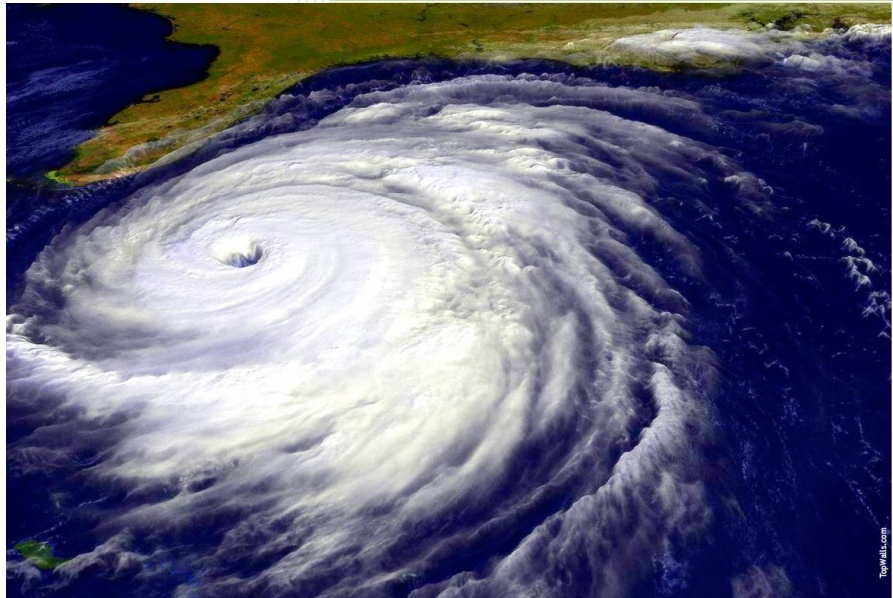


**NATIONAL CYCLONE
RISK MITIGATION
PROJECT-PHASE II
KERALA**

SITE SCREENING REPORT



District: Kasargod

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1. INTRODUCTION

1.1 Context

Preliminary assessment of suitable land (referred to as “sites” in this report) proposed from Kasargod District administration, for construction of Multi-Purpose Cyclone Shelters (MPCS) under the National Cyclone Risk Mitigation Project-Phase II was performed on 17/11/15. The assessment was done in sites proposed as per proforma submitted from the District Administration. Sites which were not proposed in the prescribed proforma but potentially suitable for construction of MPCS were also assessed for suitability upon suggestion from the Officials.

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 (Toposketch, 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 Kasargod District. The officers from State Project Implementation unit of NCRMP, Deputy Collector, Disaster Management, Tahsildars and Village Officers of concerned villages and Assistant Engineer of District Nirmithi Kendra visited the sites. Details of sites which were not proposed in the prescribed proforma but potentially suitable for construction of MPCS were also documented upon suggestion from the Officials. The details of the sites visited are as follows:

Sl no	Identification number	Taluk, Village, Place	Ownership
1	NCRMP/KER/KSD/KAS/ KUDLU-1	Kasargode, Kudlu, Revenue land, Uliyathaduka	Revenue Department
2	NCRMP/KER/KSD/HOS/ PULLUR-1	Hosdurg, Pullur, Revenue Land, Pullur	Revenue Department
3	NCRMP/KER/KSD/MAJ/ KOIPADY-1	Manjeshwar, Koipady, Government Senior Basic School, Kumbla	Education Department
4	NCRMP/KER/KSD/HOS/ BARE-1	Hosdurg, Bare, GWLPS, Bare	Education Department
5	NCRMP/KER/KSD/HOS/ HOSDURG-1	Hosdurg, Hosdurg, Revenue land RDO Office, Kanhangad	Revenue Department
6	NCRMP/KER/KSD/MAJ/ KOIPADY-2	Manjeshwar, Koipady, Revenue land, Mulyadukkam	Revenue Department
7	NCRMP/KER/KSD/HOS/ CHERUVATHUR-1	Hosdurg, Cheruvathur, Old Shelter, Maicha, Cheruvathur	Revenue Department
8	NCRMP/KER/KSD/HOS/ CHERUVATHUR-4*	Hosdurg, Cheruvathur, Revenue land, Cheruvathur	Revenue Department
9	NCRMP/KER/KSD/HOS/ CHERUVATHUR-2	Hosdurg, Cheruvathur, GWUP school, Cheruvathur	Education Department

10	NCRMP/KER/KSD/HOS/ CHERUVATHUR-3*	Hosdurg, Cheruvathur, Village Office, Cheruvathur	Revenue Department
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**Details not available in Prescribed proforma*

3. DETAILS OF SELECTED SITES

3.1 Identification number: NCRMP/KER/KSD/MAJ/KOIPADY-1

State Project Implementation Unit, NCRMP-Kerala

Site: Government Senior Basic School, Kumbla

Taluk: Manjeshwar

Village: Koipady

Block: 37 Survey number: 120/1, R.S No: 168/1pt

Panchayath: Kumbla Grama Panchayath

Lat: 12° 35' 40.2" Long: 74° 56' 49.1" (Ref GPS:648)

Observations

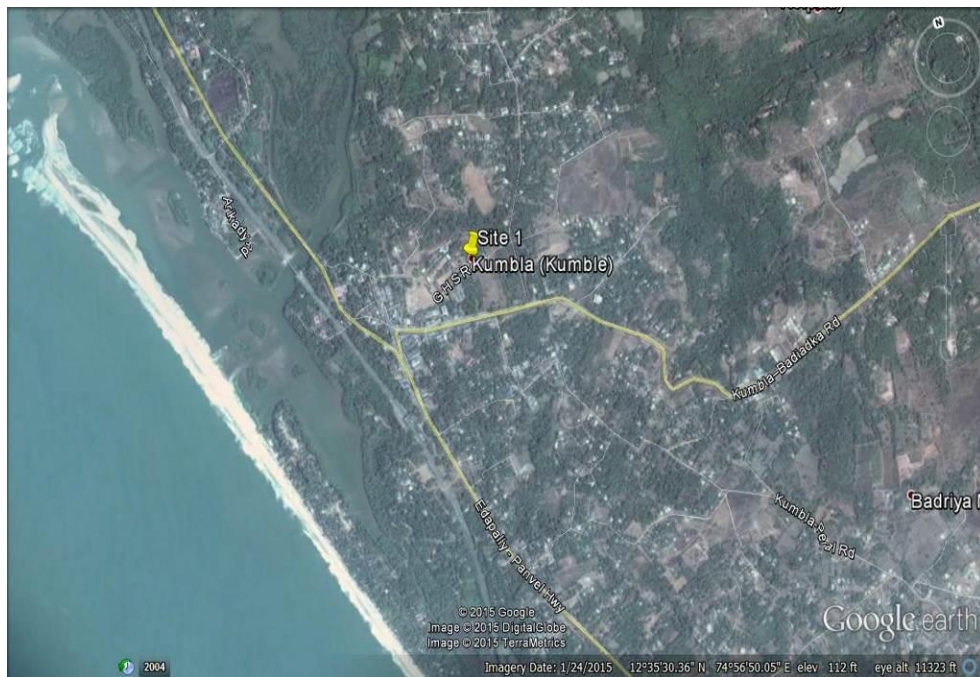
- The site is within the premises of Government Senior Basic School, Kumbla
- Approximately 25 cents of land which is used as playground is available for construction. It was informed by the Head Master that the school has around 4 acres of land in their possession.
- The site is elevated and approximately 1km from the coastline and 500m from the backwaters
- The proposed site is within the compound wall of the school and is accessible from GHS road which is 400m from the main road.
- The school was established 104 yrs back and currently has student strength of 900.
- An electric pole is located in the proposed site and electric lines traverse the site diagonally.
- Village office, Police station, Government Higher secondary school, College, Kerala Grama Panchayath Matsya Bhavan, College of Applied sciences etc is located within 1km radius of the proposed site.
- Children's play swing is placed in the site.
- The proposed site is near to school buildings and Rain water harvesting tank
- It was informed that the school was used as police camp during the recent LSGD elections
- The proposed site and School share a common entrance gate and has direct access from a side road.
- The site had not figured in the list from the District administration but was shown at the initiative of Manjeshwar Additional Tahsildar.
- It was informed that the MPCS could be used for school activities as well as for holding camps

for Government officials.

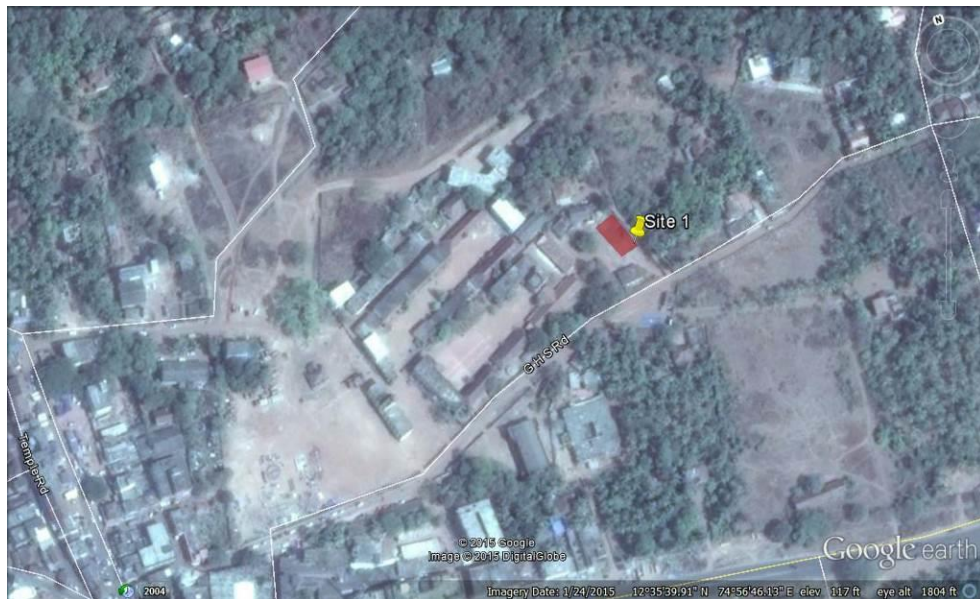
- The school authorities favored the construction of MPCS.
- An adjacent site (Ref GPS 649), belonging to PWD, between the Village Office and School was also inspected. Two dilapidated buildings said to be functioning as Rest Houses exists in the site. It was informed by the local community that there might be objection in proposing the site, as the site falls in the procession path of an annual temple festival. The Executive Engineer, Buildings Division, PWD, Kasargode was met in person by the Construction Manager and informed on the dilapidated buildings belonging to PWD.
- On visual observation, it appears that the safe bearing capacity of soil is good and hence, foundation cost will be economical.

Assessment

- The electric pole (K/KM 3/1/14) and children's swing has to be relocated to a suitable location
- The school gate may be shifted appropriately to facilitate vehicle entry to the site and school
- **The site is suitable for construction of MPCS**



1 and 2 Aerial view of the site



1 & 2: View of the site



3. View of site from the entry gate



4. View of the nearby pocket road



3.2 Identification number: NCRMP/KER/KSD/KAS/KUDLU-1

Site: Revenue land, Uliyathaduka

Taluk: Kasargode

Village: Kudlu (Shiribagilu)

Block: 37 Survey number: 232

Panchayath: Madhoor Grama Panchayath

Lat: 12° 32' 25.9" Long: 74° 59' 38.3" (Ref GPS: 652)

Observations

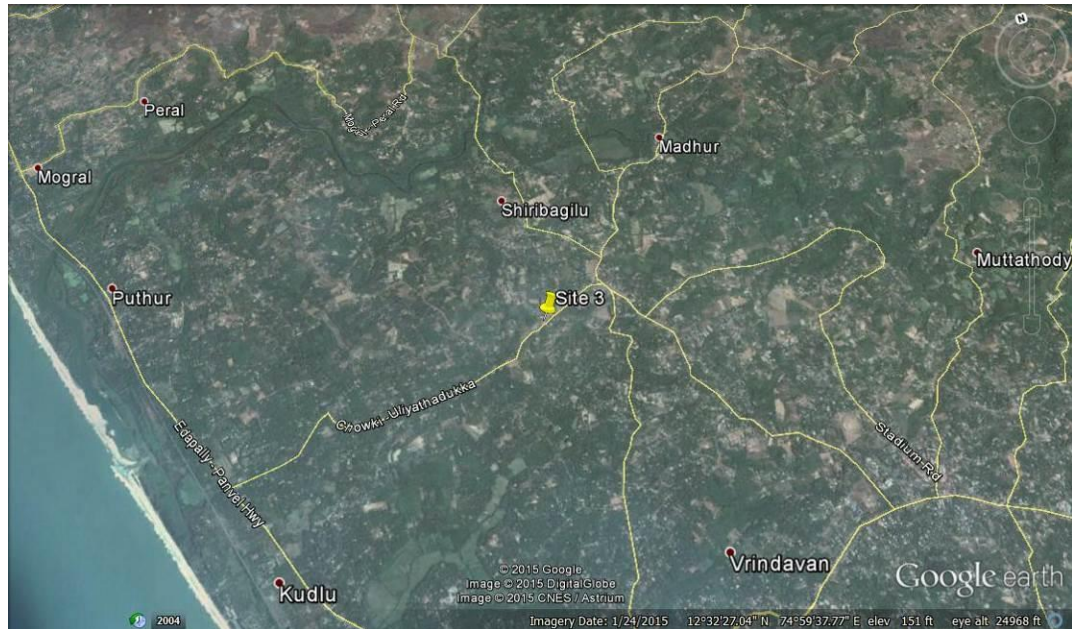
- Sufficient land is available for construction. It was reported that approximately 35 cents of land can be spared for construction.
- As per BTR records the land is marked as Revenue Purambokku road.
- The site is around 4km from the Coastline.
- The site is to the north of the Chowki-Uliyathadukka road. Widening of the road is expected.
- Electric poles run parallel to one side of the site and needs no relocation.
- Juma Masjid and Jaimatha School is near to the proposed site.
- It was informed by the Tahsildar that around 150 families in the coastal stretch are under threat from coastal hazard and there is a need for sheltering these families. Currently religious centers are used as relief centers in the area. However certain communities have apprehension in going to such shelters.
- It was suggested that the MPCs could be used as Auditorium during peace time; as such a facility is not available in the locality.
- On visual observation it appears that the safe bearing capacity of soil is good and hence, foundation cost will be economical.

Assessment

- The Taluk Surveyor may be addressed to conduct a survey and demarcate the exact area

(between the pocket road on the north-east and the building in the north-west of the site) available for construction.

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



1 and 2: Aerial view of the site





3 and 4: View of site from the main road



3.3: Identification number: NCRMP/KER/KSD/HOS/BARE-1

Site: GWLPS, Bare

Taluk: Hosdurg

Village: Bare

Block: Survey number: 210/1A

Panchayath: Bare Grama Panchayath

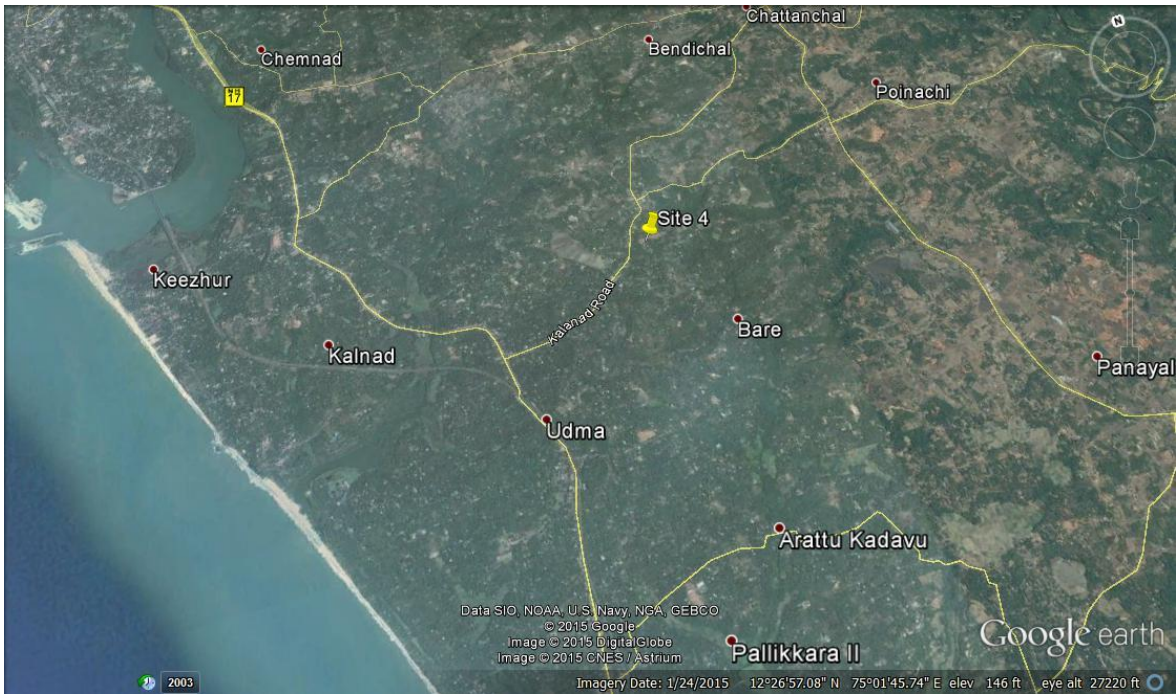
Lat: 12° 27' 27.2" Long: 75° 2' 12.7" (Ref GPS: 654)

Observations

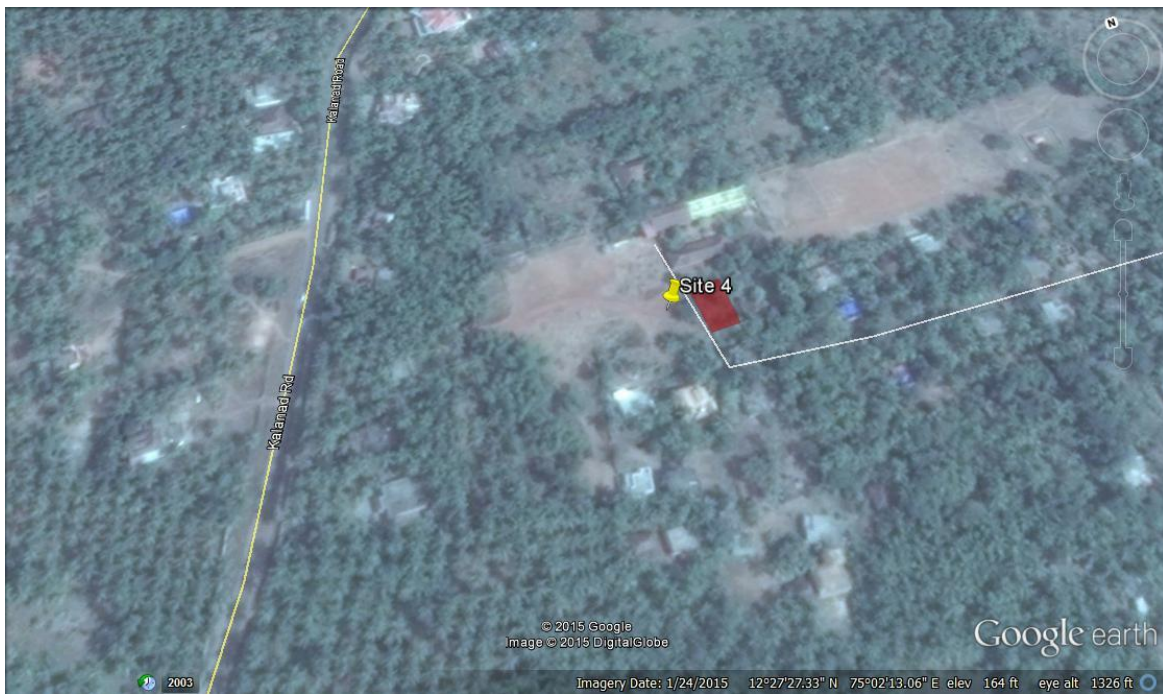
- The proposed site is within the Government Lower Primary school, Bare.
- Exact area available for construction of MPCS is not demarcated and the site has thick cover of Acacia plantation.
- A narrow "thodu" (non-perennial stream) is to the west of the site
- It was observed that the residents living nearby trespass the school compound
- The school which was established in 1917 and has student strength of 150.
- The site is in good proximity to Village Office of Bare.
- The proposed site is 4km from the coastline.
- An unpaved 20m wide approach road connects the site to Mangad-Chattanchal road.
- Acacia plantation has to be cut down to clear the area for construction.
- The MPCS could be used for school activities as well as for Village office activities.
- On visual observation it appears that the safe bearing capacity of soil is good and hence, foundation cost will be economical.

Assessment

- Taluk Surveyor may be addressed to demarcate the exact area available for construction in such a way that proper access is maintained to the school
- **The site is suitable for construction**



1 and 2: Aerial view of the site





4. View of site



4. Access road to site from approach road

3.4 Identification number: NCRMP/KER/KSD/HOS/PULLUR-1

Site 5: Revenue Land, Pullur

Taluk: Hosdurg

Village: Pullur

Block: Survey number: 110/1A3A

Panchayath: Pullur-Periya Grama Panchayath

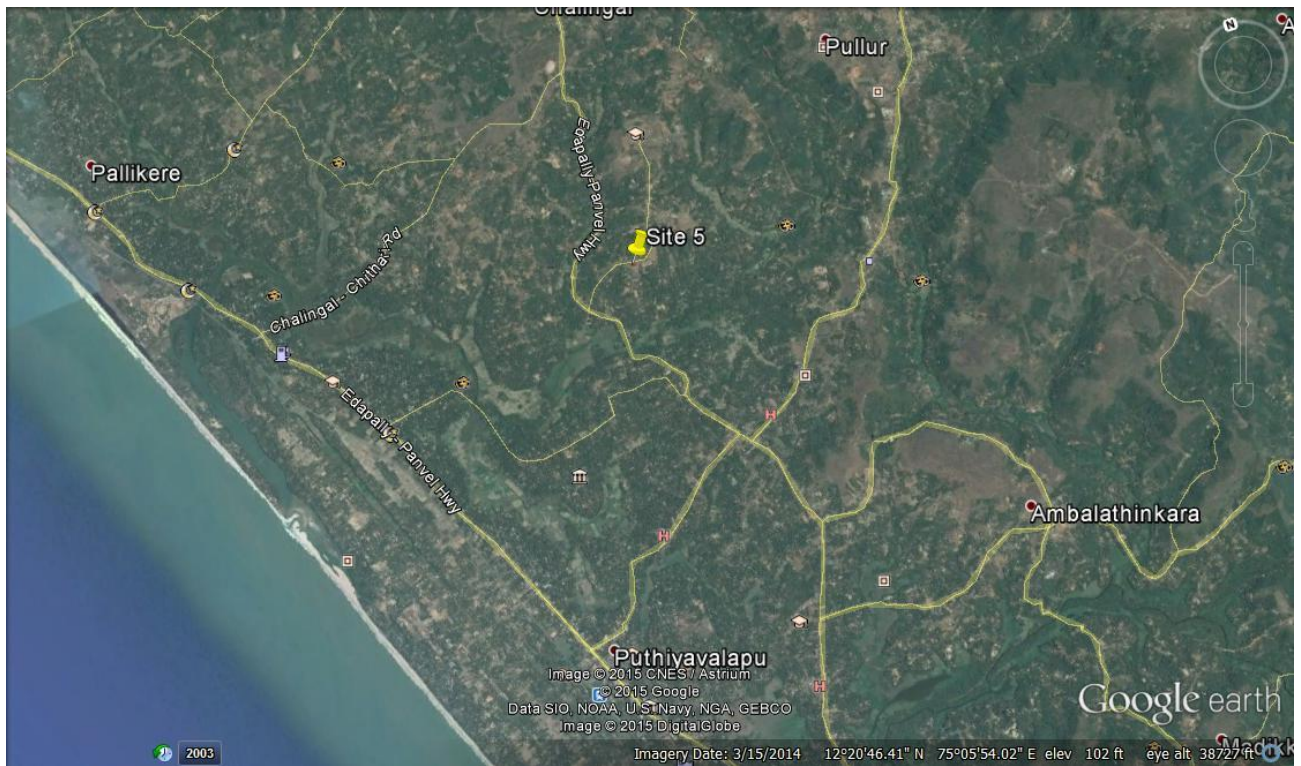
Lat: 12° 21' 28.2" Long: 75° 6' 1.4" (Ref GPS: 656)

Observations

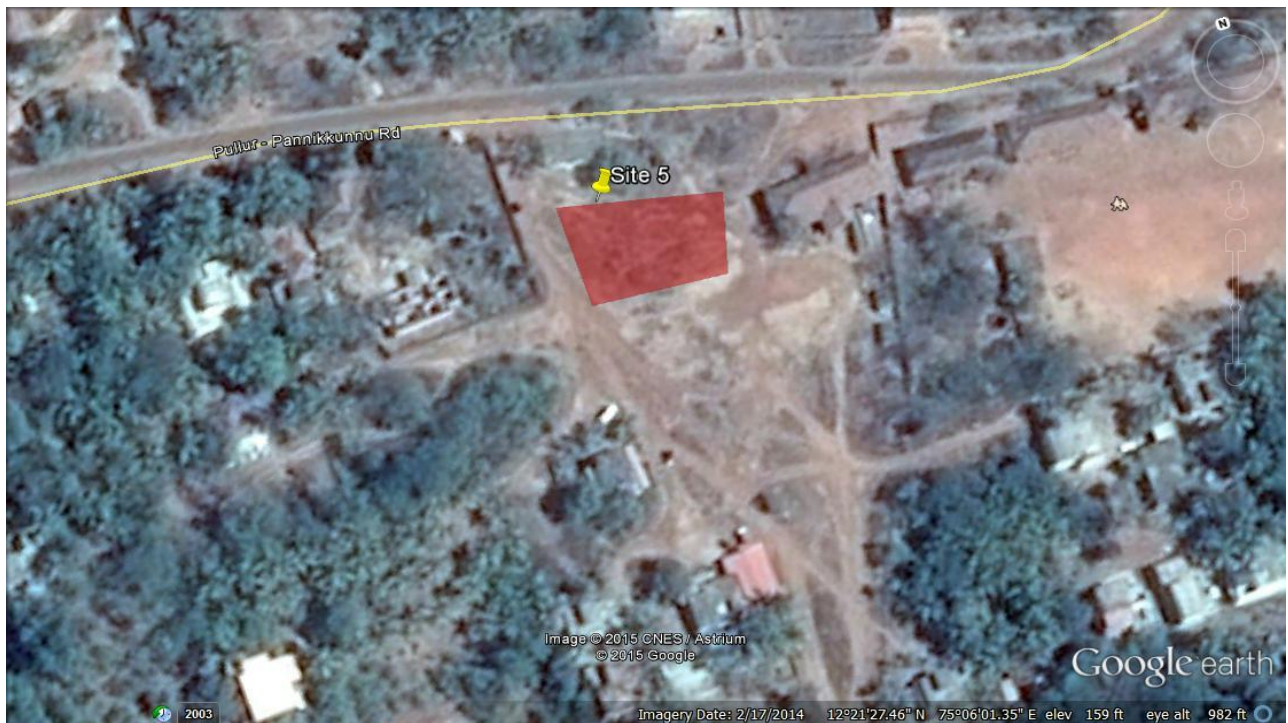
- The proposed site is a barren land to the rear side of the Pullur Village office and on the south of Haripuram Mengoth Kodavalam road
- Approximately 50 cents of land is available for construction.
- Government Upper primary School and ITI, Pullur is near to the site.
- The site is 1km to the east of National Highway
- The site is 4.5 km from the coastline.
- The MPCS can be used as Training centre cum community hall during peace time.
- On visual observation the soil is lateritic in nature with high bearing capacity and hence the foundation cost will be minimal

Assessment

- The Taluk Surveyor may be addressed to demarcate the exact area available for construction of MPCS
- **The site is suitable for construction of MPCS**



1 and 2: Aerial view of site





3. View of site (Village Office can be seen)



4. View of site (School premises can be seen)

3.5 Identification number: NCRMP/KER/HOS/HOSDURG-1

Site: Revenue land near Revenue Division, Kanhangad

Taluk: Hosdurg

Village: Hosdurg

Survey number: 204/1A,1A,1A,1A,1A

Panchayath: Kanhangad Municipality

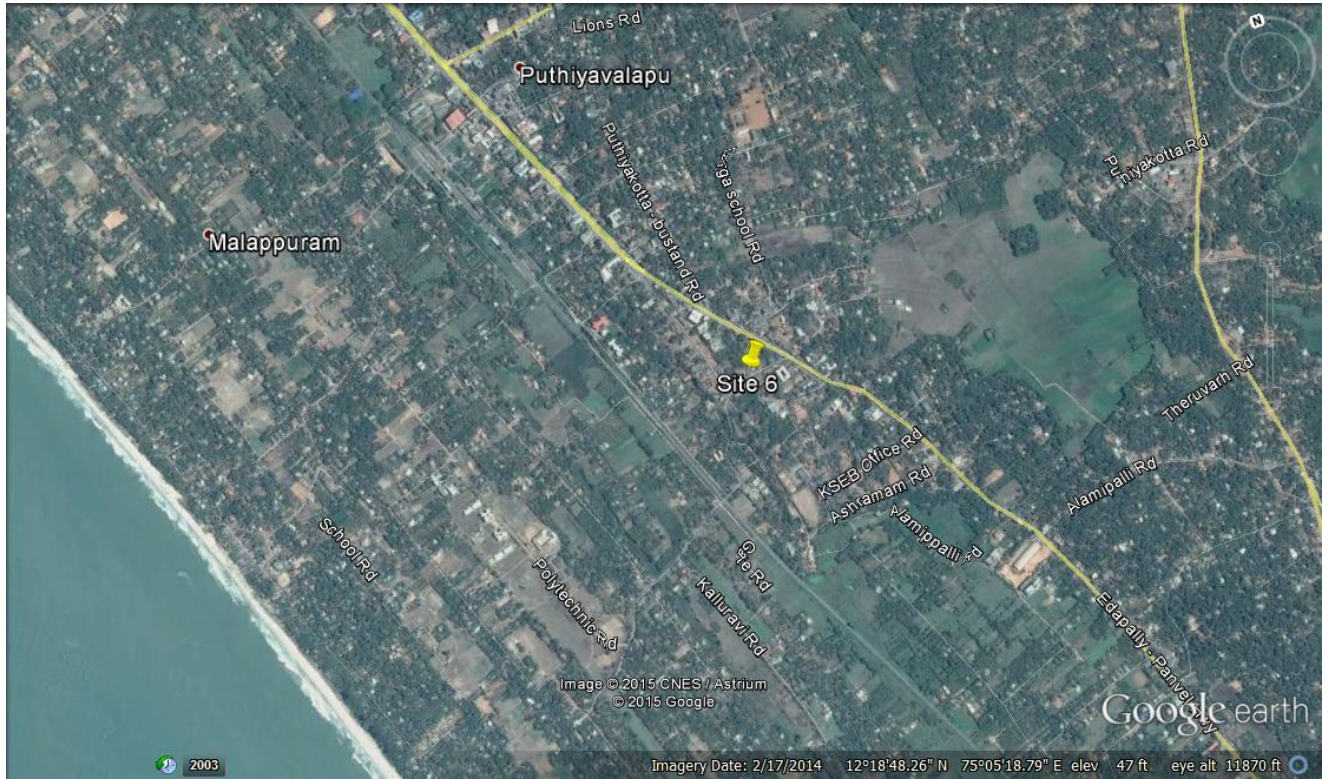
Lat: 12° 18' 47.2" Long: 75° 5' 27.5" (Ref GPS: 656)

Observations

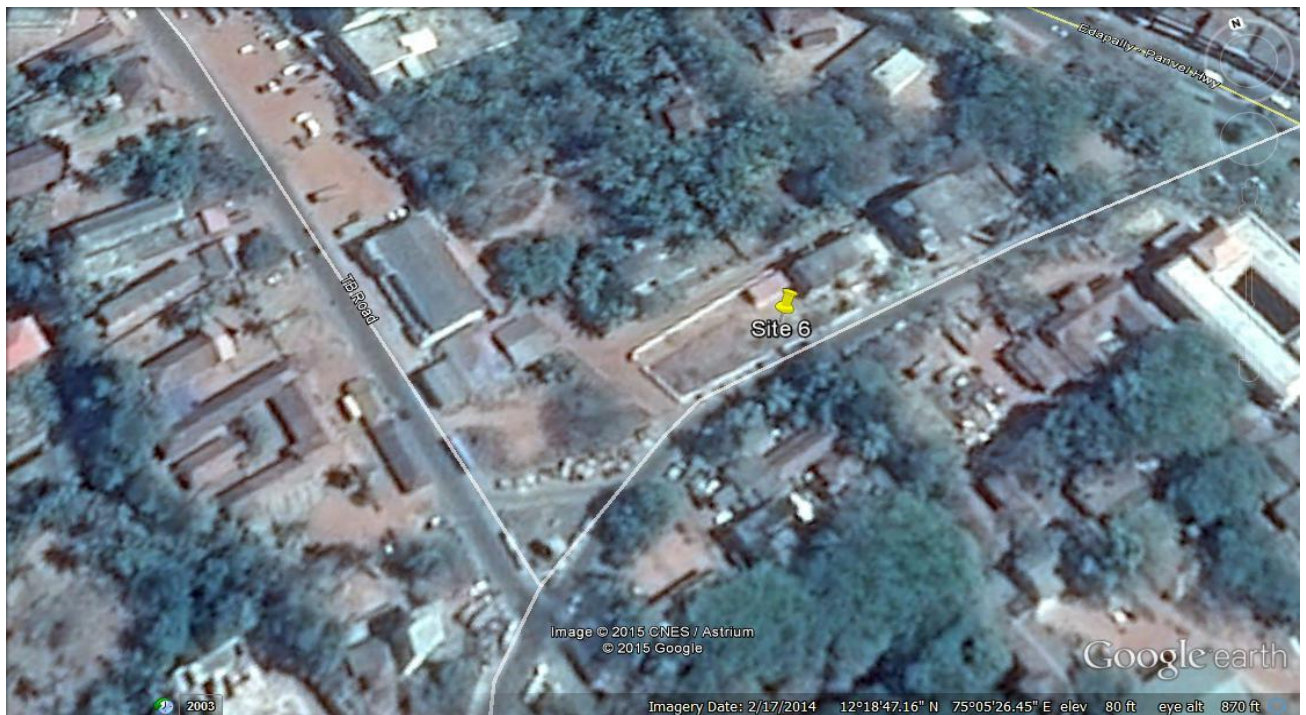
- The proposed site is adjacent to the existing RDO office of Kanhangad, Mini civil station and other major offices.
- The site is 140m from the National Highway and is also accessible from TB road
- Approximately 20-25 Cents of land is available for construction
- A temporary vehicle parking shed exist in the site.
- The site is within the RDO office compound.
- The site is 1km from the sea coast
- The site has reasonably good soil bearing capacity on visual observation.
- The site has good proximity to all basic facilities such as transportation, water and power supply etc
- During peace time, the MPCS could be used as training/meeting centres.

Assessment

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



1 and 2: Aerial view of site





3. View of site



4. Entry to the site

5. DETAILS OF UNSUITABLE SITES

4.1 Identification number: NCRMP/KER/KSD/HOS/CHERUVATHUR-1

Site: Old Shelter, Maicha, Cheruvathur

Taluk: Hosdurg

Village: Cheruvathoor

Block: Survey number: 336

Panchayath: Cheruvattur

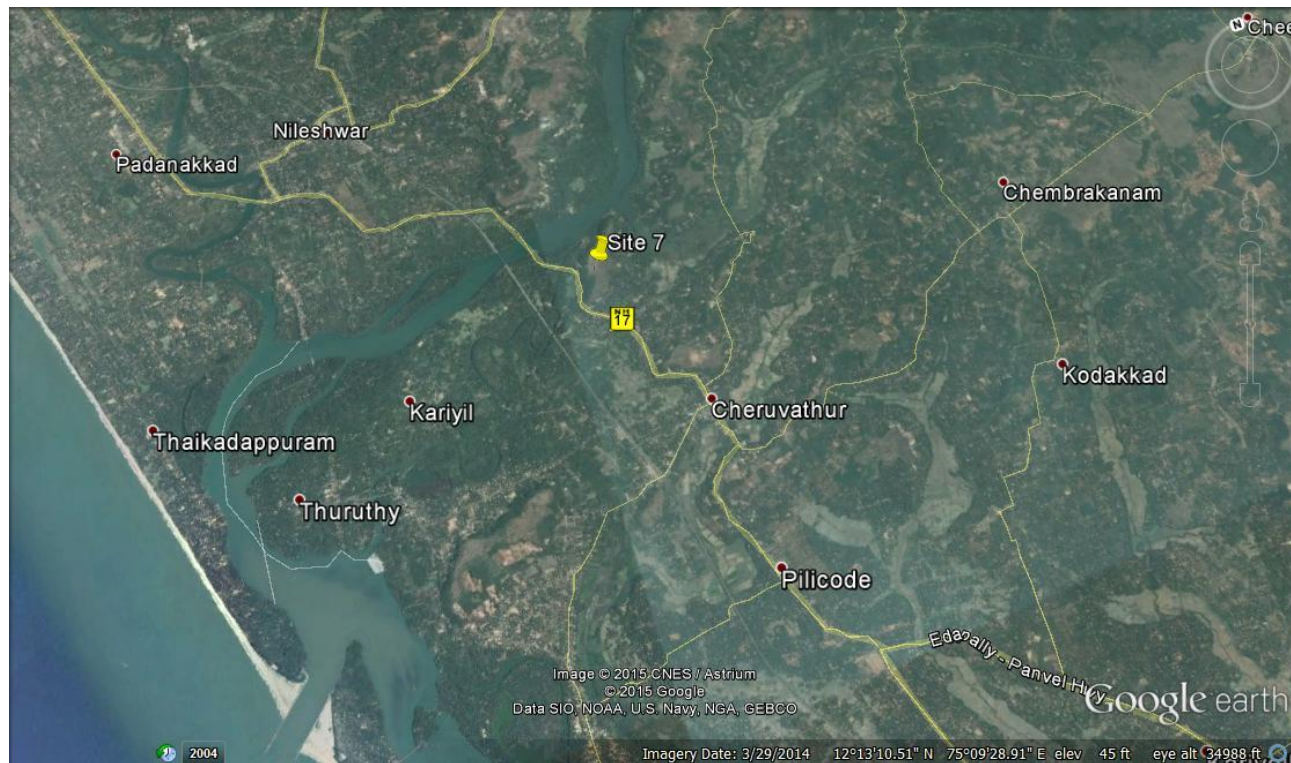
Lat: 12° 13' 59.1" Long: 75° 9' 22.2" (Ref GPS: 659)

Observations

- The proposed site has two dilapidated disaster shelters built in 1980's. The shelters were not maintained properly
- The site is located in a remote location and has limited access to basic facilities.
- The buildings will have to be demolished for new construction. New buildings if constructed may end up in the same fate of the existing disaster shelters.
- The site is located between private land and land owned by social forestry
- The site is in a hilly terrain
- Scarcity of water is anticipated.

Assessment

- A need for demolition of existing shelter and construction of MPCS is not seen.
- **The site is not suitable for construction of MPCS**



1 and 2: Aerial view of the site



3 and 4: View of the site. Dilapidated Shelter in the site can be seen



4.2 Identification number: NCRMP/KER/KSD/HOS/CHERUVATHUR-2

Site: GWUP school, Cheruvathur

Taluk: Hosdurg

Village: Cheruvathoor

Block: Survey number: 451/5

Panchayath: Cheruvathur

Lat: 12° 12' 35.6" Long: 75° 9' 13.4" (Ref GPS: 661)

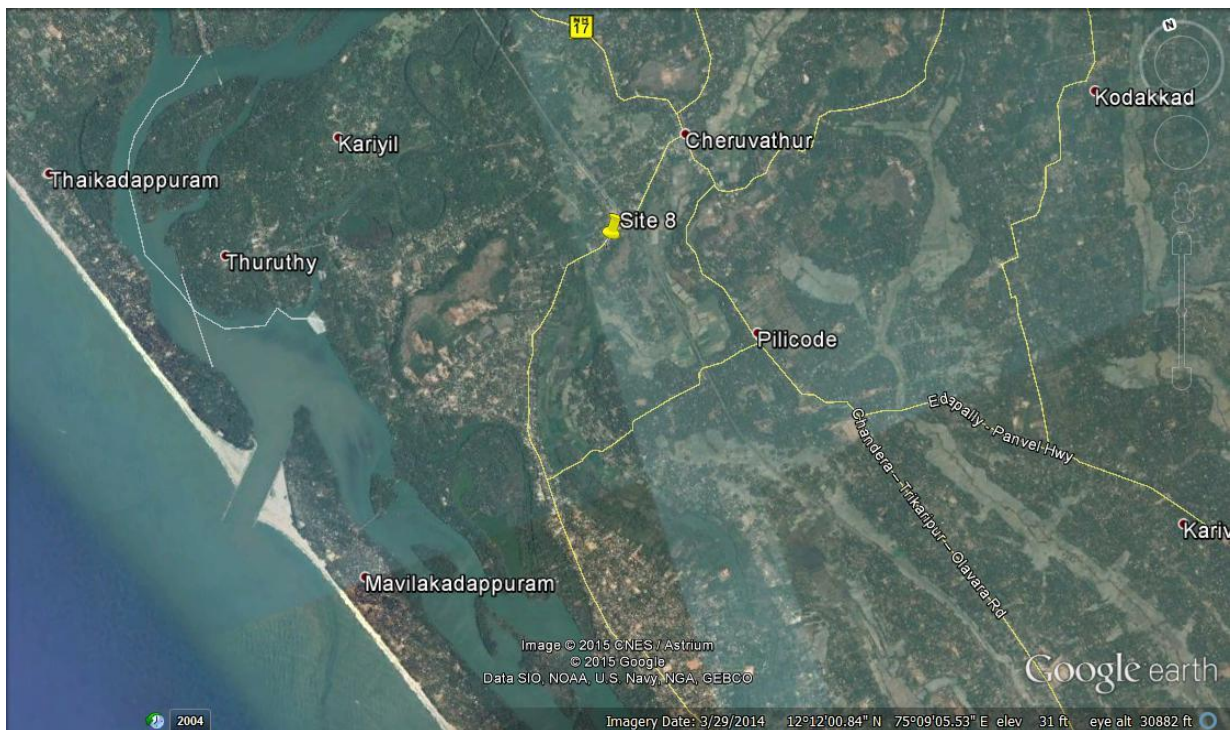
Observations

- The site is within the premises of GWUPS, Cheruvathur
- Two badly maintained shelters constructed earlier have to be demolished to facilitate construction
- Further construction in the school compound will leave very little open space for the school.

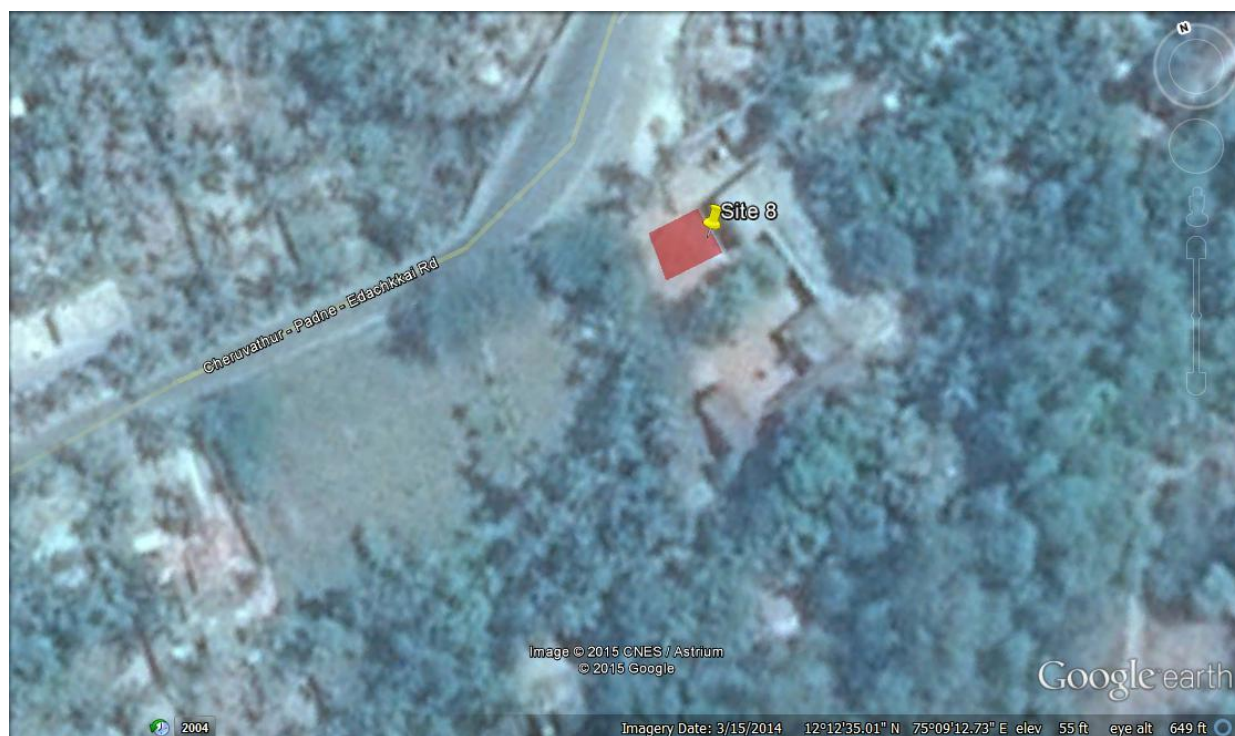
- The site is 2.4km from backwaters and 3km from sea

Assessment

- The site is not suitable for construction



1 and 2: Aerial view of the site



3 and 4: View of the site



4.3 Identification number: NCRMP/KER/KSD/HOS/CHERUVATHUR-3*

Site: Village Office, Cheruvathur

Taluk: Hosdurg

Village: Cheruvathur

Panchayath: Cheruvathur

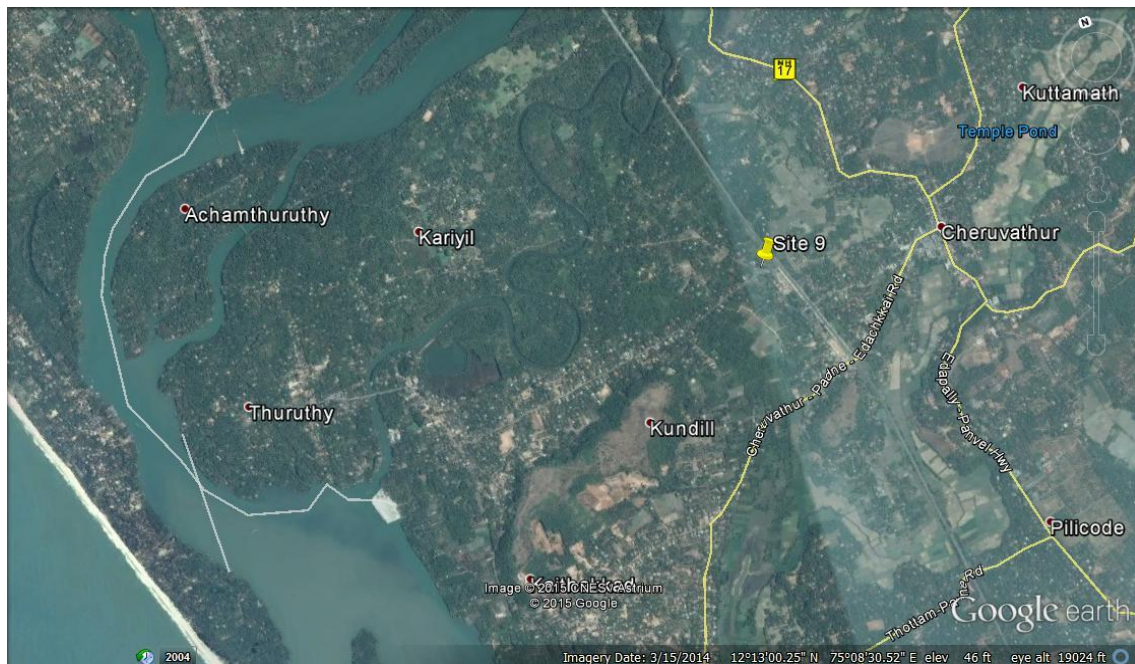
Lat: 12° 13' 2.4" Long: 75° 9' 9.5" (Ref GPS: 664)

Observation

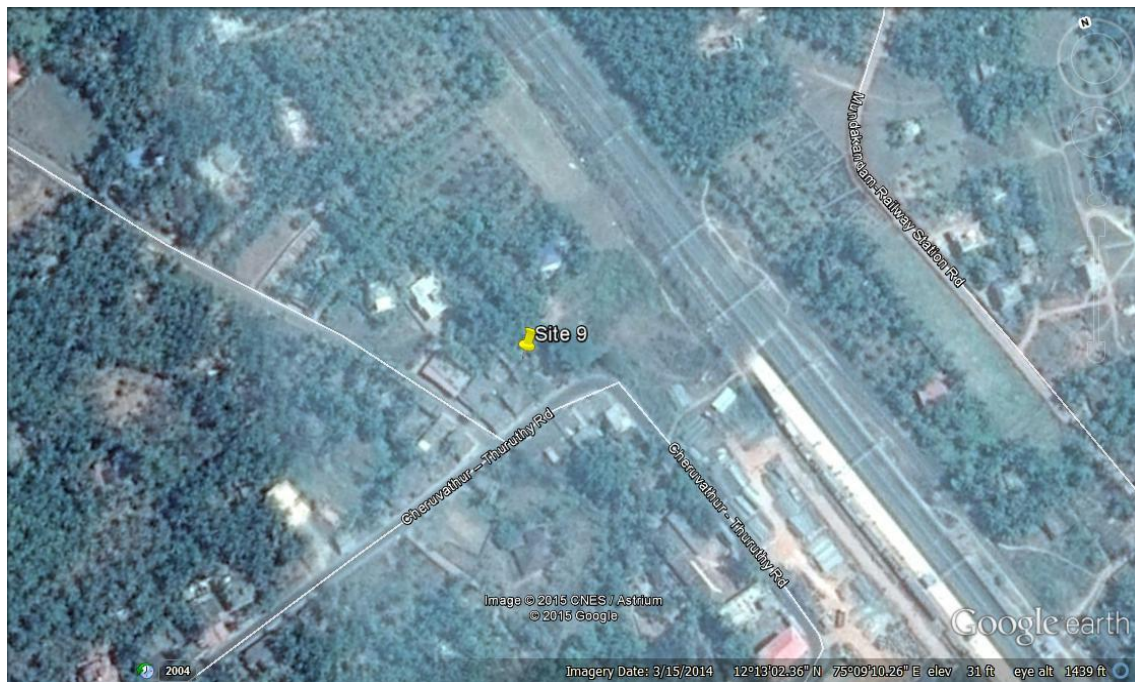
- The site is to the rear side of Village office of Cheruvathur.
- Approximately 7.5 cents of land is available for construction.
- The site is 70m from the railway line.
- The details of this site was not proposed from District Administration in the prescribed proforma but was screened upon suggestion from the Taluk and Village authorities.

Assessment

- The site is not suitable for construction



1 and 2: Aerial view of site



3. View of site. Village office building can be seen.

State Project Implementation Unit, NCRMP-Kerala

4.4 Identification number: NCRMP/KER/KSD/HOS/CHERUVATHUR-4

Site: Revenue land, Chevathur

Taluk: Hosdurg

Village: Cheruvathur

Panchayath: Cheruvathur

Lat: 12° 13' 2.1" Long: 75° 9' 10.5" (Ref GPS: 665)

Observation

- The proposed site in approximately 54 cents and has a seasonally water logged pit.
- Entry to the site is difficult commercial buildings block the free entry of vehicles.
- The safe bearing capacity of soil is comparatively low.
- The details of this site was not proposed from District Administration in the prescribed proforma but was screened upon suggestion from the Taluk and Village authorities.

Assessment

- The site is not suitable for construction



View of the site. Water logged pit can be seen.

4.5: Identification number: NCRMP/KER/KSD/MAJ/KOIPADY-2

Site: Revenue land, Mulyadukkam

Taluk: Manjeshwar

Village: Koipady

Block: 37 Survey number: 429/1 pt

Panchayath: Koipady Panchayath

Lat: 12° 36' 1.4" Long : 74° 58' 30.3" (Ref GPS: 650)

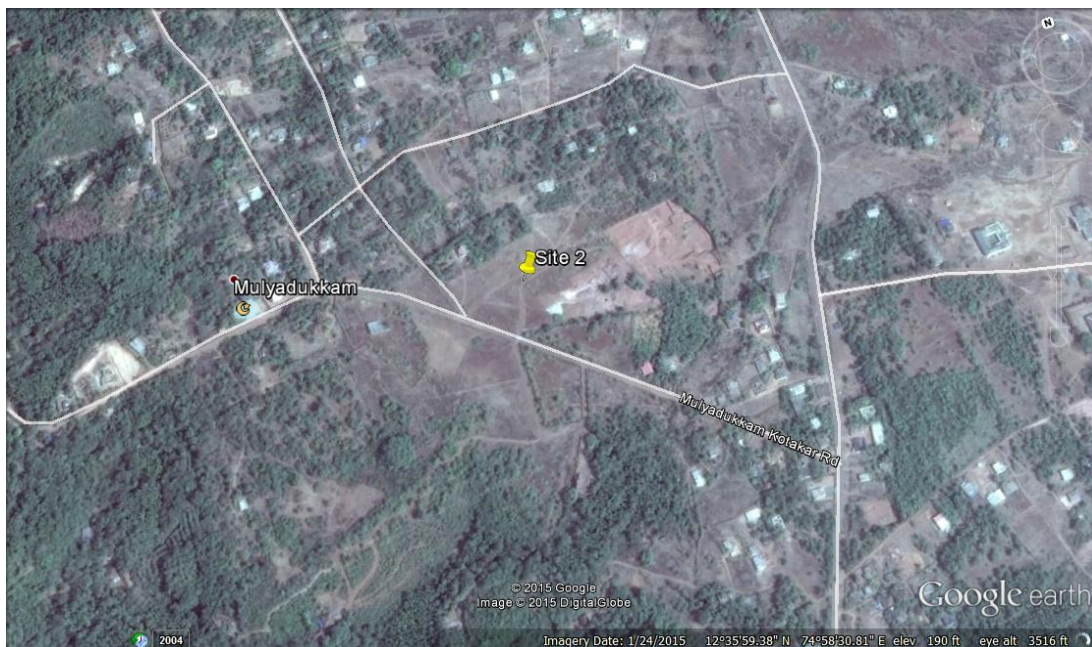
Observations

- The proposed site is located 3km from sea coast.
- The proposed site is in a remote location with limited access to other basic facilities.
- Around 2 acre of land is available for construction.T
- The site is accessible from Panchayath roads
- Difficulty in availability of water was pointed out by the officials/ Local community.

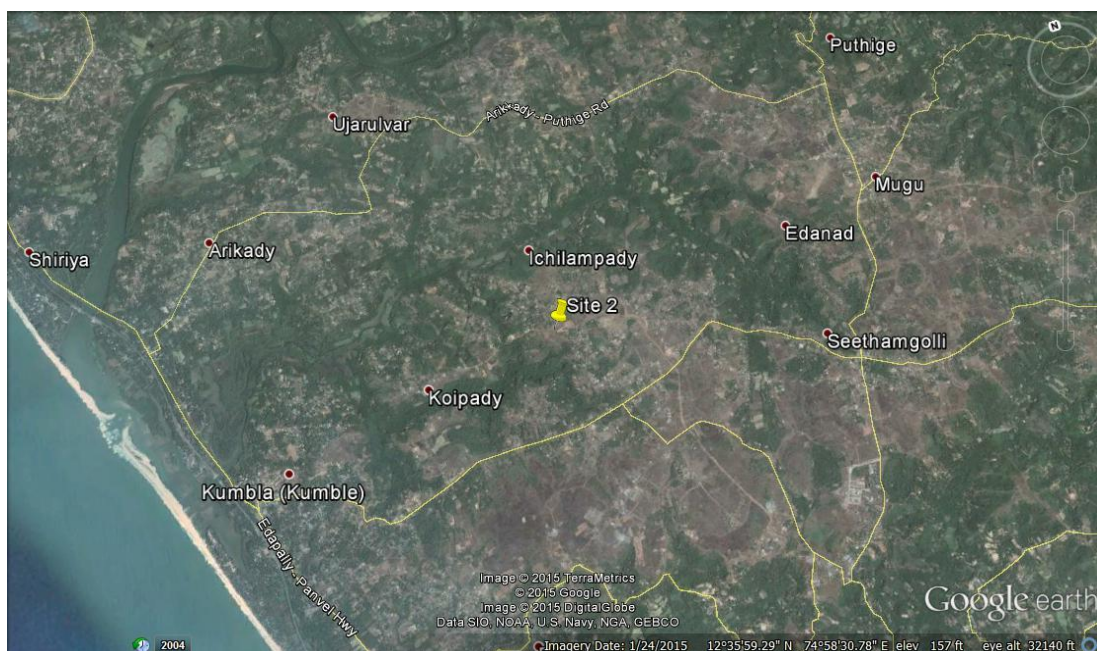
- Safe bearing capacity of the area is good on visual observation

Assessment

- The site is located away from a vulnerable population in a remote location.
- A building if constructed here cannot be put into any multipurpose use and as such there is a possibility that the building will be misused by anti-social elements.
- **The site may not be considered for construction of MPCS.**



1 and 2: Aerial view of the site



3 and 4: View of site



1. 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, 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 was 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 recommended

Sl no	Identification number	Place	Assessment criteria										TOTAL SCORE	RANK
			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			
1`	NCRMP/KER/KSD/KAS/KUDLU-1	Revenue land, Uliyathaduka	15	15	12	13	9	9	5	5	3	86	1	
2	NCRMP/KER/KSD/HOS/PULLUR-1	Revenue Land, Pullur	12	15	12	10	8	9	8	5	4	83	1	
3	NCRMP/KER/KSD/MAJ / KUMBLA-1	Government Senior Basic School, Kumbala	12	8	10	12	9	5	8	5	3	72	1	
4	NCRMP/KER.KSD/HOS/BARE-1	GWLPS, Bare	10	8	12	10	6	5	5	5	3	64	2	
5	NCRMP/KER/KSD/HOS/HOSDURG-1	Revenue land near RDO Office, Kanganhad	8	8	8	10	10	9	5	2	3	63	2	
6	NCRMP/KER/KSD/MAJ / KOIPADY-1	Revenue land, Mulyadukkam	1	8	10	12	2	7	6	5	2	53	2	
7	NCRMP/KER/KSD/HOS/CHERUVATTUR-1	Old Shelter, Maicha, Cheruvathoor	2	6	5	8	2	7	5	1	3	39	3	
8	NCRMP/KER/KSD/HOS/CHERUVATTUR-4*	Revenue land, Cheruvathur	2	2	10	4	4	9	2	4	1	38	3	
9	NCRMP/KER/KSD/HOS/CHERUVATTUR-2	GWUP school, Cheruvathoor	2	2	5	6	8	5	4	1	3	36	3	
10	NCRMP/KER/KSD/HOS/CHERUVATTUR-3*	Village Office, Cheruvathur	2	2	10	6	4	5	2	2	1	34	3	

*Details not available in proforma

5. ASSESSMENT SHEET

Total score	Rank	Status of recommendation
Between 71-100	1	Highly Recommended
Between 41-70	2	Recommended
Below 40	3	May not be recommended