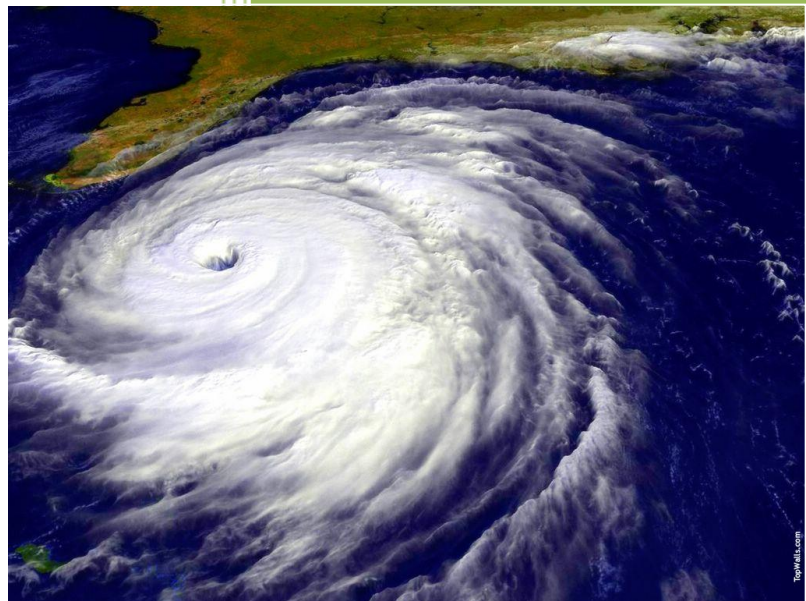


**NATIONAL CYCLONE
RISK MITIGATION
PROJECT-PHASE II
KERALA**

SITE SCREENING REPORT



District: Malappuram

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1. INTRODUCTION

1.1 Context

Preliminary assessment of suitable land (referred to as “sites” in this report) proposed from Malappuram District Administration, for construction of Multi-Purpose Cyclone Shelters (MPCS) under the National Cyclone Risk Mitigation Project-Phase II was performed in sites proposed as per proforma submitted from the District Administration.

1.2 Objectives

- Confirm site details such as title description, site boundaries and area available for construction;
- Identify land use of the proposed site and the nearby areas;
- Assess the suitability of site for construction;
- Identify the environmental and social feature of the region;
- Document site history;
- Discuss with the officials and identify specific issues relevant to the site, if any;
- Mark the site using GPS for GIS based studies.

1.3 Scope of Works

- Review of documents with the District administration held on the land (Toposheet, Field Map Plan, Basic Tax Register);
- Document locally obtained information about the site;
- Document photographs of the site;
- Assessment of the data and preparation of a draft report;
- Review of site screening report by SPIU.

2. OVERVIEW

The District Administration suggested a total 9 sites, in the prescribed proforma, for construction of Multi Purpose Cyclone shelters at various locations in Malappuram District. The officers from State Project Implementation unit of NCRMP, Officials from District administration, Tahsildars Taluk and Village Officers of concerned Taluks and Village Officers visited the sites. The details of the sites visited are as follows:

Sl no	Identification number	Place	Ownership
1	NCRMP/KER/MAL/TIR/VETTOM-1	G.M.U.P.S, Paravanna	Education Department
2	NCRMP/KER/MAL/PON/PERUMBADAPPU-1	G.H.S.S, Palappetty	Education Department
3	NCRMP/KER/MAL/TIR/PURATHOOR-1	G.U.P.S, Padinjarekkara	Education Department
4	NCRMP/KER/MAL/PON/PONANNI NAGARAM-1	G.L.P.S, Velliri	Education Department
5	NCRMP/KER/MAL/PON/VELIYANKODE-1	Dilapidated Disaster shelter near G.F.L.P.S, Veliyankode	Fisheries Department
6	NCRMP/KER/MAL/TIR/NIRAMARUTHUR-1	Revenue land near Village Office, Nirmaruthur	Revenue Department
7	NCRMP/KER/MAL/TIR/VETTOM-2	Revenue land near Village office, Vettom	Revenue Department
8	NCRMP/KER/MAL/PON/PONNANI NAGARAM-2	Municipality Shelter	Ponnani Municipality
9	NCRMP/KER/MAL/TIR/MANGALAM-1	Revenue land, Kootayi	Revenue Department

3. DETAILS OF SUITABLE SITES

3.1 Identification number: NCRMP/KER/MAL/TIR/VETTOM-1

Site: G.M.U.P.S, Paravanna

Taluk: Tirur

Village: Vettom

Survey number: 23/6

Panchayath: Vettom

Ownership: Education department

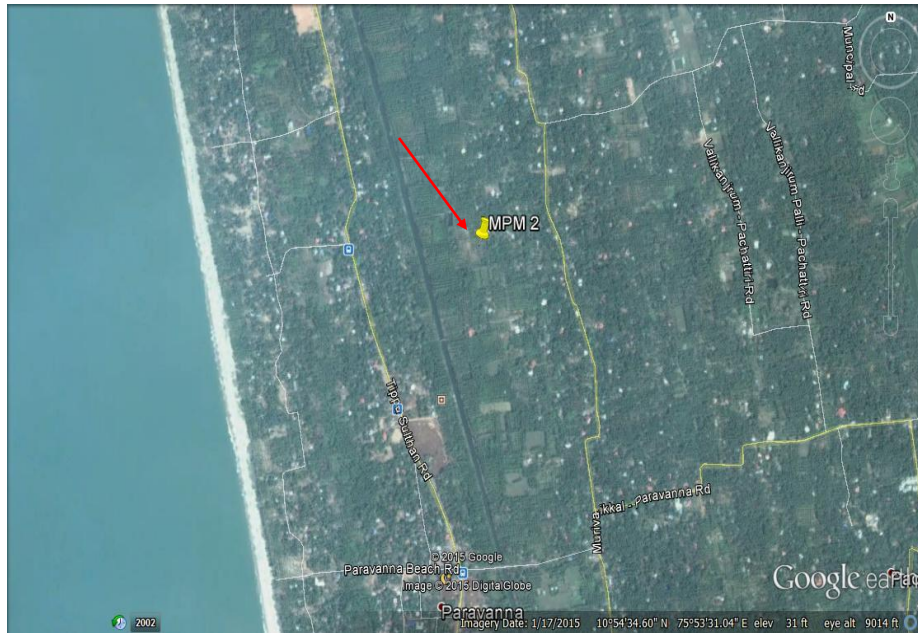
Lat: 10° 54' 1.6" Long: 75° 53' 32.4" (Ref GPS: 695)

Observation

- The proposed site is within the premises of G.M.U.P.S, Pavaranna which extends to 2.5 acres of land.
- The exact area available for the MPCS can be known after preparing a site survey sketch and master plan. However, more than 15 cents are available for construction on visual observation.
- The school was earlier used as relief camps during events of heavy rain.
- The school authorities favour the construction of MPCS. The MPCS could be used for school activities during peace time.
- The school has student strength of 978 students with possibility of upgradation to High school.
- An Anganwadi functions near to the site.
- A tree has to be cut down to facilitate construction.
- The safe bearing capacity of the soil is reasonably good on visual observation.
- The site is 2km from the coastline and is in close proximity to vulnerable population.
- The site is accessible from the nearby main road and has access to all basic amenities such as water and power supply.

Assessment

- **The site is suitable for construction of MPCS**



1. Aerial view of site at Paravanna 2. View of site



3.2 Identification number: NCRMP/KER/MAL/TIR/PURATHOOR-1

Site: Government Upper Primary School, Padinjarekkara

Taluk: Tirur

Village: Purathoor

Survey number: 38/7A2B

Panchayath: Purathoor

Ownership: Education department

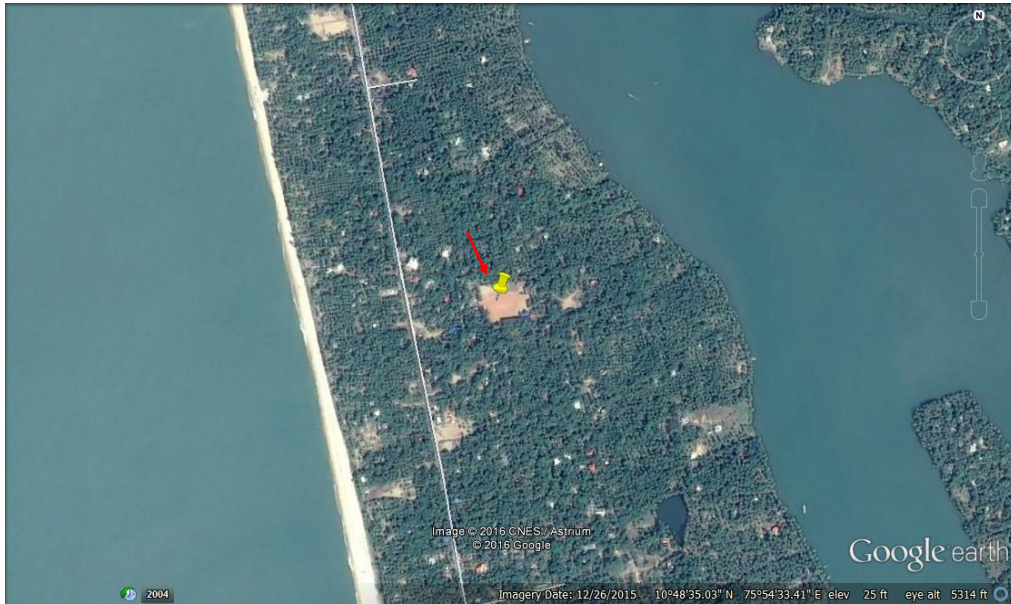
Lat: 10° 48' 34.5" Long: 75° 64' 32.8" (Ref GPS: 697)

Observations

- The proposed site is within the premises of G.U.P.S, Padinjarekkara.
- Approximately 10 cents of land is only available for construction.
- The proposed site is adjacent to the school building.
- The school was established in 1921 and has classes from pre-primary to 7th standard with student strength of 560.
- The site is 3km from the coastline.
- The MPCS could be used for School activities during peace time.
- The site is accessible from Tippu Sulthan road & nearby Panchayath roads.
- The Safe Bearing Capacity of soil is average on visual observation.

Assessment

- Campus planning has to be done to ensure that the MPCS is oriented in a manner that will not lead to loss of school playground and to ensure optimum utilisation of land.
- **The site is suitable for construction of MPCS though area available is on the lesser side.**



1. Aerial view of site at Padinjarekara 2. View of the site



3.3 Identification number: NCRMP/KER/MAL/PON/PONANNI NAGARAM-1

Site : Government Lower Primary School, Velliri

Taluk: Ponnani

Village: Ponnani Nagaram

Survey number: 107/1, 107/2 B2

Municipality: Ponnani

Ownership: Education department

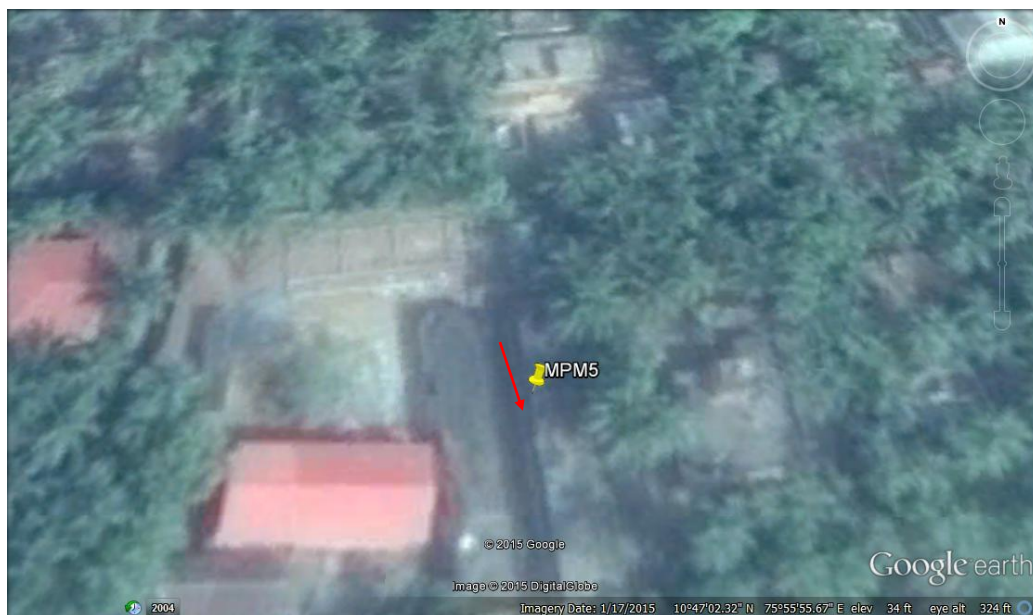
Lat: 10° 47' 2.0" Long: 75° 55' 55.7" (Ref GPS: 698)

Observations

- The proposed site is within the premises of G.L.P.S, Velliri.
- Two dilapidated disaster shelters exist in the site which has to be demolished to facilitate construction of MPCS.
- The MPCS could be used for conducting trainings for teachers and differently abled children.
- The school has student strength of 150.
- The site is 1.5km from coastline and is in close proximity to vulnerable population.
- The safe bearing capacity of the soil is average on visual observation.
- An area of 15 cents will be available for construction of MPCS
- A school building is under construction in the school campus by District Nirmithi Kendra.
- Accessibility of heavy vehicles is difficult to the school campus.

Recommendations

- Upon demolition of the two dilapidated buildings, adequate area will be available for construction. A campus planning has to be done to ensure that the MPCS is oriented in a manner that will not lead to loss of school playground.
- **The site is suitable for construction of MPCS.**



1. Aerial view of site at Velliri 2. View of the site. Dilapidated shelters can be seen.



3.4 Identification number: NCRMP/KER/MAL/PON/VELIYANKODE-1**Site: Dilapidated Disaster shelter near Government Fisheries Lower Primary School, Veliyankode**

Taluk: Ponnani

Village: Veliyankode

Survey number: 249/3

Municipality: Ponnani

Ownership: Fisheries Department

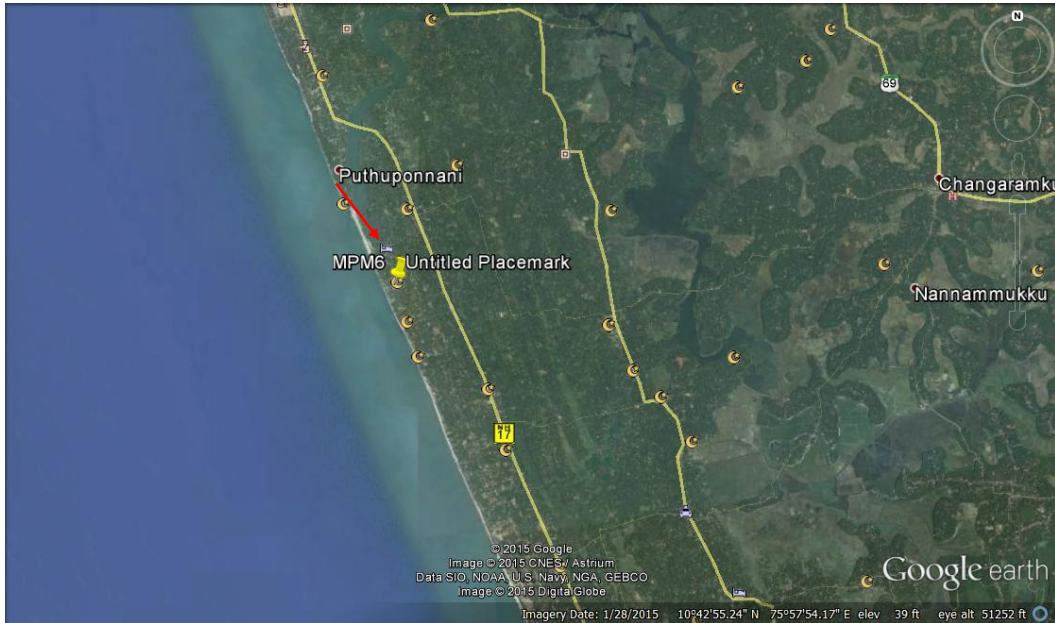
Lat: 10° 43' 11.5" Long: 75° 56' 36.6" (Ref GPS: 699)

Observations

- The proposed site is adjacent to G.F.L.P.S, Veliyankode
- Two dilapidated disaster shelters exist in the proposed site, which will have to be demolished to facilitate construction.
- The proposed site shares boundary wall with G.F.L.P.S, Veliyankode. The school has student strength of 90 students and is expecting upgradation as informed by the teachers.
- The proposed site is 100m from the coastline and is located close to the coastal community. The region falls in the CRZ region.
- A mosque, Government Dispensary and Matysa bhavan are located near the site.
- The MPCS could be used for school related activities and community gathering/meetings during peace time.

Assessment

- **The site is suitable for construction of MPCS**



1. Aerial view of site at Veliyankode. 2. View of site. Dilapidated shelters can be seen



3.5 Identification number: NCRMP/KER/MAL/PON/PERUMBADAPPU-1

Site: Government Higher Secondary School, Palapetty

Taluk: Ponnani

Village: Perumpadappu

Survey number: 108/7

Panchayath: Perumpadappu

Ownership: Education Department

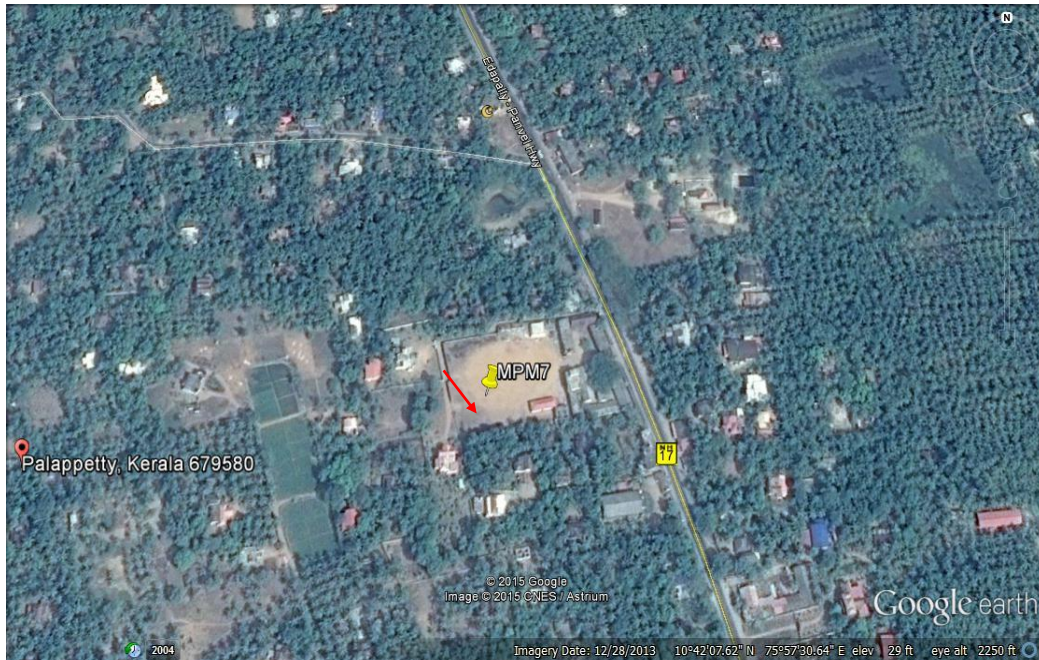
Lat: 10° 42' 6."1 Long: 75° 57' 29.6"

Observations

- The proposed site is within the premises of G.H.S.S, Palapetty and towards one corner of the school playground.
- Less than 10 cents of land is only available for construction without encroaching the playground.
- The school has student strength of 900.
- A toilet building is positioned adjacent to the proposed site
- The site can be accessed from National Highway.
- The site is 750m from coastline.
- The school was used as relief camp five years back.
- The MPCS could be used for school related activities.

Assessment

- A campus planning has to be done to ensure that the MPCS is oriented in a manner that will not lead to loss of school playground.
- **The site is suitable for construction of MPCS though area available is on the lesser side.**



1. Aerial view of site at Palappetty. 2. View of site. School building near the site can be seen



4.DETAILS OF UNSUITABLE SITES

4.1 Identification number: NCRMP/KER/MAL/TIR/NIRAMARUTHUR-1

Site: Revenue land near Village Office, Nirmaruthur

Taluk: Tirur

Village: Nirmaruthur

Survey number: 246/8

Ownership: Revenue

Observations

- The proposed site is the Village office compound.
- An area of 8.8 cents is available for construction after provision for road widening.
- No construction is possible without demolishing the existing village office.
- The site is accessible from Kalad-Unniyal road.
- A functional Tsunami shelter located at Unniyal is within 1 km from the proposed site.
- The site shares one boundary with a temple.

Assessment

- A need to demolish the existing building is not seen. Also a functional shelter is in close proximity to the proposed site.
- **The site is not suitable for construction of MPCS**



1. View of site at Nirmaruthur

4.2 Identification number: NCRMP/KER/MAL/TIR/VETTOM-2

Site: Village Office, Vettom

Taluk: Tirur

Village: Vettom

Survey number: 156/1

Panchayath: Vettom

Ownership: Revenue department

Lat: 10° 52' 32.3" Long: 75° 54' 44 9" (Ref GPS: 696)

Observations

- The proposed site is in the compound of Village office of Vettom.
- The proposed site has an area of 7 cents including the Village office building.
- The Village Office building has to be demolished to facilitate construction.
- The site is directly accessible from Tirur- Vettamcheera road
- The safe bearing capacity of the soil is good on visual observation

Assessment

- The available area is inadequate for construction of MPCS and a need to demolish the existing building is not seen.
- **The site is not suitable for construction of MPCS**



1. View of site at Vettom

4.3 Identification number: NCRMP/KER/MAL/TIR/MANGALAM-1

Site: Revenue land, Kootayi

Taluk: Tirur

Village: Mangalam

Survey number: 16/6B

Ownership: Revenue department

Observations

- The land was leased to private party for coconut plantation.
- The site is within 90m from coastline.
- An area of 20 cents is available for construction.
- Legal issues regarding possession and lease agreement prevailing in court.

Assessment

- The site is in very close proximity to sea. A shelter in this location will be at high risk
- **The site is not suitable for construction of MPCS**



1.View of site at Kootayi

4.4 Identification number: NCRMP/KER/MAL/PON/PONNANI NAGARAM-2

Taluk: Ponnani

Village: Ponnani Nagaram

Survey number: 1/145

Ownership: Ponnani Municipality

Observation

- A functional shelter already exists in the site.
- The site is near to Tsunami Rehabilitation Colony.
- Need for demolition of existing building is not seen.

Assessment

- **The site may not be recommended for MPCS**



1.View of site at Ponanni Nagaram. Existing shelter in the site can be seen.

3. ASSESSMENT

5.1 Assessment criteria

The following criteria were considered in assessing the suitability of proposed site for construction of MPCs:

1. **Necessity for MPCs:** Aspects such as vulnerable population near to the proposed site, Availability of shelters within 1km radius of the site, Capacity and condition of such shelters, Population that will have access to the MPCs during an event of emergency, History of relief camps in the area etc were considered.
2. **Area available for construction:** Sites which have atleast 15 cents of land available for construction were only considered. The effective area available for construction after provision for setbacks applicable as per Building rules was only taken into consideration.
3. **Proximity to sea:** Sites within 10km distance from coastline were only considered. Those sites which fall beyond 500m from High Tide Line were preferred. The sites within 200m from the coastline were not preferred and sites that do not require CRZ clearance were given priority.
4. **Accessibility to basic amenities:** The accessibility of site from nearby main roads, proximity of site to water supply, power, sewer etc were considered in selecting the site.
5. **Ownership of land:** Land in possession with Revenue Department was preferred to that in possession with Education Department, Fisheries Department, Local Self Government Department and others.
6. **Foundation cost:** Terrain of land, bearing capacity of soil on visual observation, drainage pattern in the region, maximum flood line etc was considered.
7. **Requirement for demolition:** Sites that did not require any demolition to facilitate construction of MPCs were given priority. However, in sites that required demolition, the state of existing building, ownership of the building etc were taken into account.
8. **Clearances required for social/archaeological/environmental issues:** Sites adjacent to archaeologically, religiously important structures were avoided. Sites with issues of Illegal

tenants and any social concerns particular to the region were also avoided. Sites close to water bodies/Environmentally sensitive regions were not preferred.

- 9. Legal issues:** Sites with legal issues regarding ownership, extent and boundaries of land and sites committed and finalized for other project etc were given less priority in the assessment.

5.2: Ranking

Each criterion was given a score depending on the importance of the criteria in screening the sites. Depending on the scores, the sites were categorized into three categories:

1. Rank 1: Score: 71-100: Highly recommended for construction of MPCs
2. Rank 2: Score: 41-70: Recommended for construction of MPCs
3. Rank 3: Score: below 40: May not be considered for construction of MPCs

5.3 Site Assessment

SI no	Site details		Assessment Criteria										
			Necessity for MPCs	Area available for construction	Proximity to sea/Water bodies	Foundation cost	Accessibility to transportation and basic amenities	Ownership of land	Clearances required for social/archaeological/environmental issues	Requirement for demolition	Legal issues	TOTAL SCORE	RANK
	Score		15	15	15	15	10	10	10	5	5	100	
	Identification number	Place											
1	NCRMP/KER/MAL/TIR/VETTOM-1	G.M.U.P.S, Paravanna	11	10	10	9	9	5	8	5	4	71	1
2	NCRMP/KER/MAL/PON/PERUMBADAPPU-1	G.H.S.S, Palappetty	10	8	10	10	9	6	9	5	4	71	1
3	NCRMP/KER/MAL/TIR/PURATHOOR-1	G.U.P.S, Padinjarekkara	10	7	10	8	8	5	8	4	3	63	2
4	NCRMP/KER/MAL/PON/PONANNI NAGARAM-1	G.L.P.S, Velliri	8	7	10	6	6	5	5	2	3	52	2
5	NCRMP/KER/MAL/PON/VELIYANKODE-1	Dilapidated Disaster shelter near G.F.L.P.S	10	8	4	5	8	5	5	4	3	52	2
6	NCRMP/KER/MAL/TIR/NIRAMARUTHUR-1	Revenue land near Village Office, Nirmaruthur	2	2	8	5	7	8	2	2	1	37	3

7	NCRMP/KER/MAL/TIR/VETTOM-2	Revenue land near Village office, Vettom	2	2	8	6	4	8	2	2	2	36	3
8	NCRMP/KER/MAL/PON/PON NANI NAGARAM-2	Municipality Shelter	0	0	5	4	5	2	2	2	2	22	3
9	NCRMP/KER/MAL/TIR/MANGALAM-1	Revenue land, Kootayi	2	2	2	2	3	2	2	4	1	20	3

Total score**Rank****Status of recommendation**

Between 71-100

1

Highly Recommended

Between 41-70

2

Recommended

Below 40

3

May not be recommended