

Involuntary Resettlement Due Diligence Report

August 2014

SRI: Integrated Road Investment Program
Central Province Rural Roads – Project 3

Prepared by Road Development Authority, Ministry of Highways, Ports and Shipping for the Asian Development Bank

CURRENCY EQUIVALENTS

(as of 14 May 2014)

Currency unit	–	Sri Lanka rupee (SLRe/SLRs)
SLRe 1.00	=	\$ 0.007669
\$1.00	=	SLR 130.400

ABBREVIATIONS

ADB	-	Asian Development Bank
AP	-	Affected Person
API	-	Affected Property Inventory
CBO	-	Community Based Organization
CP	-	Central Province
CPs	-	Community Participants
CV	-	Chief Valuer
DRR	-	Due Diligence Report
DS	-	Divisional Secretariat
ESDD	-	Environmental and Social Development Division
FGD	-	Focus Group Discussion
GoSL	-	Government of Sri Lanka
GN	-	Grama Niladari
GND	-	Grama Niladari Division
GPS	-	Global Positioning System
GRC	-	Grievance Redress Committee
GRM	-	Grievance Redress Mechanism
INGO	-	International Non-Government Organizations
iROAD	-	Integrated Road Investment Program
IR	-	Involuntary Resettlement
LAA	-	Land Acquisition Act
MOHPS	-	Ministry of Highways, Ports and Shipping
MOU	-	Memorandum of Understanding
MFF	-	Multi-tranche Financing Facility
NGO	-	Non-Government Organizations
NIRP	-	National Involuntary Resettlement Policy
PCC	-	Project Coordinating Committee
PIU	-	Project Implementing Unit
PRA	-	Participatory Rural Appraisal
PS	-	Pradeshiya Sabha
RDA	-	Road Development Authority
SPS	-	Safeguards Policy Statement

This involuntary resettlement due diligence is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature.

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

Contents

I.	INTRODUCTION	1
A.	Project Background.....	1
B.	Project Description.....	2
C.	Methodology used to carry out the due diligence	3
II.	INVOLUNTARY RESETTLEMENT DUE DILIGENCE.....	4
A.	Summary of field observations and verification	4
B.	Other impacts observed and mitigation measures.....	4
C.	Institutional Capacity.....	5
III.	SOCIOECONOMIC ASSESSMENT AND GENDER PARTICIPATION REPORT	6
A.	Description of Key Physical and Socioeconomic Features of Central Province ...	7
B.	Analysis of the Sample Socioeconomic Survey for Central Province.....	9
C.	Public Consultation and information dissemination	16
IV.	CONCLUSION AND RECOMMENDATIONS.....	17

List of Annexures

Annexure 1: Road List – Central Province.....	19
Annexure 2: Summary of Field observations.....	24

I. INTRODUCTION

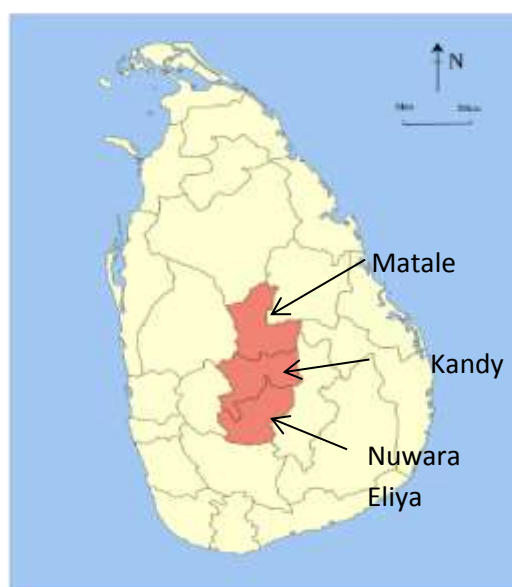
A. Project Background

1. As an island located in the Indian Ocean, Sri Lanka has a land area of about 65,610 km² and a population of above 20 million. The country has a higher road density compared other countries in the South Asian region. However the Government of Sri Lanka (GoSL) has identified that the poor transport infrastructure has hindered the distribution of economic activities and access to basic health and education and other social resources of the public. In order to assist the development drive of the nation the Government of Sri Lanka (GoSL) has now taken a bold policy decision to improve the national road network. The national road network improvement has now been coupled with the development of rural road network as a means of distributing the social and economic benefits to the rural population. GoSL has requested financial assistance from the Asian Development Bank (ADB) for the investment program which is officially called as “Integrated Road Investment Program” or iROAD program. The investment program is in line with the government’s sector objective, which is to “establish a modern transport system that will enable acceleration of economic growth.

2. The project is to be executed as a Multi-tranche Financial Facility (MFF). Ministry of Highways, Ports and Shipping (MOHPS) will be the executing agency for the project while the Road Development Authority (RDA) will implement the project. The project is to be executed in several provinces of the country. Based on the present and planned national development projects spread across the country, Southern Province was selected as the first tranche to of this project. For tranche 2, roads from five other provinces namely Central, North Central, North Western, Sabaragamuwa, and Western Province will be improved.

3. A resettlement framework (RF) was prepared for the iROAD program. The RF requires that a resettlement and land acquisition due diligence accompanied by socio-economic survey be prepared for all roads to be financed under the tranche. This report is the Involuntary Resettlement Due Diligence and Socio-economic survey report for the rural roads component of Central Province which includes the three districts of Kandy, Matale and Nuwara Eliya. Figure 1.1 presents the location of project areas of Central Province.

Figure 1.1 Location of the three districts of Central Province



B. Project Description

4. The project mainly focuses on rehabilitation of existing carriageway to suit all weather conditions. The improvements will be done within the available corridor of the candidate roads.

5. The selection of rural roads for rehabilitation has been based on the concept of community participation in development. At the outset of the project it has been decided to avoid any acquisition of land and Involuntary Resettlement (IR). Thus selection of candidate roads has been based on the below criteria.

- Adequate land width availability as specified in the typical cross sections developed for the program. Roads having an average corridor width of not less than 5 m (fence to fence or drain to drain) should be selected as candidate roads. This is in line with the typical cross section proposed for Pradeshiya Sabha (PS) roads.
- The proposed alignment involves zero or minimal land loss, and the remaining land and or/structures remain viable for continued use.

6. Further to these, modifications to the design by reduction of carriage width, alignment shifts, and modifications in cross-sections to the extent required from safety considerations has been considered to avoid IR. The field screening data sheet presented in the Resettlement Framework (RF) prepared for iROAD project used in evaluating the suitability of the road to be improved under the project.

7. The project will rehabilitate about 595 km length of rural roads located in the three districts. All these roads belong to either Provincial council, Pradesiyia Saba or Urban council. The road list of each district is presented as Annexure 1. The selected roads are located within 17 Divisional Secretariat Divisions (DSDs) of Kandy district 11 DSDs of Matale district and five (5) DSDs in Nuwara Eliya district. The DSDs that will be benefited by the project are presented in table 1.1 below.

Table 1.1 Affected DSDs

District	Divisional Secretariat Divisions that will be benefited
Kandy	Akurana, Gangawata Korale, Ganga Ihala Korale, Harispaththuwa, Hatharaliyadda, Hewaheta, Kundasale, Meda Dumbara, Minipe, Pasbage Korale, Panvila, Patha Dumbara, Poojapitiya, Udapalatha, Udunuwara, Uda Dumbara, Yatinuwara
Matale	Ambanganga Korale, Dambulla, Galewela, Laggala – Pallegama, Matale, Naulla, Pallepola, Raththota, Ukuwela, Vilgamuwa, Yatawatta
Nuwara Eliya	Ambagamuwa, Hanguranketha, Kothmale, Nuwara Eliya, Walapane

8. As per the RF for iROAD program it is required to prepare a due diligence report on Involuntary Resettlement at provincial level and present the socioeconomic profile of the project affected community based on a sample survey. Chapter II of this report presents the findings of Involuntary Resettlement Due Diligence for rural roads in Central Province. Chapter III of the report discuss the findings of the sample Socio economic survey carried out in the province with a basic socio-economic profile of Central Province based on the data from Department of Census and Statistics. Gender related aspects and community view on the project within Central Province is also discussed under Chapter III of this reports.

C. Methodology used to carry out the due diligence

9. Field verification was carried out covering all candidate roads in Kandy, Matale and Nuwara Eliya districts in Central Province in order to satisfy the above requirement. The field verification was carried out as part of the transect walk surveys which included taking measurements at sections (especially between two parapet walls, two live fences or cut sections) where any road was observed to be narrow. Any structure (permanent or temporary) which is located within the existing ROW was to be recorded as part of this field verification.

10. The site visits were carried out during the month of July, 2014. The field verification was assisted with Google online maps, topographic and land use maps of Central Province prepared by Survey Department.

11. Public consultations and awareness meetings were also carried out for each road during the transect walk survey. Public in all candidate roads were informed about the social survey, awareness meeting and transect walk in advance. The information was disseminated through Grama Niladari of each Grama Niladari Division through which a road is passing and using public notices as presented in figure 2.1.

Figure 2.1. Sample public notice referring to the meeting and survey



12. Other than the information on land availability for the proposed improvement works, following aspects were also verified during the transect walk surveys and subsequent public meetings:

- How the public feel about the existing road geometry and any improvements they suggest
- Willingness of public to donate land if there is such requirement
- Suggestions on improvements to road side drainage and cross drainage structures
- Any improvements on road safety aspects

13. All these information were summarized and recorded in the transect walk survey summary sheet with other relevant information (including a road map).

II. INVOLUNTARY RESETTLEMENT DUE DILIGENCE

14. As indicated in the RF for iROAD program and the scope of iROAD program, there will only be rehabilitation of roads along the existing carriageway without any improvements in geometry of alignment. Therefore it is anticipated that any Involuntary Resettlement (IR) will not occur due to the project. However, as per the RF and ADB's SPS 2009 it is important to verify and confirm that no Involuntary Resettlement (IR) will be required in project roads.

A. Summary of field observations and verification

15. As indicated above, the available corridor (fence to fence, drain to drain or distance between cut slope sections) width was measured with special emphasis on narrow road sections. During the field visit it was revealed the many of the selected rural roads generally have a corridor not less than 3.5–4.0 m.

16. However, few roads in all three districts appear to have narrow ROWs. This situation is prominent along roads that are placed on contour lines with cut slopes. Poor slope maintenance and growth of vegetation on to the road ROW has made such roads to appear as narrow roads. It was also observed that some of the road sections which pass through settlements have parapet walls close to the road, however no such section recorded a ROW less than 3.0 m which satisfy the minimum requirement for road improvement works without any land acquisition and involuntary resettlement.

17. During the field verification for all project roads, it was observed and recorded that there were no structures (permanent or temporary) within the available ROW.

18. It should also be noted that most of the above roads (all provincial council and municipal council roads) have a 22 feet or about 6.5m reservation. People are aware of this condition. However, people in almost all the roads are willing to donate land if required. Issues discussed during the public meetings and observations made during the transect walk surveys of each road are presented as separate reports. The summary of field observations is presented in Annexure 2.

B. Other impacts observed and mitigation measures

19. Although there will be no impacts of involuntary resettlement, following impacts could also occur especially during the civil works period. Most of the adverse impacts are temporary in nature but could cause a public nuisance especially during the civil works period.

20. **Temporary loss of access/disruption of traffic.** Availability of alternate routes was discussed during the public discussions and transect walks carried out for each road. Alternate routes for many roads were put forward by the public. However, in most of the meetings it was revealed that people are willing to have temporary road closures rather than diversions. This is mainly because that such road closures will not be of long durations as these road will paved with asphalt concrete. They have already experience road closures for several days when sections of roads have been concreted during pervious projects. But they request that they should be informed in advance so that they could get prepared even for such temporary road closures.

21. **Shifting of utility supply lines causing disruption to the supply.** This is not a major issue as stated by the public. Shifting of electricity and telecommunication poles will not be required in many roads as they are not within the ROW. Even for some posts that are close to the existing road edge it is suggested that they are painted with luminous paint for visibility and to improve road safety.

22. **Dust, noise and vibration impacts.** Impact will be felt by the people living near road sections during construction works. High vibration levels may damage structures close to the road edge. The Civil contracts should include appropriate measures to avoid/manage the issues of dust, noise. Civil contracts should also include a 3rd party insurance to compensate any damage of property caused by vibration during the construction. It is also required to carry out a property condition survey within settlement areas close to the candidate roads.

23. **Accidents during construction stage.** As there is less space to maneuver the construction vehicles it is apparent that there is a huge potential for accidents that would involve worker staff and public. Demarcation of construction sites and restriction of public moving in to construction areas is important reduce public being injured due to construction works. Poor visibility conditions even during day time are common in Nuwara Eliya area. Therefore it is important that the workers wear proper luminous jackets and safety helmets during working hours.

24. **Impacts on irrigation canals, small reservoir bunds and water lines.** Some of the roads especially in Kandy and Matale district are located on bunds of small irrigation reservoirs and many community water supply lines are running parallel to these roads. It was also observed that some of the roads are located parallel to main irrigation water canals and farmers have placed pipe lines crossing the road. Care should be taken to avoid any damage to these bunds and community water lines. During the public meetings it was recommended to keep provisions for ducts across the road so that people can take water lines across the road without damaging the road surface.

25. **Community property resources.** Care should be taken to avoid any accidental damages to common properties such as Shires, water wells located close to candidate roads. Assisting the communities to rehabilitate any common property such as Shires, water wells could positively help the project. Possible locations where the contractor could establish the camp sites and yards were discussed with the public. And it was stated that there are many potential lands that could be used by the contractor but such site should essentially be finalized with mobilization of the contractor.

C. Institutional Capacity

26. RDA will establish a Project Implementation Unit (PIU) to oversee the project implementation for the Province. Within the PIU there will be a focal person for social safeguard. The person will be supported by RDA's Environment and Social Development Division. There will also be a Project Implementation Consultant (PIC) engaged to supervision the construction. Within the PIC team, there will be a Social Development Specialist.

III. SOCIOECONOMIC ASSESSMENT AND GENDER PARTICIPATION REPORT

27. A sample socioeconomic survey needs to be carried out in the project area as per the requirement of the RF for iROAD project. Accordingly a sample survey was carried out covering all Grama Niladari Divisions affected in the project area. The methodology used was in line with the guidelines given in the RF. Every fifth (5) house along a candidate road was surveyed with a structured questionnaire. For roads that did not have many households along the road it was decided to survey households inside the villages that are connected by the candidate road. Objective of this approach was to achieve a representative sample of more than 20% of total households in each district.

28. Table 3.1 below shows the estimated number of households in each district and the actual number of households surveyed in the sample survey. Table 3.2 presents the No. of households surveyed in each Divisional Secretariat (DS) Division in each district.

Table 3.1 Estimated No. of households and enumerated households in each district

District	Estimated No. of Households	Required sample size	Enumerated No. of Households	Actual Percentage of sample size
Kandy	15,000	3,000	3,514	23.4
Matale	15,000	3,000	3,440	22.9
Nuwara Eliya	18,000	3,600	4,583	25.4

Table 3.2 No. of households surveyed in each DS Division

District	No.	Name of DSD	No. of households surveyed
Kandy	1	Delthota	196
	2	Doluwa	245
	3	Ganga Ihala korale	159
	4	Gangawata Korale	464
	5	Hatharaliyadda	96
	6	Medadumbara	191
	7	Panwila	144
	8	Pasbage Korale	173
	9	Pathadumbara	260
	10	Udadumbara	122
	11	Udawalatha	136
	12	Udunuwara	167
	13	Yatinuwara	235
	14	Akurana	160
	15	Poojapitiya	118
	16	Kundasale	563
	17	Minipe	85
	Total of Kandy		3,514
Matale	1	Ambangakorale	154
	2	Dambulla	754
	3	Laggala-pallegama	115
	4	Matale	453
	5	Naula	333
	6	Pallepola	124
	7	Rattota	562

District	No.	Name of DSD	No. of households surveyed
	8	Ukuwela	147
	9	Wilgamuwa	244
	10	Yatawatta	158
	11	Galewela	396
	Total of Matale		
Nuwara Eliya	1	Ambagamuwa	1580
	2	Hanguranketha	173
	3	Kotmale	454
	4	Nuwaraeliya	1845
	5	Walapane	531
	Total of Nuwara Eliya		

Source: Sample HH survey of Central Province, July, 2014

29. The sample was distributed within 103 Grama Niladari Divisions (GNDs) of the 17 DSDs in Kandy district, while the sample of Matale district was distributed within 84 GNDs in 11 DSDs. In Nuwara Eliya district the sample was distributed within 191 GNDs in five DSDs. From above tables it is clear that the sample has been well distributed within all affected DSDs in each district of Central Province.

A. Description of Key Physical and Socioeconomic Features of Central Province

30. Central Province which consists of three districts is geographically spread over the central hill lands of the country. Historically the Central Province was independent till early 19th century which finally fell to British conquerors in year 1815. Major towns in the Central Province include Kandy, Matale, Dambulla, Gampola, Nuwara Eliya and Hatton. Central Province is the major producer of Tea and Matale district is famous for spices and the unique Kandian home garden system.

31. Nuwara Eliya, Matale and Dambulla are major areas that produce vegetables. Dambulla and Nuwara Eliya harbours dedicated economic centres that collect and transport vegetables to other parts of the country. Central Province is also world famous for tourism. Both foreign and local tourists visit many Tourist and historical sites within the Central Province. These sites include the famous temple of the tooth relic, Dambulla cave temple, Aluwiharaya temple, Sigiriya rock, Peradeniya and Gakgala botanical gardens and Horton Planes.

32. Almost all rivers of the country originate from the central hill lands located in the province. The terrain is mostly mountainous, with deep valleys cutting into it. The two main mountain regions are the central massif and the Knuckles range to the east of Kandy. The western slopes are very wet, some places having almost 7000 mm of rain per year. The eastern slopes are parts of the mid-dry zone as it is receiving rain only from North-Eastern monsoon. The Temperatures range from 24°C in Kandy to just 16°C in Nuwara Eliya, which is located 1,889 m above sea level. The highest mountains in Sri Lanka including the Pidurutalagala Mountain are located in the Central Province.

33. Central Province has a total land area of 5,674 km² and a population of about 2.5 million persons. The land area is divided as 1,940 km² in Kandy district, 1,993 km² in Matale district and 1,741 km² in Nuwara Eliya district. Table 3.3 presents details on land area, population, population density and poverty head count ratio (year 2012/2013) for the two districts of Central Province.

Table 3.3 Summary of land area, population, and poverty head count ratio

Province	District	Population (Census 2012)	Land area (km ²)	Population Density (person/ km ²)	Poverty head count ratio (2012/2013)
Central	Kandy	1,369,899	1,940	706	6.2
	Matale	482,229	1,993	242	7.8
	Nuwara Eliya	706,588	1,741	406	6.6

Source: Department of Census and Statistics, 2012

34. Population distribution by ethnicity, sex and age and labor force in the two districts are presented below.

Table 3.4 Population by ethnicity in each district

Ethnic Group	Kandy	%	Matale	%	N' Eliya	%
Total Number Of Persons	1,369,899	100	482,229	100	706,588	100
Sinhala	1,018,323	74.3	389,092	80.7	279,784	39.6
Sri Lankan Tamil	71,640	5.2	24,756	5.1	31,867	4.5
Indian Tamil	83,234	6.1	23,400	4.9	375,795	53.2
Sri Lankan Moor	191,159	14	44,113	9.1	17,422	2.5
Burgher	2,201	0.2	376	0.1	770	0.1
Malay	2,062	0.2	335	0.1	492	0.1
Sri Lankan Chetty	115	0.0	29	0.0	49	0.0
Baratha	23	0.0	7	0.0	10	0.0
Other	1,142	0.0	121	0.0	399	0.0

Source: Department of Census and Statistics, 2012

Table 3.5 Population by sex and age in each district

District	Total number of persons	Sex		Age		
		Male	Female	Less than 15 years	15 - 59 Years	60 years and over
Kandy	1,369,899	649,790	720,109	358,152	829,753	181,994
	100	47.4	52.6	26.1	60.6	13.3
Matale	482,229	232,855	249,374	127,811	296,586	57,832
	100	48.3	52.1	26.5	61.5	12.0
N' Eliya	706,588	338,646	367,942	205,617	417,982	82,989
	100	47.9	52.1	29.1	59.2	11.7

Source: Department of Census and Statistics, 2012

Table 3.6 Labor force status of household population, 10 years of age over by district

District	Household population 10 years and over	Labor force					
		Total labor force	Labor force participation rate	Employed		Unemployed	
				Number	Rate	Number	Rate
Country	17,915,383	8,464,706	47.2	8,128,704	96.0	336,002	4.0
Kandy	1,086,796	490,678	45.1	455,326	92.8	35,352	7.2
Matale	390,063	195,500	50.1	190,082	97.2	5,418	2.8
N' Eliya	545,472	290,354	53.2	284,998	98.2	5,356	1.8

Source: Department of Census and Statistics, 2012

35. Table 3.6 describes the labor force distribution in each district with rates of employment and unemployment. As per the above information it could be concluded that employment rate of all three districts are close to the national rate.

B. Analysis of the Sample Socioeconomic Survey for Central Province

36. The socio economic survey was carried out during the month of July, 2014 covering all GNDs affected by the project. Following section describes the key finding of the sample household survey. The results are discussed under four different categories. The results are presented as percentage of the respective sample of each district. However, it should be noted that the questionnaire had questions with multiple responses. Information collected from such questions is presented as separately highlighted tables.

1. Key demographic information of the sample survey

a. Distribution of households by family size and age

37. Family size and age distribution of family members in each district of Central Province is presented in below table.

Table 3.7 Distribution of family size of the sample households (percentage)

District	Family size (No. of members)		
	1-2	3-4	More than 5
Kandy	11.72	50.09	38.19
Matale	12.27	57.87	29.86
Nuwara Eliya	10.82	41.33	47.85

Source: Sample HH survey of Central Province, July, 2014

Table 3.8 Age distribution of sample household members (percentage)

District	Age group (Years)					
	0-14		15-59		Above 60	
	Male	Female	Male	Female	Male	Female
Kandy	12.14	10.17	31.04	31.37	6.09	6.56
Matale	15.92	16.25	28.48	29.56	4.79	5.01
Nuwara Eliya	12.58	12.18	32.60	32.87	5.05	4.72

Source: Sample HH survey of Central Province, July, 2014

38. Average family size of Kandy and Matale districts is 3 to 4 members, while in N'Elia the average family size is more than 5 members. Out of these family members the highest percentage falls within the age limit of 15 to 59 years, which is the economically active population of a country. It could also be observed that there is a considerable amount of population falling between age group of 0-14 years.

39. As expressed during the public awareness meetings which were conducted in parallel to the transect walks and during the socio-economic survey the economically active population is willing to work in the project.

b. Educational attainment

40. The level of education in a region is important for the development of that area. Sri Lanka has recorded a higher literacy rate compared to many countries in the region. Table 3.9 below presents the level of educational attainment of each sample in each district.

Table 3.9 Educational attainment of each sample in each district (percentage)

District	Level of educational attainment							
	No schooling	Grade 1-5	Grade 5-10	G.C.E. O/L	G.C.E. A/L	Technical	University	Baby
Kandy	3.05	19.21	24.06	29.42	15.61	0.77	2.21	5.67
Matale	2.62	16.04	22.01	25.95	14.25	0.52	2.14	16.48
Nuwara Eliya	8.43	24.76	28.78	20.43	9.14	0.42	0.83	7.22

Source: Sample HH survey of Central Province, July, 2014

41. As elsewhere in the country the majority of population in the sample of all three districts has at least studied up to G.C.E. Ordinary Level. This is a positive factor for the project if labor is to be secured from the project area itself. A labor force with sufficient literacy level will be easy to handle and give guidance in the work.

c. Occupation of household head

42. As the project roads are located in rural area it is expected that most of the household heads will be occupied as farmers, skilled and wage labor. Below table summarize the occupation of household heads in each sample.

Table 3.10 Occupation of household head (percentage)

District	Type of employment								
	Farmer	Public/Private sector	Skilled labor	Business	Self-employment	Wage labor	Fisher man	Foreign employment	Dependent
Kandy	19.05	34.45	4.01	9.48	5.74	19.00	0.70	3.13	4.44
Matale	33.95	27.70	2.64	7.04	5.19	12.18	0.22	1.41	9.67
Nuwara Eliya	15.92	23.75	6.61	3.97	4.04	27.96	0.12	1.08	16.55

Source: Sample HH survey of Central Province, July, 2014

43. A reasonable percentage of the household heads are also working as wage laborers. The dependent population in Nuwara Eliya district is also significant.

d. Average household income, expenditure and movable assets

44. Below tables present the distribution of monthly average income in each sample in the province.

Table 3.11 Average monthly income of sample households (percentage)

District	Average monthly income (SLR)			
	Less than 5,000	5,001 – 14,999	15,000 – 49,999	50,000 <
Kandy	12.79	19.70	62.70	4.81
Matale	2.33	18.78	71.20	7.70
Nuwara Eliya	4.85	16.36	69.61	9.18

Source: Sample HH survey of Central Province, July, 2014

Table 3.12 Average monthly expenditure of sample households (percentage)

District	Average monthly expenditure (SLR)			
	Less than 5,000	5,001 – 14,999	15,000 – 49,999	50,000 <
Kandy	3.27	22.13	69.19	5.42
Matale	2.07	19.61	70.89	7.43
Nuwara Eliya	2.57	23.68	69.76	3.99

Source: Sample HH survey of Central Province, July, 2014

45. It could be observed that the ceiling of the average monthly income coincide with the average monthly expenditure in all three districts.

46. A summary of movable household assets in each district sample is presented in table 3.13. This table was developed based on a question which multiple answers were accepted because any given household will have at least two movable assets.

Table 3.13 Summary of assets (Values are in percentage with multiple answers)

Type of Asset	Kandy	Matale	Nuwara Eliya
Television	91.64	89.18	92.07
Radio/ CD player	83.33	78.76	78.80
Sowing machine	44.86	45.29	28.11
Electric fan	31.75	50.62	11.80
Fridge	46.55	49.03	19.29
Gas stove	36.04	27.35	32.54
Kerosene stove	3.55	7.52	13.22
Air conditioner	0.65	1.01	1.15
Motor cycle	16.35	29.42	6.59
Bicycle	5.00	21.02	3.18
Three wheeler	17.23	21.94	9.40
Motor car/ cab	2.85	3.91	1.54
Motor bus/ van	2.89	3.43	1.79
Water pump	7.75	19.96	6.44
Washing machine	8.17	5.58	3.38
Other	17.23	6.77	2.33

Source: Sample HH survey of Central Province, July, 2014

47. As per the above information it could be observed that the Motor cycle and three wheelers is the most common vehicle types owned and used by the rural communities

e. Housing condition, sanitary facilities, energy and water sources of sample households

48. Below tables describe the type of housing structures, sanitary facilities, energy and water sources available with in sample households.

Table 3.14 Details of type of housing structure (percentage)

District	Type of housing structure			
	Permanent	Semi-permanent	Temporary	Rent/ lease
Kandy	91.74	6.30	1.03	0.93
Matale	80.87	14.07	4.18	0.88
Nuwara Eliya	71.74	22.23	4.65	1.37

Source: Sample HH survey of Central Province, July, 2014

49. As per above information Kandy and Matale districts records a higher percentage of permanent houses while at Nuwara Eliya there is a significant number of semi-permanent structures also.

Table 3.15 Details of sanitary facilities (percentage)

District	Type of sanitary system available			
	Flush	Water sealed	Pit latrine	None
Kandy	11.95	84.83	7.70	2.43
Matale	9.41	85.80	5.28	2.95
Nuwara Eliya	3.87	71.08	20.91	5.36

Source: Sample HH survey of Central Province, July, 2014

50. All three districts have recorded percentages above 70% in using “water sealed” sanitary system facilities in their houses, but there is a reasonable amount of houses that has pit latrine system. This could be correlated to the semi-permanent type of structures observed in Nuwara Eliya district.

Table 3.16 Availability of electricity (percentage)

District	Source of electricity		
	National grid	Solar power and other sources	No Electricity
Kandy	94.07	2.05	3.87
Matale	93.01	0.48	6.51
Nuwara Eliya	95.54	1.08	3.38

Source: Sample HH survey of Central Province, July, 2014

51. Households in Kandy, Matale and N’ Eliya mainly depend on the electricity supply from the national grid. Compared to Kandy and N’ Eliya there is a fair percentage of families who do not have electricity in Matale district. A very few families depend on electricity generated through solar panels and other sources such as mini hydropower schemes.

Table 3.17 Source of water (percentage)

District	Source of water		
	NSW & DB	Well/ tube well	Community pipe
Kandy	28.62	29.51	45.05
Matale	34.48	44.33	26.96
Nuwara Eliya	5.24	17.24	77.52

Source: Sample HH survey of Central Province, July, 2014

52. As per the above information the rural communities are less benefited through the water supply lines of National Water Supply and Drainage Board (NWS & DB). Sample families in Kandy and N' Eliya districts are more dependent of community water supply schemes while communities in Matale district are more dependent on wells or tube wells for their water needs.

f. Vulnerable households and gender related details

53. The sample socio-economic survey also focused on the aspect of vulnerable families within the project area. A family was considered to be vulnerable if it had an elderly household head (age > 70 years), Families receiving a monthly income less than SLR 5,000, female headed families and families having disabled members. Below table summarize the findings of the analysis on vulnerable families in each sample.

Table 3.18 Details of vulnerable households (percentage of total households surveyed)

Type of vulnerability	Kandy	Matale	Nuwara Eliya
Family with elderly household head (age > 70 years)	15.64	12.23	10.01
Family with monthly income < SLR 5,000	12.79	2.33	4.87
Female headed families	15.59	12.93	10.26
Families with disabled members	7.47	5.50	3.04

Source: Sample HH survey of Central Province, July, 2014

54. As per above table it could be observed that a fair amount of households are headed by persons more than 70 years of age and women. Therefore, it is important to have special measures to avoid any hindrance to these families especially during the civil works period of the project.

55. The household survey also focused on the aspect of female family members getting involved in day to day decision making, bread earning and other social activities in their respective households and the community. Below tables summarize the findings of this analysis.

Table 3.19 (a) Contribution of female members in family matters and community organizations – Kandy

Type of involvement	Always	Sometime	Rarely	If Request	No Participation
Decision making in family matters	77.22	13.54	1.35	4.44	3.45
Bread earner	50.33	25.86	4.20	3.50	16.11
Participation in CBO activities	49.86	27.31	10.50	5.98	6.35
Organize community programs	47.90	26.14	5.70	13.96	6.30

Source: Sample HH survey of Central Province, July, 2014

Table 3.19 (b) Contribution of female members in family matters and community organizations – Matale

Type of involvement	Always	Sometime	Rarely	If Request	No Participation
Decision making in family matters	81.75	12.31	2.20	2.20	1.54
Bread earner	62.23	25.07	4.44	1.80	6.46
Participation in CBO activities	62.05	22.38	11.17	1.63	2.77
Organize community programs	61.13	19.88	7.48	10.03	1.50

Source: Sample HH survey of Central Province, July, 2014

Table 3.19 (c) Contribution of female members in family matters and community organizations – Nuwara Eliya

Type of involvement	Always	Sometime	Rarely	If Request	Do not Participate
Decision making in family matters	76.64	20.91	1.22	0.51	0.71
Bread earner	69.98	22.38	4.43	0.95	2.25
Participation in CBO activities	51.93	22.11	15.52	7.15	3.28
Organize community programs	54.41	16.26	9.18	17.31	2.84

Source: Sample HH survey of Central Province, July, 2014

56. From above tables it could be clearly see that female members play a key role in decision makings in family matters.

57. The opportunity for the female members getting involved in the project was also analyzed as a gender perspective for the project. Below tables summaries the analysis of this aspect.

Table 3.20 Willingness of household head to involve female family members in project

District	Agree to involve	Do not agree to involve
Kandy	60.32	39.68
Matale	67.85	32.15
Nuwara Eliya	80.85	19.15

Source: Sample HH survey of Central Province, July, 2014

58. It is observed that the majority of heads of sample families in Kandy, Matale and N' Eliya districts agrees to allow their female family members to get involved in the project. This response is especially high is Nuwara Eliya district.

Table 3.21 Type of involvement of female family members in the project (a multiple response)

Type of involvement	Kandy	Matale	Nuwara Eliya
Provide wage labor during construction	15.08	3.03	48.07
Provide wage labor for maintenance of road	6.68	2.77	20.59
Provide meals to work force as a small business	64.33	82.50	19.64

Source: Sample HH survey of Central Province, July, 2014

59. In case of female members getting involved in the project, the majority of households in Kandy and Matale districts would like them to get involved providing meals for the work force while in Nuwara Eliya the involvement would be more from wage labor aspect.

C. Community perception about the project

60. Dissemination of inform about the project including its benefits and any adverse impacts to the affected community/ ies is considered as important for the sustainability of the project and to obtain public support to the project. The survey focused on this aspect and collected information about community's knowledge of the project (i.e. have they been adequately informed). Below table presents the percentage of households who had knowledge about the project.

Table 3.22 Community awareness about the project (percentage)

District	Know about the project	Do not know about the project
Kandy	54.39	45.61
Matale	34.78	65.22
Nuwara Eliya	68.44	31.56

Source: Sample HH survey of Central Province, July, 2014

61. According to the above table communities in Kandy and Nuwara Eliya districts were aware of the project than the communities in Matale district. One major reason behind this is that in Kandy and N' Eliya both social survey and transect walk surveys (including public awareness meetings) were conducted on a parallel basis while in Matale the socio-economic survey was completed first.

62. The survey also focused on the community perception on the present road condition and how it affects their day to day life. The findings are summarized below.

Table 3.23 Condition of existing road to be rehabilitated by the project (percentage)

District	Condition of the existing road surface				
	Good	Fair	Bad	Very bad	Bad in rainy season
Kandy	4.44	31.28	39.86	17.52	6.90
Matale	3.34	39.58	34.47	11.65	10.95
Nuwara Eliya	1.93	14.13	24.21	53.37	6.35

Source: Sample HH survey of Central Province, July, 2014

63. As observed in above table it could be concluded that most of the road selected for the program in Kandy and Matale districts were either fair or bad in condition while in N' Eliya a significant amount of roads selected were in very bad condition.

Table 3.24 Impact of existing road condition on day to day activities of women, children and elderly persons (percentage)

District	Affect the activities	Do not affect the activities
Kandy	97.06	2.94
Matale	92.52	7.48
Nuwara Eliya	97.18	2.82

Source: Sample HH survey of Central Province, July, 2014

64. It is clear from the above table that all most all respondents are in the opinion that these roads affect the day to day activities of women, children and elderly persons in the project area. Table 3.25 describes the reasons for such impact.

Table 3.25 Reasons for such impact (percentage, multiple answers)

District	Kandy	Matale	Nuwara Eliya
Reason			
Damaged road condition	93.79	85.00	94.91
Shrub jungle grown on both sides of the road	56.40	46.09	32.27
Road side drains not maintained	59.29	54.31	41.16
Wing walls of culverts and bridges are damaged	49.77	40.11	30.34
Pot holes on the shoulders	52.01	50.75	45.98
Road get inundated	33.85	52.51	38.39

Source: Sample HH survey of Central Province, July, 2014

65. As per the above table it is clear that damaged road surfaces is the most significant reason, while poor road side drains and pot holes on the shoulders also impacts day to day activities of women, children and elderly in the project area.

66. Below tables summarize the willingness of community to participate in the project and how they are willing to participate.

Table 3.26 Willingness of community to participate in the project

District	Willing to participate	Do not want to participate
Kandy	83.43	16.57
Matale	94.15	5.85
Nuwara Eliya	94.03	5.97

Source: Sample HH survey of Central Province, July, 2014

67. As per above information majority of the communities in Kandy, Matale and N'Elia districts would like to participate in the project.

Table 3.27 Type of contribution for the project (percentage, multiple responses)

District	Type of contribution			
	By donating land	Community awareness creation	Involve in progress monitoring	Involve in maintenance
Kandy	24.45	25.18	22.38	27.98
Matale	33.58	22.19	20.50	23.73
Nuwara Eliya	29.40	24.22	23.05	23.33

Source: Sample HH survey of Central Province, July, 2014

68. As per the information in above table communities would like to contribute to the project in a more positive manner. Finally the community on perceived benefits of the project was analyzed. Based on analysis, all communities in the project area welcome the project.

Table 3.28 Perceived benefits of the project (percentage, multiple responses)

Perceived benefits	Kandy	Matale	Nuwara Eliya
Develop agriculture sector	73.90	82.85	79.47
Develop education facilities	78.38	80.08	82.47
Develop health and sanitary facilities	76.56	80.08	85.50
Increase job opportunities for villagers	64.52	70.89	76.62
Road safety for Women, Elders and children	73.95	77.35	80.61
Develop Public/privet transport for villagers	76.94	78.76	78.60
Easy travel even at night time or time with poor visibility	76.61	80.69	79.26
Develop industrial sector in rural areas	52.15	63.24	66.26
Reduced the travel cost and time	79.13	78.5	82.30
Increase cultural values	61.53	63.37	74.17
Improve standards of living	72.78	77.18	78.62
Develop communication with villagers and government institutes	62.46	65.26	79.46

Source: Sample HH survey of Central Province, July, 2014

D. Public Consultation and information dissemination

69. Public consultations and awareness programs need to be carried out as part of the RF of iROAD program. Public consultations and awareness meetings were carried out as part of the

transect walk survey conducted in each candidate road. Notices were placed at selected locations to inform the public about the activity.

70. Outcome of each awareness meeting and public consultations are summarised in the relevant transect walk record. However, it should be noted that people expect the project to initiate as early as possible as they face a lot of hardships in their day to day activities due to the present poor road conditions.

IV. CONCLUSION AND RECOMMENDATIONS

71. Proposed iROAD project will have a positive effect in the rural development. Any rural road selected passes through few villages, therefore more than 1000 villages will benefit through the program.

72. Central Province is located in the central hill lands of the country and most of the roads selected under this program are located along the contour lines and cut sections. As the alignment will not be improved to a great extent it is important that safety measures are placed along the critical sections such as edges of slopes and tight bends.

73. During the field visits it was observed that no road selected under the project in Central Province had a ROW less than 3.0 m. However it is important to clear the vegetation that has grown in to the road edges and soil that has fallen on to the road edges making it to appear as narrow roads.

74. Placing of speed breakers and warning sign boards is also important as it is expected that motorists, especially motorcyclists and three wheelers will move on the improved road surfaces at much higher speeds which would cause accidents.

75. It is also important to study the existing drainage structures for their functionality and replace or reconstruct the damage culverts. It is also suggested to construct new culverts and bridges where necessary. Such locations were identified during the transect survey. It is also recommended to keep ducts across the roads where community water supply lines are located parallel to the road. It may be required to encase the small pipe lines that are put across the roads to get water from irrigation canals.

76. During the public meetings it was revealed that the public in many roads are willing to donate land, but they were also in the opinion that there is no great necessity of any improvements to road horizontal geometry, which leads to land acquisition and involuntary resettlement. The design cross sections for each road should be prepared in accordance to the available ROW, and this concept is already embedded in the project scope. Hence there will be no cases of involuntary resettlement involved in the project. However, option of land donation is kept open for the community to assist the project.

77. As the available ROW in many roads will be adequate for temporary diversions, public were in the opinion that temporary road closures will be accepted. But it is important that the public are informed of such road closures in advance. However, some alternate routes that could be used during such road closures were also identified for some roads. Suitable sites for establishing contractor's camps and yards were also identified during the public meetings

78. It is important to minimize impacts to the public during construction stage. Dust, noise and vibrations are the most common impacts during the construction period and are temporary

in nature. It is also important to establish the Grievance Redress Committees before commencement of civil works.

Annexure 1: Road List – Central Province

Provincial roads

District	Rd ID	Name of Road	Length (km)
Matale	56	Beeridewala to Walawela and Muduna via dullawa junction	5.30
	32	Medakanda Maraka Road	6.20
	16	Kosgolla Adawela Road via Kuballoluwa Magallewa	8.40
	10	Bodhikotuwa junction to Hoagolla bridge road	6.00
	47	Kaduwela to Pujagoda Gama Meda Road	2.90
	18	Dambuluoya Junction to Kalundewa Road	7.70
	25	Pelwehara Randeniya Bulagala Road	4.1
	53	Dabuyaya Dambagolla Road	4.10
	52	Akuramboda Temple to Koswatta Road	1.00
Kandy	2	Medamahanuwara town - Kandekumbura Road (Retiyagama bus stand) via Metideniya	7.80
	3	Werapitiya Road ,Dunhinna Junction - Makuldeniya Road (Makuldeniya Junction) via Waradiwela	5.15
	4-A	Iskolamuduna Junction - Hiloya Road (Watagala Road) via Podadalgoda	4.40
	21	Angamma Nikathenna Road	1.30
	41	Wattegama , Pinnalanda Junction - Thunkandura Junction via Puwakgahadeniya	4.90
	10	Delthota town - Gabadagama Road	7.40
	11	maussawa - Kolambissa Junction	3.70
	36	Parana Polonnaruwa	7.20
	32	Madugalla Kalawala Road	3.45
	43	Digana Ambakotte Road	4.40
	44	Sirimalwatta Nattarampotta Road	2.70
	45	Manikkahinna (Pitiye Dewalaya) Galaluwa Road	1.30
	46	Gagasiriwatta Polgolla Road	2.60
	47	Digana Aluthwatta Road (Aluthwatta No.10 Junction) - Parana Gagapitiya Road	2.60
	12	Kobbekaduwa Gamameda Road	2.00
	13	Dodamwala Dewalaya - Wathurakumbura Road via Greppitiya temple	2.70
	14	Siyambalagoda - Omandel Sikurapotha Road	3.00
	16	Galpaya , Thelihunna Colony via Kurunduwatta New Town Pellapitiya Colony	8.20
	26	Udaiguruwatta Road to Wewathenna Road	3.40
	27	Manikkawa Junction to Gonadhikawatta Road	6.80
29	Pamunuwa Daliwala Mugatipayola Road	2.30	
30	Pamunuwa Junction - Elugoda Road	1.90	
7	Gurudeniya - Dambawela Bus Stand	0.75	
39	Hatharaliyadda,Rambukkana main Road to Dedunupitiya post office to Weniwella Road via Kalotuwawa	12.00	
49A	Vilana Pallegama - Watagoda Burton Watta	2.05	
Nuwara	33	Htiyegama UdaPolgahawaththa Minuwandeniya road	8

District	Rd ID	Name of Road	Length (km)
Eliya	41	Welioya Shanon road	9.5
	47	Pallewaththa Dagampitiya road	7
	4	Udupussellawa - Kurupanawela - Meepanawa Road	7
	7	Adikarigama - Ambewela - Merimount Road	4.6
	8	Rikillagaskada - Dimbulkumbura Road	5.5
	11	Rikillagaskada - Hapuwela Road	5
	30	Kothmale Dam View point to Kotagepitiya road	3
	36	Beramana Udagama Madakubura road	4
	37	Katugolla Hunugaloya Nawathispana road	2.6
	43	Hapugasthalawa Halgolla road	5
44	Nawathispane Harangala road	3	
Total length (Provincial roads)			213.90

Rural roads – Matale district

District	Rd ID	Name of Road	Length (km)
Matale	2	Ratalawewa Junction to Nikagolla Road via Kottagolla	1.60
	3	Mathalapitiya Rathninda Thuththiripitiya Atipola Dullawa via Walawela Aluthgama Road	12.00
	4	Yatawatta Mathalapitiya Road to Kurunegala Matale Road via Idangama Alutwatta Walpola & Maligathenna	5.00
	5	Yatawatta Mahawela Road to Pathingaskotuwa Kurunagala on Yatawatta Road via Nikagolla North	2.00
	35	Madawela Junction to Nalanda Industrials Zone	2.50
	36	Ellepola Kalupalama to Hilton Janapadaya Road	1.00
	38	Kanangamuwa Parawatta Road	2.80
	27	Bobella Bibila Road	1.50
	40	Kanamulayaya Rubber watta Via Police Station Road	2.50
	41	Meegolla Deewara Gammanaya Road	1.20
	42	Gedige Junction to Hapugasyaya Tamil Village Via Ududeniya Road	3.00
	39	Bibila Murutholuwa Road	1.70
	29	Weeragolla Munamalpitiya Via Moragaha Ulpatha Road	2.80
	33	Malgamma Gangeyaya Road	2.50
	28	Lewiyangala Junction to Weheragala Via Himbilyakada Road	4.20
	30	Nagolla Amuneyaya Via Godaulpoyha Weheragala Road	4.60
	31	Alikanda cemetery via Kaduruvediya Ela Road	3.30
	34	Hadungamuwa Kumbukoya Road	4.10
	17	Koongahamula Eriyagolla Rosawaththa via Hapugasipitiya Hunuketa Ela Matihakka Road	1.00
	43	Kosgolla Muduna to Loluwela Junction via Imbulgolla	6.00
44	Mahalakotuwa to Meda Ela via Raththinda Junction	2.00	
6	Uda Hapuwida Junction to Leliambe Junction Road	3.30	
7	Polwaththakanda to Kaudagammana Road	4.20	
8	Madakumbura to Udathenna Road (Riveston Road)	1.40	
9	Udahapuwida Keselwaththa Road	1.00	

District	Rd ID	Name of Road	Length (km)
	11	Kambiadiya to Kandenuwara via Bogambara	9.00
	12	Dombagoda Pahala Hapuwida	2.90
	13	Udaweragama Thennewatta Gansarapola Road	5.60
	15	Hulangamuwa Junction to Watagoda Road	2.70
	14	Kaikawela Temple to Pahala Owela Punchikade Main Road	4.00
	45	Ovilikanda to Babaragahakanda Road via Wademada Pathingolla	4.80
	46	Rathwatta to Elkaduwa Road via Wawugammadda	2.00
	20	Kapuwatta Akkara Seeya Yapagama Road	3.80
	22	Kandalama Rotawewa Road	4.80
	24	Sisirawatta Bulanwala Athuparayaya Dambulla Town Road	5.80
	19	Kapuwatta Yapagama Road	3.40
	23	Thiththawelgolla Rathmalgaha Ela Road	6.70
	21	Yapagama Dambulla Pola Ate Ela Batuyaya Via Diddeniya Kade Road	6.10
	49	Walaswewa Main Road	1.60
	50	Galapaula Damunumulla Road	3.30
	55	Damunumulla Yatigalpoththa Road	2.10
	54	Ambokka Dewalaya Road	2.50
Total length – Rural roads Matale district			148.30

Rural roads – Kandy district

District	Rd ID	Name of Road	Length (km)
Kandy	1	Bambaragahadeniya Junction - Madamahanuwara via Meeriyagolla	7.00
	4	Bambaragala Junction - Nithulemada Bus Stand, Nithulmada Main Road via Senarathwela	6.30
	42	Pitiyegedara Junction - Polgolla 6th mile Post via Meegamawatta	5.75
	9	Haththana, Uduwella watta - Galaha town via Galahawatta, Kithulgolla	9.70
	53	Nugethenna to Kewulgama Pamunuwella Ganegala Road	5.80
	15	Pottapitiya 4th mile post Udaranmeewala	2.55
	17	Yatapana Boswod Road	4.40
	19	Aluthgama Centre Village Road	2.70
	20	Dekinda, Weralugolla Road	2.65
	18	Nawalapitiya - Udakanda Bus Stand via Veralugashinna, Weligodawatta	7.55
	23	Pussellawa Melfret Boment Kalugala Wanahapuwa via Dunukeula Road	7.10
	24	Panvilathenna Junction - Legumdeniya Main Road via Robert Nocks Gala Pussathenna	3.70
	25	Boralu Mankada Junction - Millagahamulla Junction via Grohil Road Angamma Drate Kahawatta	8.00

District	Rd ID	Name of Road	Length (km)
	28	Viharagama - Watadeniya Road via Appallagoda	1.90
	5	Ogastawatta Wagirarama Road - Udaperadeniya Road	2.95
	6	Mahakanda Junction Mobre Samadi Mawatta via Sarasavigama Road	3.45
	8	Dambawela Road , Kandy Thalathuoya via Govi Janapadaya	1.00
	37	Hatharaliyadda, Mahanuwara main Road ,cross Junction to Galagedara Minigamuwa main Road via polwatta Ihalagama	3.75
	38	Poththapitiya Weligodapola main Road to Patapola post office via Alagalla primary school	2.60
	40	Harataliyadda Mawathagama main Road to Anludeniya school to Paragoda Gonathenna Road	4.45
	48	Karaduwwala Gatathale Road	2.85
	49	Bokkawala Pahala Higurwala via Miliyedda Road	7.80
	50	Poojapitiya , Dodamthanna , Bothota , Antharagama , Pattiyawatta via Rajapihilla Road	6.95
	51	Kasawatta Poojapitiya Road	2.55
	52	Malwanahinna Nirella via Main Road	3.55
	48	Karaduwwala Gatathale Road	2.85
Total length – Rural roads Kandy district			117.00

Rural roads – Nuwara Eliya district

District	Rd ID	Name of Road	Length (km)
Nuwara Eliya	16	Uwakele Estate road	4.80
	18	Pilot Project road	1.00
	19	Piduruthalagala Farm road	1.50
	20	Kantha Govipola & Ranaviru Gammana road	1.35
	21	Meepilimana Gamamedia road	3.00
	23	Thalawakele Galkanda road	4.00
	24	Rahanwatta Maussaella road	4.00
	26	Kandapola Konkordia road	1.95
	28	Kandapola Heatherset Estate road	1.00
	29	Nanuoya Udaradella road	6.60
	32	Henfold Couleena Estate road	2.60
	34	Tillary Tinsing road	4.00
	38	Stockhome lower Gruden road	3.20
	40	Waladola Mare road	4.00
	42	Wencher State road	3.80
	46	Ginigathhena Dehigasthenna Ellauda road	6.50
	48	Ginigathhena School road	1.00
	49	Abagamuwa Shilalekana road	1.30
	1	Ambagaspitiya- Ladupita - Liyanwela	5.00
2	Ragala Water Board - Ekagapura Road	4.30	
3	Ragala Starpet - Panditha Kumbura - Kotambe Road	10.00	

District	Rd ID	Name of Road	Length (km)
	5	Delmar - Galkadapathana - Rupaha Road	5.00
	6	Walapone Hospital Road	2.20
	10	Mahauva - Highforest Road	14.40
	15	Keenagala Estate Road	2.00
	9	Karaliyadda Village Road Via Gonagantenna Hospital	2.00
	12	Ambaliyadda - Ihala Kotape - Rikillagaskada Road	7.60
	13	Pallebowala - Medagama - Deltota	2.00
	17	Lower Pundaluoya to upper Shingama road	2.20
	31	Connecting road to Halpola	1.50
	45	Hapugasthalawa Dabagala road	2.00
Total length – Rural roads Nuwara Eliya district			115.80

Annexure 2: Summary of Field observations

Central Province Provincial Roads

District	Rd ID	Name of Road	Avg available ROW (m)	Observations and remarks on requirement of involuntary resettlement
Matale	56	Beeridewala to Walawela and Muduna via dullawa junction	4.5	No involuntary resettlement issue.
	32	Medakanda Maraka Road	4.5	No involuntary resettlement issue.
	16	Kosgolla Adawela Road via Kuballoluwa Magallewa	4.0	No involuntary resettlement issue.
	10	Bodhikotuwa junction to Hoagolla bridge road	4.0	No involuntary resettlement issue.
	47	Kaduwela to Pujagoda Gama Meda Road	4.5	No involuntary resettlement issue.
	18	Dambuluoya Junction to Kalundewa Road	4.5-5.0	No involuntary resettlement issue.
	25	Pelwehara Randeniya Bulagala Road	4.5-5.0	No involuntary resettlement issue.
	53	Dabuyaya Dambagolla Road	3.5	No involuntary resettlement issue.
	52	Akuramboda Temple to Koswatta Road	4.0	No involuntary resettlement issue.
Kandy	2	Medamahanuwara town - Kandekumbura Road (Retiyagama bus stand) via Metideniya	3.5	No involuntary resettlement issue.
	3	Werapitiya Road ,Dunhinna Junction - Makuldeniya Road (Makuldeniya Junction) via Waradiwela	3.0	No involuntary resettlement issue. Suggest CS modification to suit narrow section.
	4-A	Iskolamuduna Junction - Hiloya Road (Watagala Road) via Podadalgodra	3.0	No involuntary resettlement issue. Suggest CS modification to suit narrow section.
	21	Angammaana Nikathenna Road	3.5	No involuntary resettlement issue.
	41	Wattegama , Pinnalanda Junction - Thunkandura Junction via Puwakgahadeniya	4.0	No involuntary resettlement issue.
	10	Delthota town - Gabadagama Road	3.0-3.5	No involuntary resettlement issue. Suggest CS modification to suit narrow section.
	11	maussawa - Kolambissa Junction	3.5	No involuntary resettlement issue. Suggest CS modification to suit narrow section.
	36	Parana Polonnaruwa	3.5-4.0	No involuntary resettlement issue.
	32	Madugalla Kalawala Road	3.0-3.5	No involuntary resettlement issue.
	43	Digana Ambakotte Road	4.0-4.5	No involuntary resettlement issue.
	44	Sirimalwatta Nattarampotta Road	4.0	No involuntary resettlement issue.
	45	Manikkahinna (Pitiye Dewalaya) Galaluwa Road	3.0-3.5	No involuntary resettlement issue.
	46	Gagasiriwatta Polgolla Road	3.5-4.0	No involuntary resettlement issue.
	47	Digana Aluthwatta Road (Aluthwatta No.10 Junction) - Parana Gagapitiya Road	3.5-4.0	No involuntary resettlement issue.
12	Kobbekaduwa Gamamedra Road	3.5	No involuntary resettlement issue.	
13	Dodamwala Dewalaya - Wathurakumbura Road via Greppitiya temple	3.0-4.0	No involuntary resettlement issue. Suggest CS modification to suit narrow section.	

District	Rd ID	Name of Road	Avg available ROW (m)	Observations and remarks on requirement of involuntary resettlement
	14	Siyambalagoda - Omandel Sikurapothe Road	3.0-4.0	No involuntary resettlement issue. Suggest CS modification to suit narrow section.
	16	Galpaya , Thelihunna Colony via Kurunduwatta New Town Pellapitiya Colony	More than 3.0	No involuntary resettlement issue.
	26	Udaiguruwatta Road to Wewathenna Road	3.0-3.5	No involuntary resettlement issue. Suggest CS modification to suit narrow section.
	27	Manikkawa Junction to Gonadhikawatta Road	3.5	No involuntary resettlement issue.
	29	Pamunuwa Daliwala Mugatiyapola Road	3.0-3.5	No involuntary resettlement issue. Suggest CS modification to suit narrow section.
	30	Pamunuwa Junction - Elugoda Road	3.5	No involuntary resettlement issue.
	7	Gurudeniya - Dambawela Bus Stand	3.0-3.5	No involuntary resettlement issue. Suggest CS modification to suit narrow section.
	39	Hatharaliyadda,Rambukkana main Road to Dedunupitiya post office to Weniwella Road via Kalotuwawa	3.5	No involuntary resettlement issue.
	49A	Vilana Pallegama - Watagoda Burton Watta	3.0-3.5	No involuntary resettlement issue. Suggest CS modification to suit narrow section.
Nuwara Eliya	33	Htiyegama Udapolgahawaththa Minuwandeniya road	3.5	No involuntary resettlement issue.
	41	Welioya Shanon road	3.5	No involuntary resettlement issue.
	47	Pallewaththa Dagampitiya road	4.5	No involuntary resettlement issue.
	4	Udupussellawa - Kurupanawela - Meepanawa Road	4.0	No involuntary resettlement issue.
	7	Adikarigama - Ambewela - Merimount Road	3.5	No involuntary resettlement issue.
	8	Rikillagaskada - Dimbulkumbura Road	3.5	No involuntary resettlement issue.
	11	Rikillagaskada - Hapuwela Road	4.0	No involuntary resettlement issue.
	30	Kothmale Dam View point to Kotagepitiya road	3.5	No involuntary resettlement issue.
	36	Beramana Udagama Madakubura road	3.5	No involuntary resettlement issue.
	37	Katugolla Hunugaloya Nawathispana road	3.5	No involuntary resettlement issue.
	43	Hapugasthalawa Halgolla road	4.5	No involuntary resettlement issue.
44	Nawathispane Harangala road	3.5	No involuntary resettlement issue.	

Rural roads – Matale district

District	Rd ID	Name of Road	Avg available ROW (m)	Observations and remarks on requirement of involuntary resettlement
Matale	2	Ratalawewa Junction to Nikagolla Road via Kottagolla	3.5-4.0	No involuntary resettlement issue.
	3	Mathalapitiya Rathninda Thuththiripitiya Atipola Dullawa via Walawela Aluthgama Road	5.0	No involuntary resettlement issue.

District	Rd ID	Name of Road	Avg available ROW (m)	Observations and remarks on requirement of involuntary resettlement
	4	Yatawatta Mathalapitiya Road to Kurunegala Matale Road via Idangama Alutwatta Walpola & Maligathenna	5.0	No involuntary resettlement issue.
	5	Yatawatta Mahawela Road to Pathingaskotuwa Kurunagala on Yatawatta Road via Nikagolla North	3.5-4.0	No involuntary resettlement issue.
	35	Madawela Junction to Nalanda Industrials Zone	4.0	No involuntary resettlement issue.
	36	Ellepola Kalupalama to Hilton Janapadaya Road	4.0	No involuntary resettlement issue.
	38	Kanangamuwa Parawatta Road	4.0	No involuntary resettlement issue.
	27	Bobella Bibila Road	3.0-4.0	No involuntary resettlement issue. Suggest CS modification to suit narrow section.
	40	Kanamulayaya Rubber watta Via Police Station Road	3.5	No involuntary resettlement issue.
	41	Meegolla Deewara Gammanaya Road	3.5	No involuntary resettlement issue.
	42	Gedige Junction to Hapugasyaya Tamil Village Via Ududeniya Road	3.5	No involuntary resettlement issue.
	39	Bibila Murutholuwa Road	4.5	No involuntary resettlement issue.
	29	Weeragolla Munamalpitiya Via Moragaha Ulpatha Road	4.0	No involuntary resettlement issue.
	33	Malgamma Gangeyaya Road	5.0	No involuntary resettlement issue.
	28	Lewiyangala Junction to Weheragala Via Himbiliyakada Road	4.5	No involuntary resettlement issue.
	30	Nagolla Amuneyaya Via Godaulpoyha Weheragala Road	6.0	No involuntary resettlement issue.
	31	Alikanda cemetery via Kaduruvediya Ela Road	5.0	No involuntary resettlement issue.
	34	Hadungamuwa Kumbukoya Road	4.0-5.0	No involuntary resettlement issue.
	17	Koongahamula Eriyagolla Rosawaththa via Hapugaspiya Hunuketa Ela Matihakka Road	4.0	No involuntary resettlement issue.
	43	Kosgolla Muduna to Loluwela Junction via Imbulgolla	4.0	No involuntary resettlement issue.
	44	Mahalakotuwa to Meda Ela via Raththinda Junction	4.5	No involuntary resettlement issue.
	6	Uda Hapuwida Junction to Leliambe Junction Road	4.0	No involuntary resettlement issue.
	7	Polwaththakanda to Kaudagammana Road	4.0	No involuntary resettlement issue.
	8	Madakumbura to Udathenna Road (Riveston Road)	3.5-4.0	No involuntary resettlement issue.
	9	Udahapuwida Keselwaththa Road	4.0	No involuntary resettlement issue.
	11	Kambiadiya to Kandenuwara via Bogambara	4.0	No involuntary resettlement issue.
	12	Dombagoda Pahala Hapuwida	4.0	No involuntary resettlement issue.
	13	Udaweragama Thennewatta Gansarapola Road	3.5-4.0	No involuntary resettlement issue.
	15	Hulangamuwa Junction to Watagoda Road	4.5	No involuntary resettlement issue.
	14	Kaikawela Temple to Pahala Owela Punchikade Main Road	4.0	No involuntary resettlement issue.
	45	Ovilikanda to Babaragahakanda Road via Wademada Pathingolla	4.5	No involuntary resettlement issue.
	46	Rathwatta to Elkaduwa Road via Wawugammadda	4.5	No involuntary resettlement issue.
	20	Kapuwatta Akkara Seeya Yapagama Road	5.0-6.0	No involuntary resettlement issue.

District	Rd ID	Name of Road	Avg available ROW (m)	Observations and remarks on requirement of involuntary resettlement
	22	Kandalama Rotawewa Road	5.0-6.0	No involuntary resettlement issue.
	24	Sisirawatta Bulanwala Athuparayaya Dambulla Town Road	4.0-5.0	No involuntary resettlement issue.
	19	Kapuwatta Yapagama Road	5.0-6.0	No involuntary resettlement issue.
	23	Thiththawelgolla Rathmalgaha Ela Road	6.0	No involuntary resettlement issue.
	21	Yapagama Dambulla Pola Ate Ela Batuyaya Via Diddeniya Kade Road	5.0-6.0	No involuntary resettlement issue.
	49	Walaswewa Main Road	4.0	No involuntary resettlement issue.
	50	Galapaula Damunumulla Road	4.0	No involuntary resettlement issue.
	55	Damunumulla Yatigalpoththa Road	4.0	No involuntary resettlement issue.
	54	Ambokka Dewalaya Road	5.0	No involuntary resettlement issue.

Rural roads – Kandy district

District	Rd ID	Name of Road	Avg available ROW (m)	Observations and remarks on requirement of involuntary resettlement
Kandy	1	Bambaragahadeniya Junction - Madamahanuwara via Meeriyagolla	3.0	No involuntary resettlement issue. Suggest CS modification to suit narrow section.
	4	Bambaragala Junction - Nithulemada Bus Stand, Nithulmada Main Road via Senarathwela	3.5	No involuntary resettlement issue.
	42	Pitiyegedara Junction - Polgolla 6th mile Post via Meegamawatta	4.0	No involuntary resettlement issue.
	9	Haththana, Uduwela watta - Galaha town via Galahawatta, Kithulgolla	3.5	No involuntary resettlement issue.
	53	Nugethenna to Kewulgama Pamunuwella Ganegala Road	3.5	No involuntary resettlement issue.
	15	Pottapitiya 4th mile post Udarameewala	4.0	No involuntary resettlement issue.
	17	Yatapana Boswod Road	More than 3.0	No involuntary resettlement issue. Suggest CS modification to suit narrow section.
	19	Aluthgama Centre Village Road	3.5-4.0	No involuntary resettlement issue.
	20	Dekinda, Weralugolla Road	3.5-4.0	No involuntary resettlement issue.
	18	Nawalapitiya - Udakanda Bus Stand via Veralugashinna, Weligodawatta	3.5	No involuntary resettlement issue.
	23	Pussellawa Melfret Boment Kalugala Wanahapuwa via Dunukeula Road	3.5	No involuntary resettlement issue.
	24	Panvilathenna Junction - Legumdeniya Main Road via Robert Nocks Gala Pussathenna	More than 3.0	No involuntary resettlement issue. Suggest CS modification to suit narrow section.
25	Boralu Mankada Junction - Millagahamulla Junction via Grohil	More than 3.0	No involuntary resettlement issue. Suggest	

District	Rd ID	Name of Road	Avg available ROW (m)	Observations and remarks on requirement of involuntary resettlement
		Road Angamma Drate Kahawatta		CS modification to suit narrow section.
	28	Viharagama - Watadeniya Road via Appallagoda	3.0-4.0	No involuntary resettlement issue. Suggest CS modification to suit narrow section.
	5	Ogastawatta Wagirarama Road - Udaperadeniya Road	3.0	No involuntary resettlement issue. Suggest CS modification to suit narrow section.
	6	Mahakanda Junction Mobre Samadi Mawatta via Sarasavigama Road	3.0	No involuntary resettlement issue. Suggest CS modification to suit narrow section.
	8	Dambawela Road , Kandy Thalathuoya via Govi Janapadaya	3.5	No involuntary resettlement issue.
	37	Hatharaliyadda, Mahanuwara main Road ,cross Junction to Galagedara Minigamuwa main Road via polwatta lhalagama	3.5-4.0	No involuntary resettlement issue.
	38	Poththapitiya Weligodapola main Road to Patapola post office via Alagalla primary school	3.0-3.5	No involuntary resettlement issue. Suggest CS modification to suit narrow section.
	40	Harataliyadda Mawathagama main Road to Anludeniya school to Paragoda Gonathenna Road	3.5	No involuntary resettlement issue.
	48	Karaduwawala Gatathale Road	More than 3.5	No involuntary resettlement issue.
	49	Bokkawala Pahala Higuwala via Miliyedda Road	3.0-3.5	No involuntary resettlement issue.
	50	Poojapitiya , Dodamthanna , Bothota , Antharagama , Pattiyawatta via Rajapihilla Road	3.0-4.0	No involuntary resettlement issue.
	51	Kasawatta Poojapitiya Road	3.0-4.0	No involuntary resettlement issue.
	52	Malwanahinna Nirella via Main Road	3.5-4.0	No involuntary resettlement issue.

Rural roads – Nuwara Eliya district

District	Rd ID	Name of Road	Avg available ROW (m)	Observations and remarks on requirement of involuntary resettlement
Nuwara Eliya	16	Uwakele Estate road	4.0	No involuntary resettlement issue.
	18	Pilot Project road	4.0	No involuntary resettlement issue.
	19	Piduruthalagala Farm road	3.5	No involuntary resettlement issue.
	20	Kantha Govipola & Ranaviru Gammana road	3.5	No involuntary resettlement issue.
	21	Meepilimana Gamameda road	3.5	No involuntary resettlement issue.
	23	Thalawakele Galkanda road	3.5-4.0	No involuntary resettlement issue.
	24	Rahanwatta Maussaella road	4.0	No involuntary resettlement issue.
	26	Kandapola Konkordia road	3.5	No involuntary resettlement issue.
	28	Kandapola Heatherset Estate road	3.5	No involuntary resettlement issue.
	29	Nanuoya Udaradella road	3.0	No involuntary resettlement issue. Suggest CS modification to suit narrow section.

District	Rd ID	Name of Road	Avg available ROW (m)	Observations and remarks on requirement of involuntary resettlement
	32	Henfold Couleena Estate road	4.0	No involuntary resettlement issue.
	34	Tillary Tinsing road	4.0	No involuntary resettlement issue.
	38	Stockhome lower Gruden road	3.5	No involuntary resettlement issue.
	40	Waladola Mare road	4.0	No involuntary resettlement issue.
	42	Wencher State road	3.5	No involuntary resettlement issue. Suggest CS modification to suit narrow section.
	46	Ginigathhena Dehigasthenna Ellauda road	3.5	No involuntary resettlement issue. Suggest CS modification to suit narrow section.
	48	Ginigathhena School road	3.5	No involuntary resettlement issue. Suggest CS modification to suit narrow section.
	49	Abagamuwa Shilalekana road	3.5	No involuntary resettlement issue. Suggest CS modification to suit narrow section.
	1	Ambagaspitiya- Ladupita - Liyanwela	4.0	No involuntary resettlement issue.
	2	Ragala Water Board - Ekagapura Road	3.5	No involuntary resettlement issue. Suggest CS modification to suit narrow section.
	3	Ragala Starpet - Panditha Kumbura - Kotambe Road	3.5-4.0	No involuntary resettlement issue.
	5	Delmar - Galkadapathana - Rupaha Road	3.5	No involuntary resettlement issue. Suggest CS modification to suit narrow section.
	6	Walapone Hospital Road	4.0	No involuntary resettlement issue.
	10	Mahauva - Highforest Road	3.0-3.5	No involuntary resettlement issue. Suggest CS modification to suit narrow section.
	15	Keenagala Estate Road	4.0	No involuntary resettlement issue.
	9	Karaliyadda Village Road Via Gonagantenna Hospital	3.5-4.0	No involuntary resettlement issue.
	12	Ambaliyadda - Ihala Kotape - Rikillagaskada Road	4.0	No involuntary resettlement issue.
	13	Pallebowala - Medagama - Deltota	4.0	No involuntary resettlement issue.
	17	Lower Pundaluoya to upper Shingama road	4.0	No involuntary resettlement issue.
	31	Connecting road to Halpola	4.5	No involuntary resettlement issue.
	45	Hapugasthalawa Dabagala road	4.5	No involuntary resettlement issue.