

Land Acquisition and Resettlement Due Diligence Report

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BHU: Thimphu Urban Development Project

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CURRENCY EQUIVALENTS

(as of 20 July 2016)

Currency Unit – ngultrum (Nu)

Nu1.00 = \$0.01489

\$1.00 = Nu67.14430

ABBREVIATIONS

ADB	—	Asian Development Bank
CAPP	—	consultation and participation plan
DDR	—	due diligence report
GRM	—	grievance redress mechanism
LAP	—	Local Area Plan
MOWHS	—	Ministry of Works and Human Settlements
NFE	—	Non-Formal Education
PAVA	—	Property Assessment and Valuation Agency

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I. INTRODUCTION AND PROJECT BACKGROUND

A. Background

1. Traffic volumes have been increasing in Bhutan in recent years, particularly in Thimphu, with an average annual growth rate of traffic being 11%. The situation has worsened after the lifting of the temporary prohibition on the import of vehicles in June 2014. The total number of vehicles (as of December 2014) reached 69,602 compared to 67,926 vehicles in 2013, i.e., an increase of 2.5% from the previous year. With the growing population of both the people and vehicles, the urban roads of the urban areas has deteriorated much faster than anticipated and are in dire need of repairs and up gradation. In particular, Thimphu Thromde (Municipality), a fast growing municipality¹ with a population of 92,000, makes up 40% of Bhutan's urban population has experienced the bulk of this growth in vehicular movement. Road conditions have severely deteriorated and amenities such as foot paths and drains are in no better conditions and need to be either repaired or constructed. The Royal Government of Bhutan realizes the need for an integrated road network in Bhutan's capital city that is aligned to the urban transportation system of the city and has requested the Asian Development Bank (ADB) for assistance to help meet this objective through the improvement of the road infrastructure in Thimphu.

2. The investments under the proposed project are based on the Government's Thimphu Structure Plan² and Local Area Plans (LAPs) and intend to address some urgent road repair issues throughout the capital city that are severely impacting traffic flows and quality of life of the city's residents.³ In addition to road improvement works in the city's core area, the project will also help to rehabilitate road infrastructure in the Local Area Plan (LAP) areas.⁴ The project will also support the widening of a 3.5 kilometer (km) stretch of road which is the main connector between Thimphu and the eastern Dzongkhags. All the transport services plying to the eastern Dzongkhags use this road which eases the traffic on the express way. The project responds to the city's critical needs for enhancing its road infrastructure.

3. The Ministry of Works and Human Settlements (MOWHS) acting through its' Department of Engineering Services will be the executing agency. A program management unit, established in the MOWHS, will be responsible for planning, implementation, monitoring and supervision, and coordination of all activities under the project. The Thimphu Thromde or municipality (TT) will be the implementing agency and will be responsible for the daily coordination and execution of the project.

II. SCOPE OF THIS REPORT

4. This land acquisition and resettlement due diligence report (DDR) is being prepared for the scope of the entire project comprising a total of 2 civil works packages. Package 1 involves, four sub-lots (corresponding to the four geographical areas the works are located in) and

¹ Its population is expected to double by 2025 as per Government of Bhutan and Cities Alliance. 2008. *Thimphu City Development Strategy*. Bhutan.

² Government of Bhutan. 2003. *Thimphu Structure Plan: 2002–2027*. Thimphu.

³ Several of these road sections have potholes and poor drainage infrastructure is leading to further deterioration of road conditions.

⁴ Some of these LAPs were supported through ADB. 2006. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and Technical Assistance Grant to the Kingdom of Bhutan for Urban Infrastructure Development Project*. Manila. (Loan 2258). areas covered under the ADB assisted Urban Infrastructure Development Project (UIDP).⁴ UIDP (2258-BHU) focused on five local areas in South Thimphu (Changbangdu, Lungtenphu, Simtokha, Babesa and Serbithang).

includes, the scope of which includes: (i) resurfacing/ road rehabilitation of 28.24 km of road section; (ii) the construction of 9.15 km of drainage; (iii) 4.83 km of footpaths; and (iv) 5,266 square meters (m²) of parking area. Package 2 consist of 3.54 km of road widening between Simtokha Mani Dungkhor and YHS Junction.

5. A due diligence process was conducted to examine land acquisition and resettlement issues in detail, in line with the (ADB's Safeguard Policy Statement, 2009). The due diligence review revealed this to be a low risk project in terms of its impacts on land acquisition and resettlement and hence a resettlement framework was not deemed necessary. The works are restricted to the road rights of ways and no involuntary resettlement or land acquisition will be necessary. Hence, the project has been assessed to be category C for social safeguards. However, this DDR also outlines the processes and institutional responsibilities that will come into effect should the need for any resettlement / land acquisition come into place during the project implementation stage.

6. Upon project implementation, the Project Implementation Unit in-charge, will be required to undertake a review of this due diligence report, prepare a confirmation letter or report documenting any modifications for the subprojects and submit to the Project Manager in the program management unit and ADB. A 'no objection' confirmation is required from ADB prior to the start of construction.

III. ASSESSMENT OF LEGAL AND POLICY BACKGROUNDS

7. The policy framework for the Project is based on the ADB's Safeguards Policy Statement (2009), ADB Operations Manual (OM) and the Land Act of Bhutan 2007. Where differences exist between local law and ADB practices, the policy difference will be resolved in favor of the former.

8. The Land Act of Bhutan states that "in case of land acquired in Thromde, the land owner shall be provided cash compensation. If the land to be acquired is the only plot owned by the landowner in the Thromde, the Government shall consider a substitute land in the same Thromde. If the value of the substitute land is inadequate additional cash compensation shall be provided subject to the value of land".⁵ Also the subsequent section states that "upon acquisition, if the remaining land parcel is less 10 decimal, such land both in Thromde and rural areas shall also be acquired."

9. Compensation for land acquisition and compensation for crops/ fruits etc. are regulated in the Property Assessment and Valuation Agency (PAVA) document issued by the Ministry of Finance in 2009.

10. ADB's Safeguards Policy Statement is aimed at avoiding involuntary resettlement wherever possible; minimizing involuntary resettlement by exploring project and design alternatives; enhancing, or at least restoring, the livelihoods of all displaced persons⁶ in real terms relative to pre-project levels; and improving the standards of living of the displaced poor and other vulnerable groups.

⁵ Land Act of Bhutan, 2007, Sections 148 and 150.

⁶ According to clarifications provided in the ADB's Safeguard Requirements SPS Safeguard Requirements No 2 on Involuntary Resettlement, 2009, displaced persons are those who are physically displaced (relocation, loss of residential land, etc.) and/or economically displaced (loss of land, assets, access to assets, income sources, or means of livelihood) as a result of involuntary acquisition of land, or involuntary restrictions on land use, etc.

11. In compliance with ADB's requirements, affected people in a project area could be of three types: (i) persons with formal legal rights to land lost in its entirety or in part; (ii) persons who lost the land they occupy in its entirety or in part who have no formal legal rights to such land, but who have claims to such land that are recognized or recognizable under national laws; and (iii) persons who lost the land they occupy in its entirety or in part who have neither formal legal rights nor recognizable claims to such land. Involuntary resettlement requirements apply to all three types of Aps (affected peoples).

12. Comparison between ADB's Safeguards Policy Statement and Land legislation/regulation of Bhutan is tabulated below:

Table 1: Comparison of the Royal Government of Bhutan and ADB Resettlement Policy

ADB's IR Policy	Royal Government of Bhutan's Policy	Compliance with ADB's IR Policy- Remarks
1. Involuntary resettlement should be avoided whenever feasible.	Involuntary resettlement should be avoided where feasible	No difference.
2. Where population displacement is unavoidable, it should be minimized by providing viable livelihood options.	Not mentioned explicitly but followed in practice.	Displacement is not envisaged under the project
3. Conceive and execute involuntary resettlement as part of a development project or programme	319- In this Act, unless the context requires otherwise, the term: Public interest means the needs arising out of socio-economic development and environmental concerns including cultural, environmental, heritage, protection of land degradation, recreational, social and strategic interests as determined by the Government.	<ul style="list-style-type: none"> ▪ Full equivalence
4. People affected should be informed fully and consulted on resettlement and compensation options. This includes informing all displaced persons of their entitlements and resettlement options.	Displaced persons are not provided with information about their entitlements other than the choice of substitute land or cash compensation.	<ul style="list-style-type: none"> ▪ Consultation and information generally carried out with APs though not overtly described in Land Act. ▪ TT has conducted several consultations and used mass media to inform people about similar projects including ADB BHU-2816. ▪ To ensure meaningful consultation throughout the project a Consultation and Participation plan (CAPP) has been prepared for the project
5. The absence of a formal legal title to the land by some affected groups should not be a bar to compensation; particular attention should be paid to households headed by women and other vulnerable	Not spelled out	<ul style="list-style-type: none"> ▪ Indigenous people mainstreamed in the society in Thimphu Municipality (no discrimination of any kind noted) ▪ Not consistent with ADB policy of providing

ADB's IR Policy	Royal Government of Bhutan's Policy	Compliance with ADB's IR Policy- Remarks
groups, such as indigenous peoples and ethnic minorities, and appropriate assistance provided to help them to improve their status.		compensation for non-titled persons <ul style="list-style-type: none"> ▪ Replacement cost/ value of land as prescribed in PAVA ▪ No land acquisition, involuntary settlement, economic or physical displacement are foreseen under the project.
6.APs should be fully informed/consulted in resettlement and compensation options (meaningful consultation)	There are no provisions pertaining to consultation with affected persons other than permitting them to choose between substitute land or cash compensation. But consultation is carried out in practice.	<ul style="list-style-type: none"> • Both are in compliance terms of actual practice • No land acquisition, involuntary settlement, economic or physical displacement are foreseen under the project.
7. APs should be compensated for all their losses at replacement cost	Policy states that compensation to be based on PAVA rate and Bhutan Schedule of Rates which are revised from time to time.	<ul style="list-style-type: none"> • PAVA rates are much less than the market rates
8. APs should be timely compensated	Policy does not mention this but compensation is made before the start of project	<ul style="list-style-type: none"> • In practice both are in compliance
9. Improve the standards of living of the displaced poor and other vulnerable groups, including women to at least national minimum standards	While poor and vulnerable groups are not excluded there are no provisions directly relating to these groups and in particular towards improving the standards of living. It is noted that there is provision for the granting of rehabilitation land to landless households. This however is not in the context of acquisition.	<ul style="list-style-type: none"> • The project should require that the standards of living of the displaced poor and vulnerable groups, including women, should be improved to at least national minimum standards and this provision should be incorporated in the project RPs (which will be prepared if any resettlement issues are identified during project implementation)
10.Establish a grievance redress mechanism to receive and facilitate resolution of the affected persons' concerns.	No policy	<ul style="list-style-type: none"> • Project is classified at category 'C' for Involuntary Resettlement. However, provisions to introduce a grievance redress mechanism (GRM) have been identified in this DDR, should any instances of land acquisition or involuntary resettlement arise during project implementation.

Source: Project Preparatory Consultant Team

IV. PROJECT DESCRIPTION

A. Proposed components

13. Subproject components (civil works) proposed under the project include two civil works packages: (i) one package for road resurfacing and improvements in four zones of Thimphu city; and (ii) one package for 3.5 km of road widening between YHSS junction till Semtokha Mani Dungkhor. Each of the zones designated with road repair works has been packaged as one lot for the purpose of procurement under the first civil works contract and the road widening portion has been packaged as a separate contract package. In the four zones, the project sub-components include road resurfacing and the renovation and construction of new drains and footpaths. This includes a total of 28.24 km of road resurfacing, 9.15 km of drainage improvements and the construction/ rehabilitation of 4.83 km of footpaths. The road widening sub-component comprises of widening 3.5 km road stretch and 1.51 km of drain construction and renovation. The initial 200 meters (m) of road will be laid over the drain so as to gain the required road width of 10 m. This is done so since the upper hill side need not be disturbed as there are houses above the road at distances of more than 25 m and the lower side is rather difficult for road construction because of the steep slope.

14. The zone –wise details of the infrastructures to be taken up by the projects is tabulated in Tables 2 to 5 below:

Table 2: Zone 1 Infrastructure Details

Sl. No.	Locations	Road classification	Road Re-Surfacing (m)	Road Width (m)	Drainage (m)	Footpath (m)	Total width of works (including drainage/footpath and ROW)	Road Pavement width ⁷	Remarks
A1	Kunzang Lam -(Motithang below Azhi Building)	Secondary	493	7.5	200	493	8.8	7.5	Works are contained in right of way
A2	Below BoD Motithang	Tertiary	133	7	133		7.7	7	
	Resident parking		79	14			15.5	14	
A3	Dungkar Lam	Tertiary	195	6.5	195		8	6	
A4	Thongsal Lam – Below Shop No.7 towards RUB Junction	Secondary	205	7.5	205		8.2	7.5	
A5	Deki Lam - Along Changangkha Lhakhang till RKPS junction	Primary	215	9			11	9	
A6	Thori Lam - below City 3 tank road to Renew junction	Primary	445	10.5	445		11.8	10.5	
A7	Pedzoe Lam i) Renew Junction till National Library junction	Secondary	810	9	810	810	10.3	9	
A8	Below ACC office	Tertiary	213	8	213		8.7	8	
A9	Dasing Lam – along City garage and below DNP office	Tertiary	371	6.5	269		7.2	6.5	
A10	Jangchub Lam- along Kelki school	Secondary	225	8	200		8.7	8	
A11	Phendey Lam - milkbooth till Hotel and behind DRC	Secondary	582	8	300		9.3	8	
A12	From Phuntsho Pelri junction ,Thai Temple till Le Meridian junction	Secondary	552	7.5	270		8.8	7.5	
A13	Gongdzin Lam – in front of 8eleven till Thromde office	Primary	253	11.6			18	11.6	
A14	Peling Lam (from NLC, RAA, MoE till RMA junction	Secondary	445	8.5	445		9.8	8.5	

⁷ As per the Road Rules and Regulations of The Kingdom of Bhutan 2016 “Thromde administration shall, in coordination with the Department of Human Settlements, by an order prescribe the road right of way in accordance with the structural and local area plans and in the absence of such plans, by a notification, in writing.”

Sl. No.	Locations	Road classification	Road Re-Surfacing (m)	Road Width (m)	Drainage (m)	Footpath (m)	Total width of works (including drainage/footpath and ROW)	Road Pavement width ⁷	Remarks
	Total for Zone 1		5216m		3685m	1303 m			

Table 3: Zone 2 Infrastructure Details

SI.No	Locations	Road classification	Road Work		Drainage Work	Footpath	Total width of works (including drainage/footpath and ROW)	Road Pavement width	Remarks
			L(m)	W(m)	L(m)	L(m)	m	m	
B1	Dechencholing gate to samteling gate	Secondary	2300	6.5	50		7	6.5	Works are contained in right of way
B2	Samteling gate to Jungshina bridge	Secondary	400	7.5			85.	7.5	
B3	Towards court to dzong gate	Primary	800	6.5	800		7.7	6.5	
			500 (road widening)	5					
B4	Chubachu: R1 (Road beside Rapa)	Secondary	300	10			12	10	
B5	R2(Road below BDBL)	Secondary	250	6	250		8	6	
B6	R3(Road above JLPS & BPC)	Secondary	598	6	200	200	7	6	
B7	R4(Road branch)	Secondary	282	10			12	10	
B8	R5(Road joining towards Tarayana building)	Primary	282	6			7.5	6	
B9	R6(Access road joining front road of MyMart)	Secondary	185	5	185		5.9	5	
B10	Main road below BOB office towards JLPS	Primary	585	14			15	14	
B11	Vegetable market area:	Secondary	300	5	300	300	5.9	5	
	R1(Behind vegetable market)		100	10			11.5	10	
B12	R2(Road behind vegetable market branch)	Secondary	100	5			5.9	5	
B13	R3(Road towards vegetable market)	Secondary	144	6	144	144	6.9	6	
B14	R4(Road towards vegetable market)	Secondary	143	6			7.2	6	
B15	R5 (Road towards changlam from	Primary	145	6			7.5	6	

SI.No	Locations	Road classification	Road Work		Drainage Work	Footpath	Total width of works (including drainage/footpath and ROW)	Road Pavement width	Remarks
			L(m)	W(m)	L(m)	L(m)	m	m	
	vegetable market):								
	Parking		120	5.5			7	5.5	
Total for zone II			7534		1929	644			

Table 4: Zone 3 Infrastructure details

Sl. No	Locations	Road classification	Road Work		Drainage Work	Footpath	Total width of works (including drainage/footpath and ROW) m	Road pavement width m	Remarks
			L(m)	W(m)	L(m)	L(m)			
C1	Rabten Lam (from Norling Building till Druk School)	Primary	1980	8	483	427	10.6	8	Works are contained in right of way
C2	Fly-over bridge till Luntenzampa	Primary	1350	8	213.4		9.6	8	
C3	Link road from junction above Chorten till National Commission for women & children signboard	Access	410.5	6	225		6.9	6	
C4	Link road from ring road till Road junction near changzamthog School	Access	360	6	165		6.9	6	
C5	Link road near Chhundu Sawmill till Ring road	Secondary	300	7.2	160		8.8	7.2	
C6	Road above BBPL showroom	Access	215.3	5.5	76	90	8.2	5.5	
C7	Link road from Ring road (below Mani dungkor) till Junction near FCB Go Down	Secondary	387	7	181	250	9.7	7	
C8	By-pass road at Changzamthog till Junction near Cypress tree	Access	175	6	80		6.9	6	
C9	Link Road above chhundu Saw Mill connecting towards medical deport	Access	351.9	6.5	100		7.1	6.5	
C10	Kachey- Rabten Lam	Access	855	4.5	500		5.1	4.5	
C11	Road toward DAHE office	Access	90	5	30		5.6	5	
	Footpath at Changdhedaphu					600			
C12	Roads at Changghedaphu	Access	350	3.5	350		4.4	3.5	
C13	Straight road near by election office (rigid	Primary	400	8			9	8	

Sl. No	Locations	Road classification	Road Work		Drainage Work L(m)	Footpath L(m)	Total width of works (including drainage/footpath and ROW) m	Road pavement width m	Remarks
			L(m)	W(m)					
	pavement)								
C14	Changbandu road	Primary	500	5			7.5	5	
Total for zone III			7724.7		2571	1367			

Sl. No	Locations	Road classification	Road Work		Drainage Work L(m)	Footpath L(m)	Total width of works (including drainage/footpath and ROW) M	Road Pavement width M	Remarks
			L(m)	W(m)					
D16	Road A1	Primary	335.1	7			9	7	Works are contained in right of way
	Road A2	Primary	481.5	5			7.5	5	
	Road A3	Primary	252.1	10			12.5	10	
	Road A4	Primary	78.4	6			8.5	6	
D17	Road B1	Primary	220	5			7.5	5	
	Road B2	Primary	458.9	5			7.5	5	
	Road B3	Primary	303.5	5			7.5	5	
	Road B4	Primary	104.2	6			8.5	6	
	Road B5	Primary	396.7	10			12.5	10	
D18	Road C1	Primary	264.4	8			10.5	8	
	Road C2	Primary	444.6	7			9.5	7	
	Road C3	Primary	399.3	8			10.5	8	
	Road C4	Primary	94.7	7.5			10	7.5	
	Road C5	Primary	232.6	8			10.5	8	
D18	Road D	Primary	155	6			8.5	6	
D1	Remaining work in Olakha		40	1.7	40				
	Total		12517		960	1516			
	Road Widening Section								
17	YHSS junction till Semtokha Mani Dungkhor	Primary	3,503	12	1.51		10	12	

15. The road widening stretch from the YHSS junction till the Mani Dungkhor used to be the old highway when the express way was not there. All vehicles plying to other Dzongkhags used this road then. With the construction of the express way, the volume of traffic on this road stretch has reduced as much of the traffic is being diverted to the express way. However, vehicles plying to and from the eastern, central and three western Dzongkhags of Wangdue, Punakha and Gasa use this road. Vehicles plying to and from Sarpang, Dagana and Tsirang Dzongkhags also mostly ply on this road stretch. Improving this road stretch will definitely reduce traffic congestion as well as the traffic volume on the express way. The details of the land availability and ownership along the road widening stretch are provided in Section 5, table 6 and 7.

V. FIELD WORK AND CONSULTATION

A. Outline of Field Work

16. Field inspection of the sites for the proposed sub-projects was undertaken in February and May 2016. This included field visit to the identified sites and stakeholder consultations. The purpose of the field visits and consultations was to verify whether the project scope requires any involuntary resettlement and/or land acquisition.

B. Consultation

17. Consultations were held with Thimphu Thromde (municipality), and it was verified through site visits and interviews with key officials that the works will be contained within the right of ways of the existing roads. It was also verified that the land for the parking sites are also under the ownership of the Thromde. Further, all the land in the ROW for the widening portion of the Yangchenphug – Simtokha Mani Dungkhorfalls within the ownership of the Thromde. Further details of land ownership along the ROW for the road widening section have been provided in Section 5, table 6 and 7.

18. In addition consultations were also conducted in February 2016 with fifty six people (23 men, 33 women) who comprised the residents of the areas and motorist along the road stretches where works will be undertaken. The lists of names of the people consulted are provided in Annex 2. Participants were briefed about the components that the project will be taking up. It was explained that the project components were an effort to rehabilitate the existing infrastructures and in some cases will entail the construction of new facilities such as new drains and foot paths. The infrastructures rehabilitation has been positively viewed by the residents as it would improve the quality of their lives. The major issues that were brought up by the respondents included: (i) concerns regarding dust and noise during construction; (ii) swift completion of construction activities in order to minimize disturbances to residents; (iii) enhanced coordination between various divisions of the Thimphu Thromde (Municipality) to ensure that the re-digging of improved roads is minimized for the laying of various underground utilities; (iv) ensuring good quality construction to avoid the need for repeated road-works/ repairs; and (v) enhancing road safety through measures like good path designs, adequate street lighting, adequate drainage provision and installation of crash barriers at critical road sections for enhanced road safety. The Thimphu thromde has incorporated several of these suggestions into the project design.

19. It was observed that oftentimes the approach structures to private buildings block the drains which lead to the overflowing of the drain water onto the streets. There are two incidences of encroachment to the ROW where the property owners have built access structures (steps, ramps) in the ROW for providing access to their properties. Remedial measures to mitigate these impacts have been incorporated into the Environmental management Plan (EMP). The contractors will be responsible for demolishing the protruding structures, provision of temporary access during the construction period and reinstating permanent (within the limits of their properties) after the completion of construction. These shall be budgeted in the contractor's EMPs. As a part of the process of consultations with residents/ owners of the affected properties will be undertaken again to ensure they are in agreement with the remedial measures proposed by the contractors. Such consultation will be undertaken by the contractors and Thimphu thromde prior to starting the construction works. Further, under the provisions of the EMP, access to roads will be maintained during the construction phase and reinstated post construction for all properties that are in the immediate vicinity of the works, including businesses, institutions and households so as not to negatively impact their economic and other

daily functions. A summary of the consultations/discussions with local people is presented in Appendix 3.

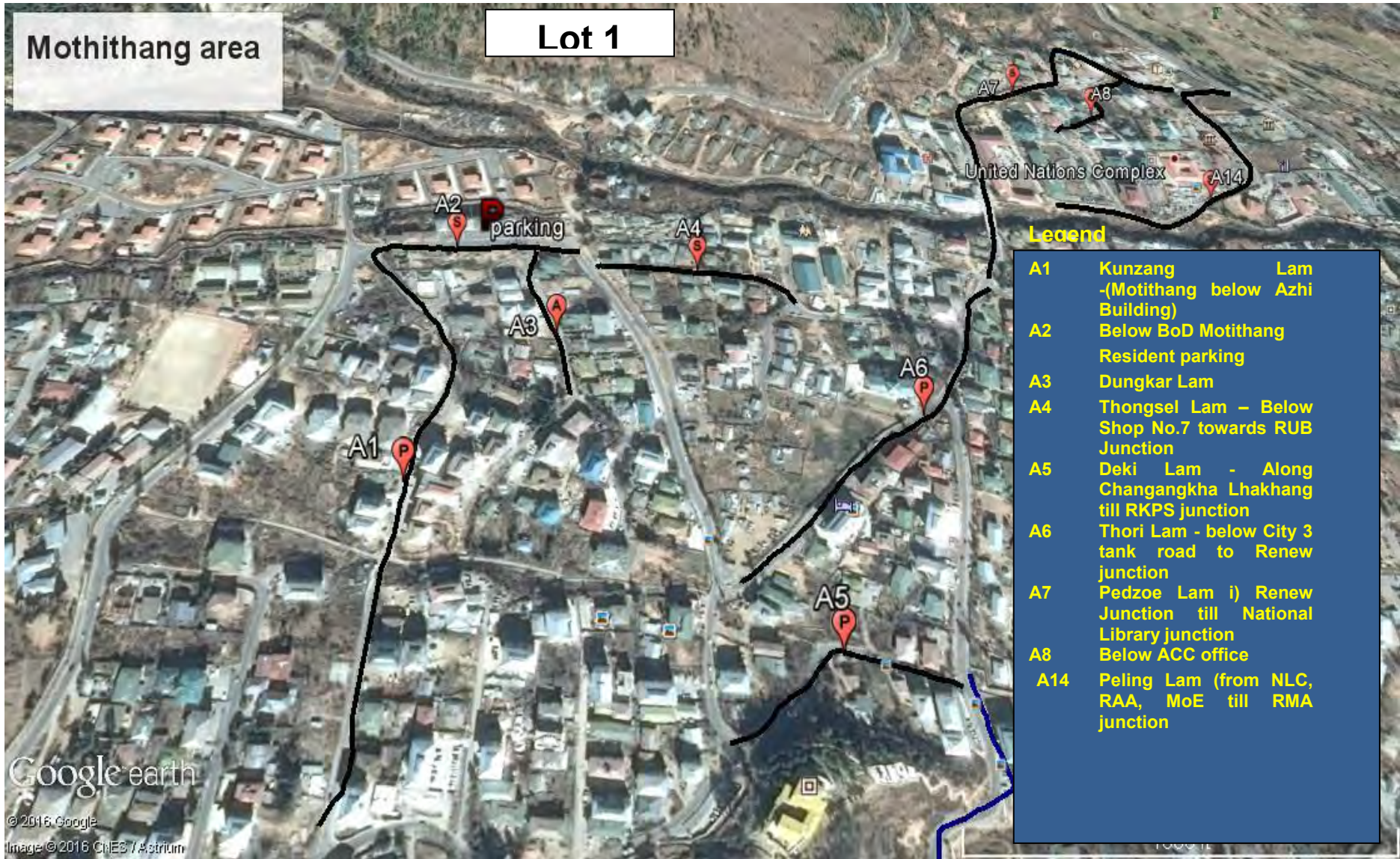
20. A Consultation and Participation Plan (CAPP) has been prepared in order to ensure meaningful consultation with stakeholders is continuously undertaken throughout the project. The purpose of the CAPP is to disseminate information, and enhance the level of informed decision-making in the implementation of subprojects. Consultations and project awareness campaigns are meant to open up the line of communication between various stakeholders and the project implementing authorities, thereby aiding the process of conflict resolution in the early stages of the project cycle, rather than escalation of conflict and attendant implementation delays and cost overruns. Participation is also meant to develop ownership of assets created under the project. The CAPP is presented in Appendix 3.

VI. LAND AVAILABILTY AND RESETTLEMENT IMPACTS

21. The field inspections and consultations helped establish that the proposed works are indeed restricted within the road right of way⁸ and hence the project will not require any involuntary resettlement or land acquisition. The field visits/ reconnaissance surveys and discussions with the Thimphu Thromde, residents of the local areas and Department of Engineering Services of the Ministry of Works and Human Settlements (MOWHS) helped establish that: (i) all works are restricted to the ROW; (ii) none of the ROW is used in any productive manner/source of business, (iii) there are two locations where there is an access structure on the ROW and the removal and restoration of a portion of the access structure (reference photo in Appendix 2) including provision of temporary access has been discussed with the property owners and will be managed through the Environmental management Plan (para 19) following the provisions of the SPS; and (iv) based on these findings there is no need for further surveys/ inventories of loss of assets to be prepared.

22. The following google map images dated April 2016 depict the current site conditions.

⁸ Width of the road plus the amenities fall within the ownership of the Thimphu Thromde.

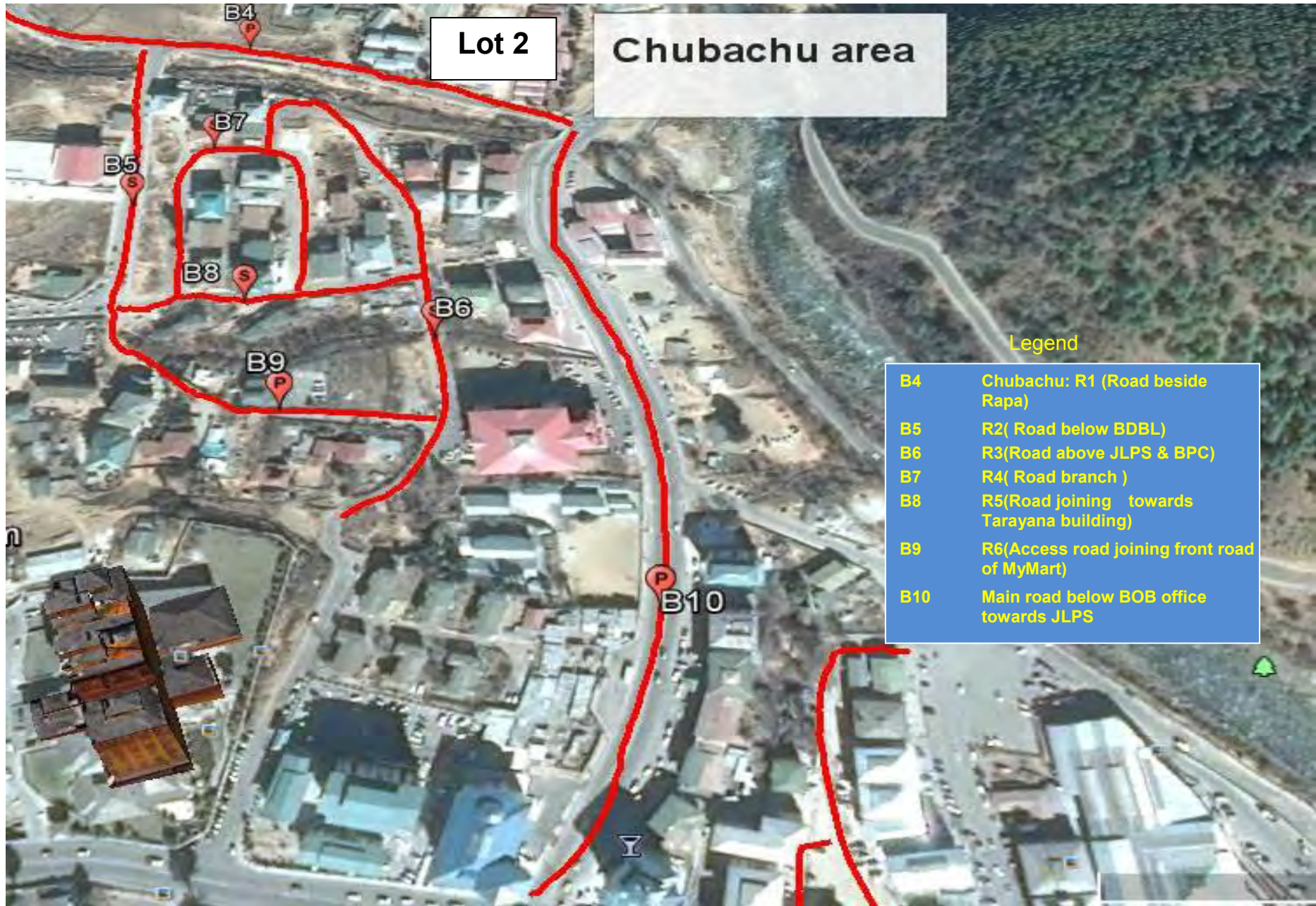


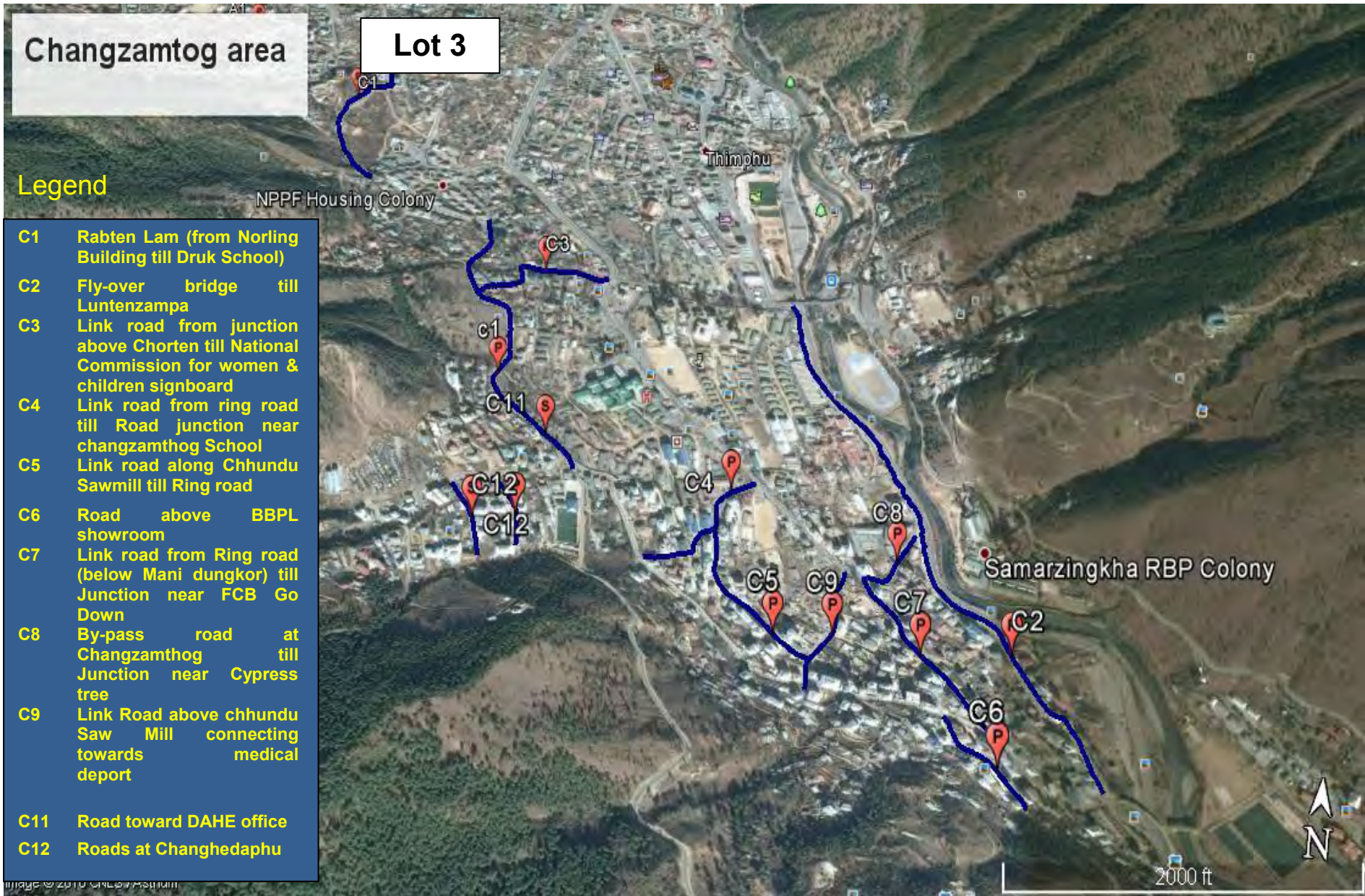




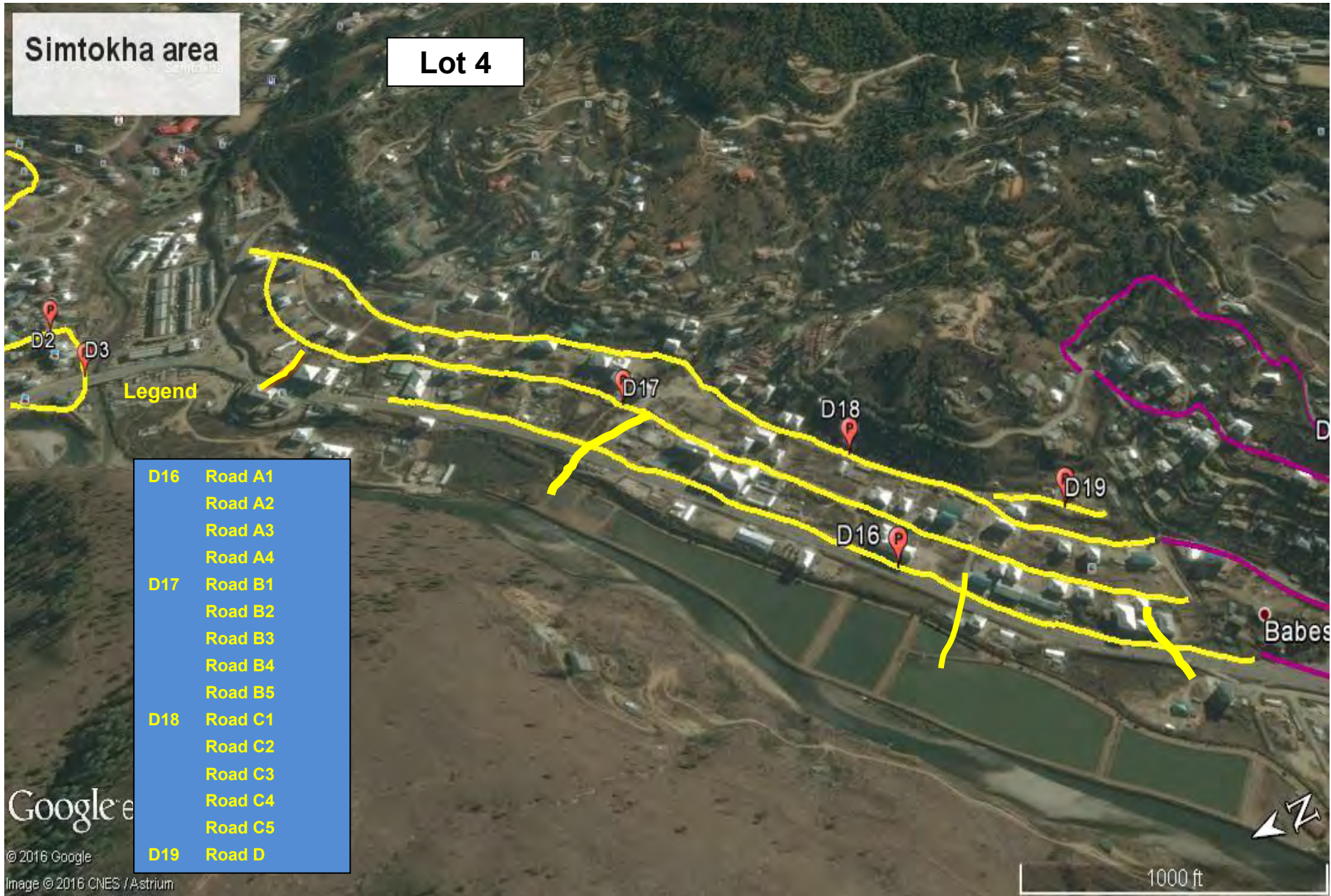


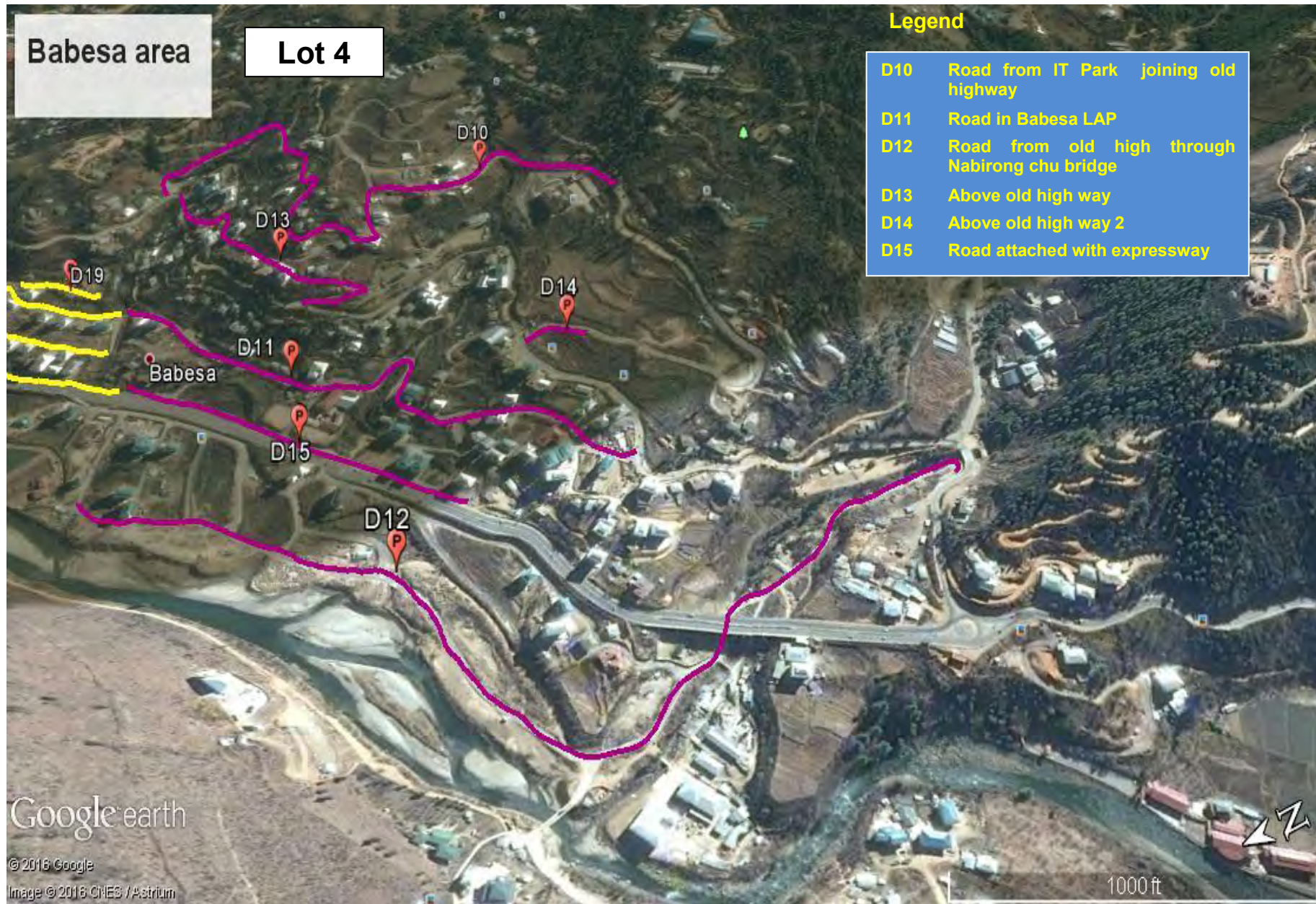














23. In particular, the details of the land ownership along the road widening stretch-YHSS junction till Semtokha Mani Dungkhor (contract package number 2) are presented in Table 6 and 7. The project intends to widen the current road stretch to 10 m width, which is the national standard for the width of a highway in Bhutan.

Table 6: Plots within close range to the existing highway

Sl. No.	Plot number	Owner	Location	Distance	Remarks
1	YC1-120	Yangchenphu Secondary School	Higher YHSS Compound area	Approx. 10 meters +	Govt. land which will not be affected. The land belonging to YHS and the RBA are indicated as belonging to them though they are not issued with the Lagthram (land ownership certificate).The land actually belongs to the Thromde and the school is also under the Thromde.. Because this is a road rehabilitation project, the existing alignment and right-of-way has been used, and as according to the Detailed Design, no structures or other assets are affected by LAR.
2	YC1-137	Royal Bhutan Army	Before turning Samarzinkha	Approx. 10 meters +	
3	YC1-748	Royal Bhutan Army	Royal Bhutan Army area	Alongside the ROW	
4	LT1-514	Bhutan Power Corporation	Upper Olakha Bhutan Power Corporation sub-station	Approx. 10 meters +	Will not be affected
5	LT1-706	Mrs. Bidha	Second plot after the over headSemtokha bridge	Above the road (5 meters)	Property will not be affected as the road to be widened below the existing alignment
6	LT1-632	Mr. AnduTshering	Immediately next to over headSemtokha bridge	Above the road (5 meters)	
7	LT1-689	Mr. SonamBahadurTamang	On the way to Wangdue	Over 300 meters	Not within the project area so will not be affected
8	LT1-687	Mrs. Kinley Selden	On the way to Wangdue	Over 300 meters	
9	LT1-435	Forest Area	Between Wangdue and Semtokha road	Approx. 10 meters +	
10	LT1-436	Mrs. TsheringLham	Between Wangdue and Semtokha road	Approx. 10 meters +	
11	LT1-437	Mrs. KenchoPemo	Between Wangdue and Semtokha road	Approx. 10 meters +	
12	LT1-438	Mrs. Wangchuk Dem	Between Wangdue and Semtokha road	Approx. 10 meters +	
13	LT1-440	Mr. LemGyeltshen	Between Wangdue and Semtokha road	Approx. 10 meters +	

Sl. No.	Plot number	Owner	Location	Distance	Remarks
14	LT1-792	Govt. land	Between Wangdue and Semtokha road	Approx. 10 meters +	

Source: Thimphu Thromde

24. The plots presented in table 10 are minimum 50 m away from the existing road stretch and these properties (and assets and structures therein) will not be impacted by land acquisition and resettlement (LAR).

Table 7: Plots that are at a distance from the existing highway

Sl. No.	Plot number	Owner	Location	Distance	Remarks
1	YC1-58	Mr. WangdaTobgay	Above the YHSS ground (above the road)	Approx. 50 m above the road	Road widening design has been done from below the existing road
2	YC1-49	Mr. SangayRinchen	Above the YHSS ground (above the road)		
3	YC1-7	Mr. DorjiTshering	Above the YHSS ground (above the road)		
4	YC1-35	Mrs. Pema Lhamo	Above the YHSS ground (above the road)		
5	YC1-51	Mr. Tenzin Gyaltshen	Above the YHSS ground (above the road)		
6	LT1-698	Mr. TshokeyTshering	On the way to Lyonpo Dago's area	Approx. 200 m above the road	Not within the road widening area
7	LT1-719	Mr. Dorji	Below Lyonpo Dago's area		

Source: Thimphu Thromde

VII. GRIEVANCE REDRESS MECHANISM

25. Immediately upon grant effectiveness, PIU, Thimphu thromde will establish a Grievance Redress Mechanism (GRM), acceptable to ADB. The GRM will aim to provide a time-bound and transparent mechanism to voice and resolve social and environmental concerns linked to the project.

26. Thimphu Thromde (TT) shall make the public aware of the GRM through public awareness campaigns. The contact phone number (PM) will serve as a hotline for complaints and shall be publicized through the media and placed on notice boards outside their offices. Information on the project shall be made available at the TT office and a brochure/leaflet will be made available to include information on the GRM and it shall be disseminated to the local government offices, temples, schools and residential associations in Thimphu by the environmental/social safeguards officers in the TT. Grievances can be filed in writing or by phone to any member of the TT as well as the environmental/social safeguards officer.

27. **First tier of GRM.** In case of the Thromde the locally elected representative shall be the channel through which complaints shall be lodged. Thereafter the PIU is the first tier of GRM which offers the fastest and most accessible mechanism for resolution of grievances. The Project Managers (PM/PIU) will be designated as the key officer for grievance redress. Resolution of complaints will be done within seven working (7) days. Investigation of grievances will involve site visits and consultations with relevant parties (e.g., affected persons, contractors, police, etc.) Grievances will be documented and personal details (name, address, date of

complaint, etc.) will be included unless the person complaining requests for anonymity.

28. A tracking number shall be assigned for each grievance, including the following elements; (i) initial grievance sheet (including the description of the grievance), with an acknowledgement of receipt handed back to the complainant when the complaint is registered; (ii) grievance monitoring sheet, mentioning actions taken (investigation, corrective measures); (iii) closure sheet, one copy of which will be handed to the complainant after he/she has agreed to the resolution and signed-off. The updated register of grievances and complaints will be available to the public at the Thromde office. Should the grievance remain unresolved, it will be escalated to the second tier.

29. **Second Tier of GRM.** The project manager (PIU) will activate the second tier of GRM by referring the unresolved issue (with written documentation) to Thromde Office who will pass unresolved complaints upward to the Grievance Redress Committee (GRC). The GRC shall be established by TT before commencement of site works. The GRC will consist of the following persons: (i) Executive Secretary; (ii) Division Heads of TT; (iii) Environmental Officer (iv) Project Coordinator; (v) Elected representative of the affected person(s); and (vi) representative of the Thromde Land Record Officer. A hearing will be called with the GRC, if necessary, where the affected person can present his/her concern/issues. The process will facilitate resolution through mediation. The local GRC will meet as necessary when there are grievances to be addressed. The local GRC will suggest corrective measures at the field level and assign clear responsibilities for implementing its decision within fifteen (15) working days. The contractor will have observer status on the committee. If unsatisfied with the decision, the existence of the GRC shall not impede the complainant's access to the Government's judicial or administrative remedies.

30. The functions of the local GRC are as follows: (i) resolve problems and provide support to affected persons arising from various social issues and including land issues (temporary or permanent), asset acquisition; and eligibility for entitlements, compensation and assistance; hampering conduct of business, utilities, power and water supply, waste disposal, traffic interference and public safety; (ii) reconfirm grievances of displaced persons, categorize and prioritize them and aim to provide solutions within a month; and (iii) report to the aggrieved parties about developments regarding their grievances and decisions of the GRC.

31. Either the environment officer or the land record officer in Thimphu Thromde will be responsible for processing and placing all papers before the GRC, maintaining database of complaints, recording decisions, issuing minutes of the meetings and monitoring to see that formal orders are issued and the decisions carried out.

32. **Third tier of GRM.** In the event that a grievance cannot be resolved directly by the GRC committee the affected person can seek alternative redress through an appropriate court. The GRC will be kept informed by the Thromde authority. The monitoring reports shall include the following aspects pertaining to progress on grievances: (i) Number of cases registered with the GRC, level of jurisdiction number of hearings held, decisions made, and the status of pending cases; and (ii) lists of cases in process and already decided upon may be prepared with details such as Name, ID with unique serial number, date of notice, date of application, date of hearing, decisions, remarks, actions taken to resolve issues and status of grievance.

VIII. CONCLUSIONS AND RECOMMENDATIONS

33. No involuntary resettlement impacts are identified at any of the project sites for any of the

sub-project components as works will be restricted to the right of way or government (municipality) owned land (roads), which are presently vacant. The implementing agency will ensure that there is minimal to no disruption of access and service to residents during the project implementation and that services and access (wherever affected) will be reinstated promptly through adequate consultation with the affected communities. It is critical for the works to be completed as per schedule so as to minimize disturbances to the communities near the project sites.

34. The DDR needs to be updated by the PIU in case of any design changes or site changes, and updated DDR needs to be approved by the ADB prior to implementation of works. Updated DDR will be verified by the project team.

Appendix 1: Involuntary Resettlement Checklist (Due Diligence Activity)

A. Introduction

1. Each project/subproject/component needs to be screened for any involuntary resettlement impacts and indigenous people impacts which will occur or already occurred. This screening determines the necessary action to be done by the project team.

B. Information on project/subproject/component:

- a. District/ Administrative Name: **Thimphu Thromde**
- b. Location (km): **Around 30 km**
- c. Civil work dates (proposed): **2016/2017**
- d. Technical Description: **Re-surfacing of the Thimphu urban roads, construction of drains and foot paths and road widening.**

C. Screening Questions for Involuntary Resettlement Impact

2. Below is the initial screening for involuntary resettlement impacts and due diligence exercise. Both permanent and temporary impacts must be considered and reported in the screening process.

Involuntary Resettlement Impacts	Yes	No	Not known	Remarks
Will the project include any physical construction work?	Yes			
Does the proposed activity include upgrading or rehabilitation of existing physical facilities?	Yes			
Will it require permanent and/or temporary land acquisition?		No		
Is the ownership status and current usage of the land known?	Yes			
Are there any non-titled people who live or earn their livelihood at the site or within the Project area?		No		
Will there be loss of housing?		No		
Will there be loss of agricultural plots?		No		
Will there be losses of crops, trees, and fixed assets (i.e. fences, pumps, etc.)?		No		
Will there be loss of businesses or enterprises?		No		
Will there be loss of incomes and livelihoods?		No		
Will people lose access to facilities, services, or natural resources?		No		
Will any social or economic activities be affected by land use-related changes?		No		
Are any of the affected persons (AP) from indigenous or ethnic minority groups?		No		If yes, please describe the situation

D. Involuntary Resettlement Impact





3. After reviewing the answers above, Executing Agency/ Safeguard Team confirm that

the assigned/
proposed subsection/ section is

- [] Has involuntary resettlement (IR) impact, a resettlement plan (or corrective action plan) is required
- [X] Has No IR impact, no resettlement plan is required. A due diligence report for the assigned section is prepared.

Prepared By:	Verified by:
Signature:	Signature:
Name:	Name:
Position:	Position:
Date:	Date:

Appendix 2: Photographs

	
<p>Part of proposed road widening section Encroachment of public road for construction of approach road to private property (vegetable market)</p>	<p>Road repair section near vegetable market</p>  <p>Encroachment to main road (Olakha area)</p>
 <p>Bad Road condition at Olakha</p>	 <p>No proper drainage at Vegetable market</p>



Road condition at Babesa



Road stretch at Changzamtog



Water logging on the road at Changzamtog



Road condition at Kala Bazar area



Clogged drains with no further connection for exit



Drain flowing across the road

Appendix 3: Summary of Consultation

Table 1: List of participants for the consultations, February 2016

Sl. no.	Name	Area	Remarks
1	Nechenmo	Above NPPF colony	Zone 3
2	GyemDorji	Above NPPF colony	
3	TsheringDhendup	Olakha bridge	Olakha
4	Khandu	Olakha bridge	
5	Wangmo	Olakha bridge	
6	SonamPeldin	Olakha Bridge	
7	AumGaki	Old highway down	
8	Dago Retty	Old highway down	
9	Pema Choden	Old highway down	
10	SangayDema	Old highway down	Babesa
11	Dechen C	Babesa 2 nd parallel road	
12	Gyeltshen	Babesa 2 nd parallel road	Zone 3
13	Kinley Wangmo	FCB Junction to cypress tree	
14	Pasang	FCB Junction to cypress tree	
15	ChokeyDorji	FCB Junction to cypress tree	
16	Yangchen	Above BPPL junction	
17	KinzangLhamo	Above BPPL junction	
18	TsheringBida	Above BPPL junction	Zone 1
19	SonamTashi	Milk booth to Sangay enterprise	
20	Pema Wangmo	Milk booth to Sangay enterprise	
21	TshewangZangmo	Milk booth to Sangay enterprise	
22	MitseeWangmo	Milk booth to Sangay enterprise	Road widening
23	Gyelpo	YHS Junction to Semtokha	
24	Wangda	YHS Junction to Semtokha	
25	Nedup	YHS Junction to Semtokha	
26	ThinleyLhamo	YHS Junction to Semtokha	Babesa
27	KesangTobgay	1 st parallel road to Express-way Babesa	
28	Bidha	1 st parallel road to Express-way Babesa	Zone 3
29	TashiTobgay	Medical depot to Army saw mill	
30	Pema Wangmo	Medical depot to Army saw mill	
31	Tauchu	Kalabazar B	
32	KinzangZangmo	Kalabazar B	
33	DomangTshomo	Kalabazar A	
34	Pabitra Devi	Kalabazar A	Zone 2
35	Lhadon	Supreme court gate to Dzong	

Sl. no.	Name	Area	Remarks
36	Sonam Yuden	Supreme court gate to Dzong	
37	LekiWangmo	Supreme court gate to Dzong	
38	Ugyen	Kinzang Lam (below Motithng BOB)	Zone 1
39	Kabita Rai	Kinzang Lam (below Motithng BOB)	
40	RatnaBahadurTiwari	Kinzang Lam (below Motithng BOB)	
41	DupthobWangchu	Kinzang Lam (below Motithng BOB)	
42	WangchuDema	Azhi's area (Motithang)	
43	TsheringDorji	Azhi's area (Motithang)	
44	DechenWangzom	Azhi's area (Motithang)	
45	DechenWangmo	Azhi's area (Motithang)	Zone 2
46	DawaPem	Samtenling gate to Bridge	
47	SangayDhendup	Samtenling gate to Bridge	
48	DekiTshomo	Samtenling gate to Bridge	Zone 1
49	DorjiWangchu	Kawajansa (below ACC)	
50	Jamphel Choeda	Kawajansa (below ACC)	
51	Ganesh Pradhan	Kawajansa (below ACC)	
52	TsheringDema	Kawajansa (below ACC)	
53	RajanBista	RENEW Junction to Education junction at Kawajangsa	
54	Pema Tshomo	RENEW Junction to Education junction at Kawajangsa	
55	SangayZangmo	RENEW Junction to Education junction at Kawajangsa	
56	TshetenZangmo	RENEW Junction to Education junction at Kawajangsa	

1. Brief discussions about the project were carried out in the four zones. Participants were briefed about the components that the project will be taking up. It was briefed that the project components were an effort to rehabilitate the existing infrastructures and in some case constructing new facilities such as new drains and foot paths. The infrastructures rehabilitation has been positively viewed by the residents as it would improve the quality of their lives. The participants comprised of a mixture of drivers, commuters, business set-ups, pedestrians, corporate & government employees and residents.

2. Overall, the public welcomed the initiatives of the project stating that the Thimphu urban roads were in dire need of repairs. Some of them mentioned that the conditions of the roads were in such state partly because there were no proper drainage system in place together with the road maintenance in the past and that often roads are dug out by other entities and even private individuals for laying of water pipes and other services. The following were some of the feedback that was received from the participants;

Table 2: Summary of Discussions

Date	Location	No. of Participants				Topic discussed	Issues raised
		Male	Female	% female	Total		
13 th 14 th & 15 th Feb. '16	Zone 1	9	11	55	20	Urban infrastructure improvement including roads, drains, footpaths & parking	<ul style="list-style-type: none"> • Timely completion of the construction. • Good quality construction • Coordination of underground services to minimize road re-digging for laying of various services. • Proper control of dust and dirt at the construction sites. • Other infrastructure facilities such as sewerage, water supply, telecom etc. to be coordinated so that road digging in future is minimized. • Quality of the road work to be maintained so that the public is not disturbed frequently in future. • The heights of foot paths to be at appropriate levels as they get destroyed by motorists. • Digging of roads once rehabilitated should not be allowed unless very necessary. • Size of drains to be big enough to carry the rain water during rainy season • One side of the foot path in the Babesa area could be done away with to gain road width. • Sewerage connections to be provided as many a times the over flow from septic tanks on to the roads causes public nuisance. • Street lights at appropriate places to installed for the safety of the pedestrians. • Often approach to private buildings block the drain which leads to the flow of the drain water onto the streets. The property owners agree to removal of these structures as long as they have a safe and convenient access to their property. • Drinking water supply pipes should not be allowed to be laid in the drains as well as over heads. • Proper drainage in front of private properties to be properly put in place so that neither the road is obstructed or the approach to private properties in blocked. • In road stretches where there are no provisions for road
11 th 12 th Feb. '16	Zone 2	1	5	83	6		
17 th , 18 th Feb. '16	Zone 3	5	9	64	14		
19 th , 20 th Feb. '16	Zone 4	5	7	58	12		

Date	Location	No. of Participants				Topic discussed	Issues raised
		Male	Female	% female	Total		
							diversions, appropriate timing for motorists should be put in place for better traffic management. The timings can be put on sign boards so the residents and shop keepers are aware of such timings.
21 st Feb. '16	Semtokha-Mani Dungkhor	3	1	25	4	Road widening	• Crash barriers to in place along the YHS to Semtokha stretch for the safety of the houses below the road.
		23	33		56		

Table 3: Consultation and Participation Plan

Outputs and types of participation	Target stakeholders	Terms of reference	Cost
Projects information 1. One half-day project orientation workshops organized by PMU for officials: (i) Information sharing (ii) Consultation (iii) Shared responsibility (iv) Shared decision-making (Year 1: after finalization of DPR at the earliest)	<ul style="list-style-type: none"> Representatives from: Thimphu Thromde, MOWHS, DoR and officials from other relevant line organizations 	(i) Introduce the project (ii) Outline the need for the project the link between improved road conditions and better urban environmental conditions. (iii) Present safeguards issues and documents for disclosure requirements (iv) Discuss roles and accountabilities of various government units (v) Discuss issues related to use of government lands and property for the project, environmental risks. (vi) Gather and agree on recommendations.	PMU to bear cost
1. One one-day project orientation workshops organized by PMU for local community groups (Year 1: prior to commencing civil works)	<ul style="list-style-type: none"> Community members in project sites, preferably heads of the families CBOs. At least 20% women. Urban poor Transport operators 	(i) Through presentations introduce project and benefits to the community (ii) Demonstrate the link between improved road conditions (iii) Explain ADB's and the government's safeguards measures; grievance redress (iv) Explain initiatives to promote economic development under the project such as employment opportunities; level of inconvenience during project implementation and construction, and the proposed mitigation measures in this	PMU to bear cost

Outputs and types of participation	Target stakeholders	Terms of reference	Cost
		regard; (v) Communicate important road safety measures (including speed limits) and signage conventions that will be used under the project. (vi) Explain transport operators the loading limits, speed limits for various road typologies and penalties to be levied by Thromde for exceeding these limits; explaining location of weigh-bridge facilities. (vii) Environmentally friendly design measures being adopted under the projects (hot mix being sourced from plant outside Thimphu Thromde, enhanced drainage	
Develop and disseminate strategic visual, audio and print materials (ongoing; to inform regarding traffic management measures and construction related impacts)	<input type="checkbox"/> <input type="checkbox"/> Communities, School Students; society, other relevant stakeholders <input type="checkbox"/> <input type="checkbox"/> Urban poor	(i) Project information sharing with affected project communities, including Grievance Redress Mechanism. (ii) To be disseminated to the local government offices, temples, schools residential associations and other stakeholders in the city. (iii) Gather concerns and views related to road usage and safety, particularly women's experiences and needs. (iv) Improved awareness on road safety, speed limits enforcement and road maintenance	\$2500
Project orientation workshop for contractors (Years 1-4: upon contractor mobilization)	<ul style="list-style-type: none"> • Laborers and field managers 	(i) Sensitize on avoiding public nuisance, minimizing public inconvenience, and avoiding disruption to the public activities/mobility (ii) Awareness creation on health and hygiene, HIV/AIDS, other communicable diseases and labor right and gender issues (iii) Best construction practices for safety during construction activities. (iv) Briefing regarding compliance with key provisions under the EMP.	PMU to bear cost
Consultation workshops (FGD method) with vendors/entrepreneurs on the project's impact on existing businesses in	<ul style="list-style-type: none"> • Vendors • Representatives of business associations 	(i) Introduce the project and its positive impacts on businesses and introduce GRM (ii) Discuss encroachment of ROW for parking to get agreement on overall project benefits to	TT to bear costs

Outputs and types of participation	Target stakeholders	Terms of reference	Cost
the project areas. (Year 1)		businesses from the road improvement works.	
Consultation workshops (FGD method) with institutions (schools, army etc) along the Right of way (Year 1)	<ul style="list-style-type: none"> • Schools and other institutions along the ROW 	<ul style="list-style-type: none"> (i) Discuss the project impacts (temporary as well as permanent) on the institutions (ii) Negotiate regarding maintaining and restoring access to the institutions during and post construction (to be carried out under the provision of the EMP). (iii) Discuss any concerns that the institutions may have regarding the works impacting their day to day functioning (example- noise, dust etc) and identify mitigation measures for the same if these are not already incorporated under the IEE/ EMP. (iv) Discuss operationalizing enhanced safety measures (e.g. safe crossing for students, women) during project construction period, also explaining that this will be carried out under the provisions of the EMP (v) Explain the grievance redress mechanism. 	TT to bear costs
Annual participatory Community monitoring meetings (Years 1-3- yearly during project implementation)	<ul style="list-style-type: none"> • Community representatives (at least 25% women representative) volunteers and civil society representatives, <input type="checkbox"/> NGOs <input type="checkbox"/> Urban poor 	<ul style="list-style-type: none"> (i) Key stakeholders informed about the current progress of project and clarified about their role in the project. (ii) Discuss issues and concerns during project implementation (iii) Discuss and recommend measures to mitigate / address problems (iv) Monitor progress of project implementation and compliance with social safeguards/provisions (v) Sharing salient features of the annual progress report and action plan for the coming year 	TT and PMU to shoulder costs

FGD=Focus Group Discussion, DOR= Department of Roads (MOWHS) ; DRP=Detail Project Report, IEE=Initial Environment Examination, PMU= program management unit, Q = quarter, TT= Thimphu Thromde NGOs=Non Governmental Organizations EMP=Environment Management Plan, ROW=Right of Way.

Appendix 4: Thimphu Municipality

1. Thimphu city, the capital of Bhutan is located in western Bhutan at 27° 30' N latitude and 89°30' E. Its approximate altitude ranges from 2,240 to 2,648m amsl with the surrounding hills rising over 3,800 m amsl. Thimphu is accessible by road, from India, through the southern town of Phuentsholing, which is about 175 km away. It is also accessible by air from Paro, which is about 55km away. Dechencholing in the north and Serbitang in the south mark the administrative extremities of the city. Geographically, the city is spread along the Wang Chhu River valley in a linear fashion. The City has been divided into the southern parts of Babesa and Simtokha, the settlements of Lungtenphu and Changjiji near the river, the elevated area of Motithang, the flat areas of Hejo and Jongshina, the northern parts of Taba and Dechencholing, and the city core along the river on flat land. The city part of the valley enjoys a warm, temperate climate with an average annual rainfall varying between 500-1,000 mm. The average daily winter temperature varies between 5-15°C and the average daily temperature during summer varies between 15-30°C. The southwest monsoon brings rainfall to the valley during the months of mid-June to September. The average annual rainfall is typically 1300 mm with a maximum average of 167.5 mm during June and occasional or little precipitation at all during November till March. According to the National Housing and Population Census in 2005, the Thimphu Dzongkhag population was 98,676 with Thimphu town's population being recorded as 79,185. The Thimphu Structure Plan acknowledges the high population growth rate for Thimphu and is based on projection for the year 2025 (162,327 persons) based on the carrying capacity of the city.

A. Location

2. The present urban Thimphu road system measures a total of 243 km spread over an area of 27 km² in the 16 urban areas viz. Babesa, Simtokha, Lungtenphu, Chang Bangdu, Changzamtog, Changangkha, Yangchenphug, Core City, Lower Motithang, Upper Motithang, Zilukha, Hejo – Langjophaka, Taba – Jongshina, Dechencholing, Dzong precinct and others.

B. Land Use

3. As of 2004, around 31.76% of the total land area of Thimphu Thromde (TT) was reported as built up with almost 17.88% consisting of residential use (refer table 1 below). Today much of the land in the designated urban areas is being developed for housing areas (LAPs) except for the area north of the Tashichho Dzong. Thimphu City's urbanization and growth is highly influenced by in-migration and land use currently has to be compromised with the fast pace of urbanization.

Table 1: Land Use, Thimphu Municipality

Land Use	Area (in Ha)	% of total
Agriculture	410.24	15.70
Commercial	37.64	1.44
Defense	174.55	6.68
Forest	488.11	18.68
Industrial	11.76	0.45
Institutional and Public	221.84	8.49
Orchard	290.30	11.11
Recreational	49.12	1.88

Land Use	Area (in Ha)	% of total
Religious	1.04	0.04
Residential	467.21	17.88
Vacant	187.61	7.18
Road Asphalt	74.73	2.86
Road Non-Asphalt	14.11	0.54
Water Body	60.62	2.32
Others	124.12	4.75
TOTAL	2613.00	100.00

Source: = Thimphu Thromde

C. Population

4. Thimphu city's accurate assessment of population is constrained by the absence of reliable information. Table 2 shows the comparative total population of Thimphu urban from 2010 till 2020 based on the National Housing and Population Report, 2005.

Table 2: Population Projection in 2010 and 2020, Thimphu

Sl. No.	Urban Village	% of distribution	Population in 2005	Population @ 5% growth rate		Population @ 10% growth rate		Population @ 13.12% growth rate		Population @ 14.7% growth rate	
				2010	2020	2010	2020	2010	2020	2010	2020
1	Babesa	3.7	2,949	3,686.60	4,423.91	4,423.91	5,898.55	4,884.00	6,818.73	5,116.99	7,284.71
2	Simtokha	5.1	4,029	5,036.21	6,043.45	6,043.45	8,057.93	6,671.97	9,314.97	6,990.26	9,951.55
3	Lungtenphu	3.3	2,602	3,251.90	3,902.28	3,902.28	5,203.05	4,308.12	6,014.72	4,513.64	6,425.76
4	ChangBangdu	5.9	4,650	5,812.44	6,974.93	6,974.93	9,299.91	7,700.32	10,750.69	8,067.67	11,485.39
5	Changzamtog	5.9	4,650	5,812.44	6,974.93	6,974.93	9,299.91	7,700.32	10,750.69	8,067.67	11,485.39
6	Changangkha	4.0	3,188	3,984.67	4,781.60	4,781.60	6,375.47	5,278.89	7,370.04	5,530.72	7,873.71
7	Yangchenphug	2.1	1,654	2,067.89	2,481.47	2,481.47	3,308.62	2,739.54	3,824.77	2,870.23	4,086.15
8	Core City	11.4	8,989	11,235.73	13,482.88	13,482.88	17,977.17	14,885.10	20,781.61	15,595.20	22,201.81
9	Lower Motithang	7.0	5,576	6,969.55	8,363.46	8,363.46	11,151.28	9,233.26	12,890.88	9,673.73	13,771.83
10	Upper Motithang	7.3	5,811	7,263.48	8,716.18	8,716.18	11,621.57	9,622.66	13,434.54	10,081.71	14,352.64
11	Zilukha	3.0	2,342	2,926.92	3,512.30	3,512.30	4,683.07	3,877.58	5,413.63	4,062.57	5,783.60
12	Hejo - Langjophaka	8.5	6,727	8,408.17	10,089.80	10,089.80	13,453.07	11,139.14	15,551.75	11,670.54	16,614.54
13	Taba - Jongshina	12.0	9,489	11,860.86	14,233.03	14,233.03	18,977.37	15,713.27	21,937.85	16,462.87	23,437.06
14	Dechencholing	8.5	6,697	8,370.91	10,045.09	10,045.09	13,393.46	11,089.78	15,482.84	11,618.82	16,540.92
15	Dzong Precinct	3.3	2,650	3,311.93	3,974.32	3,974.32	5,299.09	4,387.65	6,125.75	4,596.96	6,544.38
16	Others	9.1	7,198	8,998.11	10,797.73	10,797.73	14,396.97	11,920.69	16,642.90	12,489.37	17,780.26
TOTAL		100.0	79,185	98,997.81	118,797.37	118,797.37	158,396.50	131,152.30	183,106.35	137,408.96	195,619.67

5. The male to female ratio in 2000 was 42,465: 36,720; in 2010, it had been estimated to be of almost equal proportion at 46,742 for female and 46,490 for male, respectively. Based on the 2010 population estimate, the population density in Thimphu would have been around 3,453 persons per square km.

D. Household income and expenditure

6. Poverty Analysis Report 2012 established the total poverty line at Nu.1,704.84 per person per month. The total poverty line is obtained by adding the food poverty line of Nu. 1,154.74 to non-food allowance of Nu.550.10. An estimated 12% of the country's population is found to be poor. Poverty in rural areas (16.7%) is significantly higher than urban areas (1.8%). The poverty rate for Thimphu Dzongkhag is 0.52 percent as per the Bhutan Poverty Assessment, 2014

1. Household Income

7. The mean annual household income is Nu. 164,829 for the country, Nu.282,671 in the urban areas, and Nu.104,091 in the rural areas. The mean per capita annual household income for the country is Nu. 45,538; in the urban areas, the mean per capita income is Nu. 79,905, almost three times (2.9 times) the rural mean per capita income of Nu. 27,824. On average, the income of male-headed households is about Nu.10,000 (or more than a quarter) higher than the income of female-headed households. The major sources of household income are wages and salaries; business; real estate deals; asset and other sales; and the sale of cereal, fruits, and vegetables. In both the urban and rural areas, wages and salaries are the major source of household income. For Thimphu the Annual Household Income is Nu. 305,775.00 with wages comprising of 61.80%, agriculture 1.10% and non-agriculture at 37.10%. For the country as a whole, wages account for over half of household income (57%), agriculture 10%, and non-agricultural activities 33%. Agricultural income is less than 1% of urban household incomes and 24% of rural household incomes. Wages and salaries, including religious fees, are the sole source of income for over half of the households; agricultural activities (the sale of cereal, fruits, and vegetables and of meat, dairy products, and eggs), for 21% of households; nonagricultural activities(excluding remittances received), for 17% of households; and remittances, for 4% of households. Other households have several sources of income.

2. Household expenditure

8. The mean monthly household expenditure is Nu.18,367 for the country, Nu. 24,047 in the urban areas, and Nu.15,440 in the rural areas. The mean monthly per capita household expenditure is Nu. 4,043 for Bhutan and Nu.5,804 in the urban areas, 78% higher than that in the rural areas (Nu. 3,251). The mean monthly per capita household expenditure for Thimphu is Nu. 6,375.00 and the mean monthly Household Consumption Expenditure for Thimphu is around Nu.27,727.00 with the share of food in household consumption expenditure at around 35%. On average, food accounts for 39% of household consumption expenditure in the country,—34% in the urban areas and 43% in the rural areas. For households in the poorest consumption quintile, food takes up 58% of the household budget. Non-food expenditure goes up faster than food expenditure as per capita consumption increases. Food items that take up a significantly larger chunk of consumption expenditure at higher consumption quintiles are dairy products, vegetables, rice, other cereals and pulses, spices and seasonings, meat, fruits, non-alcoholic beverages, and food taken outside the home. The non-food items are transport and communications, housing rent, health, miscellaneous expenses, and clothing and footwear. Between the fourth and fifth quintiles, there are large spikes in per capita expenditure on

transport and communications, housing rent, health, and remittances abroad.¹

E. Infrastructure and Social Services

9. Like any other developing cities in Bhutan, Thimphu's infrastructure is insufficient to meet the need of its fast growing population. The approximately 243 km of road network remains inadequate to ensure the smooth traffic flow. Over the years, the number of vehicles plying the city has increased and the physical and infrastructure resources and services have not been able to catch up with such fast rate of growth.

10. The City has one Thromde (municipality) office also serving as community center and 4 public parks. Supplying the daily needs of the population are several supermarkets and small stores, one weekend market, and numerous meat markets and small markets. The health and medical infrastructures include the Jigme Dorji Wangchuk National Referral Hospitals, the Indian Military Training Team (IMTRAT) Hospital, The National Indigenous Hospital, The DANTAK Hospital, Army Hospital, 3 BHUs. There is also 1 crematorium in the city. There are 32 schools of in four categories viz. Higher Secondary Schools, Middle Secondary Schools, Lower Secondary Schools and Primary Schools. Besides, there are 7 Early Child Care & Development Centres and 13 Non-Formal Education Centres. Details of educational facilities Under Thimphu Thromde is presented in table 3. There are also 2 schools for traditional arts and crafts and 1 integrated technical institute. For higher education, there is one university located just outside the district municipal boundary.

Table 3: Educational facilities in Thimphu Urban areas

Educational Institutions under Thimphu Thromde	Government	Private	Total
Higher Secondary schools	2	4	6
Middle Secondary Schools	5	2	7
Lower Secondary Schools	5	0	5
Primary School	7	7	14
Early Child Care & Development	2	5	7
Non-Formal Education (NFE) Center	13	0	13
Principal	19	13	32
Teacher	807	No information	807
Students	17,746	No information	17,746
NFE Instructors	30	0	30
NFE Learners	445	0	445

Source : Thimphu Thromde

F. Economic Resources and Activities

11. Thimphu's strategic importance to the economy of the country cannot be overlooked. It is the administrative as well as one of the main business centers of the country. About 12.5% of the total population of the country resides in Thimphu and trade, commerce and service are the

¹ Source : National Statistical Bureau

lifeline of the economy in the capital. The urban poverty is reported at 1.8% as compared to 16.7% in the rural area. (Poverty line at Nu.1,704.84 per person per month²)

G. Water supply, Sanitation and Sewerage

12. Despite the significant achievement in the improvement of the general health status of the population of Bhutan over the years, much remains to be done especially in the urban areas. Water supply in urban Thimphu is looked after by the Thimphu Thromde. However, in some urban areas water supply arrangements are being done privately by individual building owners. The sewerage plant located at Babesa is connected mainly to the core areas of urban Thimphu and other urban areas such as Olakha, Semtokha, Babesa, Taba, Langjuphakha, Hejo, Dechencholing and part of Motithang are not connected to the sewerage system. These areas are connected to private septic tanks which are emptied periodically. Water borne diseases due to lack of proper hygiene and sanitation and access to improved water still remain one of causes of morbidity especially among infants, children and pregnant women in the urban areas of Thimphu. Most common water related diseases recorded from admission and consultation data in medical facilities in Thimphu city include dysentery, diarrhea and typhoid. Though treated water supply is available, it is not sufficient enough for supply to all the Thimphu urban areas. Thus in urban Thimphu one can see a lot of polythene pipe water supplies to individual buildings, many of which are arranged privately by the building owners. Such haphazard arrangement of drinking water is one of the main reasons for clogging of the urban drains as these pipes are laid along the drains.

² Bhutan Poverty Analysis Report 2012