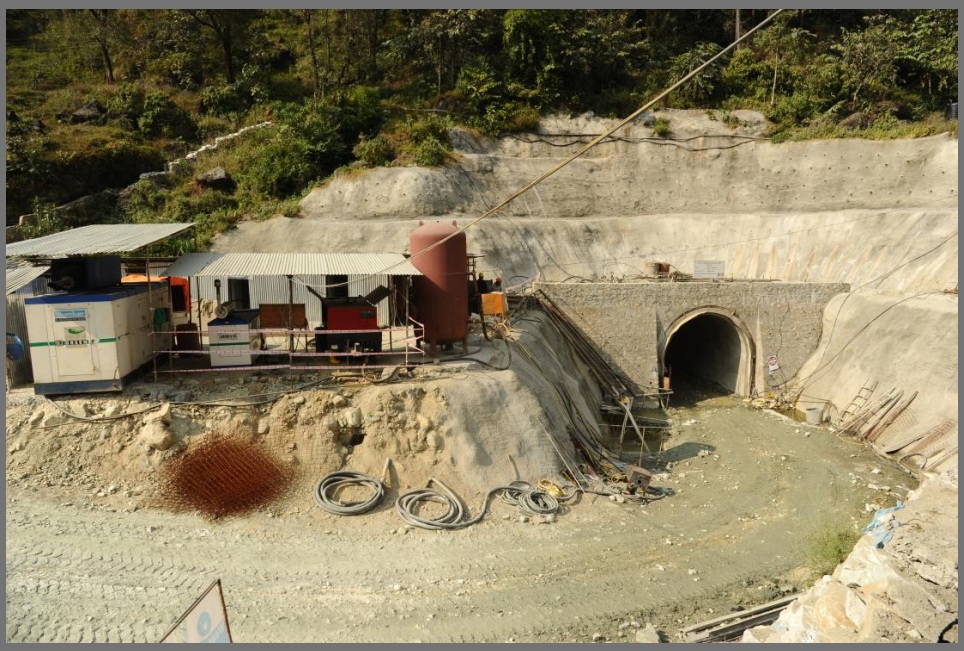
2071

Lower Modi Khola Hydroelectric Project (20 MW)

Parbat District, Western Nepal

Mangsir 2071



Progress Report

Manang Trade Link (P.) Limited

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List of abbreviation

Amsl	Above Mean Sea Level
BOQ	Bill of Quantities
BPC	Butwal Power Company
Cumecs	Cubic metre per second
DoED	Department of Electricity Development
GoN	Government of Nepal
GWh	Giga Watt Hour
HSL	Hydro Solutions (P) Ltd.
kWh	Kilowatt hour
LMKHEP	Lower Modi Khola Hydroelectric Project
m	Meter
m^2	Square metre
m^3/s	Cubic metre per second
Masl	Meter Above Sea Level
Mill	Million
Mm	Millimetre
MTL	Manang Trade Link (P) Limited
MW	Megawatt
MWh	Mega Watt Hour
NEA	Nepal Electricity Authority
(P.)	Private
PPA	Power Purchase Agreement
VAT	Value Added Tax
VDC	Village Development Committee
W	Watt
WRC	Water Resources Consult (P) Ltd.

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EXECUTIVE SUMMARY

Manang Trade Link (P.) Limited (MTL), a company setup to develop Lower Modi Khola Hydroelectric Project (LMKHEP) has prepared this progress report. Hydro Solutions Group, KL Dugar Group, Murarka Group, Debenara Group, and Mr.Bhujung Gurung as individual partner promoting this project.

The LMKHEP was identified by MTL as a potential hydropower project in the Western Region of Nepal between longitude 83º44'43" and 83º42'30" and latitudes 28º16'18" and 28º14'08" and". The altitude of the project area varies between 869 m and 767 m above mean sea level (masl).

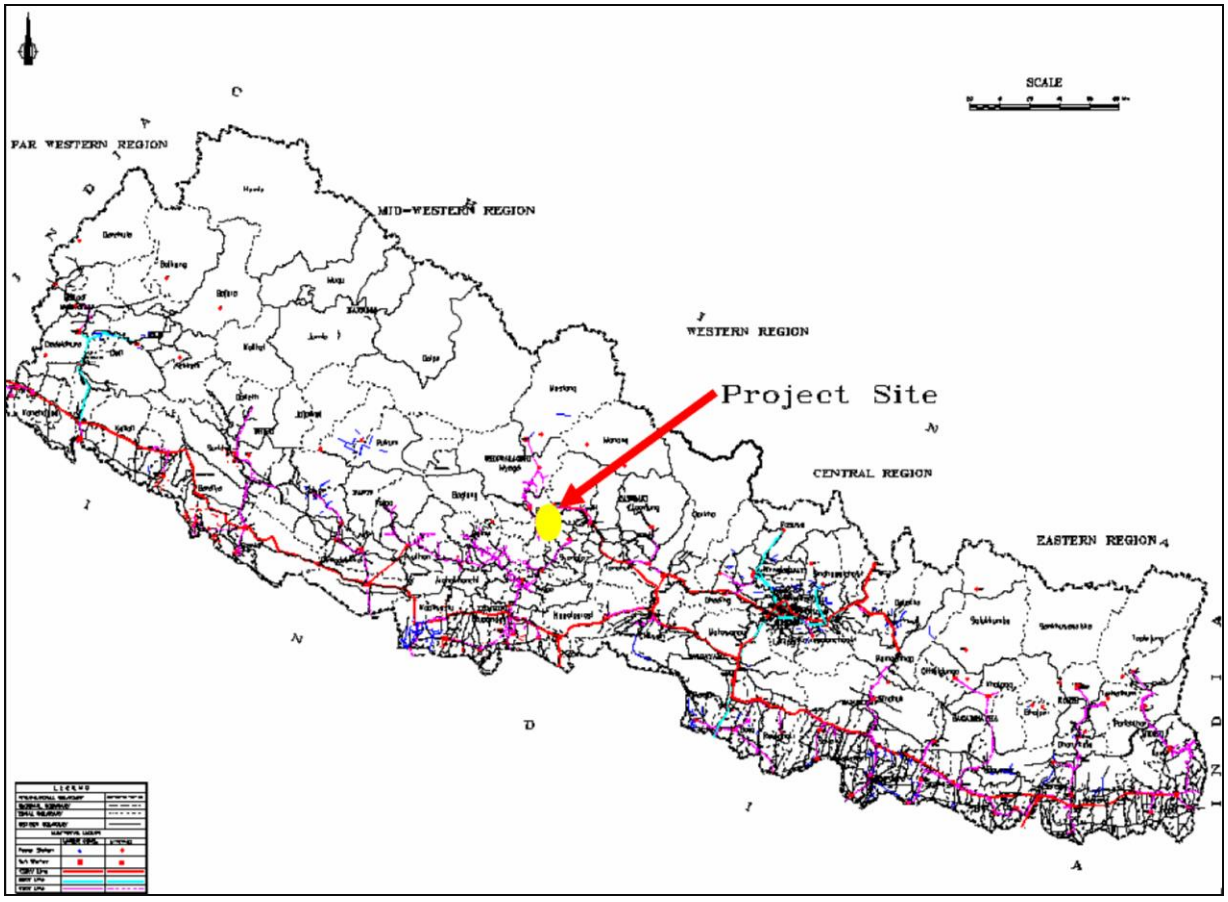

Fig 1: Proposed site

The feasibility study of the project was undertaken by WRC and reviewed by Hydro Solutions Private Limited and BPC Hydro consult in January 2008.The project has already accomplished the financial closure with the consortium of 11 banks lead by Nepal Investment Bank Ltd and co-lead by Sunrise Bank Ltd.

OBJECTIVE OF THE DOCUMENTS

The objective of this progress report is to present the progresses to date.

1. PROJECT STATUS

The following sub-sections briefly describe the status of the project till date.

1.1 FEASIBILITY STUDY

The feasibility study of the project was undertaken by WRC and reviewed by Hydro Solutions Private Limited and BPC. GoN has approved the EIA report of the project.

1.2 PPA AND INTERCONNECTION

PPA was signed with NEA on Bhadra 2068. The agreed contract energy is 117.14 GWh after deducting 4% outage and loss. The connection agreement was signed on 2066/10/14.

1.3 LAND ACQUISITION

Land required for the construction activities has been completed. Approximately 107 ropanies of land (8.5 ropanies of the land at Powerhouse, 69.5 ropanies at Headworks, 12 ropanies for mucking disposal and 15 ropanies at Housing area) has been purchased. Figures 1, 2, 3 and 4 below show the purchased land for powerhouse, housing and headwork areas. Similarly 34 ropanies of land has been leased for safe muck disposal and construction facilities.

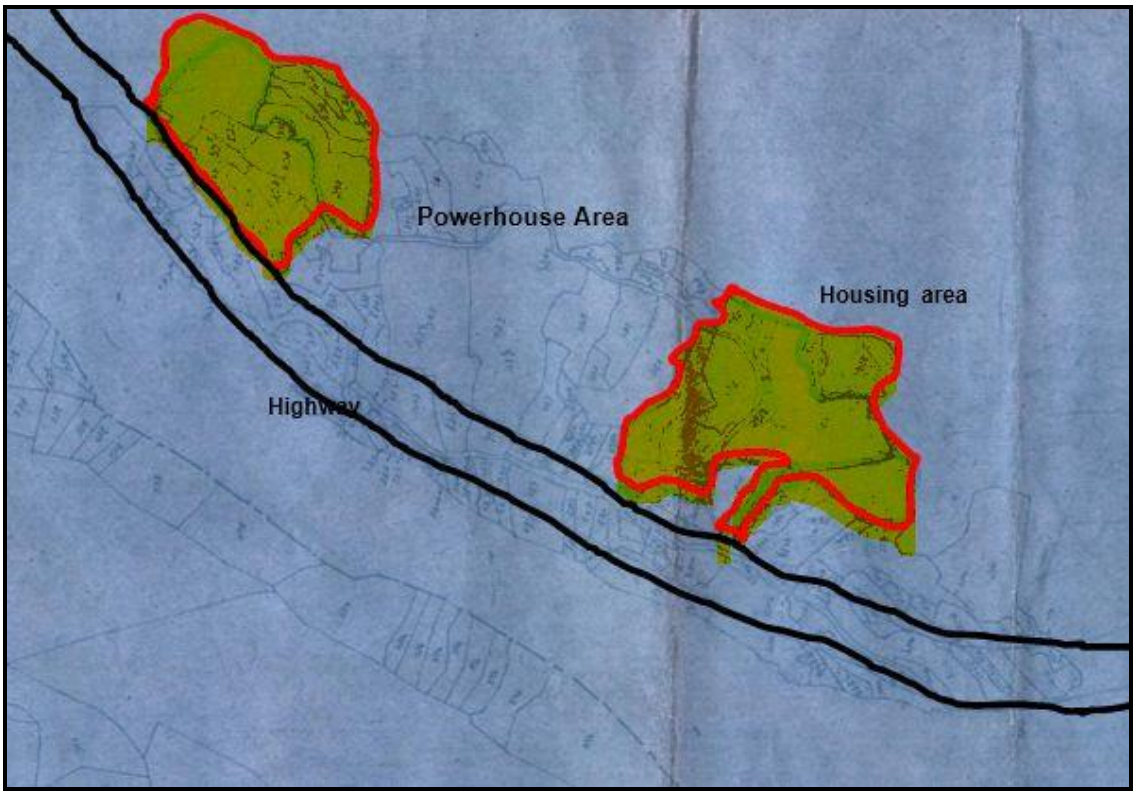

Fig 2: Detail of Land at Powerhouse and site camp area

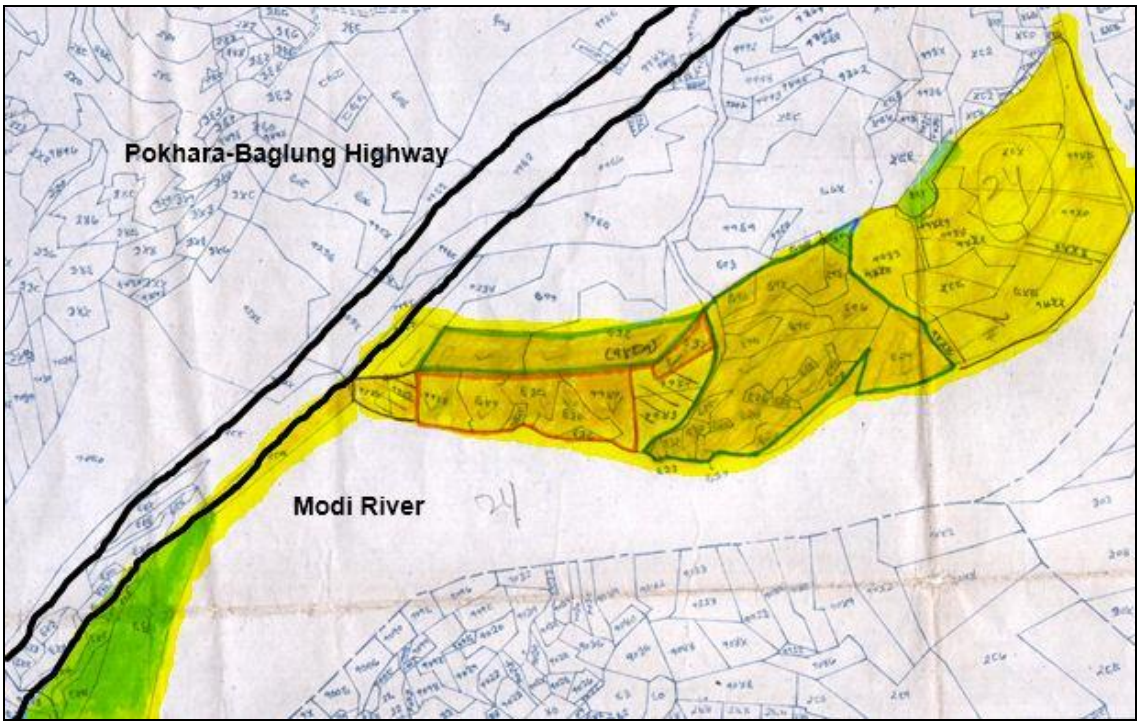

Fig 3: Detail of Land at Headworks area

Fig 4: Land purchased for settling basin

Fig 5: Land purchased for power house area

1.4 ENGINEERING AND DETAIL DESIGN

Hydro Solutions Engineering & Consultancy Private Limited has undertaken the detail engineering design of the project. The consultant has created a team of engineers and geologist for providing design and construction management services for the project. All the required investigations for underground and surface works have been completed. Till date the consultant has already submitted the Detailed Project Report (DPR), tender documents for civil construction and hydro-mechanical fabrication and construction drawing of Headworks and underground works. MTL has also engaged Australian based Indian consultant, Entura Hydro Tasmania to check and verify the design of LMKHEP.

The monitoring of the construction works at site by the Consultant is being done through regular site visits. Other experts have also been engaged to provide specialized services to enable to foresee and deal with potential problems that can impact work progress.

Fig 6: Site Visit of Consultant

2. CIVIL CONSTRUCTION

MTL has appointed two contractors for the execution of civil works of the project. South Asian Infrastructure Pvt Ltd will be constructing the underground works and Ashish-Fewa-Nayabato JV will be constructing the surface civil works of the project. MTL has signed the contract agreement with both of these contractors who have mobilized their sites and started their works.

2.1 PRE-CONSTRUCTION FACILITIES

All the pre-construction facilities including construction power, water supply, labour camp, and crusher and batching plant, bunker has been completed at all working sites.

Fig 7: Site Office and staff quarter of Manang Trade Link Pvt Ltd

Workshop at Adit-2

Staff quarter of South Asian Infrastructure Pvt Ltd

Labour camp of South Asian Infrastructure Pvt Ltd

Staff quarter and site office of Ashish-Fewa-Nayabato JV

Crushing and batching plant in operation

2.2 ACCESS ROADS

Unlike many other hydro projects, this project is easily accessible as all the structures of the project are along the Pokhara-Baglung highway. The access road to be constructed is limited to few kilometers, most of which has been successfully constructed. Constructions of access road to Adit-1, Adit-2, Headworks site, and inlet portal, site camp and outlet portal have been completed and access road up to penstock area and surge tank area is being planned to commence soon.

2.3 ADIT TUNNELS

There are two adit tunnels namely Adit-1 and Adit-2 being excavated. The excavation of two Adits each of length 181 meter and 122 meter has been completed.

Fig 8: Adit-1 Portal

Fig 9: Adit-2 Portal

Inlet Portal

Preparation of outlet Portal

2.4 SURFACE STRUCTURES

The concreting works of Undersluice, divide wall, counterfort wall, intake, bed load deflector and gravel trap and approach canal is going on. Similarly excavation of settling basin is in progress. Overall more than twenty five percent of headworks has completed.

Construction of Intake and undersluice

Construction of Gravel Trap

PCC at settling Basin

Concreting at approach canal

3. HEADRACE TUNNEL

Excavation of 4021 meter of headrace tunnel is in progress. So far excavation of around 950 meter of HRT has been completed. All the primary support including shotcrete, rockbolting and forepolling has been done along these excavated length of the Tunnel.

Inner view of HRT tunnel, upstream of Adit-2

Inner view of HRT tunnel from inlet portal

4. HYDRO-MECHANICAL

Contract has been done with Machhapuchhre Metals and Machinery Works Pvt Ltd (3MW) for the design, fabrication, supply, install and commissioning of Hydro-Mechanical components

5. ELECTRO-MECHANICAL

Contract has been done with B Fouress Pvt Ltd for the supply, installation and commissioning of electro-mechanical equipments.

6. TRANSMISSION LINE

The evacuation of the power generated from Lower Modi Khola Hydroelectric Project needs about 4.5 km of 132 KV transmission line. We have already obtained the survey license for the route alignment of the transmission line. Detail study of the line is still ongoing. The New Modi substation, which is the delivery point for evacuating power generated by the Lower Modi Hydropower Project, and which is to be built by NEA, has yet to begin construction. NEA has been notified about this and a schedule from NEA in this regard has been sought. Delay in the construction of the said substation will impact the commercial operation of this Project.

7. MITIGATION AND ENVIRONMENT

MTL has involved various local employees for the construction works as an enhancement of local skills. Beside supports for various organization to conduct awareness program has been done. MTL has provided significant support in construction and upgrading of local rural roads, water supply and sanitation. MTL is planning to organize various entrepreneurship trainings and programs to produce skilled manpower at site.

Fig 21: Visit of Hon. Minister of Energy at site office.