

Social Impact Assessment
Study of
Development of Aluva – Alangad Road
Aluva West and Kadungalloor Villages of
Aluva and Paravur Taluks of
Ernakulum District
(200 Cents)

Final Report
Date – 22/11/2023

Requisition Agency
Public Works Department
(Roads Division)

By
KERALA VOLUNTARY HEALTH SERVICES
COLLECTORATE P.O.
MULLANKUZHY
KOTTAYAM – 686002
E-mail: keralavhs@yahoo.co.in
Web: www.keralavhs.com

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Abbreviations

APL	Above Poverty Line
BPL	Below Poverty Line
DLPC	District Level Purchasing Committee
LA	Land Acquisition
NGO	Non - Governmental Organisation
NTH	Non - Title Holder
MSW	Master of Social Work
PAP	Project Affected Person
PAF	Project Affected Family
TH	Title Holder
SIA	Social Impact Assessment
SIMP	Social Impact Management Plan
PWD	Public Works Department
RTFCTLARR Act	The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act

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CHAPTER 1

EXECUTIVE SUMMARY

1.1. Introduction – Project and Public purpose

Transport plays a significant role in the economic development of any region. As road transport provides door-to-door connection and flexible movement of goods and passengers, its patronage by people are on the rise day by day. The quality of life now greatly depends on the quality of roads. The transport system in Kerala needs much improvement. The category of roads includes National Highways, State Highways & Major District Roads and PWD & local body roads. The capacity augmentation of PWD road is very slow compared to vehicular growth. There is great mismatch between the vehicular growth and augmentation of roads in the state. With adherence to IRC specifications, the existing roads has to urgently undergo qualitative improvement accomplishing multi-pronged strategies to reduce traffic congestion, transit delay, environmental issues, easier access to desired destinations and reduction of accidents. Most of the roads have to undergo massive up gradation incorporating road safety features. It is proposed that major NHs and SHs passing through the State are to be widened to four lane standards with divided carriage way. The balance NHs and SHs are to be widened to two lane standards with adequate shoulders/footpath, and other major roads to be widened with intermediate lane and adequate shoulders. The new road development initiatives like the Hill Highway, Costal Highway, bypasses etc., also needs to be addressed in the 13th Five-Year Plan. Along with this priority should be given for the formulation of a “Regulatory Body” at the State Level and “Inter-departmental Co-ordination Committees” at the district level including representatives of the various departments/agencies and experts in the fields of transport sector for better preservation, maintenance & management of roads and vehicles. Kerala is unique in many respects among the States of India. Kerala State is endowed with all major modes of transport like road, rail, water and air transport. The State boasts of one of the highest road density (853 km. / 100

sq.km), approximately three times the National average (387 km. /100 sq.km).

Aluva- Alangad road is one of the oldest Public Work Department road which connects commercial hub of Aluva to the residential hub of Alangad. Thottakkattukara junction to Kadungalloor junction is most vulnerable in terms of traffic congestion and traffic blocks having long duration. This portion of the road is crowded with transport vehicles, pedestrians, and two wheelers and goods carriers. Both the road side is thickly populated and several byroads either starting or ending here. The canals of Periyar irrigation project which crossing the road also attributed its contribution to the traffic problem. An approximate 1.85 kilometer road is the most crowded and most trafficked road in the area. The widening of the road is a long delayed development intervention in the area. In past several times the absence of consensus on road with proposed by PWD, the proposals were not progressed from proposal level. But this time the peoples representatives from the area took special efforts and had series of discussions with people in the area especially title holders who are affected by the project and reached a consensus on width i.e. 12 meter. The Honorable Minister for Law, Industries and Coir who represents, Kalamaserery Assembly Constituency conducted several consultation and public hearing in this regard. The DPR of the project was developed by PWD based on the above consultation and suggestions. This may be a best practice which could be replaced in similar development initiatives.

1.2 Location

The project area belongs to two Taluks i.e. Aluva and Paravoor. The area belongs to Aluva municipal area is coming under Aluva Taluk and the remaining part is in Paravoor Taluk. The area is having a long history, in terms of human settlement agriculture, cultural development etc. As per the history of Alangad area was famous for sugarcane and paddy cultivation. The fertile area belongs to the delta of Periyar attract people for agricultural activities and this made the area as thickly populated. The area

was ruled by Alangad King. The ancient port Mussiris is near by the area also contributed much for its commercial and cultural importance. But now the area is one of the thickly populated area with high density of residential structure. The nearness to the business hub of Aluva and oldest educational institutions like U C College increased the residential importance. National High Way 66 and 44 passing near to the area. Nearest railway station is Aluva which is just two kilometer away. Kochi international airport is situated 10 km away from the area. District headquarters and Kerala's commercial city Ernakulum are having a distance of 25 km.

1.3 Size and Attributes of Land Acquisition

Land Acquisition Authority

Special Tahsildar (LA) PWD Angamaly Office prepares the acquisition details. Boundary stones were laid by requisition authority. Alignment sketch and plan were prepared by PWD Roads division. Deputy Collector (LA), Ernakulum is monitoring the acquisition process for District Collector.

Details of the acquiring land

Two sides of Thottakkattukara – Kadungalloor junction road, which is part of Aluva – Alagad road is the project land. The project land is mixed in nature i.e. residential cum commercial. Nearness of Aluva town the commercial importance of the area is increasing day by day. But most of the families residing in the area are in ancestral property. An important worship place Narasimha Swami temple is situating. Two canals of Periyar irrigation project passing through the area. Several byroads are either starting or ending in the project land.

Socio Economic and Cultural Profile

One hundred and eighty six title holders and thirty four non-title holders are primarily affected by the project. Ninety two title holder are residing in the area and out of it sixty four are residing here

more than twenty years. Average age of title holders are forty one. 61% are Hindus, 21% and 12% are belongs to Christians and Muslims respectively. The economic distribution shows that 97% are above poverty line and 35% having income more than Rs.25,000/- per month. The gender distribution shows that 63% are men and 37% women. The distribution of the educational qualification shows that all are literate and 12% is having below 10th standard. 20% are having higher education qualification. The occupational distribution shows that 5% are Government employees, 25% are working in private sector. 60% are doing self-employment and business.

Details of the non-title holders shows that all are residing within 5 km radius of the project land. Religious distribution shows that 26% are Muslims 59% are Hindus and 15% are Christians. All are literate and 61% are doing business in the area more than 10 years. 72% of them says that their main income source is the affected commercial unit only.

1.4 Alternatives Considered

There is no alternative suggestions received.

1.5. Social Impact

The major impact of the project is the loss of land of 186 title holders and loss of structure of 117 title holders and non-title holders. The average land holding of the project affected people reduced to 9.3 cents from 13.8. The number of title holders having less than 5 cents of land increased to 21. Sixteen residential houses losing their courtyard and it affected their facility to parking vehicles. After the acquisition 29 houses near to the road by less than two meter. Fifteen title holders are not having sufficient land to reconstruct their present residence comply with existing building rules. One temple is losing its compound wall. Due to the structure lose nine shops displaced and thirty one shops may face business loss.

1.6. Mitigation Measures

Sl.No.	Risk Assumed	Approach	Mitigation Strategy
1.	Loss of part of Residential House	Compensation & Resettlement	Compensate the loss
2.	Loss of land	Compensation	Compensate the loss
3.	Loss of part of land	Compensation	Compensate the loss
4.	Loss of Part of Commercial/ other Building	Compensation	Compensate the loss
5.	Loss of structure	Compensation	Compensate the loss
6.	Loss of part structure	Compensation	Compensate the loss
7.	Loss of rented houses	Compensation	Compensate and resettle.
8.	Loss of Wells	Control, Avoid	Saving & protecting
9.	Loss of existing access	Control	Study and include the plan of resettlement in the implementation plan
10.	Loss of access to sub roads	Control	Study and include the plan of resettlement in the implementation plan
11.	Road is very near to houses	Safety/Resettlement	Take necessary action for the safety of houses.
12.	Loss of Irrigation Canals	Re construct	Re construct
13.	Loss of water supply pipes	Control, Avoid	Resettle
14.	Loss of trees	Compensate & Control	Compensate the loss and plant equal number of trees in government lands.

15.	Formation of Bit-land (uneconomic holdings)	Control	Acquire the uneconomic holdings
16.	Loss of structures of Religious institutions	Control & Resettle	Compensate the loss or resettle
17.	Involved in land acquisition process	Control	Ensure community participation in the whole process.
18.	Grievance	Control	Functional grievance redressal committee at village and district level.

1.7. Detailed Mitigation Plan

Potential Impact	Positive/Negative	Likelihood	Magnitude	Pre-Mitigation Level of Impact	Post – Mitigation Level of Impact	Mitigation Strategy
Loss of part of Residential House	Negative	Possible	High	High	Medium	Compensate the loss
Loss of land	Negative	Possible	Mode rate	Medium	Low	Compensate the loss
Loss of part of land	Negative	Possible	Mode rate	Medium	Low	Compensate the loss
Loss of Part of Commercial/ other Building	Negative	Possible	Mode rate	Medium	Low	Compensate the loss
Loss of structure	Negative	Possible	Mode rate	Medium	Low	Compensate the loss

Loss of part structure	Negative	Possible	Moderate	Medium	Low	Compensate the loss
Loss of rented houses	Negative	Possible	Low	Low	Low	Compensate and resettle.
Loss of existing access	Negative	Possible	High	Medium	Medium	Study and include the plan of resettlement in the implementation plan
Loss of access to sub roads	Negative	Possible	Low	Low	Low	Study and include the plan of resettlement in the implementation plan
Road is very near to houses	Negative	Possible	Moderate	Medium	Low	Take necessary action for the safety of houses.
Loss common source of irrigation	Negative	Possible	High	Medium	Medium	Saving & protecting
Loss of water supply pipes	Negative	Possible	Low	Low	Low	Resettle
Loss of trees	Negative	Possible	Low	Minimum	Low	Compensate the loss and plant equal number of trees in government lands.
Formation of Bit-land	Negative	Possible	Moderate	Medium	Low	Acquire the

(uneconomic holdings)							uneconomic holdings
Loss of cultural and community properties	Negative	Possible	Moderate	Medium	Low		Compensate the loss or resettle
Involved in land acquisition process	Negative	Possible	Minor	Low	Low		Ensure community participation in the whole process.
Grievance	Negative	Possible	Moderate	Medium	Medium		Functional grievance redressal committee at village and district level.

1.8. Assessment of Social Costs and Benefits

Since there is no residential house displaced, the impact of the project scaled as medium. But after the acquisition fifteen residence will not have sufficient land to reconstruct their house by complying road set back rules. More over nine commercial establishments displaced and thirty shops may face business loss. The loss of courtyards and it attributed vehicle parking also an impact of the project. These impact affected the peaceful living and standard of life of affected residence.

A case by case study on the above impact and develop a special impact mitigation plan may help the people to overcome the impact. As mentioned earlier the project land is residential cum commercial, but considering its nearness to Aluva city and

National High Way while fixing compensation the whole property may consider as commercial.

The acquisition and during implementation many commercial units in the project land may affected by business loss. Necessary compensation may mitigate the loss but time bound implementation of the project may largely reduce the impact.

Two irrigation canals are crossing the project road, and one is in the form of viaduct. People in the area afraid that these canals may affect the anticipated benefit of the project, if the canals may technically resettled.

Government claimed that the area may have encroachment. But people are not well informed about it. Proper intimation and sufficient time for resettlement may help the people to resettle them self without affecting their life.

A constructive involvement of people's representatives are visible in the overall planning of the project. This should be continued and strengthened further to reduce the grievances.

Several eminent personalities are residing in the area and many are project affected. Valuable suggestions from these people on rehabilitation and resettlement may help the project to successfully bring people's participation.

The project is treated as framed for public purpose under the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (30 of 2013) Section 2 (i)(b)(iii). It is in this base, Government of Kerala notified to initiate acquisition procedure.

Considering the public advantage and interest and treating as an inevitable need, in compared to the social impact the project has to be implemented.

CHAPTER 2

DETAILED PROJECT DESCRIPTION

2.1 Background of the project, including developer's background and governance/ management structure.

Ninety percentage of the road network is with Local Bodies – Panchayats (83%), Municipalities (5%) and Corporations (2%) and hardly 1% with other departments. State Government finance the LSGs through Plan and Non-Plan funds transfers. Prioritizing the spending pattern of the transferred funds is decided by the LSGs. Conditions of roads maintained by the LSGs is comparatively poor. Since no direct plan funds are envisaged in the development of LSGs roads, no proposal is envisaged here. Several Departments and institutions managing the Road and Road Transport Sector Public Works Department 1. PWD (NH) 2. PWD (Roads and Bridges) 3. Kerala Road Fund Board (KRFB) 4. Road Infrastructure Company Kerala (RICK) Ltd 5. Roads and Bridges Development Corporation (RBDCK) 6. Kerala Highway Research Institute (KHRI)

Road accidents are considered to be the third major cause of death in the state. The state of Kerala has nearly 3% of the country's population but it has recorded about 10% of the country's road traffic accidents. Each day on an average, 11 people lose their lives and 120 people get injured from road accidents and the Kerala state incurs an additional financial burden of over Rs1,000 crores because of accidents. Rapid increase in the number of motor vehicles has been the major reason for the increasing number of road accidents in our state. Although the rate of absolute number of road accident cases have come down from 42,000 accidents in 2005 to around 36,000 now, the fatality rate has increased tremendously. Out of around 4,200 people who get killed every year in Kerala, 30 percentage are pedestrians and 35 percentage are two-wheeler riders. Around 142 cyclists are also killed in road accidents every year. In order to promote road safety, the Government of Kerala has initiated several innovative steps, the

most important being the establishment of Kerala Road Safety Authority (KRSA) in 2006 to co-ordinate the initiatives of stake holders on road safety and creation of Road Safety Fund. To support KRSA, district wise councils named, District Road Safety Council (DRSC) was formed and even though they are all doing their designated roles, there was no notable achievement as expected for reducing the fatalities.

Traffic congestion is the order of the day in all urban areas of the State contributed by inadequate road width and 65% of the vehicles registered in the state are concentrated within the urban areas. Increased travel time, high vehicle operating cost, and environmental pollution are the end results of traffic congestion. The narrow urban arterial and sub-arterial roads are flooded with different type of vehicles including buses, trucks, two-wheelers, cars, autos and cycles. The buses on these roads are forced to crawl behind auto rickshaws and slow moving vehicles due to absence of adequate right of way. This is affecting the economic performance of the intra-city bus transport and the commuters gradually lose the credibility in the public transport system and choose alternative costly and unhealthy modes such as parallel services, autos, two-wheeler etc. Heavy traffic along existing narrow roadways is the major cause of traffic congestions in urban areas. Expanding the road capacity with increase in traffic demand is not a sustainable approach as it leads to use of more natural resources. Inadequate Road Infrastructure and Road Maintenance 61. Most of the roads in the State do not have adequate width so as to cater to the existing level of traffic. It is seen that only about one fourth of the roads have either two lane or four lane capacity while most of the roads have single lane or intermediate lane capacity. In the case of National highways, only about 12 % of the roads have four lane capacity while the remaining roads have only two lane or intermediate lane capacity. It should be noted that bulk of the inter city and inter State traffic are carried out by the National highways and State Highways which are only eight percent of the total network. Considering the demand supply gap, there is a huge need for up gradation of existing road network.

The proposed Aluva- Alangad road is one of the oldest Public Work Department road which connects commercial hub of Aluva to the residential hub of Alangad. Thottakkattukara junction to Kadungalloor junction is most vulnerable in terms of traffic conjunction and traffic blocks having long duration. This portion of the road is crowded with transport vehicles, pedestrians, and two wheelers and goods carriers. Both the road side is thickly populated and several byroads either starting or ending here. The canals of Periyar irrigation project which crossing the road also attributed its contribution to the traffic problem. An approximate 1.85 kilometer road is the most crowded and most trafficked road in the area. The widening of the road is a long delayed development intervention in the area. In past several times the absence of consensus on road with proposed by PWD, the proposals were not progressed from proposal level. But this time the peoples representatives from the area took special efforts and had series of discussions with people in the area especially title holders who are affected by the project and reached a consensus on width i.e. 12 meter. The Honorable Minister for Law, Industries and Coir who represents, Kalamaserery Assembly Constituency conducted several consultation and public hearing in this regard. The DPR of the project was developed by PWD based on the above consultation and suggestions. This may be a best practice which could be replaced in similar development initiatives.

2.1.1. Requisition Authority

2.1.1. (a). Public Works Department (Roads Division)

Public Works Department is one of the very prominent departments of the Government of Kerala and is the statutory authority for designing, planning, monitoring, constructing and undertaking maintenance of public works of the State Government such as Government Buildings, Roads, Bridges etc., irrespective of the source of funds for the same. The Department is headed by the Minister for Public Works and the Secretary to Government at the Secretariat. The present organisational structure of the Public Works Department is mainly divided into various wings based on

the nature of works and each wing is under the administrative control of a Chief Engineer. Under the Chief Engineer, there are Superintending Engineers or circle offices. Each circle consists of a number of Divisions under the control of Executive Engineers. The Divisions are divided into subdivisions under the control of Assistant Executive Engineers and the Subdivisions in turn are divided into a number of Sections under charge of Assistant Engineers. Apart from this, organizations like Kerala State Transport Project (KSTP), Kerala State Construction Corporation Ltd (KSCC), Kerala Road Fund Board (KRFB), Roads and Bridges Development Corporation of Kerala Ltd (RBDCK) and Road Infrastructure Company Kerala Ltd (RICK) also functions under the department.

The history of Kerala Public Works Department can be traced way back from 1823 in the State of Travancore (which later formed the major part of Kerala State following the reorganisation of states in 1956) with the formation of the Maramath Department as a branch of the Huzur Cutchery (Government Secretariat) with an executive branch known as the Panivakai Maramath. During 1854, this was converted in to Public Works Department. The budget system was started in 1862 and the expenditure of the department brought under due control and in 1898 a new scheme was drawn up for auditing the accounts of the department. The PWD Code was introduced in 1901. The number of offices, officers and their salaries in the department was periodically reorganised in the later years. On March 19- 1934, a new Irrigation Division with three sub-divisions and nine Sections were formed to carryout Irrigation works in the State excluding the area commanded by the Kothayar Project. The Water Works and Drainage branch was separated in 1935 and organised in to a separate department. Later on as per the G.O (P) No 27/90/PW & T dated 29th March 1990 the Public Works Department was bifurcated into two departments viz, Public Works Department and Irrigation Department with effect from 1st April 1990. Over the years the Public Works Department has grown substantially and now has eight wings, two project wings and six public sector undertakings.

Roads Division

Roads wing deals with the planning, project preparation, construction, maintenance and arrangement of works of all State Highways and Major District Roads under the State. This wing is having its headquarters at Thiruvananthapuram and is under the control of a Chief Engineer who is assisted by a Deputy Chief Engineer, a Senior Finance Officer and supported by technical and other ministerial staff. This wing have field offices with Circle offices at regional level, division offices at district level, sub-division offices at taluk level and Section offices at the lowest level.

There are three Circle offices under the roads wing namely south circle, Central circle and North circle each headed by a Superintending Engineer. Under each Circle offices there are division offices headed by an Executive Engineer. The sub-division offices are headed by Assistant Executive Engineer and Section offices are headed by Assistant Engineer.

PWD roads constitute 15 per cent of the total road network in the State carrying which carries nearly 80 per cent of the total road traffic within the State. The total length of roads maintained by Roads Wing is 29109.68 KM out of which 4127.74 km is State Highways and 24975.34 km is Major District Roads (MDRs).

2.1.2. Land Acquisition Authority

Special Tahsildar (LA) PWD Angamaly Office prepares the acquisition details. Boundary stones were laid by requisition authority. Alignment sketch and plan were prepared by PWD Roads division. Deputy Collector (LA), Ernakulum is monitoring the acquisition process for District Collector.

2.2. Rationale for project including how the project fits the public purpose criteria listed in the Act.

The proposed Project aimed to widen Aluva- Alangad road. Aluva-Alangad road is one of the oldest Public Work Department road which connects commercial hub of Aluva to the residential hub of Alangad. Thottakkattukara junction to Kadungalloor junction is

most vulnerable in terms of traffic conjunction and traffic blocks having long duration. This portion of the road is crowded with transport vehicles, pedestrians, and two wheelers and goods carriers. Both the road side is thickly populated and several byroads either starting or ending here. The canals of Periyar irrigation project which crossing the road also attributed its contribution to the traffic problem. An approximate 1.85 kilometer road is the most crowded and most trafficked road in the area. The widening of the road is a long delayed development intervention in the area. In past several times the absence of consensus on road with proposed by PWD, the proposals were not progressed from proposal level. But this time the peoples representatives from the area took special efforts and had series of discussions with people in the area especially title holders who are affected by the project and reached a consensus on width i.e. 12 meter. The Honorable Minister for Law, Industries and Coir who represents, Kalamaserery Assembly Constituency conducted several consultation and public hearing in this regard. The DPR of the project was developed by PWD based on the above consultation and suggestions. This may be a best practice which could be replaced in similar development initiatives.

2.3 Details of project size, location, capacity, outputs, production targets, cost, and risks.

Sl. No	Status of Impact	No of Residents
1	Loss of part of Residential House	7
2	Loss of part of land	186
3	Loss of part structure	117
4	Loss of Commercial/ other Building	40
5	Loss of existing access to land	4
6	Loss of access to sub roads	11
7	Loss of trees	50-100

8	Loss of Culvert	2
9	Loss of canals	3
10	Loss of Wells	4
11	Loss of Bus waiting sheds	2

2.3.1. Project Location

Two sides of Thottakkattukara – Kadungalloor junction road, which is part of Aluva – Alagad road is the project land. The project land is mixed in nature i.e. residential cum commercial. Nearness of Aluva town the commercial importance of the area is increasing day by day. But most of the families residing in the area are in ancestral property. An important worship place Narasimha Swami temple is situating. Two canals of Periyar irrigation project passing through the area. Several by roads are either starting or ending in the project land.

2.4. Phase of project construction

The Government gives administrative sanction. Boundary stones were fixed and the process of Land Acquisition started

2.5. Core design features and size and types of facilities.

Not Applicable

2.6. Need for ancillary infrastructural facilities.

Not Applicable

2.7. Work force requirements (temporary and permanent).

Not Applicable

2.8. Details of Social Impact Assessment / Environment Impact Assessment if already conducted and any technical feasibility reports.

Not Applicable

2.9. Applicable law and policies.

Sl.No.	Laws & Policies	Area of Application
1	The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act 2013.	Mitigation of Impact
2	Land Acquisition Act 1893, Land Acquisition Act (Kerala) Rules 1990, Kerala Land acquisition Act 1961, Kerala Land Acquisition Act rules	Land acquisition
3	Kerala Shops and Establishment Act	Land use

CHAPTER 3

STUDY APPROACH AND METHODOLOGY

3.1 Background

As per the Kerala Gazette No. 2829 dated 26th August, 2023, Notification No. 6212/2023/DCEKM-C3 dated 23/08/2023, and revised Notification dated 26/08/2023, Government of Kerala has selected Kerala Voluntary Health Service as the SIA Unit to study the Social Impact Assessment on the land acquisition for the Development of Aluva – Alangad road of Aluva West and Kadungalloor Villages of Aluva and Paravoor Taluks of Ernakulam District.

3.2. Social Impact Assessment Team – Profile of Team Members

Sl. No.	Name & Address	Designation in the SIA Team	Profile
1	Saju V. Itty	Team Leader	32 years experiences in social work, social survey including R&R experience in KSTP & Tsunami Rehabilitation. Conducted social research study on health child rights and rehabilitation & resettlement.
2	Rakesh R Nair	R & R Specialist & Social Investigator	15 years experiences in social work including social research, R & R activities and community mobilization.

3	Smitha R	R & R Specialist & Social Investigator	22 years experiences in social work including social research, R & R activities and community mobilization.
4	M.Ibrahimkutty	Sociologist	Rtd. Joint Director, Social Welfare Board.36 years of experience in social work.
4	Sheeba Johnson	Data Analyzer & Data entry	30 years experiences in social work and data entry operation.
5	N. Vijayakumara Pilla	L.A. Consultant	Rtd. Revenue Inspector
6	O.C.Chandi	L.A. Consultant	Rtd. Village Officer

3.3. Study Approach

The land which proposed to be acquired for the project is 200 cents. Stake holder analysis was conducted and find out key stake holders and their interest and involvement in the proposed acquisition process. After the secondary data collection Social Impact Assessment Unit developed a questionnaire for social survey and visited all Tittle Holders and collected opinion. Apart from this SIA team has conducted discussion and consultation with Local Body Representatives and local public and recorded their suggestions and opinion. Special Case studies were prepared for selected cases. The study also used transit walk and observation visit to crosscheck the suggestions and grievance which were recorded.

3.4. Methodology& Tools

The study team reviewed the relevant and available documents in Special Tahsildar LA PWD, Angamaly office. SIA team had also made a site visit along with the land revenue officials for area

identification and information dissemination. SIA team had also conducted a one-to-one discussion and consultation with all Title Holders Although SIA team had collected details by using pre prepared questionnaire.

3.5. Sources of data collected

- a) Office of the Special Tahsildar, (LA) PWD, Angamaly
- b) Village offices Aluva West and Kadungalloor.
- c) Office of Public Works Department, Roads Division, Aluva
- d) Municipality Office, Aluva
- e) Taluk Office – Aluva
- f) Project affected families and persons
- g) Local body leaders

3.6. Process and Schedule of Activities

- ❖ 26/08/2023 - Gazette notification for SIA Study
- ❖ 01/09/2023 – Revised Gazette Notification
- ❖ 06/09/2023 to 10/09/2023 – Secondary Data Collection
- ❖ 14/09/2023 to 20/09/2023 – Mapping of Stake Holders
- ❖ 22/09/2023 to 30/09/2023 - SIA survey
- ❖ 22/09/2023 & 27/09/2023 - Transit Walk, Observational Study and Case Studies
- ❖ 17/10/2023- Draft Report
- ❖ 16/11/2023 – Public Hearing
- ❖ 22/11/2023 – Final Report

3.7. Points Raised During Individual and Group Discussion with Title Holders

- 1) Alternatives should be considered before finalization of the project.
- 2) The project will be impacted on the peaceful living and privacy of Title Holders who are living near to the proposed road.

- 3) The affected and existing water sources will be protected or saved.
- 4) Compensation should be calculated based on the commercial importance of the land.
- 5) Government will resettle all the affected access.
- 6) The affected Title Holders requested an exception from Corporation building rules.
- 7) Some of the Title Holders will have no use bit land after acquisition. They request to acquire it also.
- 8) The Title Holders are demanding the detailed explanation on alignment, technical and levels detail before any further step in acquisition process.

3.8. Public Hearing –

16-11-2023 – Aluva West Village – Priyadarshini Hall, Thottakkattukara at 10.30 AM

Kadungalloor Village – V S Balakrishna Pilla Smaraka Hall, East Kadungalloor, at 2.30 PM

Section 5 of Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, of 2013 envisages that whenever a SIA study is required to be prepared the Government shall ensure that a Public Hearing is held at the affected area to ascertain the views of the affected families to be recorded and included in the SIA Report. Rule 14 of the Rules, 2015, have prescribed detailed procedure for the conduct of the public hearing.

SIA Unit took special care to inform the affected people in the area about Public Hearing by taking various steps like Notification for conducting public hearing as per Form 5 Rule 14 (1) of the RTFCTLARR Act, 2013. The notification was published in two Malayalam News Papers Janayugam and Kerala Koumudi. A notice has been served directly for informing about the public hearing. In continuation of this contacted all project affected title holders

through phone calls and SMS. The copy of notice was served to Municipality Office, Panchayath office Ward Counselors, Village Offices, Deputy Collector (LA) and Special Tahsildar LA, PWD, Angamaly. Adequate copies of the SIA draft report and summaries were made available on the day of the public hearing. The major highlights of the study were presented in local language by Chairman, SIA Unit.

Aluva East Village

Sri. Anwar Sadath MLA, Sri. M.O John, Chairman, Aluva Municipality, Sri. Suresh Muttathil, President, Kadungalloor Grama Panchayath, Smt. Sreelatha Vinod Kumar, Municipal Ward Councilor, Aluva, Smt. Tintu Rajesh, Municipal Ward Councilor, Aluva, Sri. Hari N.K, Executive Engineer, PWD Roads, Aluva, Sri. Muhammed Basheer T.K, Assistant Executive Engineer, PWD Roads, Aluva, Smt. Bindu K, Special Tahsildar, LA, PWD, Angamaly, Sri. Linesh Sebastian, Clerk, Kadungalloor Grama Panchayath, Smt. Bindu R, PA to Secretary, Aluva Municipality, Sri. Thampi Nandhakumar, (Representative of Sri. P Rajeev, Hon. Minister for Law, Industries and Coir) and Project affected persons were attended the meeting.

SL. No.	Points Raised	Remarks
1	Smt. Beena Devi - The report mentioned about the huge traffic block of Thottakkattukara Junction. But it is not because of the narrow width of Aluva – Alangad Road. It is the problem of service road of the National Highway. If the road width of Aluva – Alangad increases more and heavier vehicles come to the road and more traffic block may occur. Moreover that will make the area unsafe for pedestrians.	Sri. Hari NK, Executive Engineer, PWD Roads, Aluva - The proposed project has been in planning and discussion since 2015. Several consultations conducted and completed. The proposed project

2	<p>Adv. Jai Ram Menon I support the above view of Smt. Beena Devi. The previous consultation on the road project concluded with a consensus that 10 meters width is sufficient for smooth traffic. But now the boundary stones placed for 12 meters. The land acquisition act says for bare minimum policy. So proposed project need to reduce its width to 10 meters.</p>	<p>details prepared in 2021 after a detailed study. As per the vehicle traffic density, Aluva – alangadu road need bare minimum 12 meters width. The vehicle path is 7 meter and shoulder in both sides need 3 meters (1.5 meters in each side). Apart from this 2 meters for cable chamber cum foot path. The matter of irrigation canal will be discussed with irrigation department.</p>
3	<p>Sri. Bobby V K When Mr. Rajamanikkam IAS was the District Collector, he conducted a consultation meeting of project affected people and decided to implement the project with 10 meters width. But now without any consultation the width of the road increases to 12 meters. If it is 10 meters all will agree.</p>	<p></p>
4	<p>Smt. Suja Sreyas If heavy vehicles will move on the road, the old houses may damage.</p>	<p></p>
5	<p>Sri. Antony Kavungal An under pass is very much necessary in Thottakkattukara junction for avoiding the traffic block. So without this under pass the project aim will not achieved.</p>	<p></p>
6	<p>Sri. M.O John, Chairman, Aluva Municipality The Municipality is whole hearted by supporting the project. But recommending satisfactory compensation to all affected people.</p>	<p>Smt. Bindu K, Special Tahsildar, LA, PWD, Angamaly – the land acquisition act 2013 and rules thereafter are the</p>

7	Sri. Anwar Sadath MLA 12 meters width is a bare minimum width of the Aluva – Alangad road project. If we reduced the width the purpose of the project may not meet. All the affected families need satisfactory compensation. No one will be displaced or face any vulnerability due to the project.	basis of land acquisition procedure in Kerala. As per the act the land value fixed by using defined criteria. The last three years land documents will be verified and take the average of 5 – 10 higher values. Then the average value calculated and added 100% solatium on it. This value is the purchasing price or land compensation. Along with this structural value ad its 100% solatium other values and its 100% solatium also provided to each tittle holder. Non tittle holders like residential tenants, commercial
8	Sri. Muhammed Sha, Uppattil The irrigation canal is the major interruption for the project implementation.	
9	Sri. Suresh Muttath, President, Kadungalloor Grama Panchayath - The Panchayath committee of Kadungalloor Panchayath is supporting the project. As mentioned by MLA all project affected people should give sufficient compensation.	
10	Sri. Ashraff, Paniyapilly People in the area are not against the proposed width of 12 meters. But our land will get satisfactory compensation.	
11	Sri. Jamaludeen Vattolakudi Municipal chairman told that an elevated bridge would come over the National Highway when it comes. Heavy vehicles may not allowed in the project road. If allowed one-way system could be introduced.	
12	Smt. Lilly Vincent I have only three cents of land. No other place to shift.	

13	Sri. Sankara Narayanan, Santhi Nikethan The proposed project had been discussed in last 10 years. A time bound action required.	tenants, squatters, employees also get compensation.
14	Sri. Bini, Kalathil How the Government decided the width of the road. Any specific criteria? Introducing one-way traffic is the only solution to address the traffic issue in the road. The signal system in the junction should be automatic.	
15	Sri. Chandrasekharan I have only three cents. Expecting a fair price for the land.	
16	Sri N Gopi We all are supporting the project. But do not allow all vehicles to passing through the road. It will create huge traffic block again	
17	Sri. Hamsa Koya I had been running a commercial shop in the area since forty years. If the width fixed as 10 meters I could continue my business.	
18	Sri. Santhosh, Paduvathil Width would reduce, to 10 meters. Expecting fair compensation.	
19	Sri. Rajkumar, Gayathri Who decided the width as 12 meters?	
20	Sri. Nadirsha I had been losing my parking area. This badly affected my business.	
21	Smt. Neena John The width would be reduced to 11 meters.	

22	Smt. Rosy Antony - I have only one cent land. A bore well worth Rs.8000/- is in it. What I wanted to do?	
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Kadungalloor Village

Sri. Suresh Muttathil, President, Kadungalloor Grama Panchayath, Sri. Vinod G (PA to Sri. P Rajeev, Hon. Minister for Law, Industries and Coir), Sri Sreeraj R, Ward Member, Smt. Baby Sarojam, Ward Member, Smt. Meera, Ward Member, Sri. Hari N.K, Executive Engineer, PWD Roads, Aluva, Sri. Muhammed Basheer TK, Assistant Executive Engineer, PWD Roads, Aluva, Smt. Bindu K, Special Tahsildar, LA, PWD, Angamaly, Sri. Linesh Sebastian, Clerk, Kadungalloor Grama Panchayath and Project affected persons were attended the meeting.

SL. No.	Points Raised	Remarks
1	Sri. Prabhakaran Pilla KA - In the 4(1) notification several lands categorized as low land. But no land in this area remained as low land now.	Sri. Hari NK, Executive Engineer, PWD Roads, Aluva - The proposed project has been in planning and discussion since 2015. Several consultations conducted and completed. The proposed project details prepared in 2021 after a detailed study. As per the vehicle traffic density, Aluva – alangadu road need bare minimum 12 meters width. The vehicle path is 7 meter and shoulder in both sides need 3 meters (1.5 meters in each side). Apart from this 2 meters for cable chamber cum foot path.
2	Sri. Sundaram Gopal, Puthumana - What is the width of the proposed project? How you reached in the conclusion?	
3	Sri. Haridas - If the road width would be 11 or 11.25 meters the impact may reduced marginally.	
4	Smt. Priya Raj - No need of 12 meter. Several commercial establishments will be displaced.	
5	Sri. Prasad, Lakshmi Nivas - 11.25 meter would be agreed. All land should be considered as dry land.	

6	Sri. Vinod - Now a days no Ambulance is willing to come to the road. So the road need development. But the people should get satisfactory compensation.	<p>The matter of irrigation canal will be discussed with irrigation department.</p> <p>Smt. Bindu K, Special Tahsildar, LA, PWD, Angamaly - the land acquisition act 2013 and rules thereafter are the basis of land acquisition procedure in Kerala. As per the act the land value fixed by using defined criteria. The last three years land documents will be verified and take the average of 5 – 10 higher values. Then the average value calculated and added 100% solatium on it. This value is the purchasing price or land compensation. Along with this structural value ad its 100% solatium other values and its 100% solatium also provided to each tittle holder. Non tittle holders like residential tenants, commercial tenants, squatters, employees also get compensation.</p>
7	Sri. Ashok Kumar, Narayaeeyam - The curve near to the temple would be flatten or not. The encroachment should be identified.	
8	Sri. Sunil - Need to develop road with maximum width. How the electric lines shifted?	
9	Sri. KS Thankappan - I have only 3.5 cent land only. Need maximum compensation.	
10	Manager (KAVIL) - Government already acquired some of our land for fisheries department, but the compensation was very low. So please give maximum compensation.	
11	Secretary, Sri. Narasimha Swami Kshethram, East Kadungalloor - We have to discuss the matter with “Thanthri” and give the feed back	
12	Smt. Parvathy - Before implementation, compensation should be remitted.	
13	Sri. Prasad - Please explain the process of land value calculation.	
14	Sri. Sunil Kumar - My drinking water tank should be displaced.	
15	Sri. Parameswaran - No low land in the area	

16	Sri. Dinesh and Sri. Prasanth - We need maximum compensation.	
17	Sri. Krishna Kumar - Getting certificate for land conversion is a time consuming process. So please give priority to project affected people.	
18	Sri. Suresh Muttath, President Kadungalloor Grama Panchayath - This project is one of the long due development initiative. So please speed up the process of implementation. Panchayath would extend all support.	
19	Smt. Baby Sarojam, Ward Member, Kadungalloor Grama Panchayath - The project affected people will give maximum compensation.	
20	Smt. Meera, Ward Member, Kadungalloor Grama Panchayath - I would be with people for getting maximum compensation.	

CHAPTER 4 LAND ASSESSMENT

4.1. Description of the land

Two sides of Thottakkattukara – Kadungalloor junction road, which is part of Aluva – Alagad road is the project land. The project land is mixed in nature i.e. residential cum commercial. Nearness of Aluva town the commercial importance of the area is increasing day by day. But most of the families residing in the area are in ancestral property. An important worship place Narasimha Swami temple is situating. Two canals of Periyar irrigation project passing through the area. Several by roads are either starting or ending in the project land.

4-2. Entire area of impact under the influence of the project.

Aluva – Alangad road is one of the major Public Work Department road connecting Aluva to the western part of the district. Therefore the proposed project of widening the road will increases the traffic of the road. This will strengthen the connectivity between NH66 and NH 544. So the entire area in which the Aluva- Alangad road goes will be developed as commercial as well as residential. This may reflect in the land value, density of population, average area of land holding etc. Improved access to health care institutions may develop the health status of the area. In short more urbanization may the primary impact of the project.

4.3. Total land requirement for the project.

Both side of the Aluva – Alangad road from Thottakkattukara junction to Kadungalloor junction is defined as the project area. 200 cents of land is notified for acquisition. The area is mixed in nature i.e. residential and commercial. But the whole land is commercial in status. Nearness of Aluva town the commercial importance of the area is increasing day by day. But most of the families residing in the area are in ancestral property. An important worship place Narasimha Swami temple is situating.

Two canals of Periyar irrigation project passing through the area. Several by roads are either starting or ending in the project land.

4.4 Present use of any public utilized land in the vicinity of the project area.

Not Applicable

4.5. Land (if any) already purchased alienated, leased or acquired and the intended use for each plot or land required for the project.

Not Applicable

4.6. Quantity and location of land proposed to be acquired by the project.

Two hundred cents of land to be acquired for widening of Aluva Alangad road in Kadungalloor and Aluva west villages of Paravoor and Aluva Taluks of Ernakulum District. The area is having a long history, in terms of human settlement agriculture, cultural development etc. As per the history of Alangad area was famous for sugarcane and paddy cultivation. The fertile area belongs to the delta of Periyar attract people for agricultural activities and this made the area as thickly populated. National High Way 66 and 44 passing near to the area. Nearest railway station is Aluva which is just two kilometer away. Kochi international airport is situated 10 km away from the area. District headquarters and Kerala's commercial city Ernakulum are having a distance of 25 km.

4.7. Nature, present use and classification of land and if agricultural Land, irrigation coverage and cropping patterns

Sl. NO.	Nature of land	Present Use of Land	Irrigated / Non irrigated	Cropping Pattern	No. of Holdings
1.	Dry Land	Residential	Irrigated	NA	121
2.	Dry Land	Vacant Land	NA	NA	15

3	Dry Land	Commercial	Irrigated	NA	40
4	Dry Land	Religious	NA	NA	1
5	Dry Land	Government/ Public	NA	NA	9
	Total				186

4.8 Size of holding ownership pattern land distribution and number residential houses.

Land holding size in the project area is above the state average. The following figure shows the pattern of holding.

Size of Holdings	No. of Holdings
Below 10 Cents	38
11-30	112
Above 30 cents	36
Total	186

4.9 Land prices and recent changes in ownership, transfer and use of lands over the last 3 years.

Not Applicable

Chapter 5

Estimation and Enumeration of affected family and assets

5.1. Families which are directly affected.

One hundred and eighty six title holders and thirty four non-title holders are primarily affected by the project. Ninety two title holder are residing in the area and out of it sixty four are residing here more than twenty years. Average age of title holders are forty one. 61% are Hindus, 21% and 12% are belongs to Christians and Muslims respectively. The economic distribution shows that 97% are above poverty line and 35% having income more than Rs.25,000/- per month. The gender distribution shows that 63% are men and 37% women. The distribution of the educational qualification shows that all are literate and 12% is having below 10th standard. 20% are having higher education qualification. The occupational distribution shows that 5% are Government employees, 25% are working in private sector. 60% are doing self-employment and business.

Details of the non-title holders shows that all are residing within 5 km radius of the project land. Religious distribution shows that 26% are Muslims 59% are Hindus and 15% are Christians. All are literate and 61% are doing business in the area more than 10 years. 72% of them says that their main income source is the affected commercial unit only.

5.2. Families which are indirectly affected by the project.

Those who are living in the Kadungalloor and Alangad Panchayaths are the primary beneficiaries of the project. Their access to Aluva become more convenient by the project. As mentioned earlier several by roads are started or ended in the proposed road. These roads are connecting several neighborhoods. The project will benefited to the residents who are residing in these area. The project may increases the traffic of the road including heavy vehicle traffic. More over the project speed up the

urbanization of the area. This may lead to high land value, non-availability of land etc.

5.3. Inventory of productive assets and no significant lands.

All affected land holdings under the project is productive and significant.

Chapter 6

SOCIO ECONOMIC AND CULTURAL PROFILE

6.1. Demographic Details

One hundred and eighty six title holders and thirty four non-title holders are primarily affected by the project. Ninety two title holder are residing in the area and out of it sixty four are residing here more than twenty years. Average age of title holders are forty one. 61% are Hindus, 21% and 12% are belongs to Christians and Muslims respectively. The economic distribution shows that 97% are above poverty line and 35% having income more than Rs.25,000/- per month. The gender distribution shows that 63% are men and 37% women. The distribution of the educational qualification shows that all are literate and 12% is having below 10th standard. 20% are having higher education qualification. The occupational distribution shows that 5% are Government employees, 25% are working in private sector. 60% are doing self-employment and business. Details of the non-title holders shows that all are residing within 5 km radius of the project land. Religious distribution shows that 26% are Muslims 59% are Hindus and 15% are Christians. All are literate and 61% are doing business in the area more than 10 years. 72% of them says that their main income source is the affected commercial unit only.

6.2. Gender wise distribution of Land Holders

Gender of THs	No of THs
Male	59
Female	117
NA (Government/ Common/Cultural/Religious)	10
Total	186

6.3. Age wise distribution of TH

Age of THs	No of THs
20-30	14
31-40	23

41 – 50	31
51 – 60	50
61 – 70	39
Above 70	19
NA	10
Total	186

6.4. Family size of THs

Family Size of THs	No of Families
1-2	8
3-4	92
5-7	74
Above 7	2
NA	10
Total	186

6.5. Educational Qualification of THs

Educational Qualification	No of THs
Below 10	3
SSLC	22
PDC	32
DEGREE	53
PG	37
Others	29
NA	10
Total	186

6.6. Religious Distribution

Religion of THs	No. of THs
Hindu	114
Muslim	23
Christian	39
NA	10
Total	186

6.7. Economic Distribution of THs

Economic Status of THs	No. of THs
APL	176
BPL	3
NA	10
Total	186

6.8. Occupational Distribution THs

Major Occupation of THs	No of THs
Agricultural/plantation	2
Business	66
Govt. Job	9
Private sector	47
NRI	7
Other	45
NA	10
Total	186

6.9. Income distribution of THs

Monthly Income of THs	No of THs
Below 10000	9
10,000 – 25,000	52
26,000 – 50,000	42
51,000 - 75,000	31
40,000 – 50,000	26
Above 50,000	16
NA	10
Total	186

6.10. Socio Economic Profile of Project Affected Family Members.

6.10.1. Age wise distribution of PAF Members

Age of PAF Members	No of PAF Members
≤10	72
11-20	112
21-30	133
31-40	157
41 – 50	133
51 – 60	96
61 – 70	73
Above 70	45
Total	821

6.10.2. Educational Qualification of PAF Members

Educational Qualification	No of PAF Members
Below 10 th	129
10 th	81
+2	156
Degree	92
PG	103
Professional	96
Others	164
Total	821

6.11 Socio Economic Profile of Non Tittle Holders

6.11.1 Type of Non Tittle Holder

Sl.No.	Type of NTH	Activity			Total
		Commercial	Residential	Others	
1	Tenant	34			34

6.11.2 .Age wise distribution of NTH

Age of THs	No of THs
20-30	6
31 -40	10
41 – 50	12
51 – 60	4
Above 60	2
Total	34

6.11.3 Educational Qualification of NTHs

Educational Qualification	No of THs
Below SSLC	-
SSLC	11
PDC	9
DEGREE	3
PG	1
Professional	2
Others	8
TOTAL	34

6.11.4 Religious Distribution

Religion of NTHs	No. of NTHs
Hindu	20
Muslim	9
Christian	5
Total	34

6.11.5 Economic Distribution of NTHs

Economic Status of THs	No. of THs
APL	34
BPL	-
Total	34

6.11.6 Income distribution of NTHs

Monthly Income of THs	No of THs
BELOW 10000	14
10,000 – 15,000	6
16,000 – 20,000	5
21,000 – 25,000	7
76,000 – 1,00,000	2
Above 1,00,000	0
Total	34

CHAPTER 7

SOCIAL IMPACT MANAGEMENT PLAN

The major impact of the project is the loss of land of 186 title holders and loss of structure of 117 title holders and non-title holders. The average land holding of the project affected people reduced to 9.3 cents from 13.8. The number of title holders having less than 5 cents of land increased to 21. Sixteen residential houses losing their courtyard and it affected their facility to parking vehicles. After the acquisition 29 houses near to the road by less than two meter. Fifteen title holders are not having sufficient land to reconstruct their present residence comply with existing building rules. One temple is losing its compound wall. Due to the structure lose nine shops displaced and thirty one shops may face business loss.

7.1. Approach to Mitigation/ Measures to avoid, mitigate and compensate impact

Sl.No.	Risk Assumed	Approach	Mitigation Strategy
1.	Loss of part of Residential House	Compensation & Resettlement	Compensate the loss
2.	Loss of land	Compensation	Compensate the loss
3.	Loss of part of land	Compensation	Compensate the loss
4.	Loss of Part of Commercial/ other Building	Compensation	Compensate the loss
5.	Loss of structure	Compensation	Compensate the loss
6.	Loss of part structure	Compensation	Compensate the loss
7.	Loss of rented houses	Compensation	Compensate and resettle.

8.	Loss of Wells	Control, Avoid	Saving & protecting
9.	Loss of existing access	Control	Study and include the plan of resettlement in the implementation plan
10.	Loss of access to sub roads	Control	Study and include the plan of resettlement in the implementation plan
11.	Road is very near to houses	Safety/Resettlement	Take necessary action for the safety of houses.
12.	Loss of Irrigation Canals	Re construct	Re construct
13.	Loss of water supply pipes	Control, Avoid	Resettle
14.	Loss of trees	Compensate & Control	Compensate the loss and plant equal number of trees in government lands.
15.	Formation of Bit-land (uneconomic holdings)	Control	Acquire the uneconomic holdings
16.	Loss of structures of Religious institutions	Control & Resettle	Compensate the loss or resettle
17.	Involved in land acquisition process	Control	Ensure community participation in the whole process.

18.	Grievance	Control	Functional grievance redressal committee at village and district level.
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7.2. Measures those are included in the terms of Rehabilitation and Resettlement

Relaxation in building regulations for project affected persons use of the land held after the acquisition will help mitigating the impact after acquisition

7.3. Measures that the Requiring Body has stated it will introduce in the Project Proposal

Not Applicable

7.4. Alterations to project design and additional measures that may be required to address the extend and intensity of impacts across various groups as identified during the Social Impact Assessment Process.

Not Applicable

7.5. Detailed Mitigation Plan

Potential Impact	Positive/Negative	Likelihood	Magnitude	Pre-Mitigation Level of Impact	Post – Mitigation Level of Impact	Mitigation Strategy
Loss of part of Residential House	Negative	Possible	High	High	Medium	Compensate the loss

Loss of land	Negative	Possible	Moderate	Medium	Low	Compensate the loss
Loss of part of land	Negative	Possible	Moderate	Medium	Low	Compensate the loss
Loss of Part of Commercial/ other Building	Negative	Possible	Moderate	Medium	Low	Compensate the loss
Loss of structure	Negative	Possible	Moderate	Medium	Low	Compensate the loss
Loss of part structure	Negative	Possible	Moderate	Medium	Low	Compensate the loss
Loss of rented houses	Negative	Possible	Low	Low	Low	Compensate and resettle.
Loss of existing access	Negative	Possible	High	Medium	Medium	Study and include the plan of resettlement in the implementation plan
Loss of access to sub roads	Negative	Possible	Low	Low	Low	Study and include the plan of resettlement in the implementation plan
Road is very near to houses	Negative	Possible	Moderate	Medium	Low	Take necessary action for the safety of houses.
Loss common source of irrigation	Negative	Possible	High	Medium	Medium	Saving & protecting
Loss of water	Negative	Possible	Low	Low	Low	Resettle

supply pipes							
Loss of trees	Negative	Possible	Low	Minimum	Low	Compensate the loss and plant equal number of trees in government lands.	
Formation of Bit-land (uneconomic holdings)	Negative	Possible	Moderate	Medium	Low	Acquire the uneconomic holdings	
Loss of cultural and community properties	Negative	Possible	Moderate	Medium	Low	Compensate the loss or resettle	
Involved in land acquisition process	Negative	Possible	Minor	Low	Low	Ensure community participation in the whole process.	
Grievance	Negative	Possible	Moderate	Medium	Medium	Functional grievance redressal committee at village and district level.	

CHAPTER 8
SOCIAL IMPACT MANAGEMENT PLAN AND INSTITUTIONAL
FRAMEWORK

8.1- Institutional structure for key personal

Key persons responsible for mitigation	Role in mitigation
District Collector	Compensation & Grievance redress
Deputy Collector (L.A)	Compensation
Special Tahsildar	Compensation
District Forest Officer	Compensation measurement for trees
Requisition Authority	Resettlement of access and structure valuation

CHAPTER 9
SOCIAL IMPACT MANAGEMENT BUDGET AND FINANCING OF
MITIGATION

9.1 Costs of all resettlement and rehabilitation costs

Not Applicable

9.2 Annual budget and plan of action

Not Applicable

9.3 Funding sources with breakup

Not Applicable

CHAPTER 10

SOCIAL IMPACT MANAGEMENT PLAN MONITORING AND EVALUATION

10.1. Key Monitory and Evaluating Indicators

- Participation of THs in DLPC meeting
- Number of direct purchases happened.
- No. of affected access resettle
- Amount of compensation paid for land/structure
- Entitlement of PAPs-land/cash
- Number of business re-established
- Utilization of compensation
- House sites/business sites purchased
- Successful implementation of Income Restoration Schemes
- Methodology of fixing compensation
- Formation of Grievance Redressal Committee
- Number of time GRC met
- Number of appeals placed before grievance redressal cell
- Number of grievances referred and addressed by GRC
- Number of cases referred and addressed by arbitration
- Number of PAPs approached court
- Women concern

10.2. Reporting mechanisms and monitoring roles

Not Applicable

10.3. Plan of Independent Evaluation

Not Applicable

CHAPTER 11
ANALYSIS OF COSTS AND BENEFITS
ANDRECOMMENDATION ON ACQUISITION

Since there is no residential house displaced, the impact of the project scaled as medium. But after the acquisition fifteen residence will not have sufficient land to reconstruct their house by complying road set back rules. More over nine commercial establishments displaced and thirty shops may face business loss. The loss of courtyards and it attributed vehicle parking also an impact of the project. These impact affected the peaceful living and standard of life of affected residence.

A case by case study on the above impact and develop a special impact mitigation plan may help the people to overcome the impact. As mentioned earlier the project land is residential cum commercial, but considering its nearness to Aluva city and National High Way while fixing compensation the whole property may consider as commercial.

The acquisition and during implementation many commercial units in the project land may affected by business loss. Necessary compensation may mitigate the loss but time bound implementation of the project may largely reduce the impact.

Two irrigation canals are crossing the project road, and one is in the form of viaduct. People in the area afraid that these canals may affect the anticipated benefit of the project, if the canals may technically resettled.

Government claimed that the area may have encroachment. But people are not well informed about it. Proper intimation and sufficient time for resettlement may help the people to resettle them self without affecting their life.

A constructive involvement of people's representatives are visible in the overall planning of the project. This should be continued and strengthened further to reduce the grievances.

Several eminent personalities are residing in the area and many are project affected. Valuable suggestions from these people on rehabilitation and resettlement may help the project to successfully bring people's participation.

The project is treated as framed for public purpose under the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (30 of 2013) Section 2 (i)(b)(iii). It is in this base, Government of Kerala notified to initiate acquisition procedure.

Considering the public advantage and interest and treating as an inevitable need, in compared to the social impact the project has to be implemented.

**SAJU V ITTY
CHAIRMAN,
SIA UNIT**

Annexure

1. List of PAFs.
2. Photographs – Field Investigation
3. News Paper Notification
4. Notice for Public Hearing
5. Attendance Public Hearing
6. Gazette Notification regarding SIA study.
7. Suggestions and grievance of Project affected persons

