

**Proposal:** Diversion of 0.6995 ha. of forest land in favour of M/s Dani Maha Mai Hydro Project Barod at Alu Ground, PO Kalath, Tehsil Manali Distt. Kullu, HP for construction of Barod SHEP (1.0 MW) within the jurisdiction of Kullu Forest Division. (Proposal No.FP/HP/HYD/21645/2016).

**DETAIL OF MUCK TO BE GENERATED AND DISPOSED DURING THE CONSTRUCTION OF PROJECT**

| Component             | Qty of Muck/ Debris to be generated (m <sup>3</sup> ) | Additional quantity of muck due to swell factor @40% (m <sup>3</sup> ) | Total quantity of muck/ debris (m <sup>3</sup> ) (1+2) | Estimated quantity of muck/ debris to be utilized (m <sup>3</sup> ) | Estimated quantity of muck/ debris to be dumped (4-5) (m <sup>3</sup> ) | Name of Dumping Sites                                    | Area of dumping sites (hectare) | Avg. Height of Dumping Sites (mtr) |
|-----------------------|-------------------------------------------------------|------------------------------------------------------------------------|--------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------|----------------------------------------------------------|---------------------------------|------------------------------------|
| 1.                    | 2.                                                    | 3.                                                                     | 4.                                                     | 5.                                                                  | 6.                                                                      | 7.                                                       | 8.                              | 9.                                 |
| C/o 1.0 MW Barod SHEP | 3480                                                  | 1392                                                                   | 4872                                                   | 2348                                                                | 2524                                                                    | MD-I, MD-II, MD-III, MD-IV, MD-V, MD-VI, MD-VII, MD-VIII | 0.11                            | 2.5                                |
|                       |                                                       |                                                                        |                                                        |                                                                     |                                                                         |                                                          |                                 |                                    |

(P.H) KULLU (H.P.)  
 DISTT KULLU (H.P.)  
 Signature of User Agency  
 Office Seal

  
 Divisional Forest Officer  
 Kullu Forest Division Kullu

  
 Dani Maha Mai Hydro Project  
 ALUGROUND, MANALI  
 DISTT KULLU (H.P.)

**Proposal:** Diversion of 0.6995 ha. of forest land in favour of M/s Dani Maha Mai Hydro Project Barod at Alu Ground, PO Kalath, Tehsil Manali Distt. Kullu, HP for construction of Barod SHEP (1.0 MW) within the jurisdiction of Kullu Forest Division. (Proposal No.FP/HP/HYD/21645/2016).

### Detail of Muck/Debris to be used during construction of project

| Sr. No. | Description                           | Quantity (in m <sup>3</sup> )                        |
|---------|---------------------------------------|------------------------------------------------------|
| 1       | For the soling purpose in the project | 70% of hard rock for c/o soling, B/wall, R/wall etc. |
| 2       | For the wearing of the project        |                                                      |
| 3       | For the retaining/Breast Walls        |                                                      |
| 4 (i)   | Total quantity to be produced         | 4872                                                 |
| (ii)    | Total quantity to be used             | 2348                                                 |
| (iii)   | Net debris/muck to be dumped (i-ii)   | 2524                                                 |

### Detail of Dumping Sites

| Sr. No. | Name of Dumping Site | Dumping Area (hectare) | Height of Dumping Site (mtr) | Capacity of Dumping Site (in m <sup>3</sup> ) | Quantity of Muck/ Debris to be dumped (m3) |
|---------|----------------------|------------------------|------------------------------|-----------------------------------------------|--------------------------------------------|
| 1.      | MD-I                 | (30x10) = 0.03         | 2.5                          | 750                                           | 712                                        |
| 2.      | MD-II                | (10x5) = 0.005         |                              | 125                                           | 110                                        |
| 3.      | MD-III               | (10x5) = 0.005         |                              | 125                                           | 110                                        |
| 4.      | MD-IV                | (10x5) = 0.005         |                              | 125                                           | 110                                        |
| 5.      | MD-V                 | (15x10) = 0.015        |                              | 375                                           | 330                                        |
| 6.      | MD-VI                | (30x10) = 0.03         |                              | 750                                           | 712                                        |
| 7.      | MD-VII               | (10x5) = 0.005         |                              | 125                                           | 110                                        |
| 8.      | MD-VIII              | (15x10) = 0.015        |                              | 375                                           | 330                                        |
|         | <b>Total</b>         | <b>0. 11</b>           |                              | <b>2750</b>                                   | <b>2524</b>                                |

  
Divisional Forest Officer  
Kullu Forest Division Kullu

  
Signature of User Agency  
Dani Maha Mai Hydro Project  
ALUGROUND, MANALI  
Office Seal  
DISTT KULLU (H.P.)

**Proposal:** Diversion of 0.6995 ha. of forest land in favour of M/s Dani Maha Mai Hydro Project Barod at Alu Ground, PO Kalath, Tehsil Manali Distt. Kullu, HP for construction of Barod SHEP (1.0 MW) within the jurisdiction of Kullu Forest Division. (Proposal No.FP/HP/HYD/21645/2016).

**Detail of Muck/Debris to be generated and disposed during the construction of project**

| Sr. No. | Description of Item | Quantity (m <sup>3</sup> ) | Remarks |
|---------|---------------------|----------------------------|---------|
| 1.      | Pick Work           | 1450                       | -       |
| 2.      | Jumper Work         | 1080                       | -       |
| 3.      | Hard Rock           | 950                        | -       |
|         | <b>Total</b>        | <b>3480</b>                |         |

**1. Total Muck/ Debris to be generated:**

- a) Total Muck Dumping Generated = 3480m<sup>3</sup>
- b) Applying swelling factor @ 40% of (a) = 1392m<sup>3</sup>
- c) Total muck/debris to be generated ((a) + (b)) = 4872 m<sup>3</sup>

**2. Total Muck/Debris to be utilized:**

- a) 70% of Hard Rock for c/o soling/ R/wall, B/wall etc. = 665m<sup>3</sup>
- b) 40% of pick work and jumper work to be utilized in project = 1012 m<sup>3</sup>
- c) Applying swelling factor @ 40% = 671m<sup>3</sup>

Total muck/debris to be utilized including swell factor = 2348 m<sup>3</sup>

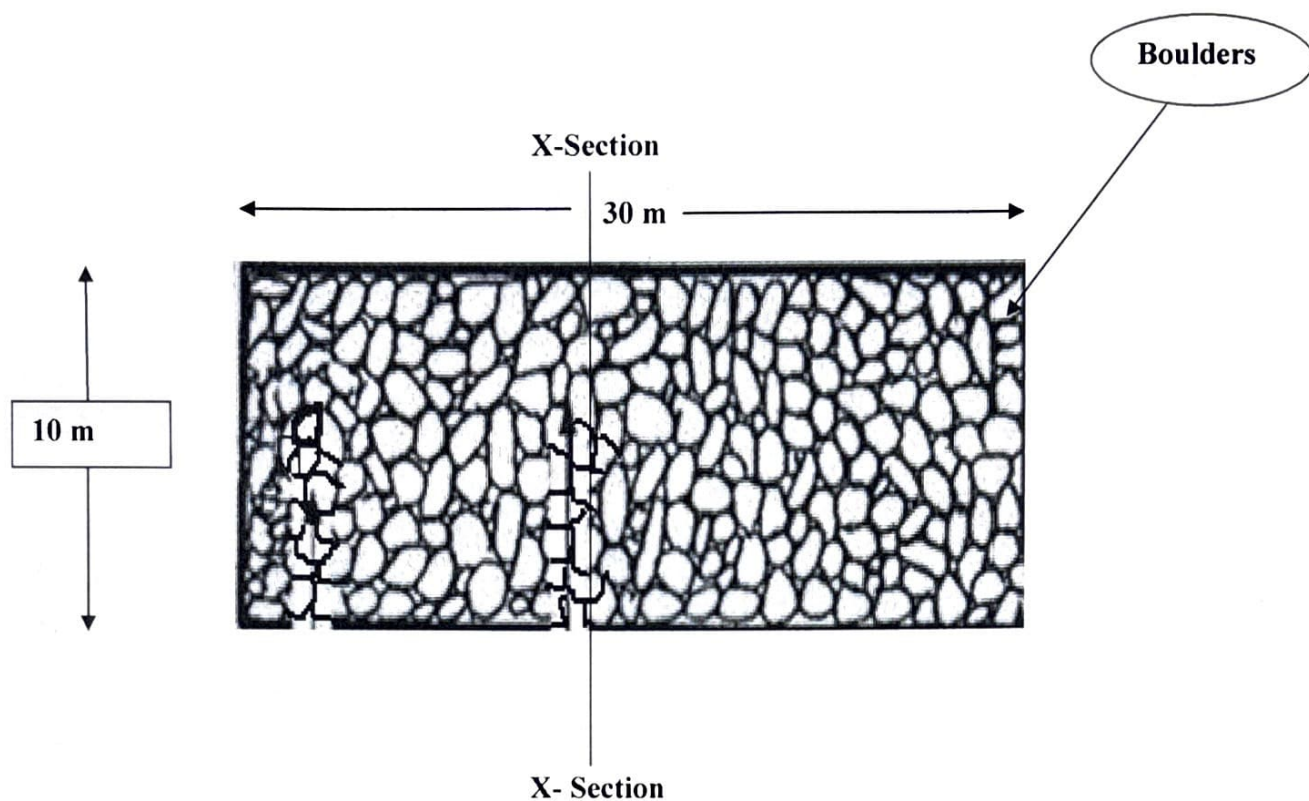
**3. Balance muck/debris to be dumped:**

- a) Total muck including swelling factor @40% to be generated = 4872m<sup>3</sup>
- b) Muck to be used including swelling factor @40% = 2348m<sup>3</sup>
- c) Total muck to be dumped ((a) - (b)) = 2524 m<sup>3</sup>

  
**Divisional Forest Officer**  
**Kullu Forest Division Kullu**

  
**Signature of Project Agency**  
**Dani Maha Mai Hydro Project**  
**ALU GROUND, MANALI**  
**Office Seal**  
**DISTT KULLU (H.P.)**

## DUMPING SITE X-SECTION DETAIL

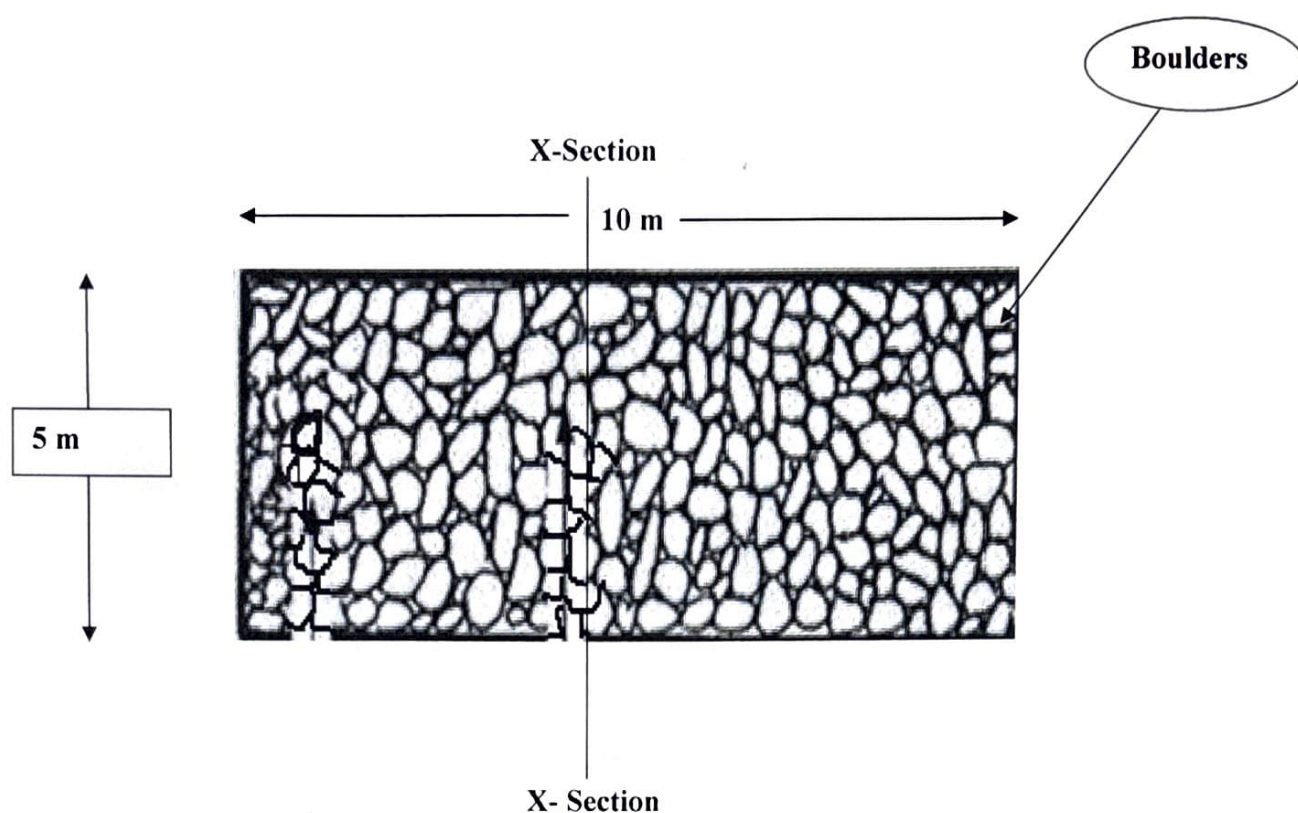


| Particular  | Qty        | Unit    | <b>Muck Dumping Site-I</b>                    |
|-------------|------------|---------|-----------------------------------------------|
| Area        | 30x10=0.03 | Hectare |                                               |
| Avg. Height | 2.5        | Metre   |                                               |
| Capacity    | 750        | cum     |                                               |
|             |            |         | C/o Barod Small Hydro Electric Project 1.0 MW |

  
 Divisional Forest Officer  
 Kullu Forest Division Kullu

  
 Dani Maha Mai Hydel Project  
 ALOGROUND, MANALI  
 DISTT KULLU (H.P.)

## DUMPING SITE X-SECTION DETAIL

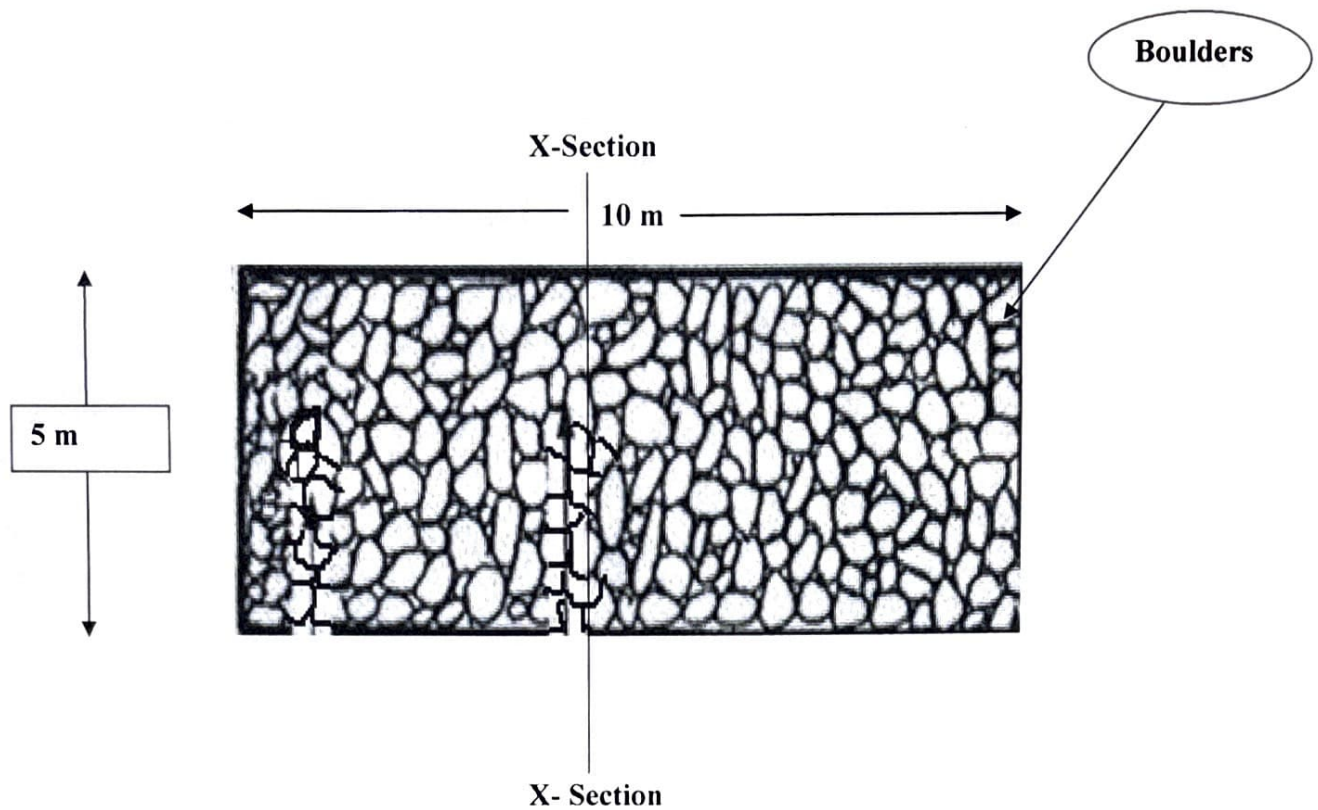


| Particular  | Qty         | Unit    | <b>Muck Dumping Site-II</b>                   |
|-------------|-------------|---------|-----------------------------------------------|
| Area        | 10x05=0.005 | Hectare |                                               |
| Avg. Height | 2.5         | Metre   | C/o Barod Small Hydro Electric Project 1.0 MW |
| Capacity    | 125         | cum     |                                               |

  
 Divisional Forest Officer  
 Kullu Forest Division Kullu

  
 Duni Maha Mai Hydel Project  
 ALOGROUND, MANALI  
 DISTT KULLU (H.P.)

## DUMPING SITE X-SECTION DETAIL



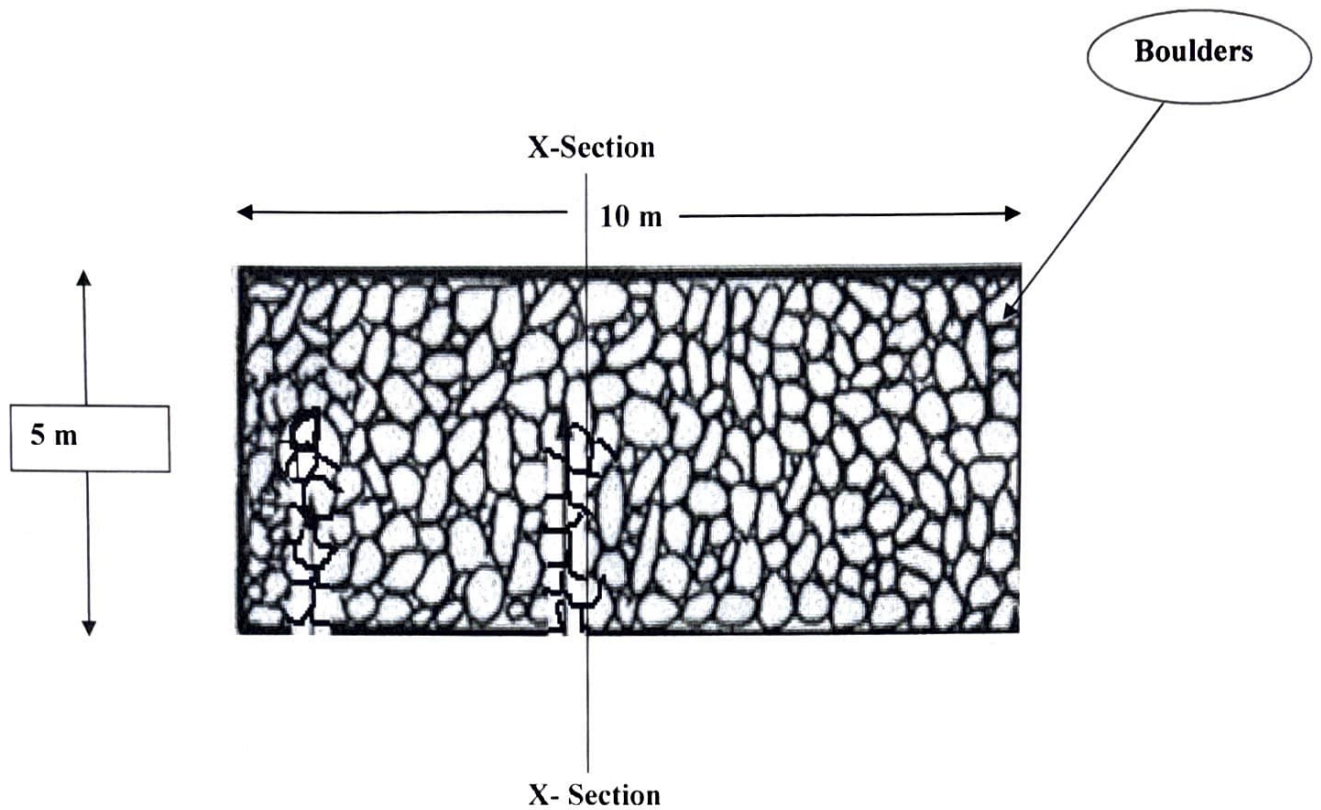
| Particular  | Qty         | Unit    | <b>Muck Dumping Site-III</b>                  |
|-------------|-------------|---------|-----------------------------------------------|
| Area        | 10x05=0.005 | Hectare |                                               |
| Avg. Height | 2.5         | Metre   |                                               |
| Capacity    | 125         | cum     |                                               |
|             |             |         | C/o Barod Small Hydro Electric Project 1.0 MW |

*[Signature]*

Divisional Forest Officer  
Kullu Forest Division Kullu

*[Signature]*  
Dani Maha Mai Hydel Project  
ALOGROUND, MANALI  
DISTT KULLU (H.P.)

## DUMPING SITE X-SECTION DETAIL

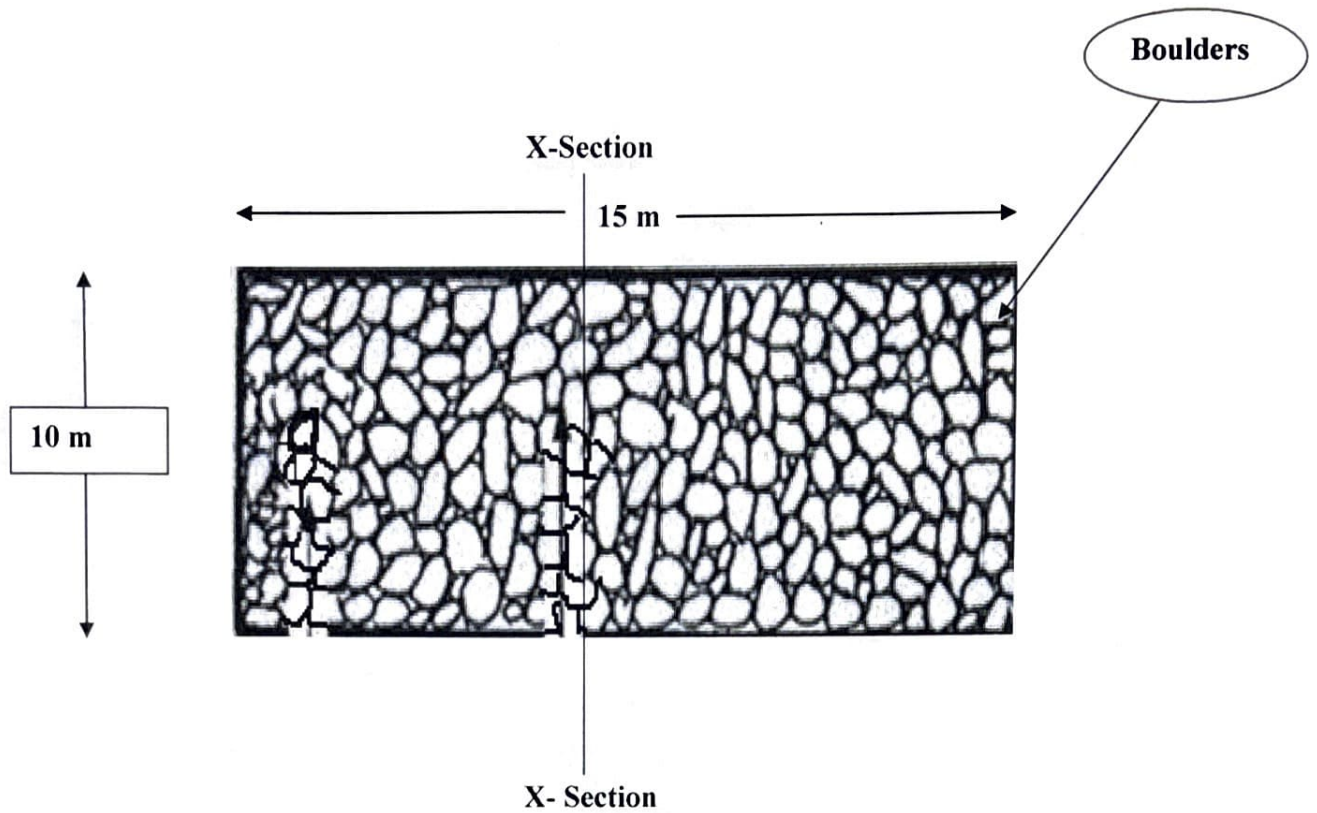


| Particular  | Qty         | Unit    | <b>Muck Dumping Site-IV</b>                   |
|-------------|-------------|---------|-----------------------------------------------|
| Area        | 10x05=0.005 | Hectare |                                               |
| Avg. Height | 2.5         | Metre   |                                               |
| Capacity    | 125         | cum     |                                               |
|             |             |         | C/o Barod Small Hydro Electric Project 1.0 MW |

  
 Divisional Forest Officer  
 Kullu Forest Division Kullu

  
 Dani Maha Mar Hydel Project  
 ALOGROUND, MANALI  
 DISTT KULLU (H.P.)

## DUMPING SITE X-SECTION DETAIL

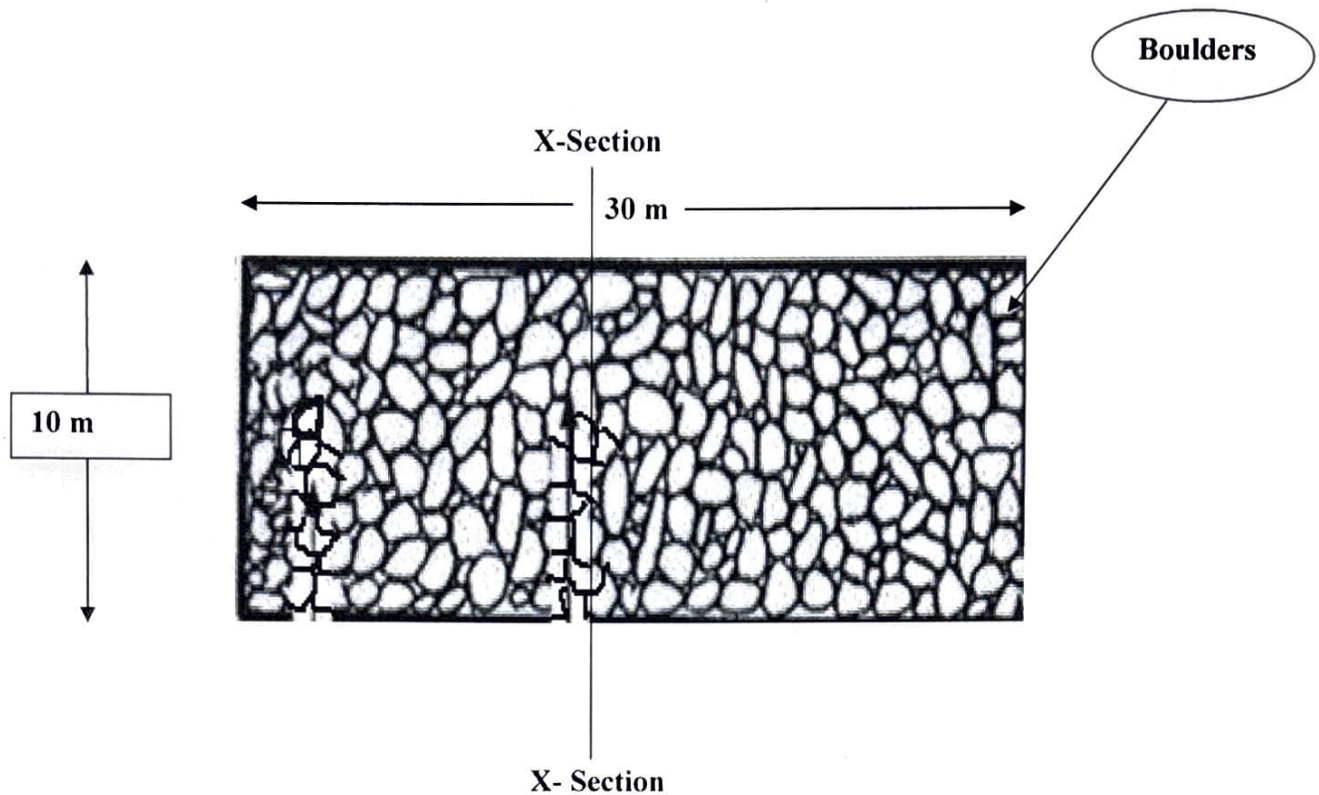


| Particular  | Qty         | Unit    | <b>Muck Dumping Site-V</b>                    |
|-------------|-------------|---------|-----------------------------------------------|
| Area        | 15x10=0.015 | Hectare |                                               |
| Avg. Height | 2.5         | Metre   | C/o Barod Small Hydro Electric Project 1.0 MW |
| Capacity    | 375         | cum     |                                               |

*[Signature]*  
 Divisional Forest Officer  
 Kullu Forest Division Kullu

*[Signature]*  
 Dant Maha Mai Hydel Project  
 ALOGROUND, MANALI  
 DISTT KULLU (H.P.)

## DUMPING SITE X-SECTION DETAIL

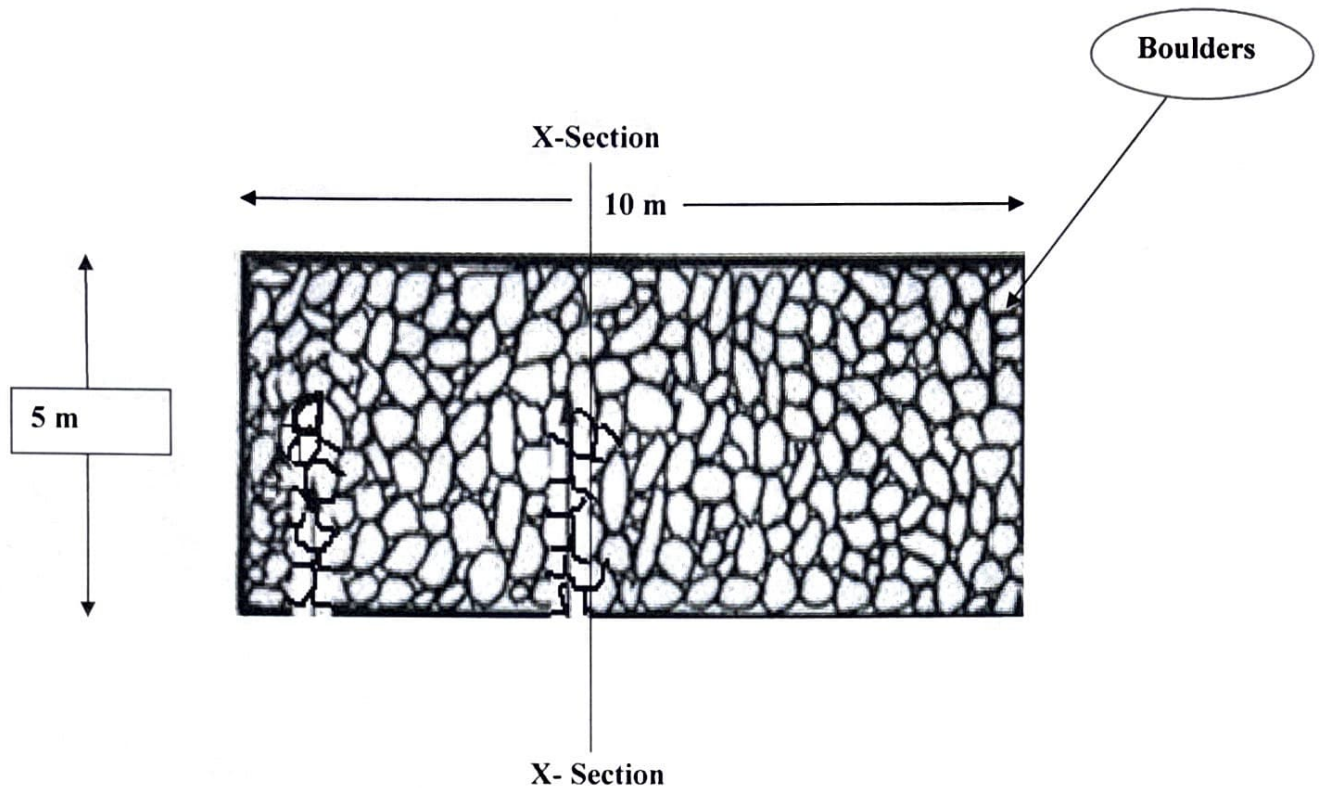


| Particular  | Qty        | Unit    | <b>Muck Dumping Site-VI</b>                   |
|-------------|------------|---------|-----------------------------------------------|
| Area        | 30x10=0.03 | Hectare |                                               |
| Avg. Height | 2.5        | Metre   |                                               |
| Capacity    | 750        | cum     |                                               |
|             |            |         | C/o Barod Small Hydro Electric Project 1.0 MW |

  
 Divisional Forest Officer  
 Kullu Forest Division Kullu

  
 Dani Maha Mai Hydel Project  
 ALOGROUND, MANALI  
 DISTT KULLU (H.P.)

## DUMPING SITE X-SECTION DETAIL

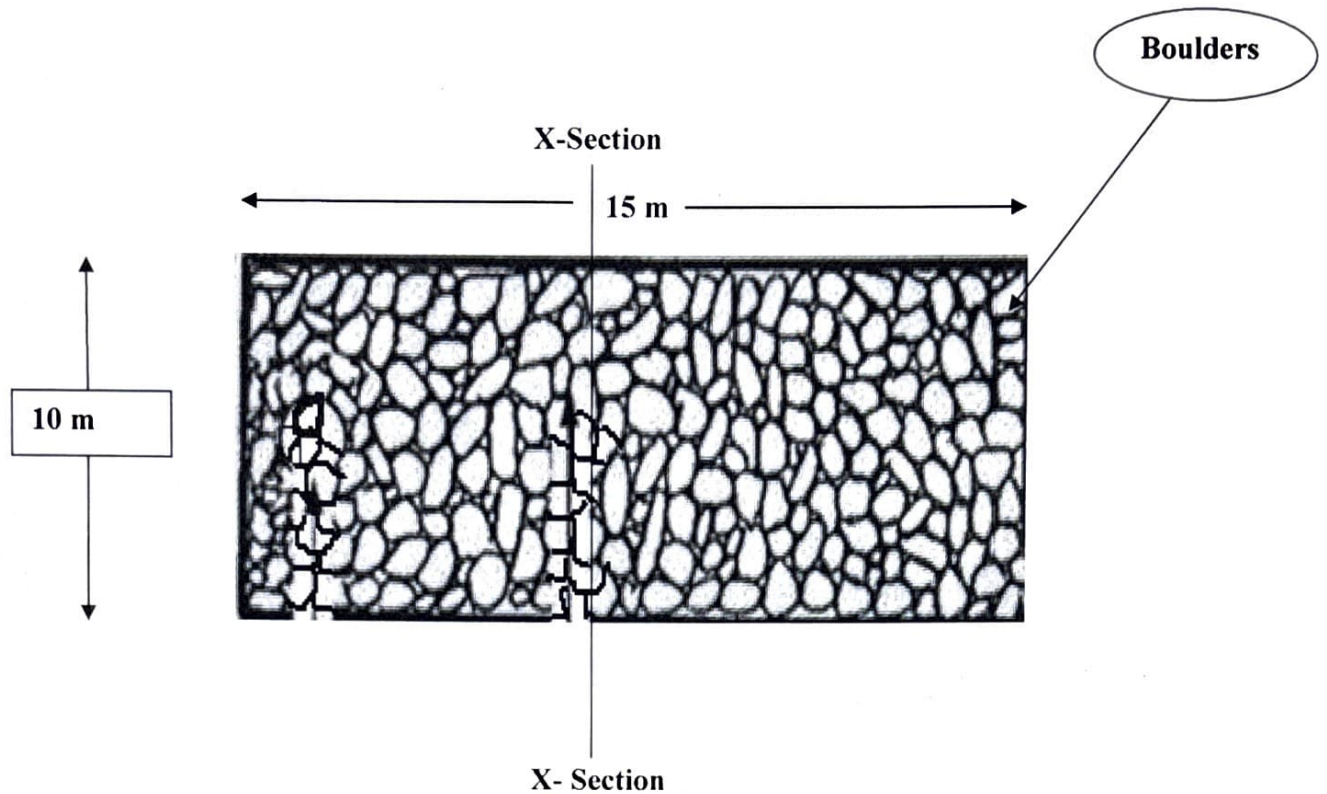


| Particular  | Qty         | Unit    | <b>Muck Dumping Site-VII</b>                  |
|-------------|-------------|---------|-----------------------------------------------|
| Area        | 10x05=0.005 | Hectare |                                               |
| Avg. Height | 2.5         | Metre   |                                               |
| Capacity    | 125         | cum     |                                               |
|             |             |         | C/o Barod Small Hydro Electric Project 1.0 MW |

  
 Divisional Forest Officer  
 Kullu Forest Division Kullu

  
 Dani Maha Mai Hydel Project  
 ALOGROUND, MANALI  
 DISTT KULLU (H.P.)

## DUMPING SITE X-SECTION DETAIL



| Particular  | Qty         | Unit    | <b>Muck Dumping Site-VIII</b>                 |
|-------------|-------------|---------|-----------------------------------------------|
| Area        | 15x10=0.015 | Hectare |                                               |
| Avg. Height | 2.5         | Metre   |                                               |
| Capacity    | 375         | cum     |                                               |
|             |             |         | C/o Barod Small Hydro Electric Project 1.0 MW |

  
 Divisional Forest Officer  
 Kullu Forest Division Kullu

  
 Dani Maha Mai Hydel Project  
 ALOGROUND, MANALI  
 DISTT KULLU (H.P.)