The Government of Nepal (GON), through the Ministry of Urban Development has received financing from the Asian Development Bank (ADB) toward the cost of the **TUKUCHA Waste Water Treatment Plant** under a Design Build and Operate (DBO) contract arrangement whereby the Government intends to apply part of its budgetary allocation to payments under the contract for design, construction, operation and maintenance of TUKUCHA Waste Water Treatment Plant (WWTP). Tukucha Khola is a tributary of the Holy Bagmati river that is mostly fed by sewage and drainage water from its catchment area. No interceptors for the collection of sewage and rainwater have been laid along the river. During the dry season 100 percent of river Tukucha flow up to $Q = 17,300 \text{ m}^3/\text{d}$ shall be collected and treated in the WWTP.

The feasibility study, base design, cost estimates of the Tukucha Wastewater Treatment plant were developed with international and national consultants and financial support of ADB in 2018/19. The plant was designed to address several constraints, including (i) limited space for construction; (ii) a location close to residential areas, a cultural heritage area, and within the flooding area of the Bagmati River; (iii) high fluctuations in the quantity and quality of the wastewater; and (iv) integration into the urban landscape. The site for the construction of the WWTP is located on the right bank of the Bagmati river (North of the river). It is limited in the North, North East by Ghats, a historic building that currently houses the police administration,
and private houses, in the East by Tukucha Khola, in the South by Bagmati River and in the West by a public street.

The site for the construction of the sludge handling units is located on the left bank of Bagmati River (South West of Bagmati River) opposite the wastewater treatment plant. It is limited by the Bagmati, a public street in the South and private properties in the West and East. The effluent discharge standards applicable to the WWTP are combination of international standards (e.g. for BOD5) and national standards. The key minimum purification requirements of outflow include Total Suspended Solids (TSS) <35 mg/l, BOD₅ <25mg/l, Oil and Grease <10 mg/l, NH₄-N <50mg/l and COD<125 mg/l.

The WWTP shall include mechanical (coarse and fine screening, aerated sand traps) and biological treatment, anaerobic excess sludge stabilisation with biogas collection, storage and combustion for energy production. Biological excess sludge shall be stabilised externally in anaerobic digesters. Stabilised sludge will be dewatered and used in agriculture, for landscaping or be dumped at a landfill. The biogas that is produced in the digesters shall serve as an energy source for internal use in the plant. The biological treatment process shall use Sequencing Batch Reactor (SBR) technology. The purification aims at removal of carbonaceous compounds and suspended solids and partial nitrification. The excess sludge from the biological purification shall be stabilised in anaerobic, mesophilic digesters. The biogas produced in those digesters shall be used for the heating of the excess sludge and energy production for internal supply. The WWTP shall be fully integrated in the urban landscape. The plant will be partially buried, and all basins shall be covered with a lawn on the cover slabs and the cover slabs be accessible to the public. The Polluted air will be drawn out of the WWTP buildings and passed through air filtration and purification facilities to remove any harmful emissions and nuisance odors. All plant amenities will be designed following the local traditional architectural style, and the aesthetics of the site will be enhanced through landscaping including riverbank protection walls, walkways, a pedestrian bridge crossing the Tukucha Khola, access road and planting of trees and lawn.

The 5-year operating agreement between the Government of Nepal and the winning bidder shall require the winning bidder to operate the Tukucha Khola to the WWTP Operation and maintenance will be done by the contractor for all aspects of the Influent Pump Station, Headworks, Primary, Secondary, Recycled Water, Solids Treatment/Storage, and Miscellaneous Equipment.

Bagmati River Basin Improvement Project (BRBIP), the High Powered Committee for Integrated Development of Bagmati Civilization (HPCIDBC), under the Ministry of Urban Development (MoUD) through the government of Nepal that has received loan (Loan No: 3816 NEP (COL)) from Asian Development Bank (ADB) invites eligible contractors to indicate their interest in providing the services. Interested contractors should provide information indicating that they are qualified to perform the services (brochures, description of similar assignments, experience in similar conditions, availability of appropriate skills among staff etc.). Contractors are encouraged to associate to enhance their qualifications. A contractor will be selected in accordance with the procedures set out by the Asian Development Bank under the Procurement Regulations for ADB. A virtual road-show may be held prior to tendering after sufficient expressions of interest have been generated where contractors will be presented with final details of the potential project and a chance to ask questions. Further details will be given to interested parties.

Asian Development Bank
Interested contractors may obtain further information as well as Expressions of interest must be delivered to the address below by email within 15 days from the first publication of this notice.

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