acacia woodland, bushland or thicket with exotic species supporting <i>Milicia excelsa</i>		C		-	8.3	6	5	1	4	16	Biodiversity management plan.	4	5	1	4	14
7	56	Locations secondary thicket mixed with bushland species and riparian forest	Buliisa	Loss of Habitat to Species of Conservation Importance	Flora and fauna species of conservation importance (terrestrial and aquatic)	Permanent loss of secondary thicket mixed with bushland species and riparian forest supporting <i>Tamarindus indica</i>		C		-	8.3	6	5	1	3	15	Biodiversity management plan.	4	5	1	3	13
2	62	Secondary thicket mixed with bushland species and <i>Acacia polyacantha</i> woodland in farmland	Buliisa Hoima	Loss of Habitat to Species of Conservation Importance	Flora and fauna species of conservation importance (terrestrial and aquatic)	Temporary loss of secondary thicket mixed with bushland species and <i>Acacia polyacantha</i> woodland in farmland supporting <i>Tamarindus indica</i>		C		-	8.3	6	5	1	3	15	Biodiversity management plan.	4	5	1	3	13
27	38	Bugungu WR and KBA	Buliisa	Loss of Habitat and Disturbance or Harm to Wildlife	Biodiversity: Legally Protected, Internationally or Nationally Recognised Areas	Loss of ecological function and integrity of protected site through impacts on species and habitats		C		-	8.4	6	1	4	4	15	Biodiversity management plan.	4	1	4	4	13
TBC	TBC	All locations sensitive to soil compaction	TBC	Soil compaction	Soil	Anaerobic conditions developing that restrict plant nutrient uptake efficiency and root development Loss of drainage capacity and poor plant establishment causing increased surface water ponding, runoff, soil erosion and decreased productivity		C		-	8.5	8	2	1	4-5	15-16	Biodiversity management plan. Community health, safety and security plan transport and road safety management plan.	6	1	1	4-5	12-13
TBC	TBC	All locations sensitive to soil erosion	TBC	Soil erosion	Soil	Loss of topsoil causing reduced fertility and impaired reinstatement		C		-	8.5	8	2	1	5	16	Soil management plan. Reinstatement plan.	6	1	1	5	13
39	39	Bubwe River	Buliisa	Erosion and increased suspended sediment in watercourses	Surface water	Erosion of river or channel banks, scour, sediment contamination of surface waters		C		-	8.6	6	2	2	3	13	Reinstatement plan. Soil management plan.	4	2	2	3	11
21	25	Waiga River	Buliisa	Management of waste and accidental release of oil or chemicals	Surface water	Contamination of surface water		C		-	8.6	4	2	2	5	13	Soil management plan. Reinstatement plan. Waste management plan.	2	1	2	5	10
28	29	Waisoke River	Buliisa	Management of waste and accidental release of oil or chemicals	Surface water	Contamination of surface water		C		-	8.6	4	2	2	5	13	Soil management plan Reinstatement plan. Waste management plan.	2	1	2	5	10
34.3	34.3	Sonso River	Buliisa	Management of waste and accidental release of oil or chemicals	Surface water	Contamination of surface water		C		-	8.6	4	2	2	5	13	Soil management plan. Reinstatement plan. Waste management plan.	2	1	2	5	10
39	39	Bubwe River	Buliisa	Management of waste and accidental release of oil or chemicals	Surface water	Contamination of surface water		C		-	8.6	4	2	2	5	13	Soil management plan. Reinstatement plan. Waste management plan.	2	1	2	5	10
44	44	Ephemeral wetland	Buliisa	Management of waste and accidental release of oil or chemicals	Surface water	Contamination of surface water		C		-	8.6	4	2	2	5	13	Soil management plan. Reinstatement plan. Waste management plan.	2	1	2	5	10

**Table E3-1 Location-Specific Impacts Register**

KP Start	KP End	Location	District	Aspect	VEC	Potential Impact	Impact Detail	Phase		High Stakeholder Concern	ESIA Section	Pre-Mitigation Impact					Management Plan(s)	Residual Impacts				
								C	O			M	D	E	S	SS		M	D	E	S	SS
44	44	MCPY	Buliisa	Management of waste and accidental release of oil or chemicals	Groundwater	Contamination of groundwater		C		-	8.7	4	1	1	4	10	Waste management plan. Pollution prevention plan.	2	1	1	4	8
44	44	MCPY	Buliisa	Management of black and grey water	Groundwater	Contamination of groundwater		C		-	8.7	4	1	2	4	11	Waste management plan. Pollution prevention plan.	4	1	2	4	11
44	44	MCPY	Buliisa	Abstraction of groundwater	Groundwater	Decreased water level due to abstraction for project use		C		-	8.7	4	1	1	4	10	Natural resource management plan.	2	1	1	4	8
27.3	38.1	Bugungo Wildlife Reserve	Buliisa	Visual intrusion of project components into landscape	Landscape	Change of landscape character	Site clearance and construction activities affecting landscape in area of natural scenic value	C		-	8.8	6	2	2	3-4	13-14	Biodiversity management plan. Reinstatement plan. Soil management plan	4	2	2	3-4	11-12
27.3	38.1	Bugungo Wildlife Reserve	Buliisa	Visual intrusion of project components into landscape	Landscape	Change of views	Site clearance and construction activities affecting views from houses and road	C		-	8.8	6	2	2	3	13	Biodiversity management plan. Reinstatement plan. Soil management plan	4	2	2	3	11
55	55	Rift escarpment	Buliisa	Visual intrusion of project components into landscape	Landscape	Change of landscape character	Site clearance and construction activities affecting landscape in area with extensive views	C		-	8.8	6	2	2	3	13	Biodiversity management plan. Reinstatement plan. Soil management plan.	4	2	2	3	11
55	55	Rift escarpment	Buliisa	Visual intrusion of project components into landscape	Landscape	Change of views	Site clearance and construction activities in area with extensive views	C		-	8.8	6	2	2	2	12	Biodiversity management plan. Reinstatement plan. Soil management plan.	4	2	2	2	10
TBC	TBC	Side slope areas with permanent benching	TBC	Visual intrusion of project components into landscape	Landscape	Change of landscape character	Permanent benching of RoW in side slope areas	C		-	8.8	6	5	2	2-5	15-18	Reinstatement plan. Soil management plan.	4	5	2	2-5	13-16
TBC	TBC	Side slope areas with permanent benching	TBC	Visual intrusion of project components into landscape	Landscape	Change of views	In areas of permanent benching of RoW in side slope areas affecting views from small settlements, farms and unsealed roads	C		-	8.8	6	5	2	2-5	15-18	Reinstatement plan. Soil management plan.	4	5	2	2-5	13-16
44	44	MCPY	Buliisa	Release of gases, exhausts and vapours to atmosphere	Air quality	Emissions of gaseous substances causing reduced air quality from operation of generators		C		-	8.9	6	2	2	1-3	11-13	Pollution prevention plan.	4	2	2	1-3	10-12

**Table E3-1 Location-Specific Impacts Register**

KP Start	KP End	Location	District	Aspect	VEC	Potential Impact	Impact Detail	Phase		High Stakeholder Concern	ESIA Section	Pre-Mitigation Impact					Management Plan(s)	Residual Impacts				
								C	O			M	D	E	S	SS		M	D	E	S	SS
TBC	TBC	Hydrotest Sections	TBC	Release of gases, exhausts and vapours to atmosphere	Air quality	Emissions of gaseous substances causing reduced air quality from operation of generators		C		-	8.9	6	1	2	1-3	10-12	Pollution prevention plan.	4	1	2	1-3	8-10
44	44	MCPY	Buliisa	Release of gases, exhausts and vapours to atmosphere	Air quality	Emissions of fine particulate matter causing reduced air quality from operation of generators		C		-	8.9	6	2	2	1-5	11-15	Pollution prevention plan.	4	2	2	1-5	9-13
TBC	TBC	Hydrotest Sections	TBC	Release of gases, exhausts and vapours to atmosphere	Air quality	Emissions of fine particulate matter causing reduced air quality from operation of generators		C		-	8.9	6	1	2	1-5	10-14	Pollution prevention plan.	4	1	2	1-5	8-12
44	44	MCPY	Buliisa	Dust	Air quality	Nuisance from mobilisation of dust by project vehicles		C		-	8.9	4	2	2	1-5	9-13	Pollution prevention plan. Transport and road safety management plan.	2	2	2	1-5	7-11
TBC	TBC	Hydrotest Sections	TBC	Dust	Air quality	Nuisance from mobilisation of dust by project vehicles		C		-	8.9	4	1	2	1-5	8-12	Pollution prevention plan. Transport and road safety management plan.	2	1	2	1-5	6-10
44	44	MCPY	Buliisa	Noise	Acoustic Environment	Disturbance or nuisance from noise generation during development of construction facilities		C		-	8.10	4	1	2	4	11	Pollution prevention plan.	4	1	2	4	11
44	44	MCPY	Buliisa	Vibration	Acoustic Environment	Disturbance or damage due to vibration generation during development of construction facilities		C		-	8.10	4	1	2	4	11	Pollution prevention plan. Stakeholder engagement plan.	4	1	2	4	11
44	44	MCPY	Buliisa	Noise	Acoustic Environment	Disturbance or nuisance from operation of the MCPY		C		-	8.10	4	2	2	4	12	Pollution prevention plan.	4	2	2	4	12
44	44	MCPY	Buliisa	Noise	Acoustic Environment	Disturbance or nuisance from noise generation during decommissioning of construction facilities		C		-	8.10	4	1	2	4	11	Pollution prevention plan.	4	1	2	4	11
44	44	MCPY	Buliisa	Vibration	Acoustic Environment	Disturbance or damage from vibration generation during decommissioning of construction facilities		C		-	8.10	4	1	2	4	11	Pollution prevention plan. Stakeholder engagement plan.	4	1	2	4	11
44	44	PACs near the MCPY	Buliisa	Employment	Local economy (nonland-based livelihoods)	Dissatisfaction arising from unmet expectations over the scale and duration of project local employment opportunities		C		Y	8.11	10	2	2	5	19	Stakeholder engagement plan. Project-induced in-migration management plan.	6	2	3	5	16
44	44	PACs near the MCPY	Buliisa	Employment	Local economy (nonland-based livelihoods)	Competition over employment opportunities		C		Y	8.11	10	2	2	5	19	Stakeholder engagement plan. Project-induced in-migration management plan.	6	2	2	5	15
6	6	Kisansya	Buliisa	Temporary road closure	Local economy (nonland-based livelihoods)	Increased transportation costs and travel time with economic consequences		C		-	8.11	8	2	2	5	17	Infrastructure and utilities management plan. Stakeholder engagement plan.	6	2	2	5	15
8	8	Kijangi and Buliisa Town	Buliisa	Temporary road closure	Local economy (nonland-based livelihoods)	Increased transportation costs and travel time with economic consequences		C		-	8.11	8	2	2	5	17	Infrastructure and utilities management plan. Stakeholder engagement plan.	6	2	2	5	15
44.5	44.5	Booma	Buliisa	Temporary road closure	Local economy (nonland-based livelihoods)	Increased transportation costs and travel time with economic consequences		C		-	8.11	8	2	2	5	17	Infrastructure and utilities management plan. Stakeholder engagement plan.	6	2	2	5	15

**Table E3-1 Location-Specific Impacts Register**

KP Start	KP End	Location	District	Aspect	VEC	Potential Impact	Impact Detail	Phase		High Stakeholder Concern	ESIA Section	Pre-Mitigation Impact					Management Plan(s)	Residual Impacts				
								C	O			M	D	E	S	SS		M	D	E	S	SS
45.5	45.5	Piida A	Buliisa	Temporary road closure	Local economy (nonland-based livelihoods)	Increased transportation costs and travel time with economic consequences		C		-	8.11	8	2	2	5	17	Infrastructure and utilities management plan. Stakeholder engagement plan.	6	2	2	5	15
47	47	Waki-Kawaibanda	Hoima	Temporary road closure	Local economy (nonland-based livelihoods)	Increased transportation costs and travel time with economic consequences		C		-	8.11	8	2	2	5	17	Infrastructure and utilities management plan. Stakeholder engagement plan.	6	2	2	5	15
75	75	Wayoyo	Hoima	Temporary road closure	Local economy (nonland-based livelihoods)	Increased transportation costs and travel time with economic consequences		C		-	8.11	8	2	2	5	17	Infrastructure and utilities management plan. Stakeholder engagement plan.	6	2	2	5	15
84.5	84.5	Buseruka	Hoima	Temporary road closure	Local economy (nonland-based livelihoods)	Increased transportation costs and travel time with economic consequences		C		-	8.11	8	2	2	5	17	Infrastructure and utilities management plan. Stakeholder engagement plan.	6	2	2	5	15
86	86	Rwamutonga, Buseruka subcounty	Hoima	Temporary road closure	Local economy (nonland-based livelihoods)	Increased transportation costs and travel time with economic consequences		C		-	8.11	8	2	2	5	17	Infrastructure and utilities management plan. Stakeholder engagement plan.	6	2	2	5	15
87.5	87.5	Rwamutonga, Bugambe subcounty	Hoima	Temporary road closure	Local economy (nonland-based livelihoods)	Increased transportation costs and travel time with economic consequences		C		-	8.11	8	2	2	5	17	Infrastructure and utilities management plan. Stakeholder engagement plan.	6	2	2	5	15
45	45	Wantembo UPDF Military Barracks	Buliisa	Temporary road closure	Local economy (nonland-based livelihoods)	Increased transportation costs and travel time with economic consequences		C		-	8.11	8	2	2	5	17	Infrastructure and utilities management plan. Stakeholder engagement plan.	6	2	2	5	15
74.5	74.5	Hoima Municipality, the Mparo Tombs, the Bugambe Tea Estate, the Kibiro Salt Mine	Hoima	Provision of goods and services	Local economy (nonland-based livelihoods)	Drop in tourism revenues		C		-	8.11	6	2	1	2	11	Stakeholder engagement plan.	4	2	1	2	9
44	44	PACs near the MCPY	Buliisa	Loss/Severance of Land and Dsirruption to Land-Based Livelihoods	Land-based livelihoods	Permanent loss of grazing land		C		Y	8.12	10	5	1	5	21	Pollution prevention plan. Resettlement action plan. Monitoring and reporting plan.	4	2	1	5	12
44	44	PACs near the MCPY	Buliisa	Employment	Land-based livelihoods	Household members seeking employment with the project will no longer be available for land-based livelihood activities		C		-	8.12	8	3	1	4	16	Stakeholder engagement plan. Labour management plan.	4	3	1	4	12
TBC	TBC	PACs located in areas of high value crop production	TBC	Loss/Severance of Land and Dsirruption to Land-Based Livelihoods	Land-based livelihoods	Permanent loss of land cultivated with high value cash crops		C		Y	8.12	10	5	1	4	20	Resettlement action plan. Stakeholder engagement plan.	4	2	1	4	11
TBC	TBC	PACs supporting large herds of cattle and sheep	TBC	Accidents Due to Open Excavations	Land-based livelihoods	Livestock falling into excavations		C		Y	8.12	8	3	1	5	17	Community health, safety and security plan. Stakeholder engagement plan. Monitoring and reporting plan.	4	2	1	5	12
44	44	PACs near the MCPY	Buliisa	PIIM	River and lake-based livelihoods	Reduction in local fish stocks due to PIIM		C		Y	8.13	6	2	1	3	12	Project-induced in-migration management plan.	4	2	1	3	10
TBC	TBC	PACs close to pipeline river crossing	TBC	Impeded Flow of River or Channel	River and lake-based livelihoods	Reduction in artisanal fish caught due to changes in water flows and increased levels of sediment during open-cut crossing construction		C		-	8.13	8	2	1	5	16	Pollution prevention plan. Reinstatement plan.	4	2	1	2	9
44	44	PACs near the MCPY	Buliisa	Resettlement	Land and property	Permanent loss of private land due to project land acquisition		C		Y	8.14	10	5	1	5	21	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	4	2	1	5	12

**Table E3-1 Location-Specific Impacts Register**

KP Start	KP End	Location	District	Aspect	VEC	Potential Impact	Impact Detail	Phase		High Stakeholder Concern	ESIA Section	Pre-Mitigation Impact					Management Plan(s)	Residual Impacts				
								C	O			M	D	E	S	SS		M	D	E	S	SS
44	44	PACs near the MCPY	Buliisa	Resettlement	Land and property	Land speculation by third parties		C		Y	8.14	10	2	1	5	18	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	4	2	1	5	12
44	44	PACs near the MCPY	Buliisa	Resettlement	Land and property	Land and property speculation by land owners		C		Y	8.14	8	2	1	4	15	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	4	2	1	4	11
44	44	PACs near the MCPY	Buliisa	Resettlement	Land and property	New disputes and exacerbation of pre-existing disputes and conflict around land and property		C		Y	8.14	10	4	1	5	20	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	6	4	1	5	16
44	44	PACs near the MCPY	Buliisa	Resettlement	Land and property	Permanent loss of physical structures due to project land acquisition		C		Y	8.14	10	5	1	5	21	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	4	2	1	5	12
44	44	PACs near the MCPY	Buliisa	Resettlement	Land and property	Permanent loss of local enterprises due to project land acquisition		C		Y	8.14	10	5	1	5	21	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	4	2	1	5	12
22.5	37	PACs located from KP22.5 to KP37	Buliisa	Resettlement	Land and property	Permanent loss of private land due to project land acquisition		C		Y	8.14	6	2	1	4	13	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	4	2	1	5	12
22.5	37	PACs located from KP22.5 to KP37	Buliisa	Resettlement	Land and property	Permanent loss of physical structures due to project land acquisition		C		Y	8.14	10	5	1	5	21	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	4	2	1	5	12
5	5	Kibambura	Buliisa	Resettlement	Land and property	Land speculation by third parties		C		Y	8.14	10	2	1	5	18	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	4	2	1	5	12
8	8	Kijangi	Buliisa	Resettlement	Land and property	Land speculation by third parties		C		Y	8.14	10	2	1	5	18	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	4	2	1	5	12
44.5	44.5	Booma	Buliisa	Resettlement	Land and property	Land speculation by third parties		C		Y	8.14	10	2	1	5	18	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	4	2	1	5	12
94.5	94.5	Kayere	Hoima	Resettlement	Land and property	Land speculation by third parties		C		Y	8.14	10	2	1	5	18	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	4	2	1	5	12

**Table E3-1 Location-Specific Impacts Register**

KP Start	KP End	Location	District	Aspect	VEC	Potential Impact	Impact Detail	Phase		High Stakeholder Concern	ESIA Section	Pre-Mitigation Impact					Management Plan(s)	Residual Impacts				
								C	O			M	D	E	S	SS		M	D	E	S	SS
95	95	Nyamasoga	Hoima	Resettlement	Land and property	Land speculation by third parties		C		Y	8.14	10	2	1	5	18	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	4	2	1	5	12
96.5	96.5	Katooke	Hoima	Resettlement	Land and property	Land speculation by third parties		C		Y	8.14	10	2	1	5	18	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	4	2	1	5	12
5	5	Kibambura	Buliisa	Resettlement	Land and property	New disputes and exacerbation of pre-existing disputes and conflict around land and property		C		Y	8.14	10	4	1	5	20	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	6	4	1	5	16
8	8	Kijangi	Buliisa	Resettlement	Land and property	New disputes and exacerbation of pre-existing disputes and conflict around land and property		C		Y	8.14	10	4	1	5	20	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	6	4	1	5	16
44.5	44.5	Booma	Buliisa	Resettlement	Land and property	New disputes and exacerbation of pre-existing disputes and conflict around land and property		C		Y	8.14	10	4	1	5	20	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	6	4	1	5	16
94.5	94.5	Kayere	Hoima	Resettlement	Land and property	New disputes and exacerbation of pre-existing disputes and conflict around land and property		C		Y	8.14	10	4	1	5	20	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	6	4	1	5	16
95	95	Nyamasoga	Hoima	Resettlement	Land and property	New disputes and exacerbation of pre-existing disputes and conflict around land and property		C		Y	8.14	10	4	1	5	20	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	6	4	1	5	16
96.5	96.5	Katooke	Hoima	Resettlement	Land and property	New disputes and exacerbation of pre-existing disputes and conflict around land and property		C		Y	8.14	10	4	1	5	20	Resettlement action plan. Stakeholder engagement plan. Community health, safety and security plan. Monitoring and reporting plan.	6	4	1	5	16
44	44	PACs near the MCPY	Buliisa	Employment	Workers' health, safety and welfare	Increased risk of vector-related diseases amongst the local workforce		C		-	8.15	8	4	1	5	18	Occupational health, safety and security plan.	4	2	1	5	12
44.5	44.5	Biiso	Buliisa	Use of Road Network	Social Infrastructure and Services	Traffic congestion leading to delays		C		-	8.16	10	2	2	5	19	Stakeholder engagement plan. Transport and road safety management plan.	6	2	2	3	13
74.5	74.5	Hoima Municipality	Hoima	Use of Road Network	Social Infrastructure and Services	Traffic congestion leading to delays		C		-	8.16	10	2	2	5	19	Stakeholder engagement plan. Transport and road safety management plan.	6	2	2	3	13
44	44	PACs near the MCPY	Buliisa	Abstraction of Groundwater	Community health	Reduced availability of groundwater		C		Y	8.17	6	2	2	4	14	Natural resources management plan. Pollution prevention plan. Waste management plan. Stakeholder engagement plan.	4	1	2	4	11



**Table E3-1 Location-Specific Impacts Register**

KP Start	KP End	Location	District	Aspect	VEC	Potential Impact	Impact Detail	Phase		High Stakeholder Concern	ESIA Section	Pre-Mitigation Impact					Management Plan(s)	Residual Impacts				
								C	O			M	D	E	S	SS		M	D	E	S	SS
44	44	PACs near the MCPY	Buliisa	Employment	Community health	The transmission of communicable diseases between the project's externally contracted workforce and PACs		C		Y	8.17	10	4	2	5	21	Community health, safety and security plan. Occupational health, safety and security plan. Natural resources management plan. Pollution prevention plan. Waste management plan. Stakeholder engagement plan.	6	2	2	5	15
44	44	PACs near the MCPY	Buliisa	Employment	Community health	Inadequate vector management activities, resulting in an increase in vector resistance and negative impacts on preventative interventions implemented by local authorities		C		-	8.17	8	2	2	5	17	Community health, safety and security plan. Occupational health, safety and security plan. Natural resources management plan. Pollution prevention plan. Waste management plan. Stakeholder engagement plan.	4	2	1	5	12
44	44	PACs near the MCPY	Buliisa	Employment	Community health	Outbreaks of infectious conditions within the MCPY affecting the health of PACs		C		Y	8.17	10	4	1	5	20	Community health, safety and security plan. Occupational health, safety and security plan. Natural resources management plan. Pollution prevention plan. Waste management plan. Stakeholder engagement plan.	6	4	1	4	15
44	44	PACs near the MCPY	Buliisa	PIIM	Community health	PIIM of jobseekers into PACs:	carrying communicable diseases	C		Y	8.17	8	5	3	5	21	Project-induced in-migration management plan. Community health, safety and security plan. Stakeholder engagement plan.	6	4	3	5	18
44	44	PACs near the MCPY	Buliisa	PIIM	Community health	PIIM of jobseekers into PACs:	causing environmental changes in the PACs that promote vector breeding	C		Y	8.17	8	3	2	4	17	Project-induced in-migration management plan. Community health, safety and security plan. Occupational health, safety and security plan. Resettlement action plan. Natural resource management plan. Pollution prevention plan. Waste management plan. Stakeholder engagement plan.	6	3	2	4	15
44	44	PACs near the MCPY	Buliisa	PIIM	Community health	PIIM of jobseekers into PACs:	causing increased pressure on existing health services at the PAC level	C		Y	8.17	6	3	2	5	16	Project-induced in-migration management plan. Community health, safety and security plan. Occupational health, safety and security plan. Resettlement action plan. Natural resource management plan. Pollution prevention plan. Waste management plan. Stakeholder engagement plan.	4	2	2	5	13
44	44	PACs near the MCPY	Buliisa	PIIM	Community health	PIIM of jobseekers into PACs:	causing uncontrolled disposal of waste in PACs	C		-	8.17	6	2	2	5	15	Project-induced in-migration management plan. Community health, safety and security plan. Occupational health, safety and security plan. Resettlement action plan. Natural resource management plan. Pollution prevention plan. Waste management plan. Stakeholder engagement plan.	4	2	2	5	13

**Table E3-1 Location-Specific Impacts Register**

KP Start	KP End	Location	District	Aspect	VEC	Potential Impact	Impact Detail	Phase		High Stakeholder Concern	ESIA Section	Pre-Mitigation Impact					Management Plan(s)	Residual Impacts				
								C	O			M	D	E	S	SS		M	D	E	S	SS
44	44	PACs near the MCPY	Buliisa	PIIM	Community health	Reduction in the availability of potable water in PACs due to PIIM		C		Y	8.17	8	4	2	5	19	Project-induced in-migration management plan. Community health, safety and security plan. Occupational health, safety and security plan. Resettlement action plan. Natural resource management plan. Pollution prevention plan. Waste management plan. Stakeholder engagement plan.	4	2	2	5	13
44	44	PACs near the MCPY	Buliisa	Provision of goods and services	Community health	Nutrition of PACs compromised as a result of reduced food security		C		Y	8.17	8	2	2	5	17	Community health, safety and security plan. Occupational health, safety and security plan. Resettlement action plan. Natural resource management plan. Pollution prevention plan. Waste management plan. Stakeholder engagement plan.	4	2	2	5	13
44	44	PACs near the MCPY	Buliisa	Community Welfare	Community safety, security and welfare	Conversion of MCPY structures into community facilities, leading to improved service provision in PACs		C		Y	8.18	B	-	-	-	-	-	B	-	-	-	-
44	44	PACs near the MCPY	Buliisa	Community Dynamics	Community safety, security and welfare	Change in local community dynamics due to employment opportunities		C		Y	8.18	6	3	2	4	15	Project-induced in-migration management plan. Community health, safety and security plan. Stakeholder engagement plan.	4	2	2	4	12
44	44	PACs near the MCPY	Buliisa	Community Dynamics	Community safety, security and welfare	PIIM causing an increase in social ills		C		Y	8.18	6	2	2	4	14	Project-induced in-migration management plan. Community health, safety and security plan. Stakeholder engagement plan.	4	2	2	4	12
44	44	PACs near the MCPY	Buliisa	Community Dynamics	Community safety, security and welfare	Tensions between non-local construction workforce and PACs		C		Y	8.18	8	2	2	5	17	Community health, safety and security plan. Stakeholder engagement plan. Resettlement action plan.	4	2	2	5	13
18.1	18.1	CHU417: Lithic core, Kabolwa	Buliisa	Disturbance or loss of cultural heritage	Category 1 tangible cultural heritage	Damage or disturbance of feature		C		TBC	8.19	2	5	1	6	14	Cultural heritage management plan.	2	5	1	6	14
33.3	33.3	CHU418: Discoid and Levallois flakes, Early Iron Age pottery, Bugoigo	Buliisa	Disturbance or loss of cultural heritage	Category 1 tangible cultural heritage	Damage or disturbance of feature		C		TBC	8.19	2	5	1	6	14	Cultural heritage management plan.	2	5	1	6	14
36	36	CHU260: Pottery scatter, Nyamukuta Bridge	Buliisa	Disturbance or loss of cultural heritage	Category 1 tangible cultural heritage	Damage or disturbance of feature		C		TBC	8.19	1	1	1	4	7	Cultural heritage management plan.	1	1	1	4	7
39.9	39.9	CHU419: Lithic scraper, Late Iron Age pottery, Nyamukuta	Buliisa	Disturbance or loss of cultural heritage	Category 1 tangible cultural heritage	Damage or disturbance of feature		C		TBC	8.19	2	5	1	6	14	Cultural heritage management plan.	2	5	1	6	14
47.6	47.6	CHU420: Late Iron Age potsherds, Katonge	Hoima	Disturbance or loss of cultural heritage	Category 1 tangible cultural heritage	Damage or disturbance of feature		C		TBC	8.19	2	5	1	6	14	Cultural heritage management plan.	2	5	1	6	14
51.2	51.2	CHU421: Three lithic scrapers, Katonge	Hoima	Disturbance or loss of cultural heritage	Category 1 tangible cultural heritage	Damage or disturbance of feature		C		TBC	8.19	2	5	1	6	14	Cultural heritage management plan.	2	5	1	6	14
55.8	55.8	CHU422: Lithic axe Late Iron Age, Lunga	Hoima	Disturbance or loss of cultural heritage	Category 1 tangible cultural heritage	Damage or disturbance of feature		C		TBC	8.19	2	5	1	6	14	Cultural heritage management plan.	2	5	1	6	14

**Table E3-1 Location-Specific Impacts Register**

KP Start	KP End	Location	District	Aspect	VEC	Potential Impact	Impact Detail	Phase		High Stakeholder Concern	ESIA Section	Pre-Mitigation Impact					Management Plan(s)	Residual Impacts				
								C	O			M	D	E	S	SS		M	D	E	S	SS
57.8	57.8	CHU423: Two potsherds, lithic axe, Kirwawanga	Hoima	Disturbance or loss of cultural heritage	Category 1 tangible cultural heritage	Damage or disturbance of feature		C		TBC	8.19	2	5	1	6	14	Cultural heritage management plan.	2	5	1	6	14
60.5	60.5	CHU424: Five potsherds, tuyere, Middle Stone Age lithic axe, Kirwawanga	Hoima	Disturbance or loss of cultural heritage	Category 1 tangible cultural heritage	Damage or disturbance of feature		C		TBC	8.19	2	5	1	8	16	Cultural heritage management plan.	2	5	1	8	16
62.7	62.7	CHU425: One potsherd, Kiganja	Hoima	Disturbance or loss of cultural heritage	Category 1 tangible cultural heritage	Damage or disturbance of feature		C		TBC	8.19	2	5	1	4	12	Cultural heritage management plan.	2	5	1	4	12
63.5	63.5	CHU426: Five potsherds Late Iron Age, Kiganja	Hoima	Disturbance or loss of cultural heritage	Category 1 tangible cultural heritage	Damage or disturbance of feature		C		TBC	8.19	2	5	1	4	12	Cultural heritage management plan.	2	5	1	4	12
63.8	63.8	CHU427: Two potsherds, Kiganja	Hoima	Disturbance or loss of cultural heritage	Category 1 tangible cultural heritage	Damage or disturbance of feature		C		TBC	8.19	2	5	1	4	12	Cultural heritage management plan.	2	5	1	4	12
68.9	68.9	CHU428: Early Iron Age and Late Iron Age potsherds and possibly Kansyore type pottery, Kabatindure	Hoima	Disturbance or loss of cultural heritage	Category 1 tangible cultural heritage	Damage or disturbance of feature		C		TBC	8.19	2	5	1	8	16	Cultural heritage management plan.	2	5	1	8	16
72	72	CHU429: Many Early Iron Age-Late Iron Age potsherds, Hanga	Hoima	Disturbance or loss of cultural heritage	Category 1 tangible cultural heritage	Damage or disturbance of feature		C		TBC	8.19	2	5	1	8	16	Cultural heritage management plan.	2	5	1	8	16
75.1	75.1	CHU430: Two potsherds, Buhiriki	Hoima	Disturbance or loss of cultural heritage	Category 1 tangible cultural heritage	Damage or disturbance of feature		C		TBC	8.19	2	5	1	4	12	Cultural heritage management plan.	2	5	1	4	12
80.9	80.9	CHU431: Two potsherds, Nakabingo	Hoima	Disturbance or loss of cultural heritage	Category 1 tangible cultural heritage	Damage or disturbance of feature		C		TBC	8.19	2	5	1	4	12	Cultural heritage management plan.	2	5	1	4	12
82	82	CHU136: Liberty Spiritual Well of God Church.	Hoima	Disturbance or loss of cultural heritage	Category 2 tangible cultural heritage with strong intangible element	Damage or disturbance of feature		C		TBC	8.19	1	1	1	6	9	Cultural heritage management plan.	1	1	1	6	9
83.9	83.9	CHU432: One potsherd, shell, Kyakabogga	Hoima	Disturbance or loss of cultural heritage	Category 1 tangible cultural heritage	Damage or disturbance of feature		C		TBC	8.19	2	5	1	4	12	Cultural heritage management plan.	2	5	1	4	12
84	84	CHU131: Roman Catholic Church.	Hoima	Disturbance or loss of cultural heritage	Category 2 tangible cultural heritage with strong intangible element	Damage or disturbance of feature		C		TBC	8.19	1	1	1	6	9	Cultural heritage management plan.	1	1	1	6	9
86.5	86.5	CHU433: One potsherd, Lwamutanga	Hoima	Disturbance or loss of cultural heritage	Category 1 tangible cultural heritage	Damage or disturbance of feature		C		TBC	8.19	2	5	1	4	12	Cultural heritage management plan.	2	5	1	4	12

## **E4 ENVIRONMENTAL AND SOCIAL MANAGEMENT PLANS**

A standalone report follows for Appendix E4.

***Appendix E4: Environmental and Social Management  
Plans***

**February 2020**

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## E4 ENVIRONMENTAL AND SOCIAL MANAGEMENT PLANS

### E4.1 Introduction

This ESIA appendix lists the mitigation measures developed throughout the impact assessment in order to avoid or reduce the potential impacts on VECs. These mitigation commitments form the minimum content of the project's environmental and social management plans and will be implemented throughout project lifetime where applicable.

The mitigation measures can either be generic, i.e., apply throughout the project to the identified project components, or location specific. Each mitigation measure is given a unique code, e.g., SOL for soil and a number, see Table E4.1-1 for a list of the codes and the primary section where they are described.

**Table E4.1-1 Mitigation Measure Codes and Associated Primary Section**

Code	Topic	Primary Impact Assessment Subsection
ACO	Acoustics	8.10 Acoustic Environment
AIR	Air quality	8.9 Air Quality
BIO	Biodiversity	8.2 Biodiversity: Habitats of Conservation Importance 8.3 Biodiversity: Flora and Fauna Species of Conservation Importance 8.4 Biodiversity: Legally Protected, Internationally or Nationally Recognised Areas
CHSW	Community health, safety, security and welfare	8.18 Community Health 8.19 Community Safety, Security and Welfare
CUH	Cultural heritage	8.20 Tangible and Intangible Cultural Heritage
ECO	Economy	8.11 Economy 8.12 Local Economy
GNL	General	Cross-cutting mitigations and cumulative impacts mitigations – various subsections
HR	Human rights	Cross-cutting mitigations – various subsections
INF	Infrastructure and services	8.17 Social Infrastructure and Services
LIV	Livelihoods	8.13 Land-Based Livelihoods



**Table E4.1-1 Mitigation Measure Codes and Associated Primary Section**

Code	Topic	Primary Impact Assessment Subsection
		8.14 River and Lake-Based Livelihoods
LNP	Land and property	8.15 Land and Property
LSC	Landscape	8.8 Landscape
RES	Resource management	8.21 Ecosystem Services
SOL	Soil	8.5 Soil
WHSW	Workers health, safety and welfare	8.16 Workers' Health, Safety and Welfare
WTR	Water	8.6 Surface water 8.7 Groundwater

Additional mitigation measures may be developed after the ESIA report issue where the need for further impact control is identified.

## E4.2 Construction Phase

### E4.2.1 Biodiversity Management Plan

The biodiversity management plan (BMP) will define the approach to reduce impacts on biodiversity and will include the mitigation measures listed below.

**Table E4.2-1 Biodiversity Management Plan – Construction Phase**

ID	Mitigation Commitment
BIO01	Preconstruction biodiversity surveys will be undertaken at locations identified in the baseline appendices of the environmental and social impact assessment to record details of habitats and species of conservation importance within the working areas. This information will be used to produce site specific biodiversity management plans that will identify fine-scale route changes (where feasible), mark features for retention and protection, develop biorestation measures including seed collection, translocation and species propagation and provide details of the specific mitigation measures (such as seasonal construction restrictions) to be implemented to reduce impacts on biodiversity during construction.
BIO02	Supplementary preconstruction biodiversity baseline surveys will be undertaken in locations identified in the baseline appendices of the environmental and social impact assessment in order to produce a Biodiversity Action Plan to identify further enhancement and conservation measures.

**Table E4.2-1 Biodiversity Management Plan – Construction Phase**

ID	Mitigation Commitment
BIO03	As part of the Biodiversity Management plan a vegetation removal method statement to reduce impacts on biodiversity will be developed. This will include but not be limited to measures such as: <ul style="list-style-type: none"> <li>• directional felling of trees on land inside the right-of-way</li> <li>• avoiding damage to trees outside the right-of-way</li> <li>• identifying areas where strimming, coppicing or other works will be undertaken in advance of clearing.</li> </ul>
BIO05	Hunting, fishing, unauthorised gathering of products (including plants and firewood) and deliberate disturbance or harassment of fauna will be prohibited for project personnel. The Project will restrict the purchase of wildlife related products and crafts by project workers.
BIO06	Appropriate measures will be implemented to prevent fauna or people from entering welded pipe sections or open excavations; there will be fauna ladders placed at suitable intervals in all open excavations. Animals will be removed safely and released into suitable habitat away from the working area.
BIO07	During open-cut watercourse crossing activities, bank and bed material will be segregated, stored away from the active channels, and not be placed where flow or drainage will be obstructed.
BIO08	A biodiversity survey strategy will be developed to include timings and methods of surveys to be undertaken, including but not limited to: <ul style="list-style-type: none"> <li>• supplemental preconstruction flora and fauna surveys</li> <li>• supplemental preconstruction biodiversity surveys of pre identified species of conservation concern</li> <li>• a biodiversity assessment of watercourses and wetlands</li> <li>• an assessment of fish spawning habitat at open-cut river crossings where the watercourse crossing is planned to occur during the fish-spawning season and International Union for Conservation of Nature or Red Data Book species are known or likely to occur</li> <li>• preclearance checks on the right-of-way.</li> </ul>
BIO09	Before construction starts, a plan will be prepared for translocating fauna and flora in areas identified in the environmental and social impact assessment and preconstruction surveys. The pre-entry surveys will be referred to when deciding suitable locations for replanting of translocated species or species planted to compensate for those removed during construction.
BIO10	A written and photographic record will be kept of translocated species for verification and potential post-construction monitoring. The success of translocation will be monitored during and post-construction for species of conservation importance.
BIO11	Information on seasonal constraints recorded within the baseline appendices environmental and social impact assessment will be used to identify activities that need to be undertaken at a specific time of year or periods when activities cannot be completed without project approval of a deviation (e.g., during sensitive periods such as breeding and migration of species).
BIO12	Where a section of the right-of-way is through habitats with high biodiversity value (as identified in the baseline appendices of the environmental and social impact assessment), the area will be reviewed to determine if the working width can be reduced to limit impacts as much as possible.

**Table E4.2-1 Biodiversity Management Plan – Construction Phase**

ID	Mitigation Commitment
BIO13	Open-cut river crossings will be undertaken during the dry season where possible; where not possible site-specific method statements will be developed addressing ecological sensitivities.
BIO14	As much riparian vegetation as possible will be left in place until immediately before a watercourse crossing needs to be made to maintain stability of the banks. During site preparation, the height of vegetation on the riverbanks will be reduced, but roots will not be disturbed, to dissuade animals from nesting. The vegetation will then be removed when the crossing is made and the area reinstated as quickly as possible.
BIO15	The maximum length of open trench at any one time (per spread) will be defined based on: <ul style="list-style-type: none"> <li>• the habitats present and potential ecological sensitivities (e.g., terrestrial commuting routes for large mammals)</li> <li>• community safety.</li> </ul> Gaps will also be left in soil stacks and pipe strings at strategic locations to allow passage of animals where it is considered safe to do so.
BIO16	If dams and pumps are used to maintain water flow during the construction of watercourse crossings or abstraction of water from watercourses is required, fish screens will be used on the end of the pump inlet hose. Any fish caught within dammed areas either side of the crossing will be transferred up or downstream as appropriate by suitably experienced personnel.
BIO17	Where watercourse bank reinforcement is required, the impact on riparian habitats and riparian fauna will be assessed to determine if the reinstatement or reinforcement is sufficient to maintain connectivity along the riparian elements of the watercourse. Mitigation will be installed to maintain habitat connectivity.
BIO18	All incidences of accidental injury or death of fauna will be recorded, including details of the circumstances, time, species, size and habitat. The report will be reviewed to determine if any action should be taken to prevent further incidents.
BIO19	Biosecurity measures will be developed and implemented that will include a strategy for weed and pest control and measures to prevent the introduction or spread of alien invasive species on the RoW, work sites and camp facilities. The biosecurity measures will also outline specifics to protect the aquatic environment from alien invasive species.
BIO21	Species' populations will be monitored pre and post construction. The project will employ adaptive management in response to findings.
BIO23	The use of pesticides, rodenticides and other chemicals is prohibited in proximity to raptor habitat.
BIO24	The total duration of construction disturbance (i.e. the time between initial site clearing and final reinstatement/biorestitution) will be minimised.
BIO26	The Project will support the relevant management authority with capacity-building, for example by contributing to additional ranger support or other activities identified in the existing protected area management plan prepared by the relevant management authority.
BIO36	A strategy for tree removal and replanting will be developed; the strategy will consider: <ul style="list-style-type: none"> <li>• where trees are to be removed, the species and size/age of trees that will be recorded prior to removal; data to be recorded includes: trunk diameter at chest height, number of each species, species and, location</li> <li>• the number of trees and species to be removed during construction</li> <li>• conservation value of the species to be removed</li> </ul>

**Table E4.2-1 Biodiversity Management Plan – Construction Phase**

ID	Mitigation Commitment
	<ul style="list-style-type: none"> <li>• variety of species to be replanted</li> <li>• provenance of species used for replanting</li> <li>• the region-specific environmental characteristics influencing replanting success.</li> </ul> Preconstruction surveys will be referred to when deciding suitable locations for replanting of translocated species or species planted to compensate for those removed during construction.
BIO37	The need to compensate for trees removed will be determined on a site-by-site basis and will take into account the species removed. Preference will be given to native species representative of adjacent undisturbed areas. No exotic species will be planted unless specifically required by the forestry agency. In areas of plantation forestry, the requirements of the forestry agency will be met (e.g., ratios for compensation planting).
BIO38	Ways to achieve an increasing trend in vegetation regrowth and diversity of desired species, specifically species composition and, plant species that support forage, refuge and nesting for species of conservation importance, in reinstated areas will be sought, with reference to nearby areas undisturbed by project activities. The re-establishment of vegetation will be monitored following reinstatement until long term re-vegetation targets have been reached.
BIO39	The Project will prohibit all staff and contractors from the possession, purchase, trade or collection of wildlife or living natural resources that are nationally legally protected, CITES listed, or classed as threatened by the IUCN Red List.
BIO40	Hunting, consumption, transport and or purchase of bushmeat will be prohibited for project employees and contractors. Workers will be prohibited from collecting shells, timber, firewood, fibres and other plant-based resources. Fishing by workers will not be permitted.
CHSW20	Vehicle movements will be restricted to defined access routes and demarcated working areas (unless in the event of an emergency).
ECO11	The guidelines and procedures set out in 'Uganda Wildlife Authority (UWA) Operational Guidelines for Oil and Gas Exploration and Production in Wildlife Protected Areas, January 2014' will be implemented and incorporated within project standard operating procedures.
SOL11	Seeds of species that have the potential to outcompete local plant species will not be used in revegetation seed mixes. Where biorestorement is required, local species will be used as far as available.
WTR04	Watercourse banks will be stabilised directly after backfilling and subsequently restored to near original conditions. Where this is not possible, site-specific solutions will be proposed with engineering justification and assessment of potential impacts (including habitat connectivity).
WTR06	Where water is abstracted from a surface waterbody, the flow, water level or water volume in the waterbody will be assessed before and during abstraction. Abstraction rates and the frequency of assessment of the water flow, level or volume will be monitored based on permit conditions. During abstraction from surface waters, inlet hoses will be fitted with suitably sized fish screens.
WTR09	Other than when required for crossings excavations, construction equipment and traffic will normally not enter watercourses. Vehicles and equipment will cross watercourses via appropriately sized temporary culverts and bridging arrangements.
WTR10	Bathing or washing clothes, vehicles and equipment by project employees will be prohibited in watercourses.

**Table E4.2-1 Biodiversity Management Plan – Construction Phase**

ID	Mitigation Commitment
WTR15	If temporary damming of a watercourse is required, a preconstruction engineering, social and environmental evaluation will be undertaken to plan the work and so the duration of the flow interruption is limited and to determine the need for pump around to maintain flows.

**E4.2.2 Pollution Prevention Plan**

The pollution prevention plan (PPP) will define the approach to prevent pollution and will include the mitigation measures listed below.

**Table E4.2-2 Pollution Prevention Plan – Construction Phase**

ID	Mitigation Commitment
ACO01	Project noise emissions will not result in an exceedance of PES or national legislative noise criteria at any existing sensitive receptor site.
ACO02	Location specific assessments will be undertaken at sensitive receptors in proximity to project activities occurring between 7 p.m. and 7 a.m. to identify appropriate mitigation where there is potential to cause disturbance from noise and vibration.
ACO03	A preconstruction record of condition, including a photographic log, will be developed. The validity of any claims of damage resulting from project activities will be assessed against the preconstruction record of condition, repairs will be undertaken or appropriate compensation paid if damage is proven.
ACO04	Preference will be given to selecting low noise and vibration emitting equipment for all construction works.
ACO05	Activities that generate high levels of noise and vibration will be assessed to determine potential impacts and mitigation will be implemented where appropriate. Notifications of work will be given at least 72 hrs in advance of work to residents / occupants located within: <ul style="list-style-type: none"> <li>• 100 m of RoW prior to trenching</li> <li>• 50 m of RoW prior to lowering and laying of pipe</li> <li>• 50 m of RoW prior to backfilling and compaction</li> <li>• 250 m of any road upgrades and new access roads.</li> </ul>
ACO06	Potential noise and vibration impacts will be assessed where piling is to be undertaken close to sensitive receptors. Where possible, alternative techniques or materials will be used to reduce potential impacts, e.g. restrictions on times and duration in any given day that piling activities are undertaken.
ACO07	Where possible new access roads will be constructed a minimum of 100 m away from sensitive receptors (hospitals, educational facilities or dwellings).
ACO08	Blasting will only be used where other excavation methods are considered technically impracticable or uneconomic. Where blasting is undertaken, a Blast Management Plan will be developed to consider the effects of noise, air overpressure and vibration on dwellings, structures and wildlife, and develop appropriate mitigation where required. The Blast Management Plan will be prepared by a competent person and peer reviewed.
AIR01	Where construction generated dust may affect sensitive receptors, the following mitigation measures will be considered: <ul style="list-style-type: none"> <li>• dust suppression at work-sites and transport routes</li> </ul>

**Table E4.2-2 Pollution Prevention Plan – Construction Phase**

ID	Mitigation Commitment
	<ul style="list-style-type: none"> <li>• adherence to RoW speed limits supplemented by awareness training</li> <li>• sheeting of fine materials being transported or stored on-site</li> </ul>
AIR02	<p>To minimise emissions to air, vehicles, machines and equipment will:</p> <ul style="list-style-type: none"> <li>• be appropriate for the task required</li> <li>• have a valid maintenance and inspection certificate or log books</li> <li>• be allocated a unique identifier to be used in a maintenance log</li> <li>• be maintained regularly in accordance with the manufacturer's recommendations to maximise fuel efficiency and help reduce emissions</li> <li>• not be allowed to idle – engines will be switched off when not in use.</li> </ul>
AIR03	<p>Vehicles or equipment seen to be emitting excessive black smoke will not be permitted to continue work and will be sent for maintenance.</p>
CHSW25	<p>A monitoring plan will be developed and implemented to ensure that environmental noise exposure levels are periodically monitored and documented. Procedures for corrective measures will be incorporated and implemented in the event of exceedances.</p>
CLI01	<p>Electrical equipment of a size that is appropriate for the functions to be performed will be selected with a view to maximising energy efficiency. Electrical equipment will be turned off when not in use.</p>
EPR02	<p>Spill response equipment, such as absorbents and spill kits, will be available at all work site locations and on fuel bowsers and tankers. The spill kits will be inspected regularly to ensure they remain adequate for the needs of the project. The spill kits will be logged, inventoried and maintained.</p>
EPR04	<p>In the event of a spillage of hazardous materials the following actions will take place:</p> <ul style="list-style-type: none"> <li>• A trained rapid response team will be mobilised</li> <li>• Spill response personnel and equipment will be provided to contain, cleanup and remediate (Tier 1 spills). A wider range of resources will be utilised to contain, cleanup and remediate Tier 2 and Tier 3 spills.</li> </ul>
MAIR02	<p>Marine construction vessels, and equipment on vessels, will be maintained regularly in accordance with the manufacturer's recommendations to maximise fuel efficiency and help reduce emissions.</p>
SOL12	<p>Procedures will be developed, incorporating plans for erosion and sediment control and reinstatement. These will be produced before work begins at areas of fragile, sensitive or thin topsoil, side slopes or narrow ridges and at watercourse crossings. Sediment interception measures will be installed, inspected and maintained to prevent sediment runoff from the right-of-way or construction sites affecting watercourses, wetlands, waterbodies or environmentally sensitive areas. Procedures will include additional precautions to be taken and increased monitoring (minimum twice per week), with the aim of preserving the topsoil for subsequent replacement.</p>
SOL14	<p>Areas of surface contamination identified prior to construction within the project footprint will be remediated before or during project construction. Where cleanup of pre-existing contaminated land is required, a remediation proposal will be implemented including but not limited to:</p> <ul style="list-style-type: none"> <li>• remediation techniques</li> <li>• the cleanup standard to be achieved</li> <li>• monitoring and analysis of remediated land to be undertaken</li> <li>• all regulatory and project documentation requirements</li> <li>• appropriate environmental and occupational health and safety protection measures to be adopted.</li> </ul>

**Table E4.2-2 Pollution Prevention Plan – Construction Phase**

ID	Mitigation Commitment
	All cleanup and remediation activities will be adequately documented.
SOL15	Contaminated material storage areas will be provided with containment measures (e.g., bunds, ditches, impermeable base membranes and covers) to prevent runoff and airborne losses.
WTR01	The storage of hazardous materials will be restricted to designated hazardous materials storage areas at least 50 m from any wetlands, surface watercourse or seasonal water channel. Such storage locations will be subject to site-specific environmental and social risk assessment that will inform site selection and the adoption of any additional mitigation measures. Storage areas for hazardous materials will be bunded (no drainage valves/holes), have impermeable floor and will be covered to minimise the ingress of rainwater.
WTR02	A refuelling procedure will be developed and implemented which will include but not be limited to: <ul style="list-style-type: none"> <li>• details of mobile and static refuelling areas and equipment (e.g. impermeable drip trays)</li> <li>• regulatory / GIIP constraints of refuelling operations to sensitive environmental receptors</li> <li>• spill prevention measures</li> <li>• training on refuelling procedures.</li> </ul>
WTR03	Site specific erosion risk assessments will be completed by a qualified fluvial geomorphologist or soil scientist as appropriate; the information will be used to prepare a soil management plan and a reinstatement plan prior to construction. Erosion control measures will include but not be limited to: <ul style="list-style-type: none"> <li>• consideration of information from preconstruction surveys</li> <li>• locations where soil compaction may result in increased sediment laden runoff to watercourses and waterbodies</li> <li>• details on construction through soft ground, considering the use of load-bearing materials to support heavy loads in soft ground</li> <li>• measures for working in areas of fragile and sensitive soils</li> <li>• restrictions to the storage of materials on steep slopes</li> <li>• provision for erosion and sediment control at watercourses.</li> </ul>
WTR05	Location-specific method statements will be produced for watercourse crossing construction. These method statements will incorporate plans for: <ul style="list-style-type: none"> <li>• erosion control</li> <li>• sediment control</li> <li>• maintaining environmental base flows downstream of water crossings for example by using measures such as pumping, channel diversions and fluming</li> <li>• notifying fisherfolk as appropriate</li> <li>• reinstatement</li> <li>• spill response equipment.</li> </ul>
WTR07	As a requirement of the PPP, locations for discharging excavated pipeline trench water will be identified as part of a 'Permit to Pump Procedure' which will be implemented during the construction phase. Appropriate sediment control measures in line with recognised industry best practices will be implemented at each location.
WTR09	Other than when required for crossings excavations, construction equipment and traffic will normally not enter watercourses. Vehicles and equipment will cross watercourses via appropriately sized temporary culverts and bridging arrangements.

**Table E4.2-2 Pollution Prevention Plan – Construction Phase**

ID	Mitigation Commitment
WTR10	Bathing or washing clothes, vehicles and equipment by project employees will be prohibited in watercourses.
WTR11	Surface water that could be affected by runoff from the pipeline route or worksites will be visually inspected on a regular basis and remedial measures implemented if sediment or contamination arising from project activities are visible.
WTR16	An environmental and social evaluation of potential treated wastewater discharge locations will be undertaken as the basis for the development of measures to mitigate impacts from discharges on surface water ecology, downstream water users or terrestrial ecology. The evaluations will take into account the compliance with project environmental standards and will support applications for discharge permits. All licences and consents will be obtained before planned liquid discharges.
WTR20	Surface water run-off from construction areas and AGIs will be discharged in accordance with project environmental standards.
WTR22	All licences and consents for hydrostatic test water discharge will be obtained following preparation of a hydrostatic test effluent disposal risk assessment. This will undergo internal technical evaluation before submitting the permit application to the appropriate water resources regulatory authority.
WTR25	No oil-based muds will be used for drilling of groundwater exploration and water supply boreholes.
WTR27	The Monitoring and Reporting Plan will detail robust monitoring and inspection requirements to be completed at locations with sensitive groundwater resources; to verify correct implementation of the PPP.

**E4.2.3 Waste Management Plan**

The waste management plan (WMP) will define the approach to reduce potential waste related impacts and will include the mitigation measures listed below.

**Table E4.2-3 Waste Management Plan – Construction Phase**

ID	Mitigation Commitment
LSC03	Options will be considered for the use of surplus rock from blasting including: <ul style="list-style-type: none"> <li>• crushing and onsite re-use</li> <li>• offsite re-use</li> <li>• offsite disposal</li> <li>• onsite placement. if this is in keeping with the local landscape character.</li> </ul>
RES01	All excavated materials will be screened and reused where possible to reduce the need for newly quarried aggregates.
RES02	If timber is cleared (e.g., as part of right-of-way clearance), it will be reused for construction activities as far as possible. Release of any and all chemically treated waste timber will be made by on a case-by-case basis.
SOL02	Environmental and social evaluations will be undertaken to identify suitable offsite disposal sites for waste soil and rock, and appropriate management measures to be implemented. All temporary borrow pits and soil and rock disposal sites will be reinstated, unless instructed otherwise by the regulatory authorities, in accordance with pre-entry



**Table E4.2-3 Waste Management Plan – Construction Phase**

ID	Mitigation Commitment
	agreements with landowner and location-specific reinstatement plans will be prepared and implemented.
WHSW01	Provision of food to workers will be planned to cater for workforce requirements and therefore minimise food waste as far as possible.
WTR08	The grey water stream will be separated from black water (e.g. sewage), treated and either reused (e.g., for toilet flushing, dust suppression) or discharged, in accordance with the environment project standards and national environmental guidance and regulations. All wastewater discharges will comply with permit conditions and the project environmental standards.
WTR17	An industry-recognised manufactured grease trap will be installed at the outlet of the kitchen(s) facilities to prevent greases and fats from entering the grey water streams.
WTR18	Treated sewage effluent which is not reused will be preferentially discharged to land. Before any discharge, the soil permeability will be evaluated, and engineered soakaways will be constructed, where required, to avoid impacts on land, surface water drainage and groundwater.
WTR19	A contingency plan for wastewater treatment plant maintenance periods or downtime will be developed. This will include, as a minimum, the provision of holding tanks that can be used to retain emergency overflows or discharges that do not meet project environmental standards.
WTR21	All potentially contaminated wastewater, excluding sanitary wastewater, will be routed to an appropriately sized treatment unit capable of achieving consent conditions and project environmental standards.

#### E4.2.4 Natural Resource Management Plan

The natural resource management plan (NRMP) will define the approach to manage natural resource use and will include the mitigation measures listed below.

**Table E4.2-4 Natural Resource Management Plan – Construction Phase**

ID	Mitigation Commitment
ECO02	Project use of third-party quarries and borrow pits will require verification of national regulatory and project standard compliance; where suppliers do not meet project standards an action plan will be implemented to build capacity, so the supplier can meet the project standard in a timely manner.
LNP02	Any new aggregate extraction sites and batching plants sites, including 3rd party sites, will undergo environmental and social evaluation prior to use; and, where possible, new sites will be located as close as possible to the existing road network to reduce the requirement for new access roads.
RES01	All excavated materials will be screened and reused where possible to reduce the need for newly quarried aggregates.
RES02	If timber is cleared (e.g., as part of right-of-way clearance), it will be reused for construction activities as far as possible. Release of any and all chemically treated waste timber will be made by on a case-by-case basis.
WTR06	Where water is abstracted from a surface waterbody, the flow, water level or water volume in the waterbody will be assessed before and during abstraction. Abstraction

**Table E4.2-4 Natural Resource Management Plan – Construction Phase**

ID	Mitigation Commitment
	rates and the frequency of assessment of the water flow, level or volume will be monitored based on permit conditions. During abstraction from surface waters, inlet hoses will be fitted with suitably sized fish screens.
WTR08	The grey water stream will be separated from black water (e.g. sewage), treated and either reused (e.g., for toilet flushing, dust suppression) or discharged, in accordance with the environment project standards and national environmental guidance and regulations. All wastewater discharges will comply with permit conditions and the project environmental standards.
WTR13	Water meters will be installed to measure the quantities of water supplied and wastewater discharged at the camp and detailed records will be kept of quantities of water reused and the purposes for which water is reused as part of the water management plan and the data used for monitoring water usage and project reporting requirements.
WTR14	Water conservation initiatives and opportunities to reuse water, e.g., for dust suppression or concrete mixing, will be identified, assessed for impacts on the environment and human health and those deemed suitable will be implemented.
WTR15	If temporary damming of a watercourse is required, a preconstruction engineering, social and environmental evaluation will be undertaken to plan the work and so the duration of the flow interruption is limited and to determine the need for pump around to maintain flows.
WTR23	The water quality and sustainability of water abstracted from either new or existing boreholes or surface water will be monitored at suitable frequencies to confirm that supply meets permit conditions and project environmental standards and does not impact adversely on other known users.
WTR24	As part of the permit application, hydraulic testing and hydrogeological impact assessments will be undertaken to evaluate the potential impact on local groundwater abstraction points. If the assessment indicates potential impacts to local users, alternative borehole locations will be considered and these alternative locations will be subject to the same testing and impact assessment process.
WTR26	All groundwater exploration and supply boreholes will be designed by suitably experienced and qualified hydrogeologists to avoid contaminant migration pathways between different aquifers and geological formations.
WTR28	Groundwater levels will be monitored once every two weeks by the Project at all sites where groundwater abstraction occurs for the project. The location of monitoring well(s) will be determined by a qualified hydrogeologist to ensure that they are installed in the correct formation and at the correct distance between project abstraction boreholes and community water points. If the local water supplies are derogated to the extent that complaints are made by the community as a result of project abstraction, then the Project will provide alternative water supplies at a convenient location for the community that is not or is less influenced by the project's abstraction.

#### E4.2.5 Soil Management Plan

The soil management plan (SMP) will define the approach to soil management and temporary erosion control and will include the mitigation measures listed below.

**Table E4.2-5 Soil Management Plan – Construction Phase**

ID	Mitigation Commitment
BIO07	During open-cut watercourse crossing activities, bank and bed material will be segregated, stored away from the active channels, and not be placed where flow or drainage will be obstructed.
SOL01	Where required, imported soil will have similar physical characteristics to soil in the area where it will be deposited. Soil will be checked, and analysed if needed, for presence of invasive species and contamination.
SOL02	Environmental and social evaluations will be undertaken to identify suitable offsite disposal sites for waste soil and rock, and appropriate management measures to be implemented. All temporary borrow pits and soil and rock disposal sites will be reinstated, unless instructed otherwise by the regulatory authorities, in accordance with pre-entry agreements with landowner and location-specific reinstatement plans will be prepared and implemented.
SOL03	Where benching is required then the areas will be re-contoured to original profiles. Side casting in areas of steep terrain will be prohibited. The effects of accidental spoil slippage on steep slopes will mitigated, e.g., by using fences or a geotextile membrane.
SOL04	Load-bearing/ ground protection materials, such as bog mats and geotextile membranes under temporary haul roads, will be used to support heavy loads in areas of soft ground, including wetland areas.
SOL06	Topsoil and subsoil stockpiles will be stored in accordance with the Soil Management Plan, be free draining and include gaps left in strategic locations to allow potential floodwater through.
SOL07	If topsoil is stored for more than six months, the stacks will be monitored for: <ul style="list-style-type: none"> <li>• the presence of weeds, which will be controlled in accordance with the weed and pest control programme</li> <li>• compaction and erosion – corrective measures will be implemented if either is identified.</li> </ul> Reinstatement will be undertaken as early as practicable following completion of construction activities in any ROW section or site.
SOL08	A preconstruction soil survey will be undertaken of the RoW and MCPY and other construction facilities, based on a representative sample, to: <ul style="list-style-type: none"> <li>• measure the depth of the topsoil layer along the pipeline route to inform requisite stripping depth</li> <li>• identify areas of fragile, sensitive and thin topsoil</li> <li>• identify areas lacking topsoil.</li> </ul>
WTR03	Site specific erosion risk assessments will be completed by a qualified fluvial geomorphologist or soil scientist as appropriate; the information will be used to prepare a soil management plan and a reinstatement plan prior to construction. Erosion control measures will include but not be limited to: <ul style="list-style-type: none"> <li>• consideration of information from preconstruction surveys</li> <li>• locations where soil compaction may result in increased sediment laden runoff to watercourses and waterbodies</li> <li>• details on construction through soft ground, considering the use of load-bearing materials to support heavy loads in soft ground</li> <li>• measures for working in areas of fragile and sensitive soils</li> <li>• restrictions to the storage of materials on steep slopes</li> <li>• provision for erosion and sediment control at watercourses.</li> </ul>

### E4.2.6 Cultural Heritage Management Plan

The cultural heritage management plan (CHMP) will define the approach to the identification, assessment and mitigation of potential impacts on tangible and intangible cultural heritage and will include the mitigation measures listed below.

**Table E4.2-6 Cultural Heritage Management Plan – Construction Phase**

ID	Mitigation Commitment
CUH01	<p>A preconstruction survey of the RoW will be undertaken to collect data on location, extent and mitigation measures of known and unknown assets (tangible and intangible cultural heritage (TCH and ICH)) and to consult community leaders about ICH sites or practices not yet identified.</p> <p>A report including a GIS file will be prepared that will recommend location-specific actions to be undertaken that could include:</p> <ul style="list-style-type: none"> <li>• Avoidance of a site</li> <li>• Access constraints to reduce disturbance to a site</li> <li>• Excavation of a site</li> <li>• a watching brief during vegetation removal or topsoil stripping</li> <li>• requirements to maintain access to cultural heritage assets</li> </ul> <p>A schedule of sites and actions to be undertaken will be prepared and included in the cultural heritage management plan (CHMP) and any appropriate licences obtained.</p>
CUH02	<p>A senior cultural heritage monitor (SCHM) will ensure that the cultural heritage management plan (CHMP) will be implemented, in agreement with relevant government authorities, in advance of construction. The CHMP will include a chance finds procedure. The cultural heritage team will schedule regular meetings and progress reports so that government authorities and appropriate community leaders are kept informed, including:</p> <ul style="list-style-type: none"> <li>• regular report on progress of excavations</li> <li>• a post-excavation assessment report</li> <li>• a research archive</li> <li>• a final publication of results of tangible or intangible heritage investigations as appropriate to the significance of the outcomes.</li> <li>• chance finds reports will be provided to the government authority and relevant stakeholders.</li> </ul> <p>The SCHM will be supported by a tangible cultural heritage monitor (TCHM) and an intangible cultural heritage monitor (ICHM) to evaluate the effectiveness of the cultural heritage protection measures and deliver awareness training for all project personnel.</p>
CUH03	<p>A written scheme of investigation (WSI) will be prepared where an intervention is needed and appended to the cultural heritage management plan (CHMP). Until investigation and recording in accordance with the WSI, or avoidance or management activity is signed off by government authorities, construction may not proceed in that area.</p>
CUH04	<p>The senior cultural heritage monitor (SCHM) will prepare the chance finds procedure (CFP); Chance finds will be excavated by suitably qualified and approved archaeologists, in accordance with the CFP and authorised by the relevant government authority.</p>
CUH05	<p>Information on intangible cultural heritage (ICH) collected during the preconstruction survey will be evaluated and integrated into the cultural heritage management plan (CHMP). This will include information on vulnerable groups if present.</p>
CUH07	<p>Collection of cultural heritage artefacts by workers for their own use is prohibited. Any cultural heritage artefacts found by workers will be left in situ and reported to the worksite supervisor or the cultural heritage monitor as required by the chance finds procedure.</p>

**Table E4.2-6 Cultural Heritage Management Plan – Construction Phase**

ID	Mitigation Commitment
CUH08	Any decompaction/ripping or other ground disturbance activities required during reinstatement will be planned to avoid any cultural heritage feature that has been preserved in situ.

**E4.2.7 Reinstatement Plan**

The reinstatement plan (RP) will define the approach to manage reinstatement incorporating permanent erosion control and bio-restoration, and will include the mitigation measures listed below.

**Table E4.2-7 Reinstatement Plan – Construction Phase**

ID	Mitigation Commitment
BIO17	Where watercourse bank reinforcement is required, the impact on riparian habitats and riparian fauna will be assessed to determine if the reinstatement or reinforcement is sufficient to maintain connectivity along the riparian elements of the watercourse. Mitigation will be installed to maintain habitat connectivity.
BIO36	A strategy for tree removal and replanting will be developed; the strategy will consider: <ul style="list-style-type: none"> <li>• where trees are to be removed, the species and size/age of trees that will be recorded prior to removal; data to be recorded includes: trunk diameter at chest height, number of each species, species and, location</li> <li>• the number of trees and species to be removed during construction</li> <li>• conservation value of the species to be removed</li> <li>• variety of species to be replanted</li> <li>• provenance of species used for replanting</li> <li>• the region-specific environmental characteristics influencing replanting success.</li> </ul> Preconstruction surveys will be referred to when deciding suitable locations for replanting of translocated species or species planted to compensate for those removed during construction.
BIO37	The need to compensate for trees removed will be determined on a site-by-site basis and will take into account the species removed. Preference will be given to native species representative of adjacent undisturbed areas. No exotic species will be planted unless specifically required by the forestry agency. In areas of plantation forestry, the requirements of the forestry agency will be met (e.g., ratios for compensation planting).
CUH08	Any decompaction/ripping or other ground disturbance activities required during reinstatement will be planned to avoid any cultural heritage feature that has been preserved in situ.
LNP01	A preconstruction entry survey, including photographs, will be undertaken to document the condition of the land including immovable assets, crops and improvements required to the land before construction.
SOL02	Environmental and social evaluations will be undertaken to identify suitable offsite disposal sites for waste soil and rock, and appropriate management measures to be implemented. All temporary borrow pits and soil and rock disposal sites will be reinstated, unless instructed otherwise by the regulatory authorities, in accordance with pre-entry agreements with landowner and location-specific reinstatement plans will be prepared and implemented.

**Table E4.2-7 Reinstatement Plan – Construction Phase**

ID	Mitigation Commitment
SOL09	Recontouring should be sympathetic and in keeping with preconstruction profiles, where this is not precluded by risk to integrity of the pipeline or erosion considerations.
SOL10	Before construction personnel and equipment are demobilised, temporary buildings and equipment, aboveground and belowground infrastructure, utilities, tools and any excess material brought onsite or generated during construction and commissioning will be removed. All off ROW sites impacted upon will be reinstated to meet pre-entry agreements with the landowner and in accordance with location-specific reinstatement method statements or plans to be prepared and implemented. Location-specific closeout reports, including photographs, will be produced to document the condition of temporary sites at handover following reinstatement.
SOL11	Seeds of species that have the potential to outcompete local plant species will not be used in revegetation seed mixes. Where biorestitution is required, local species will be used as far as available.
SOL13	<p>A preconstruction survey, including photographs, will be undertaken to document the condition of the land on which the RoW, construction and permanent facilities and access roads will be located. The survey will include immovable assets, crops and any remediation required to the land before construction. The survey will:</p> <ul style="list-style-type: none"> <li>• provide baseline evidence in the event of a claim for damage</li> <li>• identify existing contamination such as illegal disposal</li> <li>• inform pre-entry agreements including: <ul style="list-style-type: none"> <li>o agreement for temporary measures to be installed (e.g., during disruption to drainage or irrigation, temporary fencing)</li> <li>o reinstatement requirements.</li> </ul> </li> </ul> <p>Pre-entry agreements will be made with landowners, including reinstatement requirements, prior to access onto a site.</p>
SOL14	<p>Areas of surface contamination identified prior to construction within the project footprint will be remediated before or during project construction. Where cleanup of pre-existing contaminated land is required, a remediation proposal will be implemented including but not limited to:</p> <ul style="list-style-type: none"> <li>• remediation techniques</li> <li>• the cleanup standard to be achieved</li> <li>• monitoring and analysis of remediated land to be undertaken</li> <li>• all regulatory and project documentation requirements</li> <li>• appropriate environmental and occupational health and safety protection measures to be adopted.</li> </ul> <p>All cleanup and remediation activities will be adequately documented.</p>
SOL17	Trench breakers will be installed in the pipeline trench where downhill flow within the backfilled trench may lead to erosion.
SOL18	New access roads will follow existing tracks, where possible, and will be designed with adequate slope and cross fall drainage to channel runoff safely to off-road soakaways without causing erosion or siltation.

**Table E4.2-7 Reinstatement Plan – Construction Phase**

ID	Mitigation Commitment
WTR03	Site specific erosion risk assessments will be completed by a qualified fluvial geomorphologist or soil scientist as appropriate; the information will be used to prepare a soil management plan and a reinstatement plan prior to construction. Erosion control measures will include but not be limited to: <ul style="list-style-type: none"> <li>•consideration of information from preconstruction surveys</li> <li>•locations where soil compaction may result in increased sediment laden runoff to watercourses and waterbodies</li> <li>•details on construction through soft ground, considering the use of load-bearing materials to support heavy loads in soft ground</li> <li>•measures for working in areas of fragile and sensitive soils</li> <li>•restrictions to the storage of materials on steep slopes</li> <li>•provision for erosion and sediment control at watercourses.</li> </ul>
WTR04	Watercourse banks will be stabilised directly after backfilling and subsequently restored to near original conditions. Where this is not possible, site-specific solutions will be proposed with engineering justification and assessment of potential impacts (including habitat connectivity).
WTR05	Location-specific method statements will be produced for watercourse crossing construction. These method statements will incorporate plans for: <ul style="list-style-type: none"> <li>• erosion control</li> <li>• sediment control</li> <li>• maintaining environmental base flows downstream of water crossings for example by using measures such as pumping, channel diversions and fluming</li> <li>• notifying fisherfolk as appropriate</li> <li>• reinstatement</li> <li>• spill response equipment.</li> </ul>
WTR11	Surface water that could be affected by runoff from the pipeline route or worksites will be visually inspected on a regular basis and remedial measures implemented if sediment or contamination arising from project activities are visible.
WTR15	If temporary damming of a watercourse is required, a preconstruction engineering, social and environmental evaluation will be undertaken to plan the work and so the duration of the flow interruption is limited and to determine the need for pump around to maintain flows.

### E4.2.8 Stakeholder Engagement Plan

The stakeholder engagement plan (SEP) will define the approach to maintain a social licence to operate<sup>1</sup> among project-affected communities (PACs) and will include the mitigation measures listed below.

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<sup>1</sup> A social licence to operate exists when a project has ongoing approval or acceptance within the local community and other stakeholders.

**Table E4.2-8 Stakeholder Engagement Plan – Construction Phase**

ID	Mitigation Commitment
ACO03	A preconstruction record of condition, including a photographic log, will be developed. The validity of any claims of damage resulting from project activities will be assessed against the preconstruction record of condition, repairs will be undertaken or appropriate compensation paid if damage is proven.
ACO05	Activities that generate high levels of noise and vibration will be assessed to determine potential impacts and mitigation will be implemented where appropriate. Notifications of work will be given at least 72 hrs in advance of work to residents / occupants located within: <ul style="list-style-type: none"> <li>• 100 m of RoW prior to trenching</li> <li>• 50 m of RoW prior to lowering and laying of pipe</li> <li>• 50 m of RoW prior to backfilling and compaction</li> <li>• 250 m of any road upgrades and new access roads.</li> </ul>
ACO08	Blasting will only be used where other excavation methods are considered technically impracticable or uneconomic. Where blasting is undertaken, a Blast Management Plan will be developed to consider the effects of noise, air overpressure and vibration on dwellings, structures and wildlife, and develop appropriate mitigation where required. The Blast Management Plan will be prepared by a competent person and peer reviewed.
ACO09	The Project will conduct regular inspection of access roads to check for damage caused by project vehicles to repair damage in a timely and efficient manner. Strict load management will be enforced on all project vehicles.
BIO06	Appropriate measures will be implemented to prevent fauna or people from entering welded pipe sections or open excavations; there will be fauna ladders placed at suitable intervals in all open excavations. Animals will be removed safely and released into suitable habitat away from the working area.
BIO26	The Project will support the relevant management authority with capacity-building, for example by contributing to additional ranger support or other activities identified in the existing protected area management plan prepared by the relevant management authority.
BIO37	The need to compensate for trees removed will be determined on a site-by-site basis and will take into account the species removed. Preference will be given to native species representative of adjacent undisturbed areas. No exotic species will be planted unless specifically required by the forestry agency. In areas of plantation forestry, the requirements of the forestry agency will be met (e.g., ratios for compensation planting).
CHSW02	Local people will be consulted on the optimum location of crossing points and pastoralists informed of the access restrictions in advance, advising them to avoid cultivated areas. Crossing points will be provided across open trenches and welded pipes and gaps will be left in soil stacks and pipe strings at strategic locations. Incidents in conflicts between crop farmers and herders in the vicinity of the project footprint will be monitored and support will be provided to local authorities to obtain a resolution in cases of conflict wherever possible.
CHSW17	Community liaison officers will encourage PAC Leadership to provide advance warning of local events so that construction activities can be avoided at these times.
CHSW18	Regular meetings will be held with PAC representatives, during construction in their area, to update them on construction progress and to receive comments or queries. A community liaison log will be maintained detailing the content of all meetings.



**Table E4.2-8 Stakeholder Engagement Plan – Construction Phase**

ID	Mitigation Commitment
CHSW19	Community awareness programmes will be developed and implemented in project-affected communities to explain: <ul style="list-style-type: none"> <li>• road safety risks and how to increase the safety of pedestrians particularly children</li> <li>• how to ensure their safety during construction</li> <li>• the measures that have been, or will be, implemented to protect their health and safety (e.g., provision of safe access).</li> </ul>
CHSW21	Public awareness programmes for stakeholders will include a specific section about the security presence around camp and security protocols which apply.
CHSW22	A Stakeholder Engagement Plan will be developed and implemented, identifying how the Project will engage and consult with internal and external stakeholders to keep them informed about project activities, understand and respond to their concerns and report to them on the project's environmental and social performance.
CHSW27	Spouses will be consulted and present during the land surveys, entitlement briefings and compensation agreements and both spouses will sign the compensation agreements.
CHSW28	The project will work closely with local authorities to monitor any emerging tensions between crop farmers and pastoralists related to project impacts.
CHSW29	The Project will liaise with other third-party developments and relevant government bodies to share information about their worker and community health management strategies, as well as information about worker movements, to ensure that they are commensurate and enable an efficient and coordinated response to any potential disease outbreak.
CUH01	<p>A preconstruction survey of the RoW will be undertaken to collect data on location, extent and mitigation measures of known and unknown assets (tangible and intangible cultural heritage (TCH and ICH)) and to consult community leaders about ICH sites or practices not yet identified.</p> <p>A report including a GIS file will be prepared that will recommend location-specific actions to be undertaken that could include:</p> <ul style="list-style-type: none"> <li>• Avoidance of a site</li> <li>• Access constraints to reduce disturbance to a site</li> <li>• Excavation of a site</li> <li>• a watching brief during vegetation removal or topsoil stripping</li> <li>• requirements to maintain access to cultural heritage assets</li> </ul> <p>A schedule of sites and actions to be undertaken will be prepared and included in the cultural heritage management plan (CHMP) and any appropriate licences obtained.</p>

**Table E4.2-8 Stakeholder Engagement Plan – Construction Phase**

ID	Mitigation Commitment
CUH02	<p>A senior cultural heritage monitor (SCHM) will ensure that the cultural heritage management plan (CHMP) will be implemented, in agreement with relevant government authorities, in advance of construction. The CHMP will include a chance finds procedure.</p> <p>The cultural heritage team will schedule regular meetings and progress reports so that government authorities and appropriate community leaders are kept informed, including:</p> <ul style="list-style-type: none"> <li>• regular report on progress of excavations</li> <li>• a post-excavation assessment report</li> <li>• a research archive</li> <li>• a final publication of results of tangible or intangible heritage investigations as appropriate to the significance of the outcomes.</li> <li>• chance finds reports will be provided to the government authority and relevant stakeholders.</li> </ul> <p>The SCHM will be supported by a tangible cultural heritage monitor (TCHM) and an intangible cultural heritage monitor (ICHM) to evaluate the effectiveness of the cultural heritage protection measures and deliver awareness training for all project personnel.</p>
CUH03	<p>A written scheme of investigation (WSI) will be prepared where an intervention is needed and appended to the cultural heritage management plan (CHMP). Until investigation and recording in accordance with the WSI, or avoidance or management activity is signed off by government authorities, construction may not proceed in that area.</p>
CUH04	<p>The senior cultural heritage monitor (SCHM) will prepare the chance finds procedure (CFP); Chance finds will be excavated by suitably qualified and approved archaeologists, in accordance with the CFP and authorised by the relevant government authority.</p>
ECO04	<p>An approved recruitment procedure will be implemented that:</p> <ul style="list-style-type: none"> <li>• Is transparent and open to all regardless of race, political opinion, colour, creed, sexuality or gender.</li> <li>• Includes a local recruitment strategy.</li> <li>• Considers social and cultural sensitivities.</li> <li>• Describes the employment criteria for the recruitment of professional, semiskilled and unskilled labour.</li> <li>• Prohibits discrimination or harassment of job applicants.</li> </ul> <p>Job descriptions will advertise vacancies in local languages in the PACs through accessible media and on the project website.</p> <p>Targets for local recruitment from project-affected communities will be set by the project. These will be designed to meet legal requirements. An employment office will be established in the local area to conduct local recruitment.</p>
ECO05	<p>A public awareness programme to communicate employment and training opportunities will be implemented that includes but is not limited to:</p> <ul style="list-style-type: none"> <li>• The local recruitment strategy.</li> <li>• Criteria for employment.</li> <li>• The number and types of employment opportunities.</li> <li>• The procedure for applying for employment.</li> </ul> <p>Information will be disseminated publicly, including via media announcements at regional and national levels and during public meetings in PACs.</p> <p>Care will be taken to reach women and vulnerable groups if necessary through targeted meetings scheduled at times and locations that may increase women's participation</p>

**Table E4.2-8 Stakeholder Engagement Plan – Construction Phase**

ID	Mitigation Commitment
ECO06	A PIIMP will aim to reduce the number of people that arrive into project-affected communities; the PIIM will also identify requirements for: <ul style="list-style-type: none"> <li>• Monitoring effects of in-migration and demographic change.</li> <li>• Monitoring relations between communities and in-migrants.</li> <li>• Education of project workers and local communities on impacts related to in-migration.</li> </ul>
ECO09	Before construction, a benchmarking exercise to gather data associated with average prices for goods will be undertaken in each region/district. This information will be used to identify appropriate prices so that large price disparities between project-procured goods and local goods are avoided.
ECO10	Senior project security personnel will liaise directly with the army and/or security forces to provide information on project construction activities and schedules.
ECO12	The Project will engage with tourism facilities and operators and relevant organisations to communicate information about the project and the management of environmental and social risks.
ECO15	The project will undertake a benchmarking assessment on the inflation of goods within PACs if construction phases with other third parties with large workforces coincide. The results of benchmarking will be shared with the proponents of the third-party developments as required.
GNL01	The Project will implement a grievance procedure to provide opportunities for PACs to express grievances about project activities. The grievance process will be communicated to and promoted within all PACs; it will be clearly communicated to PACs that complaints related to interactions with public or private security forces will be addressed.
GNL02	The Project will advise appropriate regulators and lead agencies of the construction schedule
GNL03	The Project will, in collaboration with the government and other third-party developers in the Albertine Graben, participate in the Regional Cumulative Impacts Management (RCIM) initiative proposed by the upstream Tilenga Project.
GNL05	The Project will ensure that the proponents of the associated facilities are made aware of the construction schedule so that construction activities can be strategically planned to reduce disruption.
GNL06	The project will continue engagement with Tilenga PACs and Buliisa and Hoima district local authorities during the construction phases of the project, emphasising the temporary nature of construction employment.
GNL08	The project will consider the issue of double resettlement into its resettlement plan.
GNL09	The Project will engage proponents of the associated facilities and the third-party developments and relevant government agencies to consider options for management measures to address significant cumulative impacts. Options could cover: project design, scheduling, construction management or operations management. Project

**Table E4.2-8 Stakeholder Engagement Plan – Construction Phase**

ID	Mitigation Commitment
GNL10	The project will participate in regional cumulative environmental management initiatives being developed in collaboration with operators of current projects, developers of proposed projects, and led by the government. It is envisaged that initiative management priorities would be defined for implementation by industry participants. Objectives are expected to include: creation of a governance structure; assessment of regional cumulative impacts based on collective baseline data and ESIA's that have been prepared for projects in the region; establishment and monitoring of environmental and social thresholds; collaborative development of cumulative impact management plans and mitigation measures.
GNL11	The Project will ensure that the proponents of the associated facilities are made aware of the construction schedule so that construction activities can be strategically planned to reduce disruption.
GNL13	The Project will assist with capacity-building for government organisations to develop and budget for appropriate town planning, infrastructure and service provisions in the mid-Western Region (Hoima).
HR01	Financial management workshops will be held with workers to raise levels of financial literacy. During the recruitment process and throughout their contract, workers will be advised regularly that the duration of their employment is temporary and that they should maintain their existing livelihoods during this period and prepare through sound financial management for the ultimate termination of their employment.
HR04	A formal structure will be established (e.g. Ethics Committee), which deals with infringement of Human Rights linked to the working environment; a company representative will participate in the Ethics Committee; infringements of the Project labour policy and national regulations will be monitored.
HR08	Stakeholders concerned about child labour will be encouraged to use the grievance mechanism to address project-related child labour concerns.
HR09	The Government will be requested not to use any prison labour for tasks that are, or could be associated with, project activities.
HR13	The Human Resources function will organize periodic town hall-style sessions to provide information and receive labour and working conditions related feedback.
HR16	Community Liaison Officers will hold regular meetings with supply chain workers to address human and labour rights. This includes a focus on harassment including the possibility of demands for sexual favours, or a financial kick-back during the recruitment process.
HR17	The Project will work in partnership with local organizations to address gender bias; female CLOs will be employed to facilitate project employment and to improve the work environment for women. Female CLOs will hold periodic meetings with female employees and community groups to ensure concerns specific to women and children are identified and to solicit suggestions for improvement.
HR20	The Project's commitment to human rights for all stakeholders includes those that self-identify as Indigenous Peoples and the cultural characteristics that form their identity; stakeholder engagement will continue to be completed in a manner that is sensitive to these characteristics and fully documented.
HR21	The Project will consult with appropriate institutions and groups to identify desirable and feasible land use agreements required for the project, in terms of national legislation and IFC Performance Standard 7, with people who self-identify as Indigenous Peoples.

**Table E4.2-8 Stakeholder Engagement Plan – Construction Phase**

ID	Mitigation Commitment
HR22	An awareness campaign targeting schools at sensitive locations within the project AOI will be developed, addressing: <ul style="list-style-type: none"> <li>• Importance of staying in school.</li> <li>• Risks particularly to girls of relationships with transient workers, transactional and commercial sex.</li> <li>• Road safety awareness.</li> <li>• Awareness about their rights.</li> <li>• Project grievance mechanism and their right to use it.</li> </ul>
HR24	The Project will develop a campaign focused on providing realistic community expectations with regard to livelihood options and employment opportunities.
HR27	The Project will support Government efforts to clarify disputed land boundaries in the Project area, in particular where it concerns customary right of occupancy of land.
HR38	Project will work in partnership with local organisations to provide support to women seeking employment with the project so that they are better able to express and understand opportunities, benefits and their rights at work.
INF04	Any planned diversion of utility services, closures of any road or track, or planned traffic diversions will be communicated to local authorities and affected communities at least 72 hours before the works. Information provided to the community will include (as relevant to the diversion) but not be limited to details of the timing and duration of the diversion; the route of traffic diversions; and traffic control measures for road crossings where delays and public safety are key factors.
LNP04	The Project will continue monitoring of, and liaising with authorities on land speculation. Where required additional interventions will be developed to enhance existing interventions.
LNP06	PACs will be sensitised to recent land speculation and instances of associated violence and informed of actions that can be taken.

**E4.2.9 Resettlement Action Plan**

The resettlement action plan (RAP) will define the approach for addressing physical and/or economic displacement of Project Affected Persons (PAPs) and will include the mitigation measures listed below.

**Table E4.2-9 Resettlement Action Plan – Construction Phase**

ID	Mitigation Commitment
BIO37	The need to compensate for trees removed will be determined on a site-by-site basis and will take into account the species removed. Preference will be given to native species representative of adjacent undisturbed areas. No exotic species will be planted unless specifically required by the forestry agency. In areas of plantation forestry, the requirements of the forestry agency will be met (e.g., ratios for compensation planting).

**Table E4.2-9 Resettlement Action Plan – Construction Phase**

ID	Mitigation Commitment
CHSW02	Local people will be consulted on the optimum location of crossing points and pastoralists informed of the access restrictions in advance, advising them to avoid cultivated areas. Crossing points will be provided across open trenches and welded pipes and gaps will be left in soil stacks and pipe strings at strategic locations. Incidents in conflicts between crop farmers and herders in the vicinity of the project footprint will be monitored and support will be provided to local authorities to obtain a resolution in cases of conflict wherever possible.
CHSW27	Spouses will be consulted and present during the land surveys, entitlement briefings and compensation agreements and both spouses will sign the compensation agreements.
GNL08	The project will consider the issue of double resettlement into its resettlement plan.
GNL10	The project will work closely with the government and other developers to understand past, current and planned resettlement processes for other developments with potential for cumulative double displacement impacts.
HR21	The Project will consult with appropriate institutions and groups to identify desirable and feasible land use agreements required for the project, in terms of national legislation and IFC Performance Standard 7, with people who self-identify as Indigenous Peoples.
HR26	The Project will deal directly with those having customary rights of occupancy to land; with the compensation process witnessed by appropriate third party to minimize the risk of interference by intermediaries.
HR27	The Project will support Government efforts to clarify disputed land boundaries in the Project area, in particular where it concerns customary right of occupancy of land.
HR37	The Project will use international criteria and considerations (in terms of IFC Performance Standard 7) to inform content of the Resettlement Action Plan with regard to people who self-identify as Indigenous Peoples.
INF07	If project activities affect land-based livelihoods because of interruption to irrigation, drainage or agricultural production, appropriate compensation will be provided in accordance with the RAP.
LIV01	The community health, safety and security plan will include measures to reduce the spread of animal diseases due to increased movement of livestock.
LIV06	Post RAP monitoring of PAPs engaged in gold ASM or high value crop cultivation, particularly female headed households, youth and casual, landless artisanal miners, will be implemented. Additional measures will be developed and implemented where necessary to ensure livelihoods are restored to pre-project levels.
LNP03	A Resettlement Policy Framework (RPF) has been developed in line with national legislation, Good International Industry Practice (GIIP) and IFC Performance Standard 5. The RPF will outline procedures related to compensation for loss of assets and livelihood restoration. A Resettlement Action Plan (RAP) will describe the modalities of identifying Project Affected People (PAP) and the procedures related to compensation for loss of assets and livelihood restoration strategies. Post resettlement monitoring of livelihood restoration measures will be implemented. Additional measures will be developed and implemented where necessary to ensure livelihoods are restored as a minimum to pre-project levels.
LNP04	The Project will continue monitoring of, and liaising with authorities on land speculation. Where required additional interventions will be developed to enhance existing interventions.

## E4.2.10 Labour Management Plan

The labour management plan (LMP) will define the approach to ensure recruitment practices and working conditions comply with legal requirements and project standards. The LMP will include the mitigation measures listed below.

**Table E4.2-10 Labour Management Plan – Construction Phase**

ID	Mitigation Commitment
BIO05	Hunting, fishing, unauthorised gathering of products (including plants and firewood) and deliberate disturbance or harassment of fauna will be prohibited for project personnel. The Project will restrict the purchase of wildlife related products and crafts by project workers.
BIO39	The Project will prohibit all staff and contractors from the possession, purchase, trade or collection of wildlife or living natural resources that are nationally legally protected, CITES listed, or classed as threatened by the IUCN Red List.
BIO40	Hunting, consumption, transport and or purchase of bushmeat will be prohibited for project employees and contractors. Workers will be prohibited from collecting shells, timber, firewood, fibres and other plant-based resources. Fishing by workers will not be permitted.
CHSW09	Only trained, certified and physically fit drivers will drive vehicles. Night-time driving will be by exception only.
CHSW14	The Voluntary Principles on Security and Human Rights will be implemented; compliance will be monitored.
CHSW15	Pre-deployment screenings will be described in the LMP and communicated during the recruitment process
CHSW31	A HIV/STD awareness and prevention programme will be put in place at the rest stops used by project drivers to address: <ul style="list-style-type: none"> <li>•awareness and understanding among drivers about the risks of HIV and STDs</li> <li>•the associated health implications</li> <li>•the preventative measures that can be taken</li> <li>•community awareness meetings</li> <li>•counselling and testing services</li> <li>•the distribution of information, leaflets and condoms.</li> </ul>
CHSW32	A vaccination plan will be identified to prevent communicable diseases for which vaccinations are available from being transmitted between the national/international and local workforce. This plan will apply to all project workers and visitors.
ECO03	Compliance with project human resources policies and procedures will be a construction contract requirement.
ECO04	An approved recruitment procedure will be implemented that: <ul style="list-style-type: none"> <li>• Is transparent and open to all regardless of race, political opinion, colour, creed, sexuality or gender.</li> <li>• Includes a local recruitment strategy.</li> <li>• Considers social and cultural sensitivities.</li> <li>• Describes the employment criteria for the recruitment of professional, semiskilled and unskilled labour.</li> <li>• Prohibits discrimination or harassment of job applicants.</li> </ul> Job descriptions will advertise vacancies in local languages in the PACs through accessible media and on the project website. Targets for local recruitment from project-affected communities will be set by the

**Table E4.2-10 Labour Management Plan – Construction Phase**

ID	Mitigation Commitment
	project. These will be designed to meet legal requirements. An employment office will be established in the local area to conduct local recruitment.
ECO05	<p>A public awareness programme to communicate employment and training opportunities will be implemented that includes but is not limited to:</p> <ul style="list-style-type: none"> <li>• The local recruitment strategy.</li> <li>• Criteria for employment.</li> <li>• The number and types of employment opportunities.</li> <li>• The procedure for applying for employment.</li> </ul> <p>Information will be disseminated publicly, including via media announcements at regional and national levels and during public meetings in PACs. Care will be taken to reach women and vulnerable groups if necessary through targeted meetings scheduled at times and locations that may increase women's participation</p>
ECO07	A retrenchment plan will be prepared, using the principles in the International Finance Corporation's Good Practice Note No. 4: Managing Retrenchment, 2005, with the aim of reducing the impacts of cessation of employment contracts.
ECO08	Before construction, a benchmarking exercise gathering data associated with average incomes in the private and public sector for each region/district will be undertaken. This information will be used to identify salary levels for the construction workforce so that disparities between project-related salaries and local businesses/public sector salaries are avoided.
HR01	Financial management workshops will be held with workers to raise levels of financial literacy. During the recruitment process and throughout their contract, workers will be advised regularly that the duration of their employment is temporary and that they should maintain their existing livelihoods during this period and prepare through sound financial management for the ultimate termination of their employment.
HR03	The workers' grievance procedure will include the option to log grievances anonymously.
HR04	A formal structure will be established (e.g. Ethics Committee), which deals with infringement of Human Rights linked to the working environment; a company representative will participate in the Ethics Committee; infringements of the Project labour policy and national regulations will be monitored.
HR05	Hiring managers from (sub) contractors will receive training regarding the developer's non-discrimination policies.
HR06	Gender-based hiring criteria will be included in tendering documents, so that it becomes part of the selection criteria for (sub) contractors; contracts will include targets stipulating a minimum number of women as well as staff with disabilities or other vulnerable groups.
HR07	As a standard clause in all contracts, no employees shall be hired, directly or indirectly, under the age of 18 years of age. It will be the responsibility of the developer to ensure that no children under the age of 18 are involved in their supply chain. If periodic inspections and audits identify children under the age of 18 being hired by the developer, this will be considered a breach of contract and the child will be removed from the workplace. Their salary may continue to be paid to them for a set period pending the putting in place an alternative solution.
HR09	The Government will be requested not to use any prison labour for tasks that are, or could be associated with, project activities.



**Table E4.2-10 Labour Management Plan – Construction Phase**

ID	Mitigation Commitment
HR10	Contracts will not include provisions that may support forced labour; for example, requests of deposit guarantees from employees to have access to safety protection equipment or other materials.
HR11	As part of the work site induction, all staff will be informed on workers' rights.
HR12	The Project will require that all workers in similar jobs work under the same, or similar, working conditions (salary, vacation, insurance etc.)
HR13	The Human Resources function will organize periodic town hall-style sessions to provide information and receive labour and working conditions related feedback.
HR14	<p>All workers will have contracts describing conditions of work and will have the contents explained to them. This includes their legal rights under national law. Contracts will be available in workers' native languages written in easily understandable language. Contracts will state terms of employment and duration and specifically address:</p> <ul style="list-style-type: none"> <li>• salary</li> <li>• working conditions</li> <li>• working hours and overtime</li> <li>• holidays and sick leave</li> <li>• social security and compensation</li> <li>• health insurance</li> <li>• access to remedy.</li> <li>• medical leave</li> <li>• other provisions related to medical care.</li> </ul>
HR15	A due diligence evaluation of each (sub) contractor's human rights record related to labour and working conditions will be conducted.
HR17	The Project will work in partnership with local organizations to address gender bias; female CLOs will be employed to facilitate project employment and to improve the work environment for women. Female CLOs will hold periodic meetings with female employees and community groups to ensure concerns specific to women and children are identified and to solicit suggestions for improvement.
HR18	Ensure that benefits for spouses or dependants of employees (such as health insurance or pension schemes) are offered on a non-discriminatory basis.
HR19	The employee Code of Behaviour will include a clause that a sexual relation based on power inequality will lead to instant dismissal of the senior person.
HR25	The OHSSP, LMP and the CHSSP will include strategies for implementing the Voluntary Principles on Security and Human Rights.
HR38	Project will work in partnership with local organisations to provide support to women seeking employment with the project so that they are better able to express and understand opportunities, benefits and their rights at work.
HR39	Equal remuneration for jobs of equal value for men and women will be provided.
HR40	An independent labour rights related monitoring and evaluation system will be established, possibly in collaboration with the national regulatory agencies, to ensure that policies are adhered to and national legislation is followed.
WHSW07	Project approved vehicles will be provided to transport camp residents to worksites.
WHSW11	A workers' code of conduct outlining expected worker behaviours will be developed and implemented. This code of conduct will cover the interaction between the national and international workforce and local workforce but also interactions with unemployed PAC members. Compliance with the workers' code of conduct will be a contractual

**Table E4.2-10 Labour Management Plan – Construction Phase**

ID	Mitigation Commitment
	requirement for all contractor, including subcontractors' employees. In the event of non-compliance, workers will be disciplined in accordance with project disciplinary procedures and structures.
WHSW13	Prior to construction, a project workers' grievance procedure will be implemented, which will detail the processes for recording, investigating and, where necessary, implementing corrective actions relating to complaints, including the responsibility of the contractor. The workers' grievance procedure will: <ul style="list-style-type: none"> <li>• be available for use by all workers, including subcontractor workers and workers in the primary supply chain;</li> <li>• be displayed at visible places in the camp and work sites.</li> </ul>
WHSW14	Hours worked by all project personnel will be according to their contracts and national regulatory requirements.
WHSW16	PPE appropriate for the task will be provided to all workers.
WHSW20	The labour management plan will include: <ul style="list-style-type: none"> <li>• Compliance with international labour standards, national labour laws and regulations concerning transparency, accountability, anticorruption and human rights;</li> <li>• Recognising workers' right to organise collective bargaining and trade unions;</li> <li>• Providing suitable working conditions, including rest facilities and breaks;</li> <li>• Mechanism of compliance with the ILO Maternity Protection Convention (2000); and</li> <li>• Respecting workers' rights to privacy including data protection requirements.</li> </ul>

**E4.2.11 Project Induced In-Migration Management Plan**

The project induced in-migration management plan (PIIMP) will define the approach to prevent project induced in-migration and manage negative impacts of potential project induced in-migration and will include the mitigation measures listed below.

**Table E4.2-11 Project Induced In-Migration Management Plan – Construction Phase**

ID	Mitigation Commitment
CHSW33	Construction camp will be designated as having "closed" status to prevent interactions between the workforce and PACs and prevent the spread of communicable disease. Policies will be developed to manage transgressions within the project disciplinary procedures and structures.
ECO06	A PIIMP will aim to reduce the number of people that arrive into project-affected communities; the PIIM will also identify requirements for: <ul style="list-style-type: none"> <li>• Monitoring effects of in-migration and demographic change.</li> <li>• Monitoring relations between communities and in-migrants.</li> <li>• Education of project workers and local communities on impacts related to in-migration.</li> </ul>
HR33	The Project will identify potential PIIM areas of concern and work with local leaders to establish mitigation measures that will include informing PACs of risks and opportunities associated with PIIM.

## E4.2.12 Procurement and Supply Chain Management Plan

The procurement and supply chain management plan (PSCMP) will define the approach to supply chain management including environmental, social and quality considerations, maximise the purchase of local goods and services, and will include the mitigation measures listed below.

**Table E4.2-12 Procurement and Supply Chain Management Plan – Construction Phase**

ID	Mitigation Commitment
BIO39	The Project will prohibit all staff and contractors from the possession, purchase, trade or collection of wildlife or living natural resources that are nationally legally protected, CITES listed, or classed as threatened by the IUCN Red List.
BIO40	Hunting, consumption, transport and or purchase of bushmeat will be prohibited for project employees and contractors. Workers will be prohibited from collecting shells, timber, firewood, fibres and other plant-based resources. Fishing by workers will not be permitted.
ECO01	A Procurement and Supply Chain Management Plan (PSCMP) will be developed to maximise the purchase of goods and services from within Uganda/Tanzania. This will be contingent on whether local suppliers can offer sufficient quality and reliability and can meet project requirements. PSCMP will include, as appropriate, enterprise development, capacity development and ring-fencing contracts.
ECO02	Project use of third-party quarries and borrow pits will require verification of national regulatory and project standard compliance; where suppliers do not meet project standards an action plan will be implemented to build capacity, so the supplier can meet the project standard in a timely manner.
ECO03	Compliance with project human resources policies and procedures will be a construction contract requirement.
ECO09	Before construction, a benchmarking exercise to gather data associated with average prices for goods will be undertaken in each region/district. This information will be used to identify appropriate prices so that large price disparities between project-procured goods and local goods are avoided.
HR02	As part of the tendering process, (sub) contractors will be required to include training components in their proposal aimed at increasing local employment as well as improving skills of local staff.
HR05	Hiring managers from (sub) contractors will receive training regarding the developer's non-discrimination policies.
HR06	Gender-based hiring criteria will be included in tendering documents, so that it becomes part of the selection criteria for (sub) contractors; contracts will include targets stipulating a minimum number of women as well as staff with disabilities or other vulnerable groups.
HR07	As a standard clause in all contracts, no employees shall be hired, directly or indirectly, under the age of 18 years of age. It will be the responsibility of the developer to ensure that no children under the age of 18 are involved in their supply chain. If periodic inspections and audits identify children under the age of 18 being hired by the developer, this will be considered a breach of contract and the child will be removed from the workplace. Their salary may continue to be paid to them for a set period pending the putting in place an alternative solution.
HR12	The Project will require that all workers in similar jobs work under the same, or similar, working conditions (salary, vacation, insurance etc.)

**Table E4.2-12 Procurement and Supply Chain Management Plan – Construction Phase**

ID	Mitigation Commitment
HR15	A due diligence evaluation of each (sub) contractor's human rights record related to labour and working conditions will be conducted.
HR18	Ensure that benefits for spouses or dependants of employees (such as health insurance or pension schemes) are offered on a non-discriminatory basis.
HR19	The employee Code of Behaviour will include a clause that a sexual relation based on power inequality will lead to instant dismissal of the senior person.
LNP02	Any new aggregate extraction sites and batching plants sites, including 3rd party sites, will undergo environmental and social evaluation prior to use; and, where possible, new sites will be located as close as possible to the existing road network to reduce the requirement for new access roads.

**E4.2.13 Infrastructure and Utilities Management Plan**

The infrastructure and utilities management plan (IUMP) will define the approach to monitor use of and/ or accidental damage to infrastructure and utilities and define the process of corrective action and will include the mitigation measures listed below.

**Table E4.2-13 Infrastructure and Utilities Management Plan – Construction Phase**

ID	Mitigation Commitment
ACO09	The Project will conduct regular inspection of access roads to check for damage caused by project vehicles to repair damage in a timely and efficient manner. Strict load management will be enforced on all project vehicles.
INF01	For major road crossings, crossing techniques that minimize the obstruction of traffic flow will be selected.
INF02	A preconstruction entry survey area will be defined where there is potential for vibration effects on dwellings and buildings. The survey (including photographs) will record the external condition of dwellings and buildings before construction, provide baseline evidence in the event of a claim for damage, and will inform pre-entry agreements that will also include repair requirements.
INF03	Potentially affected landowners, land users, communities and other affected stakeholders (e.g. tourism operators) will be consulted if there is likely to be any disruption to the existing infrastructure and utility services. Feedback from communities will inform planning of the works, especially when determining the options for temporary alternatives.
INF04	Any planned diversion of utility services, closures of any road or track, or planned traffic diversions will be communicated to local authorities and affected communities at least 72 hours before the works. Information provided to the community will include (as relevant to the diversion) but not be limited to details of the timing and duration of the diversion; the route of traffic diversions; and traffic control measures for road crossings where delays and public safety are key factors.

**Table E4.2-13 Infrastructure and Utilities Management Plan – Construction Phase**

ID	Mitigation Commitment
INF05	A crossing schedule, including all known roads, telephone and electricity facilities and oil, gas and water pipes, will be maintained. Owners and service operators will be consulted and full agreement gained to cross the infrastructure or utility. Where a third-party utility service will be crossed by the project, a method statement that includes measures to protect the integrity of the utility service will be agreed with the service operator before work can start.
INF06	The Project will notify third-party utility services of any damage and the damage will be repaired promptly in consultation with the service operator or utility owner. A timetable for repair of any damaged infrastructure will be agreed with the service operator or utility owner and communicated to affected communities.
INF07	If project activities affect land-based livelihoods because of interruption to irrigation, drainage or agricultural production, appropriate compensation will be provided in accordance with the RAP.
INF08	Authorities will be notified when oversize heavy loads need to be transported and such loads will be escorted by the project.
INF09	The design of new road sections and upgrades will take account of local conditions to ensure maintenance of good road condition, for example inclusion of drainage ditches.
INF10	A post-construction exit survey will be conducted covering all areas surveyed during preconstruction (and any additional land requirements during construction) to assess the condition of dwellings, roads used including bridges, drainage structures, signage, traffic management and other road infrastructure. Any actions, such as repairs, arising from the exit survey will be closed out on a timely basis to allow a prompt return to the relevant authority, village or landowner.
INF11	Infrastructure and utility services will be identified and protected during construction.
INF12	Where disruption to infrastructure and utilities will occur for more than 12 hours, a risk analysis of impacts on affected settlements will be completed. Where there will be a risk to health or livelihood to settlements or where the disruption is not acceptable to the affected settlements, alternatives will be provided.
INF13	An initial survey, supported by photographs, will be completed of the condition of roads to be used by the project including but limited to bridges, drainage structures, signage, traffic management and other road infrastructure. The survey will be agreed and signed by the road authority, local authority and any affected landowner. The survey will be made available to the road authority and municipal authorities if requested. The chosen project access routes will be improved as required to provide safe access for the project duration.
INF16	Where there is potential for congestion on shared transport routes, the project will liaise with third party developers, the police and authorities to identify and implement additional traffic management measures that limit disruption.

**E4.2.14 Community Health, Safety and Security Plan**

The community health, safety and security plan (CHSSP) will define approach to manage community health, safety and security issues and will include the mitigation measures listed below.

**Table E4.2-14 Community Health, Safety and Security Plan – Construction Phase**

ID	Mitigation Commitment
ACO08	Blasting will only be used where other excavation methods are considered technically impracticable or uneconomic. Where blasting is undertaken, a Blast Management Plan will be developed to consider the effects of noise, air overpressure and vibration on dwellings, structures and wildlife, and develop appropriate mitigation where required. The Blast Management Plan will be prepared by a competent person and peer reviewed.
BIO06	Appropriate measures will be implemented to prevent fauna or people from entering welded pipe sections or open excavations; there will be fauna ladders placed at suitable intervals in all open excavations. Animals will be removed safely and released into suitable habitat away from the working area.
BIO15	The maximum length of open trench at any one time (per spread) will be defined based on: <ul style="list-style-type: none"> <li>• the habitats present and potential ecological sensitivities (e.g., terrestrial commuting routes for large mammals)</li> <li>• community safety.</li> </ul> Gaps will also be left in soil stacks and pipe strings at strategic locations to allow passage of animals where it is considered safe to do so.
CHSW01	A strict project maximum speed limit will be enforced for project vehicles.
CHSW02	Local people will be consulted on the optimum location of crossing points and pastoralists informed of the access restrictions in advance, advising them to avoid cultivated areas. Crossing points will be provided across open trenches and welded pipes and gaps will be left in soil stacks and pipe strings at strategic locations. Incidents in conflicts between crop farmers and herders in the vicinity of the project footprint will be monitored and support will be provided to local authorities to obtain a resolution in cases of conflict wherever possible.
CHSW03	Security personnel engaged by the project will receive training on Voluntary Principles (this will include where army and or security forces are engaged by the project); performance will be monitored.
CHSW05	Where a safety risk assessment has identified a potential for construction interfaces to cause traffic accidents, temporary traffic control measures (signage, flagmen, temporary traffic lights, barricades) will be implemented.
CHSW11	Construction barriers will have visible warning signs understandable by local communities. Signage will be in accordance with internationally accepted symbols and/or be well known to local communities.
CHSW12	A risk assessment will be conducted for excavations with consideration to community safety.
CHSW14	The Voluntary Principles on Security and Human Rights will be implemented; compliance will be monitored.
CHSW19	Community awareness programmes will be developed and implemented in project-affected communities to explain: <ul style="list-style-type: none"> <li>• road safety risks and how to increase the safety of pedestrians particularly children</li> <li>• how to ensure their safety during construction</li> <li>• the measures that have been, or will be, implemented to protect their health and safety (e.g., provision of safe access).</li> </ul>
CHSW20	Vehicle movements will be restricted to defined access routes and demarcated working areas (unless in the event of an emergency).

**Table E4.2-14 Community Health, Safety and Security Plan – Construction Phase**

ID	Mitigation Commitment
CHSW21	Public awareness programmes for stakeholders will include a specific section about the security presence around the camp and security protocols which apply.
CHSW23	As part of the CHSSP, community-based programmes will be developed and implemented, in cooperation with Health Management Teams (HMTs) which consider: <ul style="list-style-type: none"> <li>• The development and implementation of a Community Malaria Control Programme.</li> <li>• The development and implementation of a Community HIV/TB Programme.</li> <li>• The development and implementation of a Community Water, Sanitation and Hygiene (WASH) Programme.</li> </ul>
CHSW33	Construction camp will be designated as having “closed” status to prevent interactions between the workforce and PACs and prevent the spread of communicable disease. Policies will be developed to manage transgressions within the project disciplinary procedures and structures.
HR25	The OHSSP, LMP and the CHSSP will include strategies for implementing the Voluntary Principles on Security and Human Rights.
HR34	An Information Education and Communication (IEC) programme will be developed for workers addressing social conduct and including topics such as: gender-based violence and, drug and alcohol misuse. The IEC programme will explore opportunities to support community initiatives addressing vulnerable groups including gender balance.
HR35	As part of the CHSSP, implement community patrols during the evenings to monitor and minimise night-time activity in project construction areas.
LIV01	The community health, safety and security plan will include measures to reduce the spread of animal diseases due to increased movement of livestock.
LIV03	The CHSSP will describe requirements to be implemented for vehicles passing through areas where animal disease control measures are in place.
SOL05	Local communities will be discouraged from using the right-of-way as an access road during construction through signage, awareness raising and the use of communication materials.

**E4.2.15 Occupational Health, Safety and Security Plan**

The occupational health, safety and security plan (OHSSP) will define the management of workforce occupational health, safety and security and will include the mitigation measures listed below.

**Table E4.2-15 Occupational Health, Safety and Security Plan – Construction Phase**

ID	Mitigation Commitment
CHSW04	As part of the OHSSP, a Substance Misuse Management Plan will be developed and implemented, focusing on zero tolerance of drugs and alcohol. Random drugs and alcohol testing of personnel will be conducted, recorded and audited regularly.
CHSW06	A malaria and other vector control management plan will be developed and implemented to ensure adequate control over malaria and other vector-related conditions in camp.

**Table E4.2-15 Occupational Health, Safety and Security Plan – Construction Phase**

ID	Mitigation Commitment
CHSW07	As part of the project OHSSP, a Communicable Disease Management Plan will be developed to manage infectious disease outbreaks in construction camp/MCPY and prevention of spread to PACs.
CHSW13	As part of the OHSSP, pipe skid supports will be constructed to a suitable standard to prevent risks to public and worker safety.
CHSW14	The Voluntary Principles on Security and Human Rights will be implemented; compliance will be monitored.
CHSW15	Pre-deployment screenings will be described in the LMP and communicated during the recruitment process
CHSW16	As part of the project OHSSP, vector management on all project sites will be risk based. Corridor controls for landscape maintenance, as well as integrated pest management procedures (environmental, biological and chemical), will be implemented.
CHSW24	As part of OHSSP, Health Design Specifications, adequate drainage and the avoidance of standing water will be considered in camp site selection, construction and operation.
CHSW31	A HIV/STD awareness and prevention programme will be put in place at the rest stops used by project drivers to address: <ul style="list-style-type: none"> <li>•awareness and understanding among drivers about the risks of HIV and STDs</li> <li>•the associated health implications</li> <li>•the preventative measures that can be taken</li> <li>•community awareness meetings</li> <li>•counselling and testing services</li> <li>•the distribution of information, leaflets and condoms.</li> </ul>
CHSW32	A vaccination plan will be identified to prevent communicable diseases for which vaccinations are available from being transmitted between the national/international and local workforce. This plan will apply to all project workers and visitors.
CHSW33	Construction camp will be designated as having “closed” status to prevent interactions between the workforce and PACs and prevent the spread of communicable disease. Policies will be developed to manage transgressions within the project disciplinary procedures and structures.
ECO10	Senior project security personnel will liaise directly with the army and/or security forces to provide information on project construction activities and schedules.
HR23	As part of Camp Management Standards, menus in project facility canteens will be developed in consultation with a dietician to ensure adequate nutrition, cultural acceptability, portion size and diversity that is acceptable to all workers.
HR25	The OHSSP, LMP and the CHSSP will include strategies for implementing the Voluntary Principles on Security and Human Rights.
HR28	As part of the project OHSSP, a job-specific risk assessment (RA) process will be developed to consider: <ul style="list-style-type: none"> <li>• risks associated with project activities;</li> <li>• mitigation measures (PPE, etc.); and</li> <li>• knowledge and understanding of the local workforce.</li> </ul> Based on the outcome of the RA process, appropriate management measures will be developed and implemented prior to any activities being undertaken.



**Table E4.2-15 Occupational Health, Safety and Security Plan – Construction Phase**

ID	Mitigation Commitment
HR29	Risks from and mitigation of Worker Fatigue will be specifically addressed in the Occupational Health, Safety and Security Plan and the Transport and Road Safety Management Plan; the latter will stipulate driving hours and night driving will be by exception only.
HR30	Specific classes of hazards will be identified in work areas, including physical, chemical, biological, and radiological hazards and communicated to the workforce.
HR31	As part of the OHSSP, special attention will be paid to the health and safety of pregnant women, disabled employees and other vulnerable workers.
HR32	PPE and safety gear will take into account gender differences and the special needs of pregnant women.
HR36	As part of the project OHSSP, ensure that vector management on all project sites (camp and construction) align with national vector control programmes and strategies.
WHSW01	Provision of food to workers will be planned to cater for workforce requirements and therefore minimise food waste as far as possible.
WHSW02	<p>As part of the project OHSSP, construction camp will be designed and built to meet national requirements and regulations. Measures will be detailed to avoid and reduce impacts associated with the development and occupation of construction camp, including but not limited to:</p> <ul style="list-style-type: none"> <li>• suitable and sufficient welfare facilities will be provided appropriate for both genders</li> <li>• clean and sanitary toilet facilities and showers will be provided appropriate for both genders.</li> <li>• adequate segregation between different areas (e.g. accommodation and hazardous areas)</li> <li>• measures to reduce or remove community disturbance or nuisance from the camp, e.g. preventing litter, dust generation, odours and noise.</li> <li>• include a helicopter landing area and secure fencing around the boundary.</li> </ul>
WHSW03	Provide workers with personal protection from prevalent diseases where feasible (e.g., condoms and ITN).
WHSW04	As part of camp management standards, procedures will be developed to maintain the condition of each camp and to ensure camp facilities are kept clean and hygienic.
WHSW05	As part of the OHSSP, a food and water management plan will be developed and implemented to reduce the risk of water- and food-borne disease outbreaks occurring among the workers and the associated risk of transmission to local communities.
WHSW06	As part of the OHSSP Risk Assessment process, the risk to worker health posed by wildlife at each camp and yard will be assessed and appropriate management measures will be developed and implemented.
WHSW08	As part of the OHSSP, a first aid needs assessment will be undertaken for each camp to determine first aider and first aid kit requirements (e.g., qualifications, content of kits, locations).
WHSW09	As part of the OHSSP, a pest control plan will be developed for implementation on construction camp.
WHSW10	As part of Camp Management Standards, pets will be prohibited in construction camp/MCPY.

**Table E4.2-15 Occupational Health, Safety and Security Plan – Construction Phase**

ID	Mitigation Commitment
WHSW12	As part of the OHSSP, a risk-based worksite and construction camp training programme will be developed and administered to the workforce, vendor representatives and site visitors; the training programme (including daily toolbox meetings) will be updated in accordance with changes made in scope, incident statistics and/or regulatory requirements. Daily toolbox meetings will be held where health and safety issues will be discussed.
WHSW15	A medical emergency response plan will be developed and implemented to ensure that emergency cases can be dealt with without impacting on district health services.
WHSW18	MCPY will have health facilities with sufficient capacity and capability to prevent additional pressure being placed on local and district health services.
WHSW19	As part of the OHSSP, basic workplace wellness programs that are culturally and religiously acceptable will be developed and implemented.

**E4.2.16 Transport and Road Safety Management Plan**

The transport and road safety management plan (TRSMP) will guide project logistics and support community and driver road safety during project related transportation activities and will include the mitigation measures listed below.

**Table E4.2-16 Transport and Road Safety Management Plan – Construction Phase**

ID	Mitigation Commitment
ACO09	The Project will conduct regular inspection of access roads to check for damage caused by project vehicles to repair damage in a timely and efficient manner. Strict load management will be enforced on all project vehicles.
CHSW01	A strict project maximum speed limit will be enforced for project vehicles.
CHSW05	Where a safety risk assessment has identified a potential for construction interfaces to cause traffic accidents, temporary traffic control measures (signage, flagmen, temporary traffic lights, barricades) will be implemented.
CHSW08	A transport and road safety management plan based on project policies, site-specific traffic risk assessments and safe driving procedures will be developed and implemented.
CHSW09	Only trained, certified and physically fit drivers will drive vehicles. Night-time driving will be by exception only.
CHSW10	Where appropriate, such as built up areas, a banksman will be used for reversing vehicles.
CHSW17	Community liaison officers will encourage PAC Leadership to provide advance warning of local events so that construction activities can be avoided at these times.
CHSW20	Vehicle movements will be restricted to defined access routes and demarcated working areas (unless in the event of an emergency).
CHSW26	Rest areas will be identified to allow drivers to comply with rest stop requirements and maximum daytime driving hours

**Table E4.2-16 Transport and Road Safety Management Plan – Construction Phase**

ID	Mitigation Commitment
HR29	Risks from and mitigation of Worker Fatigue will be specifically addressed in the Occupational Health, Safety and Security Plan and the Transport and Road Safety Management Plan; the latter will stipulate driving hours and night driving will be by exception only.
INF08	Authorities will be notified when oversize heavy loads need to be transported and such loads will be escorted by the project.
INF14	Preference will be given to transport of pipe and other construction materials by rail to Isaka where feasible.

**E4.2.17 Emergency Preparedness and Response Plan**

The emergency preparedness and response plan (EPRP) will define the approach to emergency preparedness and response and will include the mitigation measures listed below.

**Table E4.2-17 Emergency Preparedness and Response Plan – Construction Phase**

ID	Mitigation Commitment
EPR01	A spill response procedure based on Tier 1, 2 and 3 spill responsibilities defined in the Emergency Preparedness and Response Plan will be developed together with other responsible parties, and the necessary equipment and resources will be procured to implement it. The procedure will cover: <ul style="list-style-type: none"> <li>• responses for any unintended or unauthorised release of a potentially hazardous material, identification of locations where spill response equipment and resources will be provided, and procedures for its deployment</li> <li>• contact details for the rapid response team and spill response organisation</li> <li>• notification requirements.</li> <li>• All Tier 1, 2 and 3 spills will be reported in accordance with the project incident reporting system.</li> </ul>
EPR03	A schedule of emergency response exercises will be implemented to verify the project's emergency preparedness. A report of each exercise will be written and any areas for improvement identified.
EPR04	In the event of a spillage of hazardous materials the following actions will take place: <ul style="list-style-type: none"> <li>• A trained rapid response team will be mobilised</li> <li>• Spill response personnel and equipment will be provided to contain, cleanup and remediate (Tier 1 spills). A wider range of resources will be utilised to contain, cleanup and remediate Tier 2 and Tier 3 spills.</li> </ul>
WHSW15	A medical emergency response plan will be developed and implemented to ensure that emergency cases can be dealt with without impacting on district health services.

**E4.2.18 Monitoring and Reporting Plan**

The monitoring and reporting plan will define the approach to ensure that monitoring, inspections and audits are undertaken in a systematic way in order to monitor the success of the environmental and social mitigation measures as well as

gather data on environmental and social performance, investigation of incidents and non-conformance monitoring results. Monitoring approach for each identified potential impact is described in the ESMP matrix (Appendix K), complete with monitoring parameter, target criteria and monitoring frequency. The plan will include the mitigation measures listed below.

**Table E4.2-18 Monitoring and Reporting Plan – Construction Phase**

ID	Mitigation Commitment
GNL14	The Project will monitor and report on project environmental and social performance as required by national legislation and as required by the ESMP.
MBIO12	Monitoring of suspended sediment and sedimentation will be described in the Monitoring and Reporting Plan; results will inform remedial action.

## E4.3 Operational Phase

### E4.3.1 Biodiversity Management Plan

The biodiversity management plan (BMP) will define the approach to reduce impacts on biodiversity and will include the mitigation measures listed below.

**Table E4.3-1 Biodiversity Management Plan – Operational Phase**

ID	Mitigation Commitment
BIO34	Operation phase vegetation management activities will account for species of conservation importance and their habitat requirements for foraging, nesting and/or breeding.
BIO39	The Project will prohibit all staff and contractors from the possession, purchase, trade or collection of wildlife or living natural resources that are nationally legally protected, CITES listed, or classed as threatened by the IUCN Red List.
ECO11	The guidelines and procedures set out in 'Uganda Wildlife Authority (UWA) Operational Guidelines for Oil and Gas Exploration and Production in Wildlife Protected Areas, January 2014' will be implemented and incorporated within project standard operating procedures.

### E4.3.2 Pollution Prevention Plan

The pollution prevention plan (PPP) will define the approach to prevent pollution and will include the mitigation measures listed below.

**Table E4.3-2 Pollution Prevention Plan – Operational Phase**

ID	Mitigation Commitment
EPR04	In the event of a spillage of hazardous materials the following actions will take place: <ul style="list-style-type: none"> <li>• A trained rapid response team will be mobilised</li> <li>• Spill response personnel and equipment will be provided to contain, cleanup and remediate (Tier 1 spills). A wider range of resources will be utilised to contain, cleanup and remediate Tier 2 and Tier 3 spills.</li> </ul>

**Table E4.3-2 Pollution Prevention Plan – Operational Phase**

ID	Mitigation Commitment
WTR02	A refuelling procedure will be developed and implemented which will include but not be limited to: <ul style="list-style-type: none"> <li>• details of mobile and static refuelling areas and equipment (e.g. impermeable drip trays)</li> <li>• regulatory / GIIP constraints of refuelling operations to sensitive environmental receptors</li> <li>• spill prevention measures</li> <li>• training on refuelling procedures.</li> </ul>

**E4.3.3 Waste Management Plan**

The waste management plan (WMP) will define the approach to reduce potential waste related impacts. No mitigations identified at ESIA stage.

**E4.3.4 Natural Resource Management Plan**

The natural resource management plan (NRMP) will define the approach to manage natural resource use and will include the mitigation measures listed below.

**Table E4.3-3 Natural Resource Management Plan – Operational Phase**

ID	Mitigation Commitment
WTR12	An effective collection and disposal systems for stormwater from all paved/hardstanding areas and buildings will be provided at aboveground installations.

**E4.3.5 Soil Management Plan**

The soil management plan (SMP) will define the approach to soil management and temporary erosion control. No mitigations identified at ESIA stage.

**E4.3.6 Cultural Heritage Management Plan**

The cultural heritage management plan (CHMP) will define the approach to the identification, assessment and mitigation of potential impacts on tangible and intangible cultural heritage and will include the mitigation measures listed below.

**Table E4.3-4 Cultural Heritage Management Plan – Operational Phase**

ID	Mitigation Commitment
CUH06	A CHMP will include details of all cultural heritage features identified before and during construction. The CHMP will inform cultural heritage management measures that may be required during project operation.
CUH07	Collection of cultural heritage artefacts by workers for their own use is prohibited. Any cultural heritage artefacts found by workers will be left in situ and reported to the worksite supervisor or the cultural heritage monitor as required by the chance finds procedure.

### E4.3.7 Reinstatement Plan

The reinstatement plan (RP) will define the approach to manage reinstatement incorporating permanent erosion control and biorestore and will include the mitigation measures listed below.

**Table E4.3-5 Reinstatement Plan – Operational Phase**

ID	Mitigation Commitment
SOL16	When the pipeline is operating, regular monthly monitoring and inspections will be undertaken to check that the security and integrity of the pipeline is not compromised by erosion, with weekly monitoring at locations susceptible to erosion.

### E4.3.8 Stakeholder Engagement Plan

The stakeholder engagement plan (SEP) will define the approach to maintain a social licence to operate<sup>2</sup> among project-affected communities (PACs) and will include the mitigation measures listed below.

**Table E4.3-6 Stakeholder Engagement Plan – Operational Phase**

ID	Mitigation Commitment
ECO12	The Project will engage with tourism facilities and operators and relevant organisations to communicate information about the project and the management of environmental and social risks.

### E4.3.9 Resettlement Action Plan

The resettlement action plan (RAP) will define the approach for addressing physical and/or economic displacement of Project Affected Persons (PAPs). No mitigations identified at ESIA stage.

### E4.3.10 Labour Management Plan

The labour management plan (LMP) will define the approach to ensure recruitment practices and working conditions comply with legal requirements and project standards. The LMP will include the mitigation measures listed below.

**Table E4.3-7 Labour Management Plan – Operational Phase**

ID	Mitigation Commitment
BIO39	The Project will prohibit all staff and contractors from the possession, purchase, trade or collection of wildlife or living natural resources that are nationally legally protected, CITES listed, or classed as threatened by the IUCN Red List.
HR39	Equal remuneration for jobs of equal value for men and women will be provided.

<sup>2</sup> A social licence to operate exists when a project has ongoing approval or acceptance within the local community and other stakeholders.

**Table E4.3-7 Labour Management Plan – Operational Phase**

ID	Mitigation Commitment
HR41	The Project will review the project performance regarding the Voluntary Principles on Security and Human Rights and develop an action plan to address performance improvement where necessary; the operational phase Labour Management Plan, Occupational Health, Safety and Security Plan and, the Community Health, Safety and Security Plan will account for any new measures that are required.
WHSW20	The labour management plan will include: <ul style="list-style-type: none"> <li>• Compliance with international labour standards, national labour laws and regulations concerning transparency, accountability, anticorruption and human rights;</li> <li>• Recognising workers' right to organise collective bargaining and trade unions;</li> <li>• Providing suitable working conditions, including rest facilities and breaks;</li> <li>• Mechanism of compliance with the ILO Maternity Protection Convention (2000); and</li> <li>• Respecting workers' rights to privacy including data protection requirements.</li> </ul>

**E4.3.11 Project Induced In-Migration Management Plan**

The project induced in-migration management plan (PIIMP) will define the approach to prevent project induced in-migration and manage negative impacts of potential project induced in-migration. No mitigations identified at ESIA stage.

**E4.3.12 Procurement and Supply Chain Management Plan**

The procurement and supply chain management plan (PSCMP) will define the approach to supply chain management including environmental, social and quality considerations, maximise the purchase of local goods and services. The PSCMP will include the mitigation measures listed below.

**Table E4.3-8 Procurement and Supply Chain Management Plan – Operational Phase**

ID	Mitigation Commitment
BIO39	The Project will prohibit all staff and contractors from the possession, purchase, trade or collection of wildlife or living natural resources that are nationally legally protected, CITES listed, or classed as threatened by the IUCN Red List.

**E4.3.13 Infrastructure and Utilities Management Plan**

The infrastructure and utilities management plan (IUMP) will define the approach to monitor use of and/ or accidental damage to infrastructure and utilities and define the process of corrective action. No mitigations identified at ESIA stage.

**E4.3.14 Community Health, Safety and Security Plan**

The community health, safety and security plan (CHSSP) will define approach to manage community health, safety and security issues and will include the mitigation measures listed below.

**Table E4.3-9 Community Health, Safety and Security Plan – Operational Phase**

ID	Mitigation Commitment
CHSW01	A strict project maximum speed limit will be enforced for project vehicles.
CHSW23	As part of the CHSSP, community-based programmes will be developed and implemented, in cooperation with Health Management Teams (HMTs) which consider: <ul style="list-style-type: none"> <li>• The development and implementation of a Community Malaria Control Programme.</li> <li>• The development and implementation of a Community HIV/TB Programme.</li> <li>• The development and implementation of a Community Water, Sanitation and Hygiene (WASH) Programme.</li> </ul>
HR41	The Project will review the project performance regarding the Voluntary Principles on Security and Human Rights and develop an action plan to address performance improvement where necessary; the operational phase Labour Management Plan, Occupational Health, Safety and Security Plan and, the Community Health, Safety and Security Plan will account for any new measures that are required.

**E4.3.15 Occupational Health, Safety and Security Plan**

The occupational health, safety and security plan (OHSSP) will define the management of workforce occupational health, safety and security and will include the mitigation measures listed below.

**Table E4.3-10 Occupational Health, Safety and Security Plan – Operational Phase**

ID	Mitigation Commitment
CHSW24	As part of OHSSP, Health Design Specifications, adequate drainage and the avoidance of standing water will be considered in camp site selection, construction and operation.
HR41	The Project will review the project performance regarding the Voluntary Principles on Security and Human Rights and develop an action plan to address performance improvement where necessary; the operational phase Labour Management Plan, Occupational Health, Safety and Security Plan and, the Community Health, Safety and Security Plan will account for any new measures that are required.

**E4.3.16 Transport and Road Safety Management Plan**

The transport and road safety management plan (TRSMP) will guide project logistics and support community and driver road safety during project related transportation activities and will include the mitigation measures listed below.

**Table E4.3-11 Transport and Road Safety Management Plan – Operational Phase**

ID	Mitigation Commitment
CHSW01	A strict project maximum speed limit will be enforced for project vehicles.



### E4.3.17 Emergency Preparedness and Response Plan

The emergency preparedness and response plan (EPRP) will define the approach to emergency preparedness and response and will include the mitigation measures listed below.

**Table E4.3-12 Emergency Preparedness and Response Plan – Operational Phase**

ID	Mitigation Commitment
EPR01	<p>A spill response procedure based on Tier 1, 2 and 3 spill responsibilities defined in the Emergency Preparedness and Response Plan will be developed together with other responsible parties, and the necessary equipment and resources will be procured to implement it. The procedure will cover:</p> <ul style="list-style-type: none"> <li>• responses for any unintended or unauthorised release of a potentially hazardous material, identification of locations where spill response equipment and resources will be provided, and procedures for its deployment</li> <li>• contact details for the rapid response team and spill response organisation</li> <li>• notification requirements.</li> <li>• All Tier 1, 2 and 3 spills will be reported in accordance with the project incident reporting system.</li> </ul>
EPR03	<p>A schedule of emergency response exercises will be implemented to verify the project's emergency preparedness. A report of each exercise will be written and any areas for improvement identified.</p>
EPR04	<p>In the event of a spillage of hazardous materials the following actions will take place:</p> <ul style="list-style-type: none"> <li>• A trained rapid response team will be mobilised</li> <li>• Spill response personnel and equipment will be provided to contain, cleanup and remediate (Tier 1 spills). A wider range of resources will be utilised to contain, cleanup and remediate Tier 2 and Tier 3 spills.</li> </ul>

### E4.3.18 Monitoring and Reporting Plan

The monitoring and reporting plan will define the approach to ensure that monitoring, inspections and audits are undertaken in a systematic way in order to monitor the success of the environmental and social mitigation measures as well as gather data on environmental and social performance, investigation of incidents and non-conformance monitoring results. Monitoring approach for each identified potential impact is described in the ESMP matrix (Appendix K), complete with monitoring parameter, target criteria and monitoring frequency. The plan will include the mitigation measures listed below.

**Table E4.3-13 Monitoring and Reporting Plan – Operational Phase**

ID	Mitigation Commitment
GNL12	<p>The Project will monitor and report on project environmental and social performance as required by national legislation and as required by the ESMP.</p>
MBIO12	<p>Monitoring of suspended sediment and sedimentation will be described in the Monitoring and Reporting Plan; results will inform remedial action.</p>

## **E4.4 Mitigation Commitments Register**

Table E4.4-1 below summarises project mitigation measures in alphabetical order, together with the corresponding management plans.

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
ACO01	Project noise emissions will not result in an exceedance of PES or national legislative noise criteria at any existing sensitive receptor site.	Y		PPP
ACO02	Location specific assessments will be undertaken at sensitive receptors in proximity to project activities occurring between 7 p.m. and 7 a.m. to identify appropriate mitigation where there is potential to cause disturbance from noise and vibration.	Y		PPP
ACO03	A preconstruction record of condition, including a photographic log, will be developed. The validity of any claims of damage resulting from project activities will be assessed against the preconstruction record of condition, repairs will be undertaken or appropriate compensation paid if damage is proven.	Y		PPP, SEP
ACO04	Preference will be given to selecting low noise and vibration emitting equipment for all construction works.	Y		PPP
ACO05	Activities that generate high levels of noise and vibration will be assessed to determine potential impacts and mitigation will be implemented where appropriate. Notifications of work will be given at least 72 hrs in advance of work to residents / occupants located within: <ul style="list-style-type: none"> <li>• 100 m of RoW prior to trenching</li> <li>• 50 m of RoW prior to lowering and laying of pipe</li> <li>• 50 m of RoW prior to backfilling and compaction</li> <li>• 250 m of any road upgrades and new access roads.</li> </ul>	Y		PPP, SEP
ACO06	Potential noise and vibration impacts will be assessed where piling is to be undertaken close to sensitive receptors. Where possible, alternative techniques or materials will be used to reduce potential impacts, e.g. restrictions on times and duration in any given day that piling activities are undertaken.	Y		PPP
ACO07	Where possible new access roads will be constructed a minimum of 100 m away from sensitive receptors (hospitals, educational facilities or dwellings).	Y		PPP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
ACO08	Blasting will only be used where other excavation methods are considered technically impracticable or uneconomic. Where blasting is undertaken, a Blast Management Plan will be developed to consider the effects of noise, air overpressure and vibration on dwellings, structures and wildlife, and develop appropriate mitigation where required. The Blast Management Plan will be prepared by a competent person and peer reviewed.	Y		PPP, SEP, CHSSP
ACO09	The Project will conduct regular inspection of access roads to check for damage caused by project vehicles to repair damage in a timely and efficient manner. Strict load management will be enforced on all project vehicles.	Y		SEP, IUMP, TRSMP
AIR01	Where construction generated dust may affect sensitive receptors, the following mitigation measures will be considered: <ul style="list-style-type: none"> <li>• dust suppression at work-sites and transport routes</li> <li>• adherence to RoW speed limits supplemented by awareness training</li> <li>• sheeting of fine materials being transported or stored on-site</li> </ul>	Y		PPP
AIR02	To minimise emissions to air, vehicles, machines and equipment will: <ul style="list-style-type: none"> <li>• be appropriate for the task required</li> <li>• have a valid maintenance and inspection certificate or log books</li> <li>• be allocated a unique identifier to be used in a maintenance log</li> <li>• be maintained regularly in accordance with the manufacturer's recommendations to maximise fuel efficiency and help reduce emissions</li> <li>• not be allowed to idle – engines will be switched off when not in use.</li> </ul>	Y		PPP
AIR03	Vehicles or equipment seen to be emitting excessive black smoke will not be permitted to continue work and will be sent for maintenance.	Y		PPP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
BIO01	Preconstruction biodiversity surveys will be undertaken at locations identified in the baseline appendices of the environmental and social impact assessment to record details of habitats and species of conservation importance within the working areas. This information will be used to produce site specific biodiversity management plans that will identify fine-scale route changes (where feasible), mark features for retention and protection, develop bio restoration measures including seed collection, translocation and species propagation and provide details of the specific mitigation measures (such as seasonal construction restrictions) to be implemented to reduce impacts on biodiversity during construction.	Y		BMP
BIO02	Supplementary preconstruction biodiversity baseline surveys will be undertaken in locations identified in the baseline appendices of the environmental and social impact assessment in order to produce a Biodiversity Action Plan to identify further enhancement and conservation measures.	Y		BMP
BIO03	As part of the Biodiversity Management plan a vegetation removal method statement to reduce impacts on biodiversity will be developed. This will include but not be limited to measures such as: <ul style="list-style-type: none"> <li>• directional felling of trees on land inside the right-of-way</li> <li>• avoiding damage to trees outside the right-of-way</li> <li>• identifying areas where strimming, coppicing or other works will be undertaken in advance of clearing.</li> </ul>	Y		BMP
BIO05	Hunting, fishing, unauthorised gathering of products (including plants and firewood) and deliberate disturbance or harassment of fauna will be prohibited for project personnel. The Project will restrict the purchase of wildlife related products and crafts by project workers.	Y		BMP, LMP
BIO06	Appropriate measures will be implemented to prevent fauna or people from entering welded pipe sections or open excavations; there will be fauna ladders placed at suitable intervals in all open excavations. Animals will be removed safely and released into suitable habitat away from the working area.	Y		BMP, SEP, CHSSP
BIO07	During open-cut watercourse crossing activities, bank and bed material will be segregated, stored away from the active channels, and not be placed where flow or drainage will be obstructed.	Y		BMP, SMP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
BIO08	<p>A biodiversity survey strategy will be developed to include timings and methods of surveys to be undertaken, including but not limited to:</p> <ul style="list-style-type: none"> <li>• supplemental preconstruction flora and fauna surveys</li> <li>• supplemental preconstruction biodiversity surveys of pre identified species of conservation concern</li> <li>• a biodiversity assessment of watercourses and wetlands</li> <li>• an assessment of fish spawning habitat at open-cut river crossings where the watercourse crossing is planned to occur during the fish-spawning season and International Union for Conservation of Nature or Red Data Book species are known or likely to occur</li> <li>• preclearance checks on the right-of-way.</li> </ul>	Y		BMP
BIO09	<p>Before construction starts, a plan will be prepared for translocating fauna and flora in areas identified in the environmental and social impact assessment and preconstruction surveys. The pre-entry surveys will be referred to when deciding suitable locations for replanting of translocated species or species planted to compensate for those removed during construction.</p>	Y		BMP
BIO10	<p>A written and photographic record will be kept of translocated species for verification and potential post-construction monitoring. The success of translocation will be monitored during and post-construction for species of conservation importance.</p>	Y		BMP
BIO11	<p>Information on seasonal constraints recorded within the baseline appendices environmental and social impact assessment will be used to identify activities that need to be undertaken at a specific time of year or periods when activities cannot be completed without project approval of a deviation (e.g., during sensitive periods such as breeding and migration of species).</p>	Y		BMP
BIO12	<p>Where a section of the right-of-way is through habitats with high biodiversity value (as identified in the baseline appendices of the environmental and social impact assessment), the area will be reviewed to determine if the working width can be reduced to limit impacts as much as possible.</p>	Y		BMP
BIO13	<p>Open-cut river crossings will be undertaken during the dry season where possible; where not possible site-specific method statements will be developed addressing ecological sensitivities.</p>	Y		BMP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
BIO14	As much riparian vegetation as possible will be left in place until immediately before a watercourse crossing needs to be made to maintain stability of the banks. During site preparation, the height of vegetation on the riverbanks will be reduced, but roots will not be disturbed, to dissuade animals from nesting. The vegetation will then be removed when the crossing is made and the area reinstated as quickly as possible.	y		BMP
BIO15	The maximum length of open trench at any one time (per spread) will be defined based on: <ul style="list-style-type: none"> <li>• the habitats present and potential ecological sensitivities (e.g., terrestrial commuting routes for large mammals)</li> <li>• community safety.</li> </ul> Gaps will also be left in soil stacks and pipe strings at strategic locations to allow passage of animals where it is considered safe to do so.	Y		BMP, CHSSP
BIO16	If dams and pumps are used to maintain water flow during the construction of watercourse crossings or abstraction of water from watercourses is required, fish screens will be used on the end of the pump inlet hose. Any fish caught within dammed areas either side of the crossing will be transferred up or downstream as appropriate by suitably experienced personnel.	Y		BMP
BIO17	Where watercourse bank reinforcement is required, the impact on riparian habitats and riparian fauna will be assessed to determine if the reinstatement or reinforcement is sufficient to maintain connectivity along the riparian elements of the watercourse. Mitigation will be installed to maintain habitat connectivity.	Y		BMP, RP
BIO18	All incidences of accidental injury or death of fauna will be recorded, including details of the circumstances, time, species, size and habitat. The report will be reviewed to determine if any action should be taken to prevent further incidents.	Y		BMP
BIO19	Biosecurity measures will be developed and implemented that will include a strategy for weed and pest control and measures to prevent the introduction or spread of alien invasive species on the RoW, work sites and camp facilities. The biosecurity measures will also outline specifics to protect the aquatic environment from alien invasive species.	Y		BMP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
BIO21	Species' populations will be monitored pre and post construction. The project will employ adaptive management in response to findings.	Y		BMP
BIO23	The use of pesticides, rodenticides and other chemicals is prohibited in proximity to raptor habitat.	Y		BMP
BIO24	The total duration of construction disturbance (i.e. the time between initial site clearing and final reinstatement/biorestitution) will be minimised.	Y		BMP
BIO26	The Project will support the relevant management authority with capacity-building, for example by contributing to additional ranger support or other activities identified in the existing protected area management plan prepared by the relevant management authority.	Y		BMP, SEP
BIO34	Operation phase vegetation management activities will account for species of conservation importance and their habitat requirements for foraging, nesting and/or breeding.		Y	BMP
BIO36	<p>A strategy for tree removal and replanting will be developed; the strategy will consider:</p> <ul style="list-style-type: none"> <li>• where trees are to be removed, the species and size/age of trees that will be recorded prior to removal; data to be recorded includes: trunk diameter at chest height, number of each species, species and, location</li> <li>• the number of trees and species to be removed during construction</li> <li>• conservation value of the species to be removed</li> <li>• variety of species to be replanted</li> <li>• provenance of species used for replanting</li> <li>• the region-specific environmental characteristics influencing replanting success.</li> </ul> <p>Preconstruction surveys will be referred to when deciding suitable locations for replanting of translocated species or species planted to compensate for those removed during construction.</p>	Y		BMP, RP



**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
BIO37	The need to compensate for trees removed will be determined on a site-by-site basis and will take into account the species removed. Preference will be given to native species representative of adjacent undisturbed areas. No exotic species will be planted unless specifically required by the forestry agency. In areas of plantation forestry, the requirements of the forestry agency will be met (e.g., ratios for compensation planting).	Y		BMP, RP, SEP, RAP
BIO38	Ways to achieve an increasing trend in vegetation regrowth and diversity of desired species, specifically species composition and, plant species that support forage, refuge and nesting for species of conservation importance, in reinstated areas will be sought, with reference to nearby areas undisturbed by project activities. The re-establishment of vegetation will be monitored following reinstatement until long term re-vegetation targets have been reached.	Y		BMP
BIO39	The Project will prohibit all staff and contractors from the possession, purchase, trade or collection of wildlife or living natural resources that are nationally legally protected, CITES listed, or classed as threatened by the IUCN Red List.	Y	Y	BMP, LMP, PSCMP
BIO40	Hunting, consumption, transport and or purchase of bushmeat will be prohibited for project employees and contractors. Workers will be prohibited from collecting shells, timber, firewood, fibres and other plant based resources. Fishing by workers will not be permitted.	Y	Y	LMP, PSCMP
CHSW01	A strict project maximum speed limit will be enforced for project vehicles.	Y	Y	CHSSP, TRSMP
CHSW02	Local people will be consulted on the optimum location of crossing points and pastoralists informed of the access restrictions in advance, advising them to avoid cultivated areas. Crossing points will be provided across open trenches and welded pipes and gaps will be left in soil stacks and pipe strings at strategic locations. Incidents in conflicts between crop farmers and herders in the vicinity of the project footprint will be monitored and support will be provided to local authorities to obtain a resolution in cases of conflict wherever possible.	Y		SEP, RAP, CHSSP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
CHSW03	Security personnel engaged by the project will receive training on Voluntary Principles (this will include where army and or security forces are engaged by the project); performance will be monitored.	Y		CHSSP, MRP
CHSW04	As part of the OHSSP, a Substance Misuse Management Plan will be developed and implemented, focusing on zero tolerance of drugs and alcohol. Random drugs and alcohol testing of personnel will be conducted, recorded and audited regularly.	Y		OHSSP
CHSW05	Where a safety risk assessment has identified a potential for construction interfaces to cause traffic accidents, temporary traffic control measures (signage, flagmen, temporary traffic lights, barricades) will be implemented.	Y		CHSSP, TRSMP
CHSW06	A malaria and other vector control management plan will be developed and implemented to ensure adequate control over malaria and other vector-related conditions in camp.	Y		OHSSP
CHSW07	As part of the project OHSSP, a Communicable Disease Management Plan will be developed to manage infectious disease outbreaks in construction camp/MCPY and prevention of spread to PACs.	Y		OHSSP
CHSW08	A transport and road safety management plan based on project policies, site-specific traffic risk assessments and safe driving procedures will be developed and implemented.	Y		TRSMP
CHSW09	Only trained, certified and physically fit drivers will drive vehicles. Night-time driving will be by exception only.	Y		LMP, TRSMP
CHSW10	Where appropriate, such as built up areas, a banksman will be used for reversing vehicles.	Y		TRSMP
CHSW11	Construction barriers will have visible warning signs understandable by local communities. Signage will be in accordance with internationally accepted symbols and/or be well known to local communities.	Y		CHSSP
CHSW12	A risk assessment will be conducted for excavations with consideration to community safety.	Y		CHSSP
CHSW13	As part of the OHSSP, pipe skid supports will be constructed to a suitable standard to prevent risks to public and worker safety.	Y		OHSSP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
CHSW14	The Voluntary Principles on Security and Human Rights will be implemented; compliance will be monitored.	Y		LMP, CHSSP, OHSSP, MRP
CHSW15	Pre-deployment screenings will be described in the LMP and communicated during the recruitment process	Y		LMP, OHSSP
CHSW16	As part of the project OHSSP, vector management on all project sites will be risk based. Corridor controls for landscape maintenance, as well as integrated pest management procedures (environmental, biological and chemical), will be implemented.	Y		OHSSP
CHSW17	Community liaison officers will encourage PAC Leadership to provide advance warning of local events so that construction activities can be avoided at these times.	Y		SEP, TRSMP
CHSW18	Regular meetings will be held with PAC representatives, during construction in their area, to update them on construction progress and to receive comments or queries. A community liaison log will be maintained detailing the content of all meetings.	Y		SEP
CHSW19	Community awareness programmes will be developed and implemented in project-affected communities to explain: <ul style="list-style-type: none"> <li>• road safety risks and how to increase the safety of pedestrians particularly children</li> <li>• how to ensure their safety during construction</li> <li>• the measures that have been, or will be, implemented to protect their health and safety (e.g., provision of safe access).</li> </ul>	Y		SEP, CHSSP
CHSW20	Vehicle movements will be restricted to defined access routes and demarcated working areas (unless in the event of an emergency).	Y		BMP, CHSSP, TRSMP
CHSW21	Public awareness programmes for stakeholders will include a specific section about the security presence around camp and security protocols which apply.	Y		SEP, CHSSP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
CHSW22	A Stakeholder Engagement Plan will be developed and implemented, identifying how the Project will engage and consult with internal and external stakeholders to keep them informed about project activities, understand and respond to their concerns and report to them on the project's environmental and social performance.	Y		SEP
CHSW23	As part of the CHSSP, community-based programmes will be developed and implemented, in cooperation with Health Management Teams (HMTs) which consider: <ul style="list-style-type: none"> <li>• The development and implementation of a Community Malaria Control Programme.</li> <li>• The development and implementation of a Community HIV/TB Programme.</li> <li>• The development and implementation of a Community Water, Sanitation and Hygiene (WASH) Programme.</li> </ul>	Y	Y	CHSSP
CHSW24	As part of OHSSP, Health Design Specifications, adequate drainage and the avoidance of standing water will be considered in camp site selection, construction and operation.	Y	Y	OHSSP
CHSW25	A monitoring plan will be developed and implemented to ensure that environmental noise exposure levels are periodically monitored and documented. Procedures for corrective measures will be incorporated and implemented in the event of exceedances.	Y		PPP, MRP
CHSW26	Rest areas will be identified to allow drivers to comply with rest stop requirements and maximum daytime driving hours	Y		TRSMF
CHSW27	Spouses will be consulted and present during the land surveys, entitlement briefings and compensation agreements and both spouses will sign the compensation agreements.	Y		SEP, RAP
CHSW28	The project will work closely with local authorities to monitor any emerging tensions between crop farmers and pastoralists related to project impacts.	Y		SEP
CHSW29	The Project will liaise with other third-party developments and relevant government bodies to share information about their worker and community health management strategies, as well as information about worker movements, to ensure that they are commensurate and enable an efficient and coordinated response to any potential disease outbreak.	Y		SEP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
CHSW31	A HIV/STD awareness and prevention programme will be put in place at the rest stops used by project drivers to address: <ul style="list-style-type: none"> <li>•awareness and understanding among drivers about the risks of HIV and STDs</li> <li>•the associated health implications</li> <li>•the preventative measures that can be taken</li> <li>•community awareness meetings</li> <li>•counselling and testing services</li> <li>•the distribution of information, leaflets and condoms.</li> </ul>	Y		LMP, OHSSP
CHSW32	A vaccination plan will be identified to prevent communicable diseases for which vaccinations are available from being transmitted between the national/international and local workforce. This plan will apply to all project workers and visitors.	Y		LMP, OHSSP
CHSW33	Construction camp will be designated as having “closed” status to prevent interactions between the workforce and PACs and prevent the spread of communicable disease. Policies will be developed to manage transgressions within the project disciplinary procedures and structures.	Y		PIIMP, CHSSP, OHSSP
CLI01	Electrical equipment of a size that is appropriate for the functions to be performed will be selected with a view to maximising energy efficiency. Electrical equipment will be turned off when not in use.	Y		PPP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
CUH01	<p>A preconstruction survey of the RoW will be undertaken to collect data on location, extent and mitigation measures of known and unknown assets (tangible and intangible cultural heritage (TCH and ICH)) and to consult community leaders about ICH sites or practices not yet identified.</p> <p>A report including a GIS file will be prepared that will recommend location-specific actions to be undertaken that could include:</p> <ul style="list-style-type: none"> <li>• Avoidance of a site</li> <li>• Access constraints to reduce disturbance to a site</li> <li>• Excavation of a site</li> <li>• a watching brief during vegetation removal or topsoil stripping</li> <li>• requirements to maintain access to cultural heritage assets</li> </ul> <p>A schedule of sites and actions to be undertaken will be prepared and included in the cultural heritage management plan (CHMP) and any appropriate licences obtained.</p>	Y		CHMP, SEP
CUH02	<p>A senior cultural heritage monitor (SCHM) will ensure that the cultural heritage management plan (CHMP) will be implemented, in agreement with relevant government authorities, in advance of construction. The CHMP will include a chance finds procedure.</p> <p>The cultural heritage team will schedule regular meetings and progress reports so that government authorities and appropriate community leaders are kept informed, including:</p> <ul style="list-style-type: none"> <li>• regular report on progress of excavations</li> <li>• a post-excavation assessment report</li> <li>• a research archive</li> <li>• a final publication of results of tangible or intangible heritage investigations as appropriate to the significance of the outcomes.</li> <li>• chance finds reports will be provided to the government authority and relevant stakeholders.</li> </ul> <p>The SCHM will be supported by a tangible cultural heritage monitor (TCHM) and an intangible cultural heritage monitor (ICHM) to evaluate the effectiveness of the cultural heritage protection measures and deliver awareness training for all project personnel.</p>	Y		CHMP, SEP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
CUH03	A written scheme of investigation (WSI) will be prepared where an intervention is needed and appended to the cultural heritage management plan (CHMP). Until investigation and recording in accordance with the WSI, or avoidance or management activity is signed off by government authorities, construction may not proceed in that area.	Y		CHMP, SEP
CUH04	The senior cultural heritage monitor (SCHM) will prepare the chance finds procedure (CFP); Chance finds will be excavated by suitably qualified and approved archaeologists, in accordance with the CFP and authorised by the relevant government authority.	Y		CHMP, SEP
CUH05	Information on intangible cultural heritage (ICH) collected during the preconstruction survey will be evaluated and integrated into the cultural heritage management plan (CHMP). This will include information on indigenous peoples and vulnerable groups if present.	Y		CHMP
CUH06	A CHMP will include details of all cultural heritage features identified before and during construction. The CHMP will inform cultural heritage management measures that may be required during project operation.	Y	Y	CHMP
CUH07	Collection of cultural heritage artefacts by workers for their own use is prohibited. Any cultural heritage artefacts found by workers will be left in situ and reported to the worksite supervisor or the cultural heritage monitor as required by the chance finds procedure.	Y	Y	CHMP
CUH08	Any decompaction/ripping or other ground disturbance activities required during reinstatement will be planned to avoid any cultural heritage feature that has been preserved in situ.	Y		CHMP, RP
ECO01	A Procurement and Supply Chain Management Plan (PSCMP) will be developed to maximise the purchase of goods and services from within Uganda/Tanzania. This will be contingent on whether local suppliers can offer sufficient quality and reliability and can meet project requirements. PSCMP will include, as appropriate, enterprise development, capacity development and ring-fencing contracts.	Y		PSCMP
ECO02	Project use of third-party quarries and borrow pits will require verification of national regulatory and project standard compliance; where suppliers do not meet project standards an action plan will be implemented to build capacity, so the supplier can meet the project standard in a timely manner.	Y		NRMP, PSCMP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
ECO03	Compliance with project human resources policies and procedures will be a construction contract requirement.	Y		LMP, PSCMP
ECO04	<p>An approved recruitment procedure will be implemented that:</p> <ul style="list-style-type: none"> <li>• Is transparent and open to all regardless of race, political opinion, colour, creed, sexuality or gender.</li> <li>• Includes a local recruitment strategy.</li> <li>• Considers social and cultural sensitivities.</li> <li>• Describes the employment criteria for the recruitment of professional, semiskilled and unskilled labour.</li> <li>• Prohibits discrimination or harassment of job applicants.</li> </ul> <p>Job descriptions will advertise vacancies in local languages in the PACs through accessible media and on the project website.</p> <p>Targets for local recruitment from project-affected communities will be set by the project. These will be designed to meet legal requirements. An employment office will be established in the local area to conduct local recruitment.</p>	Y		SEP, LMP
ECO05	<p>A public awareness programme to communicate employment and training opportunities will be implemented that includes but is not limited to:</p> <ul style="list-style-type: none"> <li>• The local recruitment strategy.</li> <li>• Criteria for employment.</li> <li>• The number and types of employment opportunities.</li> <li>• The procedure for applying for employment.</li> </ul> <p>Information will be disseminated publicly, including via media announcements at regional and national levels and during public meetings in PACs.</p> <p>Care will be taken to reach women and vulnerable groups if necessary through targeted meetings scheduled at times and locations that may increase women's participation</p>	Y		SEP, LMP



**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
ECO06	A PIIMP will aim to reduce the number of people that arrive into project-affected communities; the PIIM will also identify requirements for: <ul style="list-style-type: none"> <li>• Monitoring effects of in-migration and demographic change.</li> <li>• Monitoring relations between communities and in-migrants.</li> <li>• Education of project workers and local communities on impacts related to in-migration.</li> </ul>	Y		SEP, PIIMP, MRP
ECO07	A retrenchment plan will be prepared, using the principles in the International Finance Corporation’s Good Practice Note No. 4: Managing Retrenchment, 2005, with the aim of reducing the impacts of cessation of employment contracts.	Y		LMP
ECO08	Before construction, a benchmarking exercise gathering data associated with average incomes in the private and public sector for each region/district will be undertaken. This information will be used to identify salary levels for the construction workforce so that disparities between project-related salaries and local businesses/public sector salaries are avoided.	Y		LMP
ECO09	Before construction, a benchmarking exercise to gather data associated with average prices for goods will be undertaken in each region/district. This information will be used to identify appropriate prices so that large price disparities between project-procured goods and local goods are avoided.	Y		SEP, PSCMP
ECO10	Senior project security personnel will liaise directly with the army and/or security forces to provide information on project construction activities and schedules.	Y		SEP, OHSSP
ECO11	The guidelines and procedures set out in ‘Uganda Wildlife Authority (UWA) Operational Guidelines for Oil and Gas Exploration and Production in Wildlife Protected Areas, January 2014’ will be implemented and incorporated within project standard operating procedures.	Y	Y	BMP
ECO12	The Project will engage with tourism facilities and operators and relevant organisations to communicate information about the project and the management of environmental and social risks.	Y	Y	SEP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
ECO15	The project will undertake a benchmarking assessment on the inflation of goods within PACs if construction phases with other third parties with large workforces coincide. The results of benchmarking will be shared with the proponents of the third-party developments as required.	Y		SEP
EPR01	A spill response procedure based on Tier 1, 2 and 3 spill responsibilities defined in the Emergency Preparedness and Response Plan will be developed together with other responsible parties, and the necessary equipment and resources will be procured to implement it. The procedure will cover: <ul style="list-style-type: none"> <li>• responses for any unintended or unauthorised release of a potentially hazardous material, identification of locations where spill response equipment and resources will be provided, and procedures for its deployment</li> <li>• contact details for the rapid response team and spill response organisation</li> <li>• notification requirements.</li> <li>• All Tier 1, 2 and 3 spills will be reported in accordance with the project incident reporting system.</li> </ul>	Y	Y	EPRP
EPR02	Spill response equipment, such as absorbents and spill kits, will be available at all work site locations and on fuel bowzers and tankers. The spill kits will be inspected regularly to ensure they remain adequate for the needs of the project. The spill kits will be logged, inventoried and maintained.	Y		PPP
EPR03	A schedule of emergency response exercises will be implemented to verify the project's emergency preparedness. A report of each exercise will be written and any areas for improvement identified.	Y	Y	EPRP
EPR04	In the event of a spillage of hazardous materials the following actions will take place: <ul style="list-style-type: none"> <li>• A trained rapid response team will be mobilised</li> <li>• Spill response personnel and equipment will be provided to contain, cleanup and remediate (Tier 1 spills). A wider range of resources will be utilised to contain, cleanup and remediate Tier 2 and Tier 3 spills.</li> </ul>	Y	Y	PPP, EPRP
GNL01	The Project will implement a grievance procedure to provide opportunities for PACs to express grievances about project activities. The grievance process will be communicated to and promoted within all PACs; it will be clearly communicated to PACs that complaints related to interactions with public or private security forces will be addressed.	Y		SEP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
GNL02	The Project will advise appropriate regulators and lead agencies of the construction schedule	Y		SEP
GNL03	The Project will, in collaboration with the government and other third-party developers in the Albertine Graben, participate in the Regional Cumulative Impacts Management (RCIM) initiative proposed by the upstream Tilenga Project.	Y		SEP
GNL05	The Project will ensure that the proponents of the associated facilities are made aware of the construction schedule so that construction activities can be strategically planned to reduce disruption.	Y		SEP
GNL06	The project will continue engagement with Tilenga PACs and Buliisa and Hoima district local authorities during the construction phases of the project, emphasising the temporary nature of construction employment.	Y		SEP
GNL08	The project will consider the issue of double resettlement into its resettlement plan.	Y		SEP, RAP
GNL09	The Project will engage proponents of the associated facilities and the third-party developments and relevant government agencies to consider options for management measures to address significant cumulative impacts. Options could cover: project design, scheduling, construction management or operations management. Project	Y		SEP
GNL10	The project will participate in regional cumulative environmental management initiatives being developed in collaboration with operators of current projects, developers of proposed projects, and led by the government. It is envisaged that initiative management priorities would be defined for implementation by industry participants. Objectives are expected to include: creation of a governance structure; assessment of regional cumulative impacts based on collective baseline data and ESIA's that have been prepared for projects in the region; establishment and monitoring of environmental and social thresholds; collaborative development of cumulative impact management plans and mitigation measures.	Y		SEP
GNL11	The Project will ensure that the proponents of the associated facilities are made aware of the construction schedule so that construction activities can be strategically planned to reduce disruption.	Y		SEP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
GNL13	The Project will assist with capacity-building for government organisations to develop and budget for appropriate town planning, infrastructure and service provisions in the mid-Western Region (Hoima).			SEP
GNL14	The Project will monitor and report on project environmental and social performance as required by national legislation and as required by the ESMP.	Y	Y	MRP
HR01	Financial management workshops will be held with workers to raise levels of financial literacy. During the recruitment process and throughout their contract, workers will be advised regularly that the duration of their employment is temporary and that they should maintain their existing livelihoods during this period and prepare through sound financial management for the ultimate termination of their employment.	Y		SEP, LMP
HR02	As part of the tendering process, (sub) contractors will be required to include training components in their proposal aimed at increasing local employment as well as improving skills of local staff.	Y		PSCMP
HR03	The workers' grievance procedure will include the option to log grievances anonymously.	Y		LMP
HR04	A formal structure will be established (e.g. Ethics Committee), which deals with infringement of Human Rights linked to the working environment; a company representative will participate in the Ethics Committee; infringements of the Project labour policy and national regulations will be monitored.	Y		SEP, LMP, MRP
HR05	Hiring managers from (sub) contractors will receive training regarding the developer's non-discrimination policies.	Y		LMP, PSCMP
HR06	Gender-based hiring criteria will be included in tendering documents, so that it becomes part of the selection criteria for (sub) contractors; contracts will include targets stipulating a minimum number of women as well as staff with disabilities or other vulnerable groups.	Y		LMP, PSCMP, MRP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
HR07	As a standard clause in all contracts, no employees shall be hired, directly or indirectly, under the age of 18 years of age. It will be the responsibility of the developer to ensure that no children under the age of 18 are involved in their supply chain. If periodic inspections and audits identify children under the age of 18 being hired by the developer, this will be considered a breach of contract and the child will be removed from the workplace. Their salary may continue to be paid to them for a set period pending the putting in place an alternative solution.	Y		LMP, PSCMP
HR08	Stakeholders concerned about child labour will be encouraged to use the grievance mechanism to address project-related child labour concerns.	Y		SEP
HR09	The Government will be requested not to use any prison labour for tasks that are, or could be associated with, project activities.	Y		SEP, LMP
HR10	Contracts will not include provisions that may support forced labour; for example, requests of deposit guarantees from employees to have access to safety protection equipment or other materials.	Y		LMP
HR11	As part of the work site induction, all staff will be informed on workers' rights.	Y		LMP
HR12	The Project will require that all workers in similar jobs work under the same, or similar, working conditions (salary, vacation, insurance etc.)	Y		LMP, PSCMP
HR13	The Human Resources function will organize periodic town hall-style sessions to provide information and receive labour and working conditions related feedback.	Y		SEP, LMP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
HR14	<p>All workers will have contracts describing conditions of work and will have the contents explained to them. This includes their legal rights under national law. Contracts will be available in workers' native languages written in easily understandable language. Contracts will state terms of employment and duration and specifically address:</p> <ul style="list-style-type: none"> <li>• salary</li> <li>• working conditions</li> <li>• working hours and overtime</li> <li>• holidays and sick leave</li> <li>• social security and compensation</li> <li>• health insurance</li> <li>• access to remedy.</li> <li>• medical leave</li> <li>• other provisions related to medical care.</li> </ul>	Y		LMP
HR15	A due diligence evaluation of each (sub) contractor's human rights record related to labour and working conditions will be conducted.	Y		LMP, PSCMP
HR16	Community Liaison Officers will hold regular meetings with supply chain workers to address human and labour rights. This includes a focus on harassment including the possibility of demands for sexual favours, or a financial kick-back during the recruitment process.	Y		SEP
HR17	The Project will work in partnership with local organizations to address gender bias; female CLOs will be employed to facilitate project employment and to improve the work environment for women. Female CLOs will hold periodic meetings with female employees and community groups to ensure concerns specific to women and children are identified and to solicit suggestions for improvement.	Y		SEP, LMP
HR18	Ensure that benefits for spouses or dependants of employees (such as health insurance or pension schemes) are offered on a non-discriminatory basis.	Y		LMP, PSCMP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
HR19	The employee Code of Behaviour will include a clause that a sexual relation based on power inequality will lead to instant dismissal of the senior person.	Y		LMP, PSCMP
HR20	The Project's commitment to human rights for all stakeholders includes those that self-identify as Indigenous Peoples and the cultural characteristics that form their identity; stakeholder engagement will continue to be completed in a manner that is sensitive to these characteristics and fully documented.	Y		SEP
HR21	The Project will consult with appropriate institutions and groups to identify desirable and feasible land use agreements required for the project, in terms of national legislation and IFC Performance Standard 7, with people who self-identify as Indigenous Peoples.	Y		SEP, RAP
HR22	An awareness campaign targeting schools at sensitive locations within the project AOI will be developed, addressing: <ul style="list-style-type: none"> <li>• Importance of staying in school.</li> <li>• Risks particularly to girls of relationships with transient workers, transactional and commercial sex.</li> <li>• Road safety awareness.</li> <li>• Awareness about their rights.</li> <li>• Project grievance mechanism and their right to use it.</li> </ul>	Y		SEP
HR23	As part of Camp Management Standards, menus in project facility canteens will be developed in consultation with a dietician to ensure adequate nutrition, cultural acceptability, portion size and diversity that is acceptable to all workers.	Y		OHSSP
HR24	The Project will develop a campaign focused on providing realistic community expectations with regard to livelihood options and employment opportunities.	Y		SEP
HR25	The OHSSP, LMP and the CHSSP will include strategies for implementing the Voluntary Principles on Security and Human Rights.	Y		LMP, CHSSP, OHSSP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
HR26	The Project will deal directly with those having customary rights of occupancy to land; with the compensation process witnessed by appropriate third party to minimize the risk of interference by intermediaries.	Y		RAP
HR27	The Project will support Government efforts to clarify disputed land boundaries in the Project area, in particular where it concerns customary right of occupancy of land.	Y		SEP, RAP
HR28	As part of the project OHSSP, a job-specific risk assessment (RA) process will be developed to consider: • risks associated with project activities; • mitigation measures (PPE, etc.); and • knowledge and understanding of the local workforce. Based on the outcome of the RA process, appropriate management measures will be developed and implemented prior to any activities being undertaken.	Y		OHSSP
HR29	Risks from and mitigation of Worker Fatigue will be specifically addressed in the Occupational Health, Safety and Security Plan and the Transport and Road Safety Management Plan; the latter will stipulate driving hours and night driving will be by exception only.	Y		OHSSP, TRSMP
HR30	Specific classes of hazards will be identified in work areas, including physical, chemical, biological, and radiological hazards and communicated to the workforce.	Y		OHSSP
HR31	As part of the OHSSP, special attention will be paid to the health and safety of pregnant women, disabled employees and other vulnerable workers.	Y		OHSSP
HR32	PPE and safety gear will take into account gender differences and the special needs of pregnant women.	Y		OHSSP
HR33	The Project will identify potential PIIM areas of concern and work with local leaders to establish mitigation measures that will include informing PACs of risks and opportunities associated with PIIM.	Y		PIIMP



**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
HR34	An Information Education and Communication (IEC) programme will be developed for workers addressing social conduct and including topics such as: gender-based violence and, drug and alcohol misuse. The IEC programme will explore opportunities to support community initiatives addressing vulnerable groups including gender balance.	Y		CHSSP
HR35	As part of the CHSSP, implement community patrols during the evenings to monitor and minimise night-time activity in project construction areas.	Y		CHSSP
HR36	As part of the project OHSSP, ensure that vector management on all project sites (camp and construction) align with national vector control programmes and strategies.	Y		OHSSP
HR37	The Project will use international criteria and considerations (in terms of IFC Performance Standard 7) to inform content of the Resettlement Action Plan with regard to people who self-identify as Indigenous Peoples.	Y		RAP
HR38	Project will work in partnership with local organisations to provide support to women seeking employment with the project so that they are better able to express and understand opportunities, benefits and their rights at work.	Y		SEP, LMP
HR39	Equal remuneration for jobs of equal value for men and women will be provided.	Y	Y	LMP
HR40	An independent labour rights related monitoring and evaluation system will be established, possibly in collaboration with the national regulatory agencies, to ensure that policies are adhered to and national legislation is followed.	Y		LMP
HR41	The Project will review the project performance regarding the Voluntary Principles on Security and Human Rights and develop an action plan to address performance improvement where necessary; the operational phase Labour Management Plan, Occupational Health, Safety and Security Plan and, the Community Health, Safety and Security Plan will account for any new measures that are required.		Y	LMP, CHSSP, OHSSP
INF01	For major road crossings, crossing techniques that minimize the obstruction of traffic flow will be selected.	Y		IUMP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
INF02	A preconstruction entry survey area will be defined where there is potential for vibration effects on dwellings and buildings. The survey (including photographs) will record the external condition of dwellings and buildings before construction, provide baseline evidence in the event of a claim for damage, and will inform pre-entry agreements that will also include repair requirements.	Y		IUMP
INF03	Potentially affected landowners, land users, communities and other affected stakeholders (e.g. tourism operators) will be consulted if there is likely to be any disruption to the existing infrastructure and utility services. Feedback from communities will inform planning of the works, especially when determining the options for temporary alternatives.	Y		IUMP
INF04	Any planned diversion of utility services, closures of any road or track, or planned traffic diversions will be communicated to local authorities and affected communities at least 72 hours before the works. Information provided to the community will include (as relevant to the diversion) but not be limited to details of the timing and duration of the diversion; the route of traffic diversions; and traffic control measures for road crossings where delays and public safety are key factors.	Y		SEP, IUMP
INF05	A crossing schedule, including all known roads, telephone and electricity facilities and oil, gas and water pipes, will be maintained. Owners and service operators will be consulted and full agreement gained to cross the infrastructure or utility. Where a third-party utility service will be crossed by the project, a method statement that includes measures to protect the integrity of the utility service will be agreed with the service operator before work can start.	Y		IUMP
INF06	The Project will notify third-party utility services of any damage and the damage will be repaired promptly in consultation with the service operator or utility owner. A timetable for repair of any damaged infrastructure will be agreed with the service operator or utility owner and communicated to affected communities.	Y		IUMP
INF07	If project activities affect land-based livelihoods because of interruption to irrigation, drainage or agricultural production, appropriate compensation will be provided in accordance with the RAP.	Y		RAP, IUMP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
INF08	Authorities will be notified when oversize heavy loads need to be transported and such loads will be escorted by the project.	Y		IUMP, TRSMP
INF09	The design of new road sections and upgrades will take account of local conditions to ensure maintenance of good road condition, for example inclusion of drainage ditches.	Y		IUMP
INF10	A post-construction exit survey will be conducted covering all areas surveyed during preconstruction (and any additional land requirements during construction) to assess the condition of dwellings, roads used including bridges, drainage structures, signage, traffic management and other road infrastructure. Any actions, such as repairs, arising from the exit survey will be closed out on a timely basis to allow a prompt return to the relevant authority, village or landowner.	Y		IUMP
INF11	Infrastructure and utility services will be identified and protected during construction.	Y		IUMP
INF12	Where disruption to infrastructure and utilities will occur for more than 12 hours, a risk analysis of impacts on affected settlements will be completed. Where there will be a risk to health or livelihood to settlements or where the disruption is not acceptable to the affected settlements, alternatives will be provided.	Y		IUMP
INF13	An initial survey, supported by photographs, will be completed of the condition of roads to be used by the project including but limited to bridges, drainage structures, signage, traffic management and other road infrastructure. The survey will be agreed and signed by the road authority, local authority and any affected landowner. The survey will be made available to the road authority and municipal authorities if requested. The chosen project access routes will be improved as required to provide safe access for the project duration.	Y		IUMP
INF14	Preference will be given to transport of pipe and other construction materials by rail to Isaka where feasible.	Y		TRSMP
INF16	Where there is potential for congestion on shared transport routes, the project will liaise with third party developers, the police and authorities to identify and implement additional traffic management measures that limit disruption.	Y		IUMP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
LIV01	The community health, safety and security plan will include measures to reduce the spread of animal diseases due to increased movement of livestock.	Y		RAP, CHSSP
LIV03	The CHSSP will describe requirements to be implemented for vehicles passing through areas where animal disease control measures are in place.	Y		CHSSP
LIV06	Post RAP monitoring of PAPs engaged in gold ASM or high value crop cultivation, particularly female headed households, youth and casual, landless artisanal miners, will be implemented. Additional measures will be developed and implemented where necessary to ensure livelihoods are restored to pre-project levels.	Y		RAP
LNP01	A preconstruction entry survey, including photographs, will be undertaken to document the condition of the land including immovable assets, crops and improvements required to the land before construction.	Y		RP
LNP02	Any new aggregate extraction sites and batching plants sites, including 3rd party sites, will undergo environmental and social evaluation prior to use; and, where possible, new sites will be located as close as possible to the existing road network to reduce the requirement for new access roads.	Y		NRMP, PSCMP
LNP03	A Resettlement Policy Framework (RPF) has been developed in line with national legislation, Good International Industry Practice (GIIP) and IFC Performance Standard 5. The RPF will outline procedures related to compensation for loss of assets and livelihood restoration. A Resettlement Action Plan (RAP) will describe the modalities of identifying Project Affected People (PAP) and the procedures related to compensation for loss of assets and livelihood restoration strategies. Post resettlement monitoring of livelihood restoration measures will be implemented. Additional measures will be developed and implemented where necessary to ensure livelihoods are restored as a minimum to pre-project levels.	Y		RAP, MRP
LNP04	The Project will continue monitoring of, and liaising with authorities on land speculation. Where required additional interventions will be developed to enhance existing interventions.	Y		SEP, RAP, MRP
LNP06	PACs will be sensitised to recent land speculation and instances of associated violence and informed of actions that can be taken.	Y		SEP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
LSC03	Options will be considered for the use of surplus rock from blasting including: <ul style="list-style-type: none"> <li>• crushing and onsite re-use</li> <li>• offsite re-use</li> <li>• offsite disposal</li> <li>• onsite placement. if this is in keeping with the local landscape character.</li> </ul>	Y		WMP
RES01	All excavated materials will be screened and reused where possible to reduce the need for newly quarried aggregates.	Y		WMP, NRMP
RES02	If timber is cleared (e.g., as part of right-of-way clearance), it will be reused for construction activities as far as possible. Release of any and all chemically treated waste timber will be made by on a case-by-case basis.	Y		WMP, NRMP
SOL01	Where required, imported soil will have similar physical characteristics to soil in the area where it will be deposited. Soil will be checked, and analysed if needed, for presence of invasive species and contamination.	Y		SMP
SOL02	Environmental and social evaluations will be undertaken to identify suitable offsite disposal sites for waste soil and rock, and appropriate management measures to be implemented. All temporary borrow pits and soil and rock disposal sites will be reinstated, unless instructed otherwise by the regulatory authorities, in accordance with pre-entry agreements with landowner and location-specific reinstatement plans will be prepared and implemented.	Y		WMP, SMP, RP
SOL03	Where benching is required then the areas will be re-contoured to original profiles. Side casting in areas of steep terrain will be prohibited. The effects of accidental spoil slippage on steep slopes will mitigated, e.g., by using fences or a geotextile membrane.	Y		SMP
SOL04	Load-bearing/ ground protection materials, such as bog mats and geotextile membranes under temporary haul roads, will be used to support heavy loads in areas of soft ground, including wetland areas.	Y		SMP
SOL05	Local communities will be discouraged from using the right-of-way as an access road during construction through signage, awareness raising and the use of communication materials.	Y		CHSSP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
SOL06	Topsoil and subsoil stockpiles will be stored in accordance with the Soil Management Plan, be free draining and include gaps left in strategic locations to allow potential floodwater through.	Y		SMP
SOL07	If topsoil is stored for more than six months, the stacks will be monitored for: <ul style="list-style-type: none"> <li>• the presence of weeds, which will be controlled in accordance with the weed and pest control programme</li> <li>• compaction and erosion – corrective measures will be implemented if either is identified.</li> </ul> Reinstatement will be undertaken as early as practicable following completion of construction activities in any ROW section or site.	Y		SMP
SOL08	A preconstruction soil survey will be undertaken of the RoW and MCPY and other construction facilities, based on a representative sample, to: <ul style="list-style-type: none"> <li>• measure the depth of the topsoil layer along the pipeline route to inform requisite stripping depth</li> <li>• identify areas of fragile, sensitive and thin topsoil</li> <li>• identify areas lacking topsoil.</li> </ul>	Y		SMP
SOL09	Recontouring should be sympathetic and in keeping with preconstruction profiles, where this is not precluded by risk to integrity of the pipeline or erosion considerations.	Y		RP
SOL10	Before construction personnel and equipment are demobilised, temporary buildings and equipment, aboveground and belowground infrastructure, utilities, tools and any excess material brought onsite or generated during construction and commissioning will be removed. All off ROW sites impacted upon will be reinstated to meet pre-entry agreements with the landowner and in accordance with location-specific reinstatement method statements or plans to be prepared and implemented. Location-specific closeout reports, including photographs, will be produced to document the condition of temporary sites at handover following reinstatement.	Y		RP
SOL11	Seeds of species that have the potential to outcompete local plant species will not be used in revegetation seed mixes. Where biorestorement is required, local species will be used as far as available.	Y		BMP, RP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
SOL12	<p>Procedures will be developed, incorporating plans for erosion and sediment control and reinstatement. These will be produced before work begins at areas of fragile, sensitive or thin topsoil, side slopes or narrow ridges and at watercourse crossings.</p> <p>Sediment interception measures will be installed, inspected and maintained to prevent sediment runoff from the right-of-way or construction sites affecting watercourses, wetlands, waterbodies or environmentally sensitive areas.</p> <p>Procedures will include additional precautions to be taken and increased monitoring (minimum twice per week), with the aim of preserving the topsoil for subsequent replacement.</p>	Y		PPP
SOL13	<p>A preconstruction survey, including photographs, will be undertaken to document the condition of the land on which the RoW, construction and permanent facilities and access roads will be located. The survey will include immovable assets, crops and any remediation required to the land before construction. The survey will:</p> <ul style="list-style-type: none"> <li>• provide baseline evidence in the event of a claim for damage</li> <li>• identify existing contamination such as illegal disposal</li> <li>• inform pre-entry agreements including:                             <ul style="list-style-type: none"> <li>o agreement for temporary measures to be installed (e.g., during disruption to drainage or irrigation, temporary fencing)</li> <li>o reinstatement requirements.</li> </ul> </li> </ul> <p>Pre-entry agreements will be made with landowners, including reinstatement requirements, prior to access onto a site.</p>	Y		RP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
SOL14	<p>Areas of surface contamination identified prior to construction within the project footprint will be remediated before or during project construction.</p> <p>Where cleanup of pre-existing contaminated land is required, a remediation proposal will be implemented including but not limited to:</p> <ul style="list-style-type: none"> <li>• remediation techniques</li> <li>• the cleanup standard to be achieved</li> <li>• monitoring and analysis of remediated land to be undertaken</li> <li>• all regulatory and project documentation requirements</li> <li>• appropriate environmental and occupational health and safety protection measures to be adopted.</li> </ul> <p>All cleanup and remediation activities will be adequately documented.</p>	Y		PPP, RP
SOL15	Contaminated material storage areas will be provided with containment measures (e.g., bunds, ditches, impermeable base membranes and covers) to prevent runoff and airborne losses.	Y		PPP
SOL16	When the pipeline is operating, regular monthly monitoring and inspections will be undertaken to check that the security and integrity of the pipeline is not compromised by erosion, with weekly monitoring at locations susceptible to erosion.		Y	RP, MRP
SOL17	Trench breakers will be installed in the pipeline trench where downhill flow within the backfilled trench may lead to erosion.	Y		RP
SOL18	New access roads will follow existing tracks, where possible, and will be designed with adequate slope and cross fall drainage to channel runoff safely to off-road soakaways without causing erosion or siltation.	Y		RP
WHSW01	Provision of food to workers will be planned to cater for workforce requirements and therefore minimise food waste as far as possible.	Y		WMP, OHSSP



**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
WHSW02	<p>As part of the project OHSSP, construction camp will be designed and built to meet national requirements and regulations. Measures will be detailed to avoid and reduce impacts associated with the development and occupation of construction camp, including but not limited to:</p> <ul style="list-style-type: none"> <li>• suitable and sufficient welfare facilities will be provided appropriate for both genders</li> <li>• clean and sanitary toilet facilities and showers will be provided appropriate for both genders.</li> <li>• adequate segregation between different areas (e.g. accommodation and hazardous areas)</li> <li>• measures to reduce or remove community disturbance or nuisance from the camp, e.g. preventing litter, dust generation, odours and noise.</li> <li>• include a helicopter landing area and secure fencing around the boundary.</li> </ul>	Y		OHSSP
WHSW03	Provide workers with personal protection from prevalent diseases where feasible (e.g., condoms and ITN).	Y		OHSSP
WHSW04	As part of camp management standards, procedures will be developed to maintain the condition of each camp and to ensure camp facilities are kept clean and hygienic.	Y		OHSSP
WHSW05	As part of the OHSSP, a food and water management plan will be developed and implemented to reduce the risk of water- and food-borne disease outbreaks occurring among the workers and the associated risk of transmission to local communities.	Y		OHSSP
WHSW06	As part of the OHSSP Risk Assessment process, the risk to worker health posed by wildlife at each camp and yard will be assessed and appropriate management measures will be developed and implemented.	Y		OHSSP
WHSW07	Project approved vehicles will be provided to transport camp residents to worksites.	Y		LMP
WHSW08	As part of the OHSSP, a first aid needs assessment will be undertaken for each camp to determine first aider and first aid kit requirements (e.g., qualifications, content of kits, locations).	Y		OHSSP
WHSW09	As part of the OHSSP, a pest control plan will be developed for implementation on construction camp.	Y		OHSSP
WHSW10	As part of Camp Management Standards, pets will be prohibited in construction camp/MCPY.	Y		OHSSP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
WHSW11	A workers' code of conduct outlining expected worker behaviours will be developed and implemented. This code of conduct will cover the interaction between the national and international workforce and local workforce but also interactions with unemployed PAC members. Compliance with the workers' code of conduct will be a contractual requirement for all contractor, including subcontractors' employees. In the event of non-compliance, workers will be disciplined in accordance with project disciplinary procedures and structures.	Y		LMP
WHSW12	As part of the OHSSP, a risk-based worksite and construction camp training programme will be developed and administered to the workforce, vendor representatives and site visitors; the training programme (including daily toolbox meetings) will be updated in accordance with changes made in scope, incident statistics and/or regulatory requirements. Daily toolbox meetings will be held where health and safety issues will be discussed.	Y		OHSSP
WHSW13	Prior to construction, a project workers' grievance procedure will be implemented, which will detail the processes for recording, investigating and, where necessary, implementing corrective actions relating to complaints, including the responsibility of the contractor. The workers' grievance procedure will: • be available for use by all workers, including subcontractor workers and workers in the primary supply chain; • be displayed at visible places in the camp and work sites.	Y		LMP
WHSW14	Hours worked by all project personnel will be according to their contracts and national regulatory requirements.	Y		LMP
WHSW15	A medical emergency response plan will be developed and implemented to ensure that emergency cases can be dealt with without impacting on district health services.	Y		OHSSP, EPRP
WHSW16	PPE appropriate for the task will be provided to all workers.	Y		LMP
WHSW17	Lost time incidences and, type and incidence of malady (sickness, disease, injury) will be monitored.	Y		MRP
WHSW18	MCPY will have health facilities with sufficient capacity and capability to prevent additional pressure being placed on local and district health services.	Y		OHSSP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
WHSW19	As part of the OHSSP, basic workplace wellness programs that are culturally and religiously acceptable will be developed and implemented.	Y		OHSSP
WHSW20	The labour management plan will include: <ul style="list-style-type: none"> <li>• Compliance with international labour standards, national labour laws and regulations concerning transparency, accountability, anticorruption and human rights;</li> <li>• Recognising workers' right to organise collective bargaining and trade unions;</li> <li>• Providing suitable working conditions, including rest facilities and breaks;</li> <li>• Mechanism of compliance with the ILO Maternity Protection Convention (2000); and</li> <li>• Respecting workers' rights to privacy including data protection requirements.</li> </ul>	Y	Y	LMP
WTR01	The storage of hazardous materials will be restricted to designated hazardous materials storage areas at least 50 m from any wetlands, surface watercourse or seasonal water channel. Such storage locations will be subject to site-specific environmental and social risk assessment that will inform site selection and the adoption of any additional mitigation measures. Storage areas for hazardous materials will be bunded (no drainage valves/holes), have impermeable floor and will be covered to minimise the ingress of rainwater.	Y		PPP
WTR02	A refuelling procedure will be developed and implemented which will include but not be limited to: <ul style="list-style-type: none"> <li>• details of mobile and static refuelling areas and equipment (e.g. impermeable drip trays)</li> <li>• regulatory / GIIP constraints of refuelling operations to sensitive environmental receptors</li> <li>• spill prevention measures</li> <li>• training on refuelling procedures.</li> </ul>	Y	y	PPP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
WTR03	<p>Site specific erosion risk assessments will be completed by a qualified fluvial geomorphologist or soil scientist as appropriate; the information will be used to prepare a soil management plan and a reinstatement plan prior to construction. Erosion control measures will include but not be limited to:</p> <ul style="list-style-type: none"> <li>•consideration of information from preconstruction surveys</li> <li>•locations where soil compaction may result in increased sediment laden runoff to watercourses and waterbodies</li> <li>•details on construction through soft ground, considering the use of load-bearing materials to support heavy loads in soft ground</li> <li>•measures for working in areas of fragile and sensitive soils</li> <li>•restrictions to the storage of materials on steep slopes</li> <li>•provision for erosion and sediment control at watercourses.</li> </ul>	Y		PPP, SMP, RP
WTR04	<p>Watercourse banks will be stabilised directly after backfilling and subsequently restored to near original conditions. Where this is not possible, site-specific solutions will be proposed with engineering justification and assessment of potential impacts (including habitat connectivity).</p>	Y		BMP, RP
WTR05	<p>Location-specific method statements will be produced for watercourse crossing construction. These method statements will incorporate plans for:</p> <ul style="list-style-type: none"> <li>• erosion control</li> <li>• sediment control</li> <li>• maintaining environmental base flows downstream of water crossings for example by using measures such as pumping, channel diversions and fluming</li> <li>• notifying fisherfolk as appropriate</li> <li>• reinstatement</li> <li>• spill response equipment.</li> </ul>	Y		PPP, RP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
WTR06	Where water is abstracted from a surface waterbody, the flow, water level or water volume in the waterbody will be assessed before and during abstraction. Abstraction rates and the frequency of assessment of the water flow, level or volume will be monitored based on permit conditions. During abstraction from surface waters, inlet hoses will be fitted with suitably sized fish screens.	Y		BMP, NRMP
WTR07	As a requirement of the PPP, locations for discharging excavated pipeline trench water will be identified as part of a 'Permit to Pump Procedure' which will be implemented during the construction phase. Appropriate sediment control measures in line with recognised industry best practices will be implemented at each location.	Y		PPP
WTR08	The grey water stream will be separated from black water (e.g. sewage), treated and either reused (e.g., for toilet flushing, dust suppression) or discharged, in accordance with the environment project standards and national environmental guidance and regulations. All wastewater discharges will comply with permit conditions and the project environmental standards.	Y		WMP, NRMP
WTR09	Other than when required for crossings excavations, construction equipment and traffic will normally not enter watercourses. Vehicles and equipment will cross watercourses via appropriately sized temporary culverts and bridging arrangements.	Y		BMP, PPP
WTR10	Bathing or washing clothes, vehicles and equipment by project employees will be prohibited in watercourses.	Y		BMP, PPP
WTR11	Surface water that could be affected by runoff from the pipeline route or worksites will be visually inspected on a regular basis and remedial measures implemented if sediment or contamination arising from project activities are visible.	Y		PPP, RP
WTR12	An effective collection and disposal systems for stormwater from all paved/hardstanding areas and buildings will be provided at aboveground installations.		Y	NRMP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
WTR13	Water meters will be installed to measure the quantities of water supplied and wastewater discharged at the camp and detailed records will be kept of quantities of water reused and the purposes for which water is reused as part of the water management plan and the data used for monitoring water usage and project reporting requirements.	Y		NRMP
WTR14	Water conservation initiatives and opportunities to reuse water, e.g., for dust suppression or concrete mixing, will be identified, assessed for impacts on the environment and human health and those deemed suitable will be implemented.	Y		NRMP
WTR15	If temporary damming of a watercourse is required, a preconstruction engineering, social and environmental evaluation will be undertaken to plan the work and so the duration of the flow interruption is limited and to determine the need for pump around to maintain flows.	Y		BMP, NRMP, RP
WTR16	An environmental and social evaluation of potential treated wastewater discharge locations will be undertaken as the basis for the development of measures to mitigate impacts from discharges on surface water ecology, downstream water users or terrestrial ecology. The evaluations will take into account the compliance with project environmental standards and will support applications for discharge permits. All licences and consents will be obtained before planned liquid discharges.	Y		PPP
WTR17	An industry-recognised manufactured grease trap will be installed at the outlet of the kitchen(s) facilities to prevent greases and fats from entering the grey water streams.	Y		WMP
WTR18	Treated sewage effluent which is not reused will be preferentially discharged to land. Before any discharge, the soil permeability will be evaluated, and engineered soakaways will be constructed, where required, to avoid impacts on land, surface water drainage and groundwater.	Y		WMP
WTR19	A contingency plan for wastewater treatment plant maintenance periods or downtime will be developed. This will include, as a minimum, the provision of holding tanks that can be used to retain emergency overflows or discharges that do not meet project environmental standards.	Y		WMP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
WTR20	Surface water run-off from construction areas and AGIs will be discharged in accordance with project environmental standards.	Y		PPP
WTR21	All potentially contaminated wastewater, excluding sanitary wastewater, will be routed to an appropriately sized treatment unit capable of achieving consent conditions and project environmental standards.	Y		WMP
WTR22	All licences and consents for hydrostatic test water discharge will be obtained following preparation of a hydrostatic test effluent disposal risk assessment. This will undergo internal technical evaluation before submitting the permit application to the appropriate water resources regulatory authority.	Y		PPP
WTR23	The water quality and sustainability of water abstracted from either new or existing boreholes or surface water will be monitored at suitable frequencies to confirm that supply meets permit conditions and project environmental standards and does not impact adversely on other known users.	Y		NRMP
WTR24	As part of the permit application, hydraulic testing and hydrogeological impact assessments will be undertaken to evaluate the potential impact on local groundwater abstraction points. If the assessment indicates potential impacts to local users, alternative borehole locations will be considered and these alternative locations will be subject to the same testing and impact assessment process.	Y		NRMP
WTR25	No oil-based muds will be used for drilling of groundwater exploration and water supply boreholes.	Y		PPP
WTR26	All groundwater exploration and supply boreholes will be designed by suitably experienced and qualified hydrogeologists to avoid contaminant migration pathways between different aquifers and geological formations.	Y		NRMP
WTR27	The Monitoring and Reporting Plan will detail robust monitoring and inspection requirements to be completed at locations with sensitive groundwater resources; to verify correct implementation of the PPP.	Y		PPP, MRP

**Table E4.4-1 Project Mitigation Commitments Register and Relevant Management Plans**

ID	Mitigation Commitment	Construction	Operation	Management Plan(s)
WTR28	<p>Groundwater levels will be monitored once every two weeks by the Project at all sites where groundwater abstraction occurs for the project.</p> <p>The location of monitoring well(s) will be determined by a qualified hydrogeologist to ensure that they are installed in the correct formation and at the correct distance between project abstraction boreholes and community water points.</p> <p>If the local water supplies are derogated to the extent that complaints are made by the community as a result of project abstraction, then the Project will provide alternative water supplies at a convenient location for the community that is not or is less influenced by the project's abstraction.</p>	Y		NRMP, MRP
WTR30	<p>The Monitoring and Reporting Plan will describe requirements for monitoring community water sources including surface water and groundwater; the monitoring plan will detail monitoring boreholes and monitoring equipment.</p>	Y		MRP