

PUBLIC NOTICE

Notice issued in terms of Section 10 of the Environmental Assessment Act (Cap, 65:07)

DETAILED ENVIRONMENTAL IMPACT ASSESSMENT (EIA) FOR PROPOSED BORROW PITS FOR THE SUPPLY OF GRAVEL AGGREGATE FOR CONSTRUCTION OF MOTOPHI-MAKALAMABEDI ROAD BY MINISTRY OF TRANSPORT AND PUBLIC WORKS- ROADS -CENTRAL

The major findings of an Environmental Impact Assessment (EIA) Study undertaken for the above-mentioned project by Department of Roads Infrastructure Development and Maintenance are as summarized hereunder.

A. Nature and Magnitude of the Activity

The government of Botswana through the Roads Department of the Ministry of Transport and Public Works intends to upgrade the existing 30km Motopi-Makalambedi gravel road to bituminous standard with associated geometric improvements. The existing Motopi-Makalambedi road is currently a gravel road and often undergoes extensive routine maintenance due to the relatively high volume of traffic.

B. Location of the Activity

The borrow pits are located along the Motopi-Makalambedi gravel road and all of them are away from the road by a kilometre.

C. Anticipated Impacts and Proposed Mitigation Measures

The environmental impacts and mitigation measures identified by the EIA study are presented in detail in the Environmental Impact Statement (EIS) and summarized in the table below. A detailed Environmental Management Plan which comprises both the Mitigation and the Monitoring Plans, to help manage and monitor potential impacts is also included in the EIA statement.

Construction Phase	
Impacts	Mitigation Measures
Loss of vegetation outside borrow pit area	<ul style="list-style-type: none">Clearly demarcate the borrow pit area.Clearing of vegetation should be limited to the borrow pit areas and borrow pit access road.Vegetation outside the borrow areas should not be cut by all means.
Health Issues and Environmental Degradation from Poor Air Quality	<ul style="list-style-type: none">The workers on site should be protected against dust by wearing face masks of N95 rating.dust should be suppressed by sprinkling of waterTruck operators should limit their speeds to 40km/hrSpeed reduction signs should be erected at the approaches to the areas being worked on.Vehicle/equipment exhaust discharges shall be inspected to ensure no excessive emissions of black smoke.
Habitat destruction	<ul style="list-style-type: none">The contractor should be encouraged to find alternative water sources, like private boreholes and also encourage water recycling and reuse practices to reduce the reliance on fresh water extraction from the river.Introduce seasonal water restrictions during dry periods or when river flows are low to ensure sufficient water remains in the river for environmental needs
Loss of archaeological artefacts	<ul style="list-style-type: none">There should be an archaeological induction for all workers.Should there be any finds on site, DNMM should be notified immediately and an archaeologist sent to site to preserve the finds.
Operation Phase	
Impacts	Mitigation Measures
Increase in Human Wildlife Conflict due to Disruption of Wildlife	<ul style="list-style-type: none">Develop and implement operational plans that consider wildlife behaviour and movements, ensuring minimal disruption during critical life stages or migration periods.Regularly monitor wildlife responses to noise and adjust operational practices as needed to reduce impacts on the local fauna
Air Pollution	<ul style="list-style-type: none">Dust suppression on the temporary roads should be undertaken daily and records kept.Dust suppression within the borrow pit should also be undertaken, this will also ensure that loads are wet and as such not cause discomfort to the environment.Air quality monitoring should be undertaken during mining.There should be maintenance of the netting along borrow pit 9 to ensure effectiveness in reducing dust.
Noise Pollution	<ul style="list-style-type: none">Loading and haulage of gravel should be undertaken during the day, specifically from 0600- 1900 depending on the season.Temporary road should be kept in good condition to reduce shaking and rattling of vehicles.Baseline Noise monitoring should be undertaken before start of borrow pit operations and it should adhere to BOS 575:2013 Maximum Permissible Limits for Environmental Noise.The machinery and vehicles to be used for should be well serviced.Workers should be provided with noise protection gear such as ear plugs.All machinery should be well maintained and records kept.
Ground Water Pollution	<ul style="list-style-type: none">Use liquid detectors to ensure that the liquid don't remain in the tanks to prevent accidental spillages.Any soils containing Hydrocarbons spillages must be excavated and taken for treatment.Prepare oil spillage management planFuel storage tanks/ facilities should be checked for leaks, the operator should procure software/technology that can monitor leakages remotely.All oil contaminated waste should be stored in a special bin and taken to an appropriate facility.Ensuring adherence to relevant legislationsProcurement of a spill kit on site.
Occupational Health Risks to Workers	<ul style="list-style-type: none">First Aid Kit should be made available on site all times equipped with all the necessary and up to date equipment and medical supplies.Trained personnel on administering first aid should also be available on site.There should be a Workman Compensation InsuranceIssuance of proper protective equipment should be practiced.Safety precautions should be practiced all times through daily tool box talks and orientations as requiredA Safety Health and Environment Officer should be present during site establishment activities
Increase in Road Traffic Accidents	<ul style="list-style-type: none">There should be an induction for all drivers and operators on the Road Traffic Act.All construction vehicles should be fitted with flashing/warning lights and those hauling construction materials should be covered at all time.Licensed drivers and operators should be employed
Soil pollution due to oil Spills	<ul style="list-style-type: none">Provide spill kits around the borrow pits sites, for cases of minor spillsFlushable Potable sanitary facilities should be provided on site.implement strict protocols for handling and storing oil and fuel at the borrow pit site, including proper storage containers, spill containment systems, and regular inspectionsDevelop an oil spill response plan specific to the borrow pit site, outlining procedures for spill containment, clean-up, and reportingConduct thorough training for workers on spill prevention measures, safe handling practices, and emergency response procedures
Creation of Employment	<ul style="list-style-type: none">Unskilled labour personnel should be recruited from local villages.The Contractor shall adhere to the requirements of the Employment Act.Employment for non-skilled personnel should be transparent and should be conducted through village authorities like V.D.C and Kgosi
Decommissioning Phase	
Impacts	Mitigation Measures
Loss of Agricultural land	<ul style="list-style-type: none">Upon completion, the borrow pits should be rehabilitated (not possible to attain original form). This should involve the reworking of borrow pit faces to stabilise them, partial infilling with surplus material and landscaping.The client should ensure the implementation of the rehabilitation plan through attaching a financial penalty for failure to implement rehabilitation plan.
Loss of jobs/ Economic Opportunities	<ul style="list-style-type: none">There should be a provision in the contract to ensure that suppliers of certain machinery are used during the rehabilitation of the borrow pit.Some of the workers should be retained for the rehabilitation process.Workers should be provided with counselling and trained to develop curriculum vitae.
Air Pollution	<ul style="list-style-type: none">Dust suppression should be undertaken daily on site.Workers should be provided with dust masks.Machinery shall be in good condition, e.g. all doors on graders, front loaders shall be in good condition to prevent the ingress of dust.
Water pollution	<ul style="list-style-type: none">Implement regulations and policies to limit the discharge of pollutants from borrow pits area into the riverAny soils containing Hydrocarbons spillages must be excavated and taken for treatment.Prepare oil spillage management planFuel storage tanks/ facilities should be checked for leaks, the operator should procure software/technology that can monitor leakages remotely.All oil contaminated waste should be stored in a special bin and taken to an appropriate facility.Ensuring adherence to relevant legislationsProcurement of a spill kit on site.

D. Conclusions and Recommendations of the Study

The project will have both positive and negative environmental impacts at local level. Following the undertaking of the detailed EIA Studies for the project on the area it is recommended that the project be allowed to proceed with appropriate implementation of the mitigation measures recommended.

E. Environmental Impact Statement Placement

- Copies of the EIS can be reviewed at the following locations:
- Department of Environmental Affairs (Serowe)
- Motopi Kgotta
- Makalambedi Central Kgotta
- Makalambedi North West Kgotta

F. Correspondences

Interested and Affected Parties are invited to review the report, written comments and objections to the project must be addressed directly to The District Coordinator, Department of Environmental Affairs, Private Bag 0028, Serowe, and Tel: 4630174, Fax 4631307 or hand delivered to Department of Environmental Affairs in Serowe near Roads Department, in Palamaokuwe Ward before 23rd February 2024.

KITSISO

Kitsiso e dirwa go setswe morago temana ya bolesome ya Molao wa Tshekatsheko ya Tikologo, Environmental Assessment Act (Cap 65: 07)

TSHEKATSHEKO YA SEEMO SA TIKOLOGO MABAPI LE MAHUTI A KEPO YA MMU GO AGA TSELA YA MOTOPHI-MAKAL-AMABEDI KE BA LEPHATA LA DITSELA

Tse di fitlhetsweng morago ga tshekatsheko ya tikologo mabapi le mogopolo o o fa godimo ke ba Lephata la Ditse di sobokilewa fa tlase.

A. Seelo le Bokete jwa Tiro

Puso ya Botswana ka Lephata la Ditsela la e na le maikaelelo a go tokafatsa tsele e e teng ya dikilomithara di le masome a mararo ya legkwarapana ya Motopi-Makalambedi ka go e tsenya sekontiri. Tsele ya Motopi-Makalambedi ke legkwarapana e bile e nna fela e baakanyeditswe ruri ka nthla ya dikoloi tse dintsi tse di tsamayang mo go yone.

B. Lefelo La Tiro

Mahuti otlhe a kepo ya mmu a mo tseleng ya Motopi-Makalambedi ya legkwarapana, a mo seeleng sa khilomithara ele nngwe go bapa le tsele.

C. Ditlamorago tse di solofetsweng mabapi le tiro kakanyetso e le methale ya go fokotsa manokonoko a tsone

Ditlamorago tsa tiro kakanyetso e, le methale ya go fokotsa le go thibela bogale jwa ditlamorago e nankotswe ka botlalo mo lokwalong la tshekatsheko tikologo. Mokwalo o o fa tlase o supa ka boripana, ditlamorago tse di senotsweng ka boripana mo tshekatsheko e.

Tiro e mo legatong la kago	
Ditlamorago	Methale ya go thibela kgotsa go fokotsa ditlamorago
Go lathegelwa ke dimela mo tikologong ya mahuti	<ul style="list-style-type: none">Supa ka botlalo lefelo la fa lehuti le leng tengDira gore tiro ya go kgaola dimela e ganelele fela mo lefelong le go yang go berekelwa teng.Dimela tse di kgakala kgotsa kwa ntle ga lefelo la lehuti di seka tsa tloiswa gotlhelole.
Dikgang tsa botsogo le kgotlesego tikologo tse di bakwang ke go kgotlesego ga phefo	<ul style="list-style-type: none">Babereki ba ba mo lefelong la tiro ba tshwanetse go sireletswa kgathlanong le lerole ka go rwala dithiba melemo le dinko.Lerole le le tseneletseng le tshwanetse go fokodiwa ka go kgatsha metsi fa fatshe.Bakgweetsi ba dikoloi tse ditona ba tshwanetse go kgweetsa ka lebelo le le sa feteng la 40km/hr
Go senya mafelo a diphologolo di nngang teng	<ul style="list-style-type: none">Rrakonteraka o rotloediwa go senka ko a ka tsayang metsi teng bogolo jang mo didibeng mo boemong ja go tsaya metsi mo nokeng.Gape o rotlediwa go buseletsu metsi a a lhatatswitsweng mo tirisong.Go tshwanetse ga rotloetswa tirisu ya metsi a noka go lebeleletsewe dipaka tse metsi a leng mantsi thata mo nokeng go leka go dira gore metsi a seka a kgala gotlhelole a mangwe a salele go amusa tikologo.
Go senngwa ga dilo tse di nang le boleng mo go tsa ditso	<ul style="list-style-type: none">Go epiwa ga mmu go tshwanetse ga lebelelwa ke moitsanape wa tsa ditso gangwe mo kwedding.Tse di ka bonwang gone foo di na le boleng mo go tsa ditso di tshwanetse tsa babalelwa mme di begwe kwa go ba lephatla la ditso le matlotlo a thlogole (DNMM).
Tiro e tswaletse	
Ditlamorago	Methale ya go thibela kgotsa go fokotsa ditlamorago
Koketsego ya kgotlhang gare ga batho le diphologolo tsa naga	<ul style="list-style-type: none">Dira gore go nne le mananeo a lebeleletse maitswaro, botshelo le metsamao ya diphologolo gore le kgone go tla ka ditsela tsa go babalela diphologolo.Ela tlhoko gore diphologolo di dira jang fa go nale modumo ebe go netefadiwa gore tiro e dirwa ka modumo o o letlelesegang go fokotsa ditlamorago mo diphologolong tse di mo lefelong
Koketsego ya dikotsi tsa dikoloi	<ul style="list-style-type: none">Bakgweetsi botlhe le badiri ba tshwanetse go thathlhelwa dithuto tsa melawana ya tsele.Dikoloi tsothle tse di dirisiwang di tshwanetse go tsennngwa dipone tse di phatsimang, dikoloi tse di rwalang didirisiwa di tshwanetse go apeswa saile ka nako tsothle.Bakgweetsi le badiri ba ba nang le diteseletso ba tshwanetse go thapiwa.
Diphatsa le tse di amang botsogo mo tirong	<ul style="list-style-type: none">Dilwana tsa itshireletso tse di maleba di tshwanetse go nna teng le tirisu ya tsone e rurifadiweThutontsho ka tsa pabalesego le botsogo e tshwanetse go dirwa kgapetsakgapetsa.Boleng -teng jwa modiredi le didirisiwa tsa thuso ya potlako di tshwanetse go rurifadiwaBaeng ba tshwanetse go tsibosiwa ka tsa pabalesego mo tirongDidirisiwa tsa mo tirong di tshwanetse go nna mo seemong se se siameng ebile se babalesegileMelao ya phimilo dikededi e tshwanetse go salwa morago ha babereki ba golafetse mo tirong
Kgotlelele go mmu e dirwang ke leokwane	<ul style="list-style-type: none">Go tshwanetse ga nna le selwana se se dirisiwang go beelelsa leokwane gore le seka la tshologela mo mmungMebu yotlhe e e amilweng ke kgotlelele go leokwane e tshwanetse ya ntshiwa e bo e bewa mo bodilong jo bo babalesegilengGo tshwanetse ga nna le ditlamelo tse di itebagantseng le go baakanya kgotlelele e e bakilweng ke leokwaneBabereki ba tshwanetse go rutuntshiwa ka tirisu e e babalesegileng ya leokwane
Kgotlelele go phefo	<ul style="list-style-type: none">Metsi a tshwanetse go kgachiwa go fokotsa leroleDithotobolo tsa mebu di tshwanetse go babalesego gore di seka tsa baka leroleLebelo la dikoloi e nne 30km/h kana 60km/hr jaaka gotaabo go supilweBabereki ba tshwanetse go abelwa dilwana/didirisiwa tse di maleba go itshireletsa mo leroleng
Kgotlelele go metsi	<ul style="list-style-type: none">Go tshwanetse g anna le selwana se se dirisiwang go beelelsa leokwane gore le seka la tshologela mo mmungMebu yotlhe e e amilweng ke kgotlelele go leokwane e tshwanetse ya ntshiwa e bo e bewa mo bodilong jo bo babalesegilengGo tshwanetse g anna le ditlamelo/didirisiwa tse di itebagantseng le go baakanya kgotlelele e e bakilweng ke leokwaneBabereki ba tshwanetse go rutuntshiwa ka tirisu e e babalesegileng ya leokwane
Kgotlelele go mmu	<ul style="list-style-type: none">Dikantini tsa matlakala tse di babalesegileng di tshwanetse tsa nna teng.Matlwana a boiteketo a metsi a tshwanetse go nna teng mo lefelong la tiro.
Go thamiwa ga mebereko	<ul style="list-style-type: none">Netefatsa gore o fa beng ba gae sebaka pele mo go tsa phiro ya baberekiMong wa tiro o tla obamela ditsamaiso tsa melawana ya tsa phiro.Go thapiwa ga batho go tshwanetse go dirwa phatlalatsa kwa kgotleng.
Tiro e ya Tswalwa	
Ditlamorago	Methale ya go thibela kgotsa go fokotsa ditlamorago
Go lathegelwa ke lefatsho la temothuo	<ul style="list-style-type: none">Morago ga go fela, mahuti a kepo mmu a tshwanetse go busetswa mo seemong se se tsamaeleng le sa pele ga epiwa. Lehuti le tshwanetse la thijwa ka mebu gore le nne mo seemong se se tokafetseng.Mohiri o tshwanetse go dira gore tiro ya go baakanya lehuti e nne le kotlhao ya madi fa e ka pala go dirwa.
Go lathegelwa ke ditiro	<ul style="list-style-type: none">Go tshwanetse ga nna le mokwalo oo supang gore barekisi ba mengwe mshini ba a dirisiwa mo paakanyong ya mahuti.Babereki bangwe ba tshwanetse ba name ba beilwe mo tirong gore batle go bereka tiro ya go baakanya lehuti.Babereki ba tshwanetse go fiwa dikgakololo ga mmogo le dithuto go dira dipampiri tse di supang ditiro tse ba di berekileng.
Kgotlelele go metsi	<ul style="list-style-type: none">Go tshwanetse g anna le selwana se se dirisiwang go beelelsa leokwane gore le seka la tshologela mo mmungMebu yotlhe e e amilweng ke kgotlelele go leokwane e tshwanetse ya ntshiwa e bo e bewa mo bodilong jo bo babalesegilengGo tshwanetse g anna le ditlamelo/didirisiwa tse di itebagantseng le go baakanya kgotlelele e e bakilweng ke leokwaneBabereki ba tshwanetse go rutuntshiwa ka tirisu e e babalesegileng ya leokwane
Kgotlelele go phefo	<ul style="list-style-type: none">Metsi a tshwanetse go kgachiwa go fokotsa leroleDithotobolo tsa mebu di tshwanetse go babalesego gore di seka tsa baka leroleLebelo la dikoloi e nne 30km/h kana 60km/hr jaaka gotaabo go supilweBabereki ba tshwanetse go abelwa dilwana/didirisiwa tse di maleba go itshireletsa mo leroleng

D. Bokhutlo le Kabelano Maano ka Tiro e.

Tiro e na le ditlamorago tse di ntle (mosola) le tse di busula mo tikologong e tiro e akanyeditsweng go ya go dirwa teng le mo mafelong a a mo tikologong ya yone. Tshekatsheko ya tikologo, e kaya gore tiro e ka tsewelelela mme go setswe morago ditsetlana tsa pabalelo tikologo le phokotso ya manokonoko a ditlamorago tse di kwadilweng mo lekwalong la tshekatsheko tikologo go babalela tikologo le matshelo a batho.

E. Mekwalo ya Tshekatsheko Tikologo le matshelo a batho ya Tiro e.

Mekwalo ya tshekatsheko ya tikologo e ka bonwa kwa:

- Lephateng la Merero ya Tikologo kwa Serowe
- Kgotla ya Motopi
- Kgotla e tona ya Makalambedi Central
- Kgotla ya Makalambedi North West

F. Ba Ba Batlang go Akgela kotsa go Botsa Mabapi le Tiro e.

Botlhe ba ba amegang ba lalediswa go tla go bala mokwalo wa tshekatsheko wa tikologo wa tiro e, mekwalo yotlhe ya dikakgelo kgotsa dingongorego mabapi le tiro e, e kwalelwe kwa go District Environmental Coordinator, Department of Environmental Affairs, Private Bag 0028, Serowe **Mogala:** 4630174, Fax 4631307 kgotsa o ka isa mokwalo ka letsoego kwa dikantong tsa Lephata la Tsa Tikologo kwa Serowe go bapa le dikantoro tsa Lephata la Ditsela kwa kgotleng ya Palamaokuwe pele ga di 23 Thakole 2024.



Department of Environmental Affairs
Ministry of Environment & Tourism
Private Bag 0028, Serowe
Tel: 4630174 fax. 4630307