Department of Agriculture
Himachal Pradesh

No. Agr.SC.H. (H) 6-35/2016(MMKSY) - Vol. III- **Dated: Shimla-5, the**

From

Director of Agriculture,
Himachal Pradesh, Shimla-5.

To

1. The Additional Director of Agriculture,
   North Zone, Dharamshala, Distt. Kangra, H.P.
2. All the Dy. Directors of Agriculture in H.P.
3. The District Agriculture Officer,
   Kinnaur at Reckong Peo & Lahaul at Keylong, H.P.
4. The Assistant Project Officer (Agri.) Kaza
   Distt. Lahaul & Spiti, H.P.
5. The Subject Matter Specialist,
   Pangi & Bharmour, Distt. Chamba, H.P.

Dated: Shimla -5, the- 31 AUG 2019

Subject:- **Inclusion of Barbed Wire, Chainlink and Composite Fencing under Mukhya Mantri Khet Sansarkshan Yojna during the year 2019-20; supplementary guide lines thereof.**

Memo,

It is intimated that Govt. of Himachal Pradesh has conveyed the approval to include **Barbed Wire, Chainlink/ woven wire mesh and Composite Fencing systems under Mukhya Mantri Khet Sansarkshan Yojna during the year 2019-20** vide letter no. Agr.-B-F(10)-4/2018,dated 21st August,2019. As per approved proposal, the subsidy for installation of Barbed and Chainlink (Woven Mesh) Fencing system would be 50% and for composite fencing comprising of Solar Fencing integrated with G.I. Wire Mesh up to 0.60m and 1.20m height at the bottom would be 70% for individual farmer.

It is also made clear that Barbed wire and Chainlink (Woven Mesh) fencing shall be executed through self mode by the beneficiaries themselves. The specification of materials to be used in both the systems along with indicative detailed cost estimates are enclosed herewith for smooth implementation of the scheme. Under this scheme, the subsidy have been worked out for Angle iron Posts and R.C.C. Posts for both the systems and will be paid to the beneficiaries through RTGS after recording the actual measurements of work done at site in the register. It is also informed that no separate budget allocation shall be made for these newly included fence systems which may be met out from the budget already allocated to you under Mukhya Mantri Khet Sanrakhshan Yojna for the year 2019-20. Also ensure that 25% of the budget shall be made available for these newly introduced components out of the allocated budget for the year 2019-20.

The farmers would be free to opt any one system of the fencing whether it may be Barbed Wire fence, Chain link fence, Composite Fence & Solar Fence in consideration view of extent of crop loss caused by stray / wild animals, monkey menace and demand of the farmers, If the farmer wants to install barbed wire fence / Chainlink (Woven) Fence in his farm fields, he is further allowed to erect either R.C.C. pole or Angle iron pole in his fencing system and the subsidy may be disbursed accordingly.

The detailed supplementary operational guidelines are also enclosed for your guidance with regard to implementation of Barbed wire and Chainlink (Woven Mesh) fencing and shall be uploaded on departmental web site i.e. www. hpagriculture.com. You are also advised to circulate the sufficient copies of operational guidelines to all the PIA's along with devised Application formats , other related formats for further necessary action accordingly. Block wise physical & financial targets for the year 2019-20 may be fixed in accordance with the budget allocation already made to you under Mukhya Mantri Khet Sanrakshan Yojna in view of the demand of farming community.

You are further directed to undertake immediate necessary steps for the smooth implementation of the scheme as per these new supplementary guidelines. Any further clarifications regarding operational guidelines or others criteria's of the scheme can be clarified from this Directorate. Being Budget Assurance Scheme, the wide publicity of this scheme at District/Block/Panchayat levels, may be ensured through print media, electronic media, training camps in convergence with ATMA, so that more farmers may come forward to get the benefit of the scheme. In addition to this, the existing operational guidelines for installation of Solar Fencing shall also be continued for the implementation of this scheme.

Encl.: As above.

Director of Agriculture,
Himachal Pradesh.

Endst. No. as above. Dated: Shimla-5, the 31 AUG 2019

Copy to:-

1. The Principal Secretary (Agriculture) to the Govt. of Himachal Pradesh Shimla-171002 for information and necessary action w.r.t. his letter referred as above please.
2. All the Divisional Engineers (Soil Cons.), Division Shimla, Mandi at Bhangrotu & Palampur for information and necessary action.

Director of Agriculture,
Himachal Pradesh.

Supplementary Operational Guidelines for Implementation of Barbed Wire, Chainlink and Composite Fencing under Mukhya Mantri Khet Sanrakhshan Yojna(MMKSY) in H.P.

1) **Introduction:** In agriculture, fences are used to keep animals in or out of an area. They can be made from a wide variety of materials, depending on terrain, location and animals to be confined. Most agricultural fencing averages about 1.2 m high, and in some places, the height and construction of fences designed to hold livestock is mandated by law. Historically throughout most of the world, domesticated livestock would roam freely and were fenced out of areas, such as gardens or fields of crops, where they were unwanted. Over time, especially where crop agriculture became dominant and population density of both humans and animals was significant, livestock owners were made to fence their animals in.

While presenting budget for the year 2019-20, the Hon'ble Chief Minister has announced that the subsidy for Solar Fencing (80%) will continue to be provided and included the new components i.e. Barbed Wire and Chainlink (Woven/ Welded Mesh Wire) fencing in the ongoing scheme wherein 50 percent subsidy will be provided to individual farmers as well as a group of three or more farmer under "**Mukhya Mantri Khet Sanrakshan Yojna"** during the year 2019-20. The main objective is to protect the standing crops from stray & wild animals and monkeys menace as the present practice of crop protection by manual guarding does not ensure 100 % crop protection.

Further, the Hon,ble Agriculture Minister , Govt. of Himachal Pradesh has also advocated to include the Composite Fencing i.e. G.I. Wire Mesh integrated with Solar Fencing under this scheme on 50% and 80% subsidy respectively. Accordingly, detailed cost estimates for 1.50m and 1.80m height of composite fencing have been prepared with 1.20m wire mesh. The average pattern of subsidy for this type of composite system would be 70% .

In this regard, a budget provision of Rs. 3500.00lakh has been made for the year 2019-20 to protect approximately 1500 hectares cultivated areas from wild/ stray animals and monkey menace under this scheme. The scheme would be implemented in the entire state through Deputy Director of Agriculture of concerned districts . Composite Fencing shall be implemented through already empanelled service providers whereas Barbed wire and Chainlink (Woven/ Welded Mesh) fencing would be executed through self mode by the beneficiaries.

2) **Fencing Basics:-** The sturdiness and strength of wire fencing material can be measured by its wire gauge, and by its method of securing the wires together. Metal wire is measured according to an American Wire Gauge (AWG) rating, in which smaller numbers indicate thicker wires. In this system, 10-gauge wire is heavier than 12-gauge wire, for example. The strength of wire fencing material is also dependent on how the wires are secured together. The least expensive (and cheapest) wire fencing is welded wire, in which the individual wires are simply spot-welded at their intersection point. From this basic level, there are a variety of ways to weave and crimp and knot the vertical and horizontal wires together to provide strength that is appropriate to the use of the fence. Large animals have different needs than poultry, for example, and animals known to push or climb have fencing material

designed especially for them. Any farm's homestead may, of course, have the same types of residential fencing common in urban and suburban homes, such as chain link, picket fences, etc. Here are some common types of fencing unique to farms.

2.1) Strainer Assemblies :-Strainer assemblies also known as "end assemblies" are the most important part of the fence as they take the tension of the wire and eliminate any fence movement. Strainers are required at the end of each fence line, gateways, corners and changes in fence direction, at the crest or hills and bottom of gullies. Strainer assemblies may also need to be included at intervals in long fences over flat ground. Strainer posts must be stayed for each fence line it is connected to, so that the fence does not pull the post over. Strainer assemblies can be wooden, steel or concrete. Under this Yojna, the following three types of fence posts have been proposed.

2.2) Steel –It is suitable for high fire risk areas, susceptible to rust and corrosion particularly in coastal areas and acidic soils. However galvanized options are available and will extend the life of the post and are becoming increasingly popular.

2.3) Concrete – usually more expensive but are strong and durable. Care needs to be taken as they can crack when overstrained. The concrete posts are better than both wooden and iron ones and durable though the cost is slightly more than other two.

2.4) Wire fences:- The principle of wire fences is that they are supported mainly by tension, being stretched between heavy strutted or guy-wired posts at ends, corners, and ideally at intervals in longer stretches (every 50 to 300 metres). Between these braced posts are additional smaller wooden or metal posts which keep the wires spaced and upright, usually 3 to 6 metre apart, depending on the style of fencing used. Traditionally, wire fencing material is made of galvanized mild steel, but galvanized high-tensile steel is now also used in many places. To prevent sagging of the fence, which raises the risk of entanglement or escape, the wire is tensioned as much as the material will safely allow during construction by various means, including a hand-operated "wire stretcher" or "fence stretcher" (called a "monkey strainer" in some areas) or other leverage devices, a winch, or even by carefully pulling with a tractor or other vehicle. Wire fences are typically run on wooden posts, either from trees commercially grown in plantations or (particularly in the American West) cut from public lands. When less expensive or more readily available than wood, steel T-posts or star posts are used, usually alternating every 2 to 5 steel posts with a more stable wood post. Non-electrified wire is attached to wooden posts using fencing staples (for intermediate posts, these are fitted loosely, not gripping the wire). Non-electrified wire is held on T-posts by means of wire "clips" made of smooth galvanized wire that wrap around the back of the post and hook onto the wire on either side of the post. Other than in a truly desert climate, use of rot-resistant wooden posts or steel posts is advised. In the United States, wood with natural rot resistance, such as oak and juniper, was often used until it became in short supply in the 1950s. Then, chemically treated pine and spruce posts became prevalent, and these are also widely used in Britain, together with chestnut. Creosote, pentachlorophenol, and chromated copper arsenate are all widely used in the US and elsewhere for treatment (although some of these chemicals are subject to legal controls).

3) **Component :-** Under this project, the three new components have been proposed :

1) Barbed wire fencing with Angle Iron and R.C.C. Posts.
2) Chainlink fencing with Angle Iron and R.C.C. Posts.3
3) Composite Fencing i.e. G.I. Wire Mesh integrated with Solar Powered System.

3.1) Barbed Wire:- Barbed wire is the classic farm fencing for confining cattle, consisting of six horizontal strands and two diagonals of strong of galavanised steel barbed wire (IS:278-1962 Type -I) into which sharp barbs are inserted. The strands are strung between metal or wooden posts. Barbed wire fences confine livestock through simple aversion—animals come to associate the fencing with painful pricks and learn to stay away from it. Barbed wire works fairly well for confining relatively docile animals in large spaces, but can easily be broached by a large, aggressive animal. They are not very attractive, but highly effective for their purpose.

Barbed wire fencing goes up very quick, saving on labor costs. Most of the fencing is barbed wire to keep cows and horses out of the forest. However most of the barbed wire is on wooden posts which eventually rot so ongoing maintenance is needed. And the wooden posts require the harvesting of wood. Some people make concrete posts, but those are high cost and since the barbed wire is weak, seem like overkill. No security against humans.

Under this Yojna, the Barbed wire fencing has been proposed for two fence posts i.e. Angle Iron Post and R.C.C. Fence posts with six horizontal strands and two diagonal wire.

3.2) **Chain-link fence** (also referred to as **wire netting**, **wire-mesh fence**, **chain-wire fence**, **cyclone fence**, **hurricane fence**, or **diamond-mesh fence**) is a type of woven fence usually made from galvanized coated steel wire. The wires run vertically and are bent into a zig-zag pattern so that each "zig" hooks with the wire immediately on one side and each "zag" with the wire immediately on the other.

Sizes and uses:- The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric. The width of the fabric shall be 0.90m,1.20m,1.50m,1.80m,2.00m, and 3.00m or as per the requirement of the purchaser. The fabric shall be supplied in rolls of 5.00m, 10.00m, 15.00m, 20.00m, and 25m or as per the requirement of the purchaser ; of wire and mesh sizes . The popularity of chain-link fence is from its relatively low cost and that the open weave does not obscure sunlight from either side of the fence. One can make a chain-link fence semi-opaque by inserting slats into the mesh. Allowing ivy to grow and interweave itself is also popular.

Installation: The installation of chain-link fence involves setting posts into the ground and attaching the fence to them. The posts may be Angle Iron or concrete and may be driven into the ground or set in concrete. End, corner or gate posts, commonly referred to as "terminal posts", must be set in concrete footing or otherwise anchored to prevent leaning

under the tension of a stretched fence. Posts set between the terminal posts are called "line posts" and are set at intervals not to exceed 3.05 feet. The installer attaches the fence at one end, stretches it, and attaches at the other, easily removing the excess by "unscrewing" a wire. Finally, the installer ties the fence to the line posts with aluminium wire. In many cases, the installer stretches a bottom tension wire, sometimes referred to as "coil wire", between terminal posts to help minimize the in and out movement that occurs at the bottom of the chain-link mesh between posts. Top horizontal rails are used on most chain-link fences, although not necessary. Bottom rails may be added in lieu of bottom tension wires, and for taller fences, 10 feet or more, intermediate horizontal rails are often added. Once stretched, a bottom wire should be secured to the line posts and the chain-link mesh "hog ringed" to the tension wire 50mm on centre.

Under this Yojna, the Chain link (Woven Mesh) fencing has been proposed for two fence posts i.e. Angle Iron Post and R.C.C. Fence posts with 100mm to 150mm mesh size woven with 5mm thick G.I. Wire .

3.3) Composite Fencing –Welded Wire Mesh/G.I. Woven Mesh integrated with Solar Fencing:

Under this system, two types of models of composite fencing have been proposed for 1.50m and 1.80m heights which comprises 0.60m & 1.20m woven G.I. wire mesh / Welded wire mesh at the bottom of fence and 2 & 4 horizontal strands for 1.50m height and 3 & 5 horizontal strands for 1.80m height of H.T. Wires at the top of fence which will be energized by Solar Modules .

3.3.1) Welded Wire Mesh /G.I. Woven Mesh :-This basic farm fencing is made from rigid wires arranged in vertical and horizontal rows with joints welded together. Typically the grid squares 50mm wide and 100mm or150mm tall. Welds may break, so this type is normally used for light-weight applications, such as confining small animals or to protect poultry or gardens. It can, for example, be used to keep foxes, coyotes, and other small predators away from small livestock. Welded wire fencing is typically made from 16-gauge or 14-gauge wire, and is sold in rolls that are 0.60m, 0.90m, 1.20m or 1.50m wide.

Under this scheme, the height of G.I. Woven mesh has been kept 0.60m & 1.20m which will be supported with Angle iron post of 35mmx35mm x5mm at 2.50m Centre to Centre and flat iron of 25mm x3mm.

3.3.2) Solar Powered Electric Fence: The solar powered fence electrifies the fence with pulsating current and these pulses are the "shock" felt by an animal that touches an electrified fence. Unlike a conventional fence, an electric fence is a psychological barrier such that animals learn to respect the fence. Any periphery can be solar fenced, though the cost differs with respect to the area to be fenced. An electric fence is a barrier that uses electric shocks to deter animals or people from crossing a boundary. The voltage of the shock may have effects ranging from discomfort to death. Most electric fences are used today for agricultural fencing and other forms of animal control, although they are frequently used to enhance the security of sensitive areas, such as military installations, prisons, and other security sensitive places; places exist where lethal voltages are used.

Under Composite Fencing, two types of fencing systems have been taken up. In the first system, G.I. Wire woven mesh would be installed up to 0.60m height above ground level which is further integrated with solar powered fence of 0.60m height and 1.20m height thus having total height of 1.50m and 1.80m respectively. In the 2nd system, G.I. Wire woven mesh would be installed up to 1.20m height above ground level which is further integrated with solar powered fence of 0.30m height and 0.60m height thus having total height of 1.50m and 1.80m respectively. The indicative cost estimates are enclosed at Annexure- for reference.

4) **Maintenance:-** All types of agricultural fencing require regular maintenance to ensure their effectiveness. Cattle and horses are strong enough to go through most types of fence by main force, and occasionally do so when frightened or motivated by hunger, thirst, or sex drive. Weather, flood, fire, and damage from vandals or motor vehicle accidents can do similar damage and may allow livestock to escape.

5) Project Areas, Beneficiaries and Eligibility Criteria:-

1) Project shall be implemented in all the districts of the State as per demand and need of farming community .
2) Farmers should have cultivated land as per revenue record in the state and have a compact piece of land.
3) Priority would be given to those farmers and group of 3 or more farmers whose cultivable land is adjacent to the forest lands and agriculture is being done on that land. The scheme will not be apply on barren and non-cultivable lands.
4) Preference for availing assistance would be given to the farmers whose livelihood source is Agriculture & Horticulture sector only.
6) Preference shall be given to community farming system and preferential areas would be those where cultivated land is in one compact patch in order to avoid legal complications.

6) Procedure for obtaining Administrative and Financial Sanction:

6.1) Farmers willing to install Barbed Wire / Chainlink Fencing systems for availing project assistance shall submit an application along with supporting revenue papers with the concerned Deputy Director of Agriculture ,who is the project sanctioning authority through Project Implementing Agency (PIA) in the development block i.e. Subject Matter Specialist on prescribed application form **(Annexure-A).**

6.2) The prescribed application forms shall be made available in all the offices of the Department at District, Block level and Circle level. Farmers can submit applications to the Agriculture Extension Officer of the area, Agriculture Development Officer, Subject Matter Specialist at the Block level.

6.3) The PIA/DNO shall maintain a beneficiary register as per format –B & C and submit the format B to DNO for obtaining Administrative approval .

6.4) D.N.O. shall issue administrative approval after scrutiny of the cases within 10 days from the date of receipt of cases from PIA's with a copy to the concerned bank, in case of Bank Loan.

6.5) DNO will ensure that the copy of technical specifications to be used in fencing work be supplied along with authorization letter to the concerned beneficiary as per format at **Annexure-E.**

6.6) The DNO shall issue authorization letter in favour of the beneficiary for the installation of Barbed wire/Chainlink fencing as per recommendation of PIA on the prescribed authorization letter given at **Annexure-D.**

6.7) DNO shall sanction the projects and project assistance as per the final assessment and recommendation received from the PIA within 20 days from receipt of such request. Completion period of each sub-project should be 90 days from the issue date of authorization letter.

7) Pattern of Financial Assistance:

7.1) Barbed Wire Fencing :- Under this component, the financial assistance shall be provided for two different types of fence posts i.e. Angle Iron Post and R.C.C. Posts with a fence height of 1.50m for a maximum perimeter of 3000m farm field. The financial assistance pattern shall be under:

7.1.1) Financial Assistance under Barbed Wire Fencing with Angle Iron Posts: Under this system, the beneficiary would be provided subsidy @ 50% limited to Rs. 208/- per meter (maximum) or as per the actual work done basis whichever is less for erecting and installation of barbed wire fencing with angle iron fence posts. Indicative total unit cost of Barbed Wire Fencing with Angle Iron Posts derived from detailed cost estimates enclosed at **Annexure- I to V** is as under :

Model	**Perimeter of Farm Land (Meter)**	**Total Cost**	**Cost per meter (Rs.)**
1	**2**	**3**	**4**
Model 1	100	43246	430
Model 2	500	209082	420
Model 3	1000	416011	420
Model 4	2000	830357	420
Model5	3000	1244460	410
Average of Above			**416**

7.1.2) Financial Assistance under Barbed Wire Fencing with R.C.C Posts: Under this system, Farmers would be provided subsidy @ 50% limited to Rs 265/- per meter(maximum) or as per the actual work done basis whichever is less for erecting barbed wire fencing with R.C.C. Fence posts. Indicative total unit Cost of Barbed Wire Fencing with R.C.C. Posts derived from detailed cost estimates enclosed at **Annexure- VI to X** is as under :

Model	**Perimeter of Farm Land (Meter)**	**Total Cost**	**Cost per meter (Rs.)**
1	**2**	**3**	**4**
Model 1	100	54946.53	550
Model 2	500	265355.59	530

Model 3	1000	528002.01	530
Model 4	2000	1053781.39	530
Model 5	3000	1579317.50	530
Average of Above			**530**

7.2) Chain link Fencing :- Under this component, the financial assistance shall be provided for two different types of fence posts such as Angle Iron Post and R.C.C. Posts with a fence height of 1.50m for a maximum perimeter of 3000m farm field. The financial pattern shall be under:

7.2.1) Farmers would be provided subsidy @ 50% limited to Rs. 320/- per meter (maximum) or as per the actual work done basis whichever is less for installation of Chain Link fencing with angle iron fence posts. Indicative total unit Cost of Chain link Fencing with Angle Iron Posts derived from detailed cost estimates enclosed at **Annexure- XI to XV** is as under :

Model	**Perimeter of Farm Land (Meter)**	**Total Cost**	**Cost per meter (Rs.)**
1	**2**	**3**	**4**
Model 1	100	56999.00	570
Model 2	500	278771.00	560
Model 3	1000	647207.00	650
Model 4	2000	1292793.00	650
Model 5	3000	1938203.00	650
Average of above			**642 or say Rs. 640/-**

7.2.2) Farmers would be provided subsidy @ 50% limited to Rs 350/- per meter (maximum) or as per the actual work done basis whichever is less for erecting / installation of Chain link fencing with R.C.C. Fence posts. Indicative total unit Cost of Barbed Wire Fencing with R.C.C. Posts derived from detailed cost estimates enclosed at **Annexure- XVI to XX** is as under :

Model	**Perimeter of Farm Land (Meter)**	**Total Cost**	**Cost per meter (Rs.)**
1	**2**	**3**	**4**
Model 1	100	67745.00	680.00
Model 2	500	329823.00	660.00
Model 3	1000	709920.00	710.00
Model 4	2000	1417613.00	710.00
Model 5	3000	2125307.00	710.00
Average of above			**706 or say Rs. 700/-**

7.3) Composite Fencing integrated with Welded Mesh & Solar Powered System:- Under this component , two types of fencing systems have been taken up. The financial assistance @ 70% has been proposed up to 3000meter perimeter of cultivated land on actual measurements basis as per norms.

6.3.1) In the first system, G.I. Wire woven mesh would be installed up to 0.60m height above ground level which is further integrated with solar powered fence of 0.60m height and 1.20m height thus having total height of 1.50m and 1.80m respectively. The indicative cost estimates are enclosed at **Annexure-XXI to XXXVIII** for reference.

The detail of unit cost for Composite Fencing of 0.60m high G.I. Wire mesh / welded mesh integrated with 0.90 m high solar fence for 1.50meter height derived from detailed cost estimates is as under:-

Model	Perimeter of Fence (Running Meter)	No. of Strands & Height	Unit Cost per Running Meter (Rs.)	Financial Assistance @70%per Running Meter (Rs.)	Beneficiaries Share per rmt. (Rs.)
Model-1	100	4Wires (1.50m)	1370.00	959.00	411.00
Model-2	200	4Wires (1.50m)	1080.00	756.00	324.00
Model -3	300	4Wires (1.50m)	990.00	693.00	297.00
Model-4	500	4Wires (1.50m)	910.00	637.00	273.00
Model-5	750	4Wires (1.50m)	870.00	609.00	261.00
Model-6	1000	4Wires (1.50m)	850.00	595.00	255.00
Model-7	1500	4Wires (1.50m)	830.00	581.00	249.00
Model-8	2000	4Wires (1.50m)	820.00	574.00	246.00
Model-9	3000	4Wires (1.50m)	810.00	567.00	243.00

The detail of unit cost for Composite Fencing of 0.60m high G.I. Wire mesh / welded mesh integrated with 1.20m high solar fencing for 1.80meter height derived from detailed cost estimates is as under:-

Model	Perimeter of Fence (Running Meter)	No. of Strands & Height	Unit Cost per Running Meter (Rs.)	Financial Assistance @70%per Running Meter (Rs.)	Beneficiaries Share per rmt. (Rs.)
Model-1	100	5Wires (1.80m)	1420.00	994.00	426.00
Model-2	200	5Wires (1.80m)	1120.00	784.00	336.00
Model -3	300	5Wires (1.80m)	1030.00	721.00	309.00
Model-4	500	5Wires (1.80m)	950.00	665.00	285.00
Model-5	750	5Wires (1.80m)	910.00	637.00	273.00
Model-6	1000	5Wires (1.80m)	890.00	623.00	267.00

Model-7	1500	5Wires (1.80m)	870.00	609.00	261.00
Model-8	2000	5Wires (1.80m)	860.00	602.00	258.00
Model-9	3000	5Wires (1.80m)	850.00	595.00	255.00

7.3.2) In the 2nd system, G.I. Wire woven mesh would be installed up to 1.20m height above ground level which is further integrated with solar powered fence of 0.30m height and 0.60m height thus having total height of 1.50m and 1.80m respectively. The indicative cost estimates are enclosed at **Annexure- XXXIX to LVI** for reference.

The detail of unit cost for Composite Fencing of 1.20m high G.I. Wire mesh / welded mesh integrated with 0.30m high solar fencing for 1.50meter height derived from detailed cost estimates is as under:-

Model	**Perimeter of Fence (Running Meter)**	**No. of Strands & Height**	**Unit Cost per Running Meter (Rs.)**	**Financial Assistance @70%per Running Meter (Rs.)**	**Beneficiaries Share per rmt. (Rs.)**
Model-1	100	2Wires (1.50m)	1490.00	1043.00	447.00
Model-2	200	2Wires (1.50m)	1200.00	840.00	360.00
Model -3	300	2Wires (1.50m)	1100.00	770.00	330.00
Model-4	500	2Wires (1.50m)	1020.00	714.00	306.00
Model-5	750	2Wires (1.50m)	980.00	686.00	294.00
Model-6	1000	2Wires (1.50m)	970.00	679.00	291.00
Model-7	1500	2Wires (1.50m)	950.00	665.00	285.00
Model-8	2000	2Wires (1.50m)	940.00	658.00	282.00
Model-9	3000	2Wires (1.50m)	930.00	651.00	279.00

The detail of unit cost for Composite Fencing of 1.20m high G.I. Wire mesh / welded mesh integrated with 0.60m high solar fencing for 1.80meter height derived from detailed cost estimates is as under:-

Model	**Perimeter of Fence (Running Meter)**	**No. of Strands & Height**	**Unit Cost per Running Meter (Rs.)**	**Financial Assistance @70%per Running Meter (Rs.)**	**Beneficiaries Share per rmt. (Rs.)**
Model-1	100	3Wires (1.80m)	1530.00	1071.00	459.00
Model-2	200	3Wires (1.80m)	1240.00	868.00	372.00
Model -3	300	3Wires (1.80m)	1140.00	798.00	342.00
Model-4	500	3Wires (1.80m)	1060.00	742.00	318.00
Model-5	750	3Wires (1.80m)	1020.00	714.00	306.00
Model-6	1000	3Wires (1.80m)	1000.00	700.00	300.00

Model-7	1500	3Wires (1.80m)	980.00	686.00	294.00
Model-8	2000	3Wires (1.80m)	970.00	679.00	291.00
Model-9	3000	3Wires (1.80m)	960.00	672.00	288.00

Note :-

8) **Mode of Implementation:-** The programme will be implemented by the Deputy Directors of 10 districts through Project Implementing Agency (PIA) in the development block i.e. Subject Matter Specialist. In Tribal districts , the District Agriculture Officer , Keylong & Assistant Project Officer, Kaza of Lahaul& Spiti District, District Agriculture Officer ,Reckongpeo , Distrct Kinnaur, Subject Matter Specialist Pangi and Bharmour of District Chamba in their respective areas/ districts will act as Project Sanctioning Authority as well as Project Implementation Agencies (PIA,s). The PIAs shall be responsible for identification and selection of the potential beneficiaries.

9) **Implementation Process:-** The project would be implemented as per the process given below:

9.1) First two components i.e. Barbed Wire Fencing and Chain link Fencing shall be implemented by the beneficiary himself mode as per approved specifications, rates and terms & conditions. The beneficiary will apply to the Deputy Director of Agriculture of concerned district on prescribed format supplied by the department through concerned Subject Matter Specialist. The Deputy Director of Agriculture will sanction the scheme and award the work to the concerned beneficiary along with a copy of specifications and rates applicable. The assistance would be released to the beneficiary through direct benefit transfer (DBT) in their bank accounts after field monitoring of fencing on their agricultural fields.

9.2) The Composite Fencing integrated with **Woven/Welded Mesh & Solar Powered System** shall be implemented through the service providers already empanelled for Solar Fencing work on the basis of item wise rates finalized by department for solar fencing, however other terms & conditions, application format and other formats already circulated shall remain as such. Before installing the composite fencing system, the beneficiaries are allowed to choose welded mesh as well as Woven mesh in view of financial resources. The rates for extra items i.e. welded Mesh etc. over and above the approved cost shall be borne by the beneficiaries themselves.

10) **Monitoring and Evaluation: -** This would help in bringing about need based modifications in the operational modalities of the project and would provide guidance with regard to facilitation required for the success of the project both to the beneficiaries and implementing department. It would be done by the;

10.1) State level project implementation unit, D.N.O. and PIA.

1) Core team will carry out 100% physical verification of Fencing Systems installed under the scheme.
2) PIA will carry out 20% of the total nos. of Fence systems installed in their respective blocks.
3) Deputy Director of Agriculture cum DNO will carry out 5% of the fence systems installed in the district.
4) Random physical verification in each district will be carried out by HQ officers.

10.2) By an independent agency having sufficient experience and knowledge of the project if required.

10.3) The PIA will ensure submission of detailed Monthly & Quarterly Progress Report (MPR & QPR) by 5th of every month/ quarter on the prescribed format. Similarly, detailed Annual Progress Report (APR) should be sent within three months after closure of financial year.

11) Expected Outcome:

1) 20% to 25% increase in yield of crop production due to protection from wild / stray animals/ monkey menace.
2) 50% relief in drudgery of guarding the fields during nights over the whole season.
3) Self-reliant agro-bio diverse farming possible.
4) Prosperity in rural areas.
5) Ultimately help the farmer achieve their right to security of food, nutrition and livelihood, reduce mental and physical stress and lead sustainable family life of better quality.

Annexure–A

कृषि विभाग
हिमाचल प्रदेश

मुख्यमंत्री खेत संरक्षण योजना
(व्यक्तिगत – आवेदन पत्र)
(मुफ्त)

पासपोर्ट फोटो

केवल कार्यालय प्रयोग के लिए	
आवेदन सं0 :–	आवेदन की तिथि :–
	दस्तावेज जांच की तिथि :–
	प्रविष्टि की तिथि :–

सेवा में,

उप कृषि निदेशक/जिला कृषि अधिकारी/सहायक परियोजना अधिकारी/विषयवाद विशेषज्ञ _____,
जिला _____ ऋ हि0 प्र0।

विशय :– **मुख्यमंत्री खेत संरक्षण योजना के अन्तर्गत कान्टेदार तार/चेनलिन्क बाड़ लगाने के लिए वित्तीय सहायता प्राप्त करने हेतू आवेदन पत्र।**

महोदय,

1. सामान्य जानकारी :

आवेदक का नामः _____ पिता/पति का नाम : _____ श्रेणी _____ (एसटी/एससी/ओबीसी/जनरल)

पताः– गांव : _____ ग्राम पंचायत : _____ डाकघरः _____, जिला : _____

पिन कोड : _____, फोन नं0 एसटीडी कोड सहित : _____

मोबाइल फोन नं0 : _____ आधार कार्ड नं0 : _____

पुरुष/महिला _____ शारीरिक विकलांगता (हां/नहीं) _____

2. बैंक खाता विवरण :

2.1 बैंक खाते में किसान का नाम : _____

2.2 खाता संख्या : _____

2.3 बैंक का नाम व बैंक शाखा का पता : _____

2.4 आईएफएससी कोड : _____

3. भूमि विवरण :

3.1 खेत का नामः _____

3.2 खाता/खतौनी सं0 : _____

3.3 खेत का स्थान : अ) गांव : _____ ब) डाकघर : _____ स) जिला : _____

3.4 कुल क्षेत्र (हैक्टेयर) : _____

3.5 बाड़ के लिए प्रस्तावित क्षेत्र (हैक्टेयर) : _____

3.6 स्वामित्व की स्थितिः (अप्रासंगिक प्रविष्टि चिन्हित करें) स्वयं मालिक/संयुक्त मालिक/ विरासत (पैत्रिक/अन्य) /अन्य स्वीकृत विरासतनामा ।

4. प्रस्तावित बाड़ :

बाड़ की किस्म	लम्बाई (मीटर)	बाड़बन्दि क्षेत्र (हैक्टेयर)	अनुमानित लागत प्रति मीटर	कुल लागत

5. प्रस्तावित बाड़ क्षेत्र के अन्दर वर्तमान में उगाई गई फसलें व प्रस्तावित फसलें (दोनों बागवानी एवं कृषि) :

क्रम सं0	**ऋतु**	**फसल**	**क्षेत्र (हैक्टेयर)**
अ) बाड़ लगाने से पहले			
ब) बाड़ लगाने के बाद			
		कुल :–	

अतः आपसे अनुरोध किया जाता है कि कान्टेदार तार/चेनलिन्क बाड़ के लिए मेरे प्रस्ताव को मंजूरी जल्द प्रदान करने की कृपा करें ।

भवदीय,

हस्ताक्षर _____

किसान का नाम व पूरा पता _____

_____

दिनांक _____

निम्नलिखित दस्तावेजों को सलंग्न कर दिया गया है :

1. ततिमा व जमाबन्दी की प्रति (सम्बन्धित पटवारी द्वारा जारी की गई)।
2. बिकीनामा/विरासतनामा/सह–मालिक से अनापति प्रमाण पत्र/विभाजननामा/कोई दूसरा (स्पष्ट करें) की अभिप्रमाणित प्रति ।
3. बैंक पासबुक के प्रथम पृष्ठ की छाया प्रति (नाम व पूरा पता)।
4. आधार कार्ड की छाया प्रति।

Annexure-B

Mukhya Mantri Khet Sanrakshan Yojna

Format to be filled in by the PIA for submission to District Nodal Officer for obtaining Administrative Approval of the project proposal.

1.	Date of receipt of Application	
2.	Date of spot inspection	
3.	Category of farmers (SF/MF/Other from SC/ST/Gen./BPL)	
4	Feasibility report.	
Barbed Wire /G.I. Chainlink Fencing		
	a) Khasra No. and Size of field where farmers intend to install Barbed Wire /G.I. Chainlink Fencing	
	b) Perimeter of Field	
	c) Area (Hectares)	
	d) Estimated Cost (as per A above)	
	e) Amount of assistance (in Rs.)	
	f) Amount of Beneficiary Share (in Rs.)	
5.	Recommendation of PIA to DNO for Administrative Approval.	
	Total estimated cost of Barbed Wire /G.I. Chainlink Fencing	
a)	Eligible cost (in Rs.)	
(i)	Project share (in Rs.)	
(ii)	Beneficiary Share (in Rs.)	
6.(A)	Mode of payment of Project assistance	
	➢ Directly to the service provider as per undertaking of farmer	
	➢ Through bank (to be specified) in case Beneficiary willing to avail credit facility (Full Name & Address of Bank)	
6(B)	Beneficiary would contribute his share as per procedure given in the guidelines.	

Certified that above details are based on spot inspection and information furnished by the beneficiary.

Submitted to the DDA- cum-District Nodal Officer for favour of perusal and necessary action along with necessary estimates and documents.

SMS-cum-PIA,
Dev.Block_____
Distt._____H.P

Annexure-C

Performa for maintaining beneficiary wise record under Mukhya Mantri Khet Sanrakshan Yojna (A Separate page in register is to be allocated for each farmer / beneficiary on financial year basis)

Sr.No.	Particulars of Farmer / Beneficiary	
1.	Name of the farmer with complete address and telephone number.	
2.	Category of Farmer(General/SC/ST)	
3.	Date of Receipt of Application	
4.	Date of field verification	
5.	Date of Administrative Approval	
6.	Date of issue of authorization letter	
7.	Date of Receipt of Bills	
8.	Date of Disbursement	
9.	Area under Project Proposal	
10.	i) Barbed /G.I. Chainlink Fencing (Perimeter in Running Meter)	
	ii) Area Protected (Ha.)	
11.	Total Project cost (Rs.)	
12.	Total Financial assistance to the beneficiary @ 50% (Rs.)	
13.	Beneficiary Share @ 50% (Rs.)	
14.	Any other detail	

Annexure-D

Mukhya Mantri Khet Sanrakshan Yojna
Authorization Letter

To

Shri_____S/O Shri_____
Resident of village_____
P.O_____Tehsil_____
Distt._____H.P.

Subject: **Authorization for installation of Barbed Wire /G.I. Chainlink Fencing System under Mukhya Mantri Khet Sanrakshan Yojna.**

Sir,

Please refer to your application dated _____and recommendation of PIA received vide letter No. _____dated _____

You are hereby authorized to undertake the work of Installation of Barbed Wire /G.I. Chain link Fencing having perimeter of _____Meters (Area ____ Ha.) with an estimated cost of Rs. _____(Rupees_____) only as per specification given in the guidelines issued by the Govt. vide letter No._____dated_____ as per estimated cost prepared by Core Team and submitted by PIA after spot inspection.

The above authorization is subject to the following terms and conditions:-

1. Eligibility of assistance for components as above would be 50% of total approved cost for all models subject to the maximum ceiling and actual evaluation based upon measurements done by the PIA or his authorized representative at site.
2. For any deviation from the given / approved specifications with regard to material and design etc., you will be responsible for the same and in that case no assistance will be provided under this Scheme.
3. 10% variation in the sanctioned perimeter of 'Fence Work' is allowed depending upon the site for which revised sanction is not required. In case, likely deviation if more than 10%, the revised sanction have to obtain from concerned DNO through PIA before starting the construction work.
4. The completion period for this work shall be 90 days from the date of issue of award letter, failing which the award of work will stand cancelled.
5. The completion report of work be given to the concerned PIA immediately with in stipulated period.
6. At the time of measurements the copy of bills on account of purchase of materials like Angle Iron, Barbed wire, interlink Chain, Cement and other accessories required for the fence work have to be submitted to the PIA concerned.
7. The copy of technical specifications of materials to be used for fencing work is attached herewith for strict compliance.

District Nodal Officer-cum-
Deputy Director of Agriculture,
----------Distt.----------H.P

Copy forwarded to The PIA cum SMS Development Block_____ Distt._____ H.P.

District Nodal Officer-cum-
Deputy Director of Agriculture,
----------Distt.----------H.P

Annexure-E

Technical Specifications.

1.Basic Parameters of Barbed Wire / G.I. Chain Link fencing:

i) Maximum distance between 2 support posts - 15 Mts.
ii) Maximum Distance between 2 intermediate posts - 3 Mts.
iii) No. of strands – 6 Horizontal wires & 2 Diagonal Wire for Barber wire Fence with Angle Iron Post and 7 Horizontal Wire & 2 diagonal wire for Barbed Wire Fence with R.C.C. Posts.
iv) Height of fence above the ground – 1.55m.
v) Total Pole Height (Above + Below Ground level:- 1.95m.
vi) Spacing between two Horizontal Rows: (Minimum 0.15m to maximum 0.30m depends upon the type of animals in that areas.

Description	Specifications	Remarks
Earth Work	Pit Size – 0.40mx0.40mx0.40m at distance of 3.00meter C/C.	
Cement Concrete	1:3:6 (1 Cement : 3Sand : 6 Stone Aggregate 20mm nominal size) .	**Consumption of Material for one pit :-** 0.28Bag of Cement , 0.03 Cum Sand & 0.06 cum of Stone Aggregate
Corner / Support / Intermediate Posts	**Angle Iron Posts:**	0.40meter length of the posts must be grouted in cement concrete in the pit)
	Size of Angle- 40mmx40mmx5mm (Weight – 3 Kg/meter)	
	R.C.C. Posts:	
	Top Size:125mm x 125mm Bottom Size: 150mm x 150mm	
	Support Post:110mm x 110 mm	
Barbed Wire	(Is:278-1962 Type-I) weighing 9.38Kg. per 100mtr.(minimum)	In Angle Iron Posts: 6 Horizontal lines with 2 diagonal wires, and in R.C.C. Posts:7 horizontal wires with 2 diagonal wires.
	The barbs shall be well formed, tightly wrapped and shall have a length of not less than 13 mm and not more than 18 mm.	
	The point shall be sharp and cut at an angle not greater than 35° to the axis of the wire forming the barbs.	
	The barbed wire may also be given protective chromate conversion coating conform to IS 1340.	
Chainlink	**MATERIAL:** The mesh wire and the line wire of the fabric shall be manufactured from galvanized steel wire conforming to IS: 280, having a tensile strength within the range of 400 to 550 MPa.	

	MESH SIZE: The mesh size shall be 50mm x 50mm to 150 mm X 150 mm with tolerance ± 4 mm.	The mesh size shall be determined by measuring the minimum clear distance between the wires forming the parallel sizes of the mesh when measured in normal stretched condition.
	WIDTH: The fabric shall be supplied in widths of 1.50 m (5 Ft) with the tolerance of ± 35 mm.	The width of fabric shall be the overall dimension from one extreme line wire to other extreme line wire and shall be checked in fully stretched condition.
	Wire Dia: Nominal dia of mesh wire shall be 5 mm. Tolerances permitted on the diameter of mesh and line wire shall be as given in IS: 280.	
	Galvanizing: The chain link fence fabric shall have zinc coating of type "heavy" as given in IS 4826 or in IS 12753.	
	workmanship and Finish: Each roll shall be warranted to contain no weld joint or splice what so ever. The wire shall be circular and shall be free from scales, irregularities, imperfections, flaws, sand splits and other defects. The zinc coating shall be smooth, even and bright. The rust formation on the cut ends of the wire at the fabric selvages are inherent characteristics of this material and do not warrant rejection of the fabric.	

Annexure-I

Name of Work:-Standard Estimate for the Barbed Wire Fencing to protect the crops from wild / stray animals for perimeter length of 100meter (Angle Iron Fence Posts@3.00M C/C)

Sr. No.	Description	No.	Length (M)	Breadth (M)	Height (M)	Qty.	Weight per Mtr.	Total Weight	Rate	Amount
1	Excavation in earth work and disposal of excavated earth upto a lead of 20metres	42	0.4	0.4	0.40	2.688			282.00	758.02
2	Providing and laying cement concrete 1:3:6(1 Cement : 3 Sand: 6 Graded stone aggregate 20mm nominal size) and curing complete excluding cost of form work in foundation and plinth	42	0.4	0.4	0.40	2.688			5874.00	15789.31
3	Steel Work welded in built up sections , trusses and framed work , including cutting , hoisting , fixing in position and applying a priming coat of red lead paint				0.064					
	In grating framed guard bars, ladders , raining , brackets and similar works									
	Post of Angle iron (40mm x40mm x 5mm) 3.00M C/C Spacing	34			1.95	66.3	3.00	198.9	75.00	14917.50
	Corner Posts (40mm x40mm x 5mm) 15.00M C/C Spacing	8			1.95	15.6	3.00	46.8	75.00	3510.00
4	Supply and fixing galavanised steel barbed wire (IS:278-1962 Type -I) weighing 9.38 Kg. per 100 metre (minimum) straining and fixing to any type of standrads rails , straining bolts including securing with and provision of galvinized mild steel wire ,staples or steel pins etc. as directed (posts and struts of wood concrete , steel etc) and straining bolts shall be paid for seperately . (6 Horizontal Wire and 2 Diagonal Wire)	1	901			901.00			9.18	8271.18
	G.Total:-									**43246.01**
	Cost per running meter	**100**	**RM**							**430.00**

Annexure-II

Name of Work:-Standard Estimate for the Barbed Wire Fencing to protect the crops from wild / stray animals for perimeter length of 500meter (Angle Iron Fence Posts@3.00M C/C)

Sr. No.	Description	No.	Length (M)	Breadth (M)	Height (M)	Qty.	Weight per Mtr.	Total Weight	Rate Rs.	Amount Rs. ₹
1	Excavation in earth work and disposal of excavated earth upto a lead of 20metres	202	0.4	0.4	0.40	12.928			282.00	**3645.70**
2	Providing and laying cement concrete 1:3:6(1 Cement : 3 Sand: 6 Graded stone aggregate 20mm nominal size) and curing complete excluding cost of form work in foundation and plinth	202	0.4	0.4	0.40	12.928			5874.00	**75939.07**
3	Steel Work welded in built up sections , trusses and framed work , including cutting , hoisting , fixing in position and applying a priming coat of red lead paint									
	In grating framed guard bars, ladders , raining , brackets and similar works									
	Post of Angle iron (40mm x40mm x 5mm) 3.00M C/C Spacing	168			1.95	327.6	3.00	982.8	75.00	**73710.00**
	Corner Posts (40mm x40mm x 5mm) 15.00M C/C Spacing	34			1.95	66.3	3.00	198.9	75.00	**14917.50**
4	Supply and fixing galavanised steel barbed wire (IS:278-1962 Type -I) weighing 9.38 Kg. per 100 metre (minimum) straining and fixing to any type of standrads rails , straining bolts including securing with and provision of galvinized mild steel wire ,staples or steel pins etc. as directed (posts and struts of wood concrete , steel etc) and straining bolts shall be paid for seperately . (6 Horizontal Wire and 2 Diagonal Wire)	1	4452			4452.00			9.18	**40869.36**
	G.Total:-									**209081.63**
	Cost per running meter	**500**	**RM**							**420.00**

Name of Work:-Standard Estimate for the Barbed Wire Fencing to protect the crops from wild / stray animals for perimeter length of1000meter (Angle Iron Fence Posts@3.00M C/C)

Annexure-III

Sr. No.	Description	No.	Length (M)	Breadth (M)	Height (M)	Qty.	Weight per Mtr.	Total Weight	Rate	Amount Rs.
1	Excavation in earth work and disposal of excavated earth upto a lead of 20metres	402	0.4	0.4	0.40	25.728			282.00	**7255.30**
2	Providing and laying cement concrete 1:3:6(1 Cement : 3 Sand: 6 Graded stone aggregate 20mm nominal size) and curing complete excluding cost of form work in foundation and plinth	402	0.4	0.4	0.40	25.728			5874.00	**151126.27**
3	Steel Work welded in built up sections , trusses and framed work , including cutting , hoisting , fixing in position and applying a priming coat of red lead paint									
	In grating framed guard bars, ladders , raining , brackets and similar works									
	Post of Angle iron (40mm x40mm x 5mm) 3.00M C/C Spacing	334			1.95	651.3	3.00	1953.9	75.00	**146542.50**
	Corner Posts (40mm x40mm x 5mm) 15.00M C/C Spacing	68			1.95	132.6	3.00	397.8	75.00	**29835.00**
4	Supply and fixing galavanised steel barbed wire (IS:278-1962 Type -I) weighing 9.38 Kg. per 100 metre (minimum) straining and fixing to any type of standrads rails , straining bolts including securing with and provision of galvinized mild steel wire ,staples or steel pins etc. as directed (posts and struts of wood concrete , steel etc) and straining bolts shall be paid for seperately . (6 Horizontal Wire and 2 Diagonal Wire)	1	8851			8851.00			9.18	**81252.18**
	G.Total:-									**416011.25**
	Cost per running meter	**1000**	**RM**							**420**

Annexure-IV

Name of Work:-Standard Estimate for the Barbed Wire Fencing to protect the crops from wild / stray animals for perimeter length of 2000meter (Angle Iron Fence Posts@3.00M C/C)

Sr. No.	Description	No.	Length (M)	Breadth (M)	Height (M)	Qty.	Weight per Mtr.	Total Weight	Rate Rs.	Amount Rs.
1	Excavation in earth work and disposal of excavated earth upto a lead of 20metres	802	0.4	0.4	0.40	51.328			282.00	**14474.50**
2	Providing and laying cement concrete 1:3:6(1 Cement : 3 Sand: 6 Graded stone aggregate 20mm nominal size) and curing complete excluding cost of form work in foundation and plinth	802	0.4	0.4	0.40	51.328			5874.00	**301500.67**
3	Steel Work welded in built up sections , trusses and framed work , including cutting , hoisting , fixing in position and applying a priming coat of red									
	In grating framed guard bars, ladders , raining , brackets and similar works									
	Intermediate Post of Angle iron (40mm x40mm x 5mm) 3.00M C/C Spacing	668			1.95	1302.6	3.00	3907.8	75.00	**293085.00**
	Corner Posts (40mm x40mm x 5mm) 15.00M C/C Spacing	134			1.95	261.3	3.00	783.9	75.00	**58792.50**
4	Supply and fixing galavanised steel barbed wire (IS:278-1962 Type -I) weighing 9.38 Kg. per 100 metre (minimum) straining and fixing to any type of standrads rails , straining bolts including securing with and provision of galvinized mild steel wire ,staples or steel pins etc. as directed (posts and struts of wood concrete , steel etc) and straining bolts shall be paid for seperately . (6 Horizontal Wire and 2 Diagonal Wire)	1	17702			17702.00			9.18	**162504.36**
	G.Total:-									**830357.03**
	Cost per running meter	**2000**	**RM**							**420**

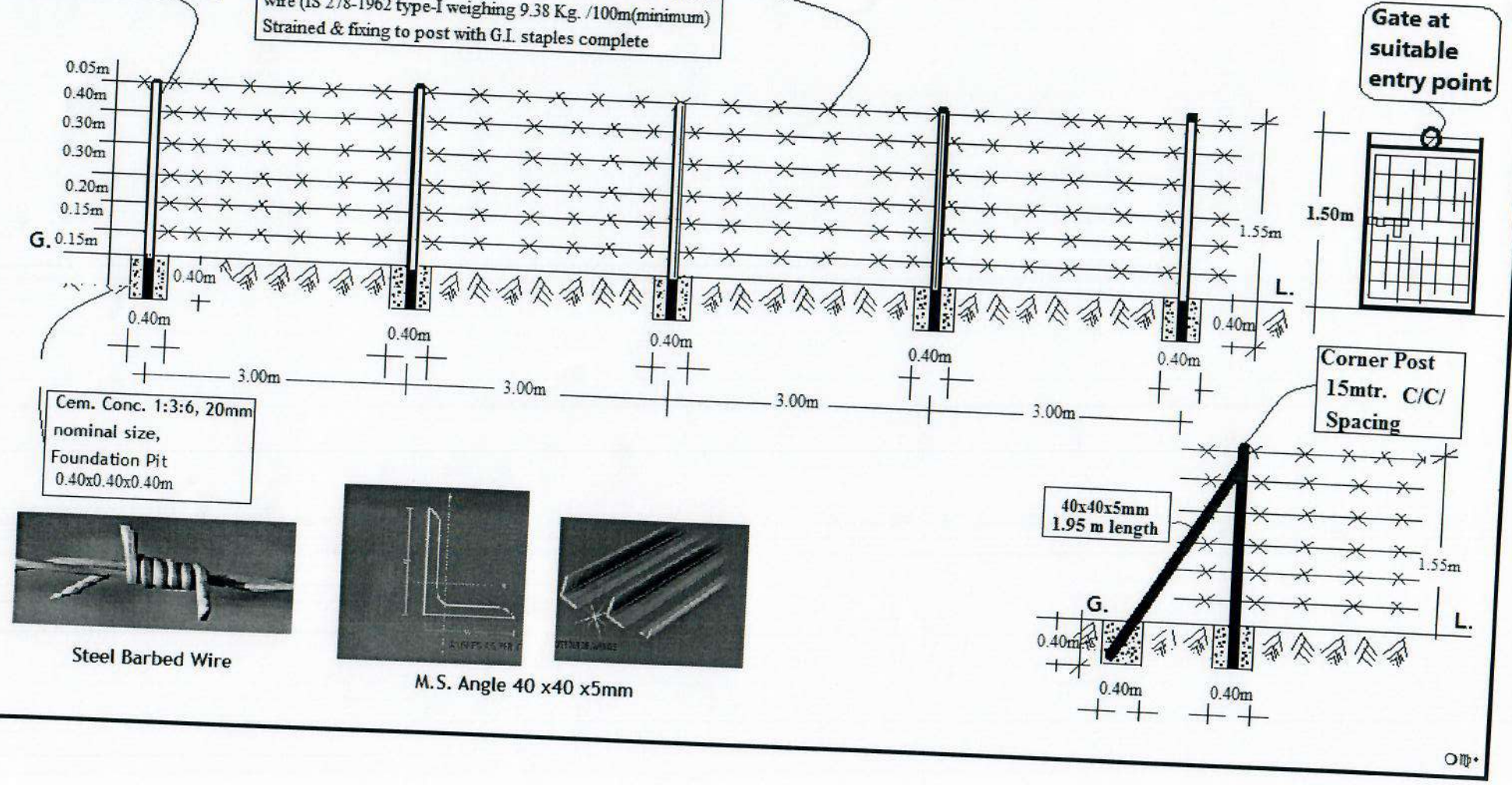
Annexure-V

Name of Work:-Standard Estimate for the Barbed Wire Fencing to protect the crops from wild / stray animals for perimeter length of 3000 meter (Angle Iron Fence Posts@ 3.00M C/C)

Sr. No.	Description	No.	Length (M)	Breadth (M)	Height (M)	Qty.	Weight per Mtr.	Total Weight	Rate Rs.	Amount Rs.
1	Excavation in earth work and disposal of excavated earth upto a lead of 20metres	1202	0.4	0.4	0.40	76.928			282.00	**21693.70**
2	Providing and laying cement concrete 1:3:6(1 Cement : 3 Sand: 6 Graded stone aggregate 20mm nominal size) and curing complete excluding cost of form work in	1202	0.4	0.4	0.40	76.928			5874.00	**451875.07**
3	Steel Work welded in built up sections , trusses and framed work , including cutting , hoisting , fixing in position and applying a priming coat of red lead paint									
	In grating framed guard bars, ladders , raining , brackets and									
	Intermediate Post of Angle iron (40mm x40mm x 5mm) 3.00M C/C Spacing	1001			1.95	1951.95	3.00	5855.85	75.00	**439188.75**
	Corner Posts (40mm x40mm x 5mm) 15.00M C/C Spacing	201			1.95	391.95	3.00	1175.85	75.00	**88188.75**
4	Supply and fixing galavanised steel barbed wire (IS:278-1962 Type -I) weighing 9.38 Kg. per 100 metre (minimum) straining and fixing to any type of standrads rails , straining bolts including securing with and provision of galvinized mild steel wire ,staples or steel pins etc. as directed (posts and struts of wood concrete , steel etc) and straining bolts shall be paid for seperately . (6 Horizontal Wire and 2 Diagonal Wire)	1	26526.50			26526.50			9.18	**243513.27**
	G.Total:-									**1244459.54**
	Cost per running meter	**3000**	**RM**							**410**

Barbed wire fencing with Angle iron posts 3.00mtr.c/c with Six Horizontal lines and two diagonals of galvanised steel Barbed wire.

Not to Scale



Steel Barbed Wire

M.S. Angle 40 x40 x5mm

Annexure-VI

Name of Work:-Standard Estimate for the Barbed Wires Fencing to protect the crops from wild / stray animals for perimeter length of100meter(R.C.C. Fence Post)

Sr. No.	Description	No.	Length (M)	Breadth (M)	Height (M)	Qty.	Weight per Mtr.	Total Weight	Rate	Amount
1	Excavation in earth work and disposal of excavated earth upto a lead of 20metres	42	0.40	0.40	0.40	2.688			282.00	**758.02**
2	Providing and laying cement concrete 1:3:6(1 Cement : 3 Sand: 6 Graded stone aggregate 20mm nominal size) and curing complete excluding cost of form work in foundation and plinth	42	0.40	0.40	0.40	2.688			5874.00	**15789.31**
3	RCC Fence line posts of bottom size 150x150mm , top size 125x125mm (3METER C/C SPACING)	34				34			719.00	**24446.00**
	Corner Posts (110mmX110mm) 15.00M C/C Spacing	8				8			719.00	**5752.00**
4	Supply and fixing galavanised steel barbed wire (IS:278-1962 Type -I) weighing 9.38 Kg. per 100 metre (minimum) straining and fixing to any type of standrads rails , straining bolts including securing with and provision of galvanized mild steel wire ,staples or steel pins etc. as directed (posts and struts of wood concrete , steel etc) and straining bolts shall be paid for seperately . (7 Horizontal Wire and 2	1	901			901.00		0	9.18	**8271.18**
	G.Total:-									**55016.51**
	Cost per running meter	**100**	**RM**							**550.00**

Annexure-VII

Name of Work:-Standard Estimate for the Barbed Wires Fencing to protect the crops from wild / stray animals for perimeter length of 500meter(R.C.C. Fence Post)

Sr. No.	Description	No.	Length (M)	Breadth (M)	Height (M)	Qty.	Weight per Mtr.	Total Weight	Rate	Amount
1	Excavation in earth work and disposal of excavated earth upto a lead of 20metres	202	0.40	0.40	0.40	12.928			**282.00**	**3645.70**
2	Providing and laying cement concrete 1:3:6(1 Cement : 3 Sand: 6 Graded stone aggregate 20mm nominal size) and curing complete excluding cost of form work in foundation and plinth	202	0.40	0.40	0.40	12.928			5874.00	**75939.07**
3	RCC Fence line posts of bottom size 150x150mm , top size 125x125mm (3METER C/C SPACING)	168				168			**719.00**	**120792.00**
	Corner Posts (110mmX110mm) 15.00M C/C Spacing	34				34			**719.00**	**24446.00**
4	Supply and fixing galavanised steel barbed wire (IS:278-1962 Type -I) weighing 9.38 Kg. per 100 metre (minimum) straining and fixing to any type of standrads rails , straining bolts including securing with and provision of galvinized mild steel wire ,staples or steel pins etc. as directed (posts and struts of wood concrete , steel etc) and straining bolts shall be paid for seperately . (7 Horizontal Wire and 2 Diagonal Wire)	1	4452.00			4452.00		0	9.18	**40869.36**
	G.Total:-									**265692.13**
	Cost per running meter	**500**	**RM**							**530.00**

Annexure-VIII

Name of Work:-Standard Estimate for Barbed Wire Fencing to protect the crops from wild / stray animals for perimeter length of 1000meter(R.C.C. Fence Post)

Sr. No.	Description	No.	Length (M)	Breadth (M)	Height (M)	Qty.	Weight per Mtr.	Total Weight	Rate	Amount Rs.
1	Excavation in earth work and disposal of excavated earth upto a lead of 20metres	402	0.40	0.40	0.40	25.728			282.00	**7255.30**
2	Providing and laying cement concrete 1:3:6(1 Cement : 3 Sand: 6 Graded stone aggregate 20mm nominal size) and curing complete excluding cost of form work in foundation and plinth	402	0.40	0.40	0.40	25.728			5874.00	**151126.27**
3	RCC Fence line posts of bottom size 150x150mm , top size 125x125mm (3.00 Meter C/C Spacing)	334				334			719.00	**240146.00**
	Corner Posts (110mmX110mm) 15.00M C/C Spacing	68				68			719.00	**48892.00**
	Total :-									**289038.00**
4	Supply and fixing galavanised steel barbed wire (IS:278-1962 Type -I) weighing 9.38 Kg. per 100 metre (minimum) straining and fixing to any type of standrads rails , straining bolts including securing with and provision of galvinized mild steel wire ,staples or steel pins etc. as directed (posts and struts of wood concrete , steel etc) and straining bolts shall be paid for seperately . (7 Horizontal Wire and 2 Diagonal Wire)	1	8851			8851.00			9.18	**81252.18**
	G.Total:-									**528671.75**
	Cost per running meter	**1000**	**RM**							**530**

Annexure-IX

Name of Work:-Standard Estimate for Barbed Wire Fencing to protect the crops from wild / stray animals for perimeter length of 2000meter(R.C.C. Fence Post)

Sr. No.	Description	No.	Length (M)	Breadth (M)	Height (M)	Qty.	Weight per Mtr.	Total Weight	Rate Rs.	Amount Rs.
1	Excavation in earth work and disposal of excavated earth upto a lead of 20metres	802	0.40	0.40	0.40	51.328			282.00	**14474.50**
2	Providing and laying cement concrete 1:3:6(1 Cement : 3 Sand: 6 Graded stone aggregate 20mm nominal size) and curing complete excluding cost of form work in foundation and plinth	802	0.40	0.40	0.40	51.328			5874.00	**301500.67**
3	RCC Fence line posts of bottom size 150x150mm , top size 125x125mm (3.00 Meter C/C Spacing)	668				668			719.00	**480292.00**
	Corner Posts (110mmX110mm) 15.00M C/C Spacing	134				134			719.00	**96346.00**
	Total :-									**576638.00**
4	Supply and fixing galavanised steel barbed wire (IS:278-1962 Type -I) weighing 9.38 Kg. per 100 metre (minimum) straining and fixing to any type of standrads rails , straining bolts including securing with and provision of galvinized mild steel wire ,staples or steel pins etc. as directed (posts and struts of wood concrete , steel etc) and straining bolts shall be paid for seperately . (7 Horizontal Wire and 2 Diagonal Wire)	1	17702			17702.00			9.18	**162504.36**
	G.Total:-	1								**1055117.53**
	Cost per running meter	**2000**	**RM**							**530**

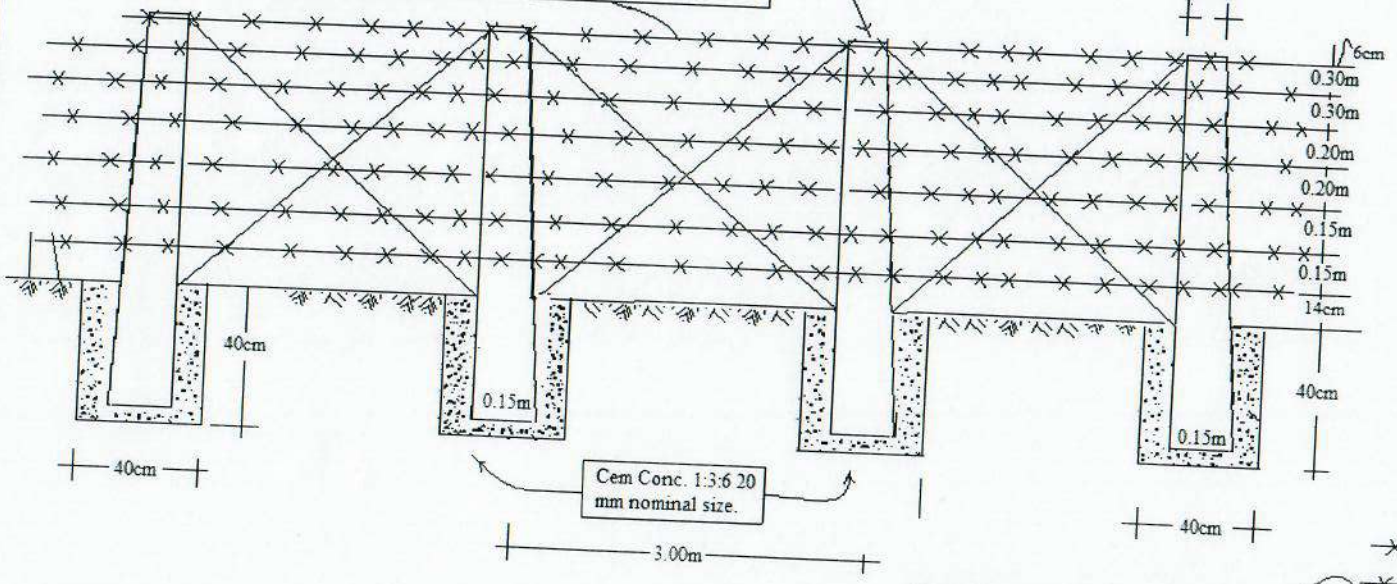
Annexure-X

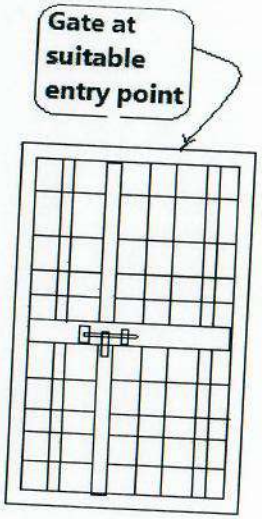
Name of Work:-Standard Estimate for Barbed Wire Fencing to protect the crops from wild / stray animals for perimeter length of 3000meter(R.C.C. Fence Post)

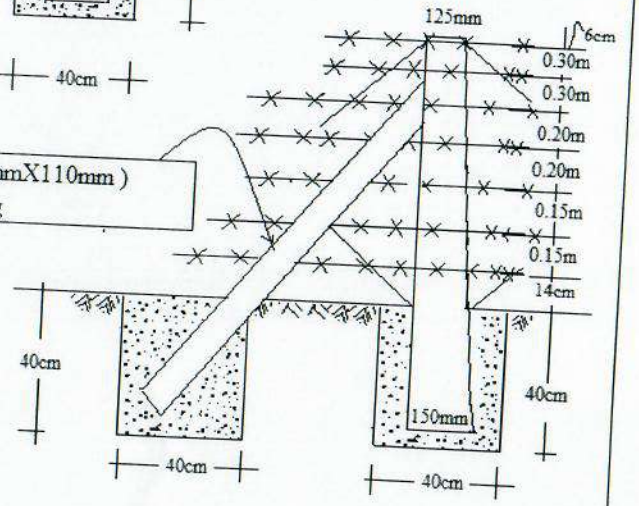
Sr. No.	Description	No.	Length (M)	Breadth (M)	Height (M)	Qty.	Weight per Mtr.	Total Weight	Rate Rs.	Amount Rs.
1	Excavation in earth work and disposal of excavated earth upto a lead of 20metres	1202	0.40	0.40	0.40	76.928			282.00	**21693.70**
2	Providing and laying cement concrete 1:3:6(1 Cement : 3 Sand: 6 Graded stone aggregate 20mm nominal size) and curing complete excluding cost of form work in foundation and plinth	1202	0.40	0.40	0.40	76.928			5874.00	**451875.07**
3	RCC Fence line posts of bottom size 150x150mm , top size 125x125mm (3.00 Meter C/C Spacing)	1001				1001			719.00	**719719.00**
	Corner Posts (110mmX110mm) 15.00M C/C Spacing	201				201			719.00	**144519.00**
	Total :-									**864238.00**
4	Supply and fixing galavanised steel barbed wire (IS:278-1962 Type -I) weighing 9.38 Kg. per 100 metre (minimum) straining and fixing to any type of standrads rails , straining bolts including securing with and provision of galvinized mild steel wire ,staples or steel pins etc. as directed (posts and struts of wood concrete , steel etc) and straining bolts shall be paid for seperately . (7 Horizontal Wire and 2 Diagonal Wire)	1	26526.5			26526.50			9.18	**243513.27**
	G.Total:-	1								**1581320.04**
	Cost per running meter	**3000**	**RM**							**530**

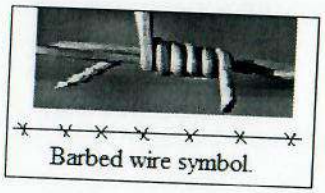
Galvanised Steel Barbed wire fencing (1.50m high) with R.C.C. Posts 3.00 m c/c with Seven horizontal lines and two diagonals.

1.50 mtr. high fencing with 1.95 mtr. long RCC fencing post with 6mm bar nibs, 3.00 mtr. centre to centre with 7 horizontal lines and two diagonals of galvanised steel barbed wire (IS278-1962 type-I weighing 9.38kg./100m (minimum) strained & fixing to post with G.I. staples complete.








Barbed wire symbol.

Annexure-XI

Name of Work:-Standard Estimate for the G.I. Chainlink Fence Fabric to protect the crops from wild / stray animals for perimeter length of 100meter(Angle Iron Post)

Sr. No.	Description	No.	Length (M)	Breadth (M)	Height (M)	Qty.	Weight per Mtr.	Total Weight	Rate Rs	Amount Rs.
1	Excavation in earth work and disposal of excavated earth upto a lead of 20metres	42	0.40	0.40	0.40	2.688			**282.00**	**758.02**
2	Providing and laying cement concrete 1:3:6(1 Cement : 3 Sand: 6 Graded stone aggregate 20mm nominal size) and curing complete excluding cost of form work in foundation and plinth	42	0.40	0.40	0.40	2.688			5874.0	**15789.31**
3	Steel Work welded in built up sections , trusses and framed work , including cutting , hoisting , fixing in position and applying a priming coat of red lead paint									
	In grating framed guard bars, ladders , raining , brackets and similar works									
	Post of Angle iron (40mm x40mm x 5mm) 3.00M C/C Spacing of 1.50meter high	34			1.55	52.7	3.00	158.1	**75.00**	**11857.50**
	Corner Posts (40mm x40mm x 5mm) 15.00M C/C Spacing	8			1.55	12.4	3.00	37.2	**75.00**	**2790.00**
	Flat for Angle Iron to support Chainlink Fence Fabric (40mm x 5mmthick)	34			1.20	40.8	1.57	64.056	**75.00**	**4804.20**
	Total :-							**259.356**		**35999.03**
4	Supplying & Fixing woven planis G.I. Wires fencing of mesh 50mm to 150mm to any type of standards rails straining bolts etc including provision of binding wire ,	1	100		1.20	120.00			175.00	**21000.00**
	G.Total:-									**56999.03**
	Cost per running meter	**100**	**RM**							**570**

Annexure-XII

Name of Work:-Standard Estimate for the Chainlink Fencing to protect the crops from wild / stray animals for perimeter length of 500meter (Angle Iron Post)

Sr. No.	Description	No.	Length (M)	Breadth (M)	Height (M)	Qty.	Weight per Mtr.	Total Weight	Rate Rs.	Amount Rs.
1	Excavation in earth work and disposal of excavated earth upto a lead of 20metres	202	0.40	0.40	0.40	12.928			282.00	**3645.70**
2	Providing and laying cement concrete 1:3:6(1 Cement : 3 Sand: 6 Graded stone aggregate 20mm nominal size) and curing complete excluding cost of form work in foundation and plinth	202	0.40	0.40	0.40	12.928			5874.0	**75939.07**
3	Steel Work welded in built up sections , trusses and framed work , including cutting , hoisting , fixing in position and applying a priming									
	In grating framed guard bars, ladders , raining , brackets and similar works									
	Post of Angle iron (40mm x40mm x 5mm) 3.00M C/C Spacing of 1.50meter high	168			1.55	260.4	3.00	781.2	75.00	**58590.00**
	Corner Posts (40mm x40mm x 5mm) 15.00M C/C Spacing	34			1.55	52.7	3.00	158.1	75.00	**11857.50**
	Flat for Angle Iron to support Chainlink Fence Fabric (40mm x 5mmthick)	168			1.20	201.6	1.57	316.512	75.00	**23738.40**
	Total :-							**1255.812**		**173770.67**
4	Supplying & Fixing woven planis G.I. Wires fencing of mesh 50mm to 150mm to any type of standards rails straining boets etc including provision of binding wire , staples.	1	500		1.20	600.00			175.00	**105000.00**
	G.Total:-									**278770.67**
	Cost per running meter	**500**	**RM**							**560**

Name of Work:-Standard Estimate for the Chainlink Fencing to protect the crops from wild / stray animals for perimeter length of 1000meter (Angle Iron Post)

Annexure-XIII

Sr. No.	Description	No.	Length (M)	Breadth (M)	Height (M)	Qty.	Weight per Mtr.	Total Weight	Rate Rs.	Amount Rs.
1	Excavation in earth work and disposal of excavated earth upto a lead of 20metres	402	0.4	0.4	0.40	25.728			282.00	**7255.30**
2	Providing and laying cement concrete 1:3:6(1 Cement : 3 Sand: 6 Graded stone aggregate 20mm nominal size) and curing complete excluding cost of form work in foundation and plinth	402	0.4	0.4	0.40	25.728			5874.00	**151126.27**
3	Steel Work welded in built up sections , trusses and framed work , including cutting , hoisting , fixing in position and applying a priming coat of red lead paint									
	In grating framed guard bars, ladders , raining , brackets and similar works									
	Post of Angle iron (40mm x40mm x 5mm) 3.00M C/C Spacing	334			1.85	617.9	3.00	1853.7	75.00	**139027.50**
	Corner Posts (40mm x40mm x 5mm) 15.00M C/C Spacing	68			1.85	125.8	3.00	377.4	75.00	**28305.00**
	Flat for Angle Iron to support Chainlink Fence Fabric (40mm x 5mmthick)	334			1.50	501	1.57	786.57	75.00	**58992.75**
	Total :-							**3017.67**		**384706.82**
4	Supplying & Fixing woven plain G.I. Wires fencing of mesh 50mm to 150mm to any type of standards rails straining bolts etc including provision of binding wire , staples.	1	1000		1.50	1500.00			175.00	**262500.00**
	G.Total:-									647206.82
	Cost per running meter	**1000**	**RM**							**650**

Annexure-XIV

Name of Work:-Standard Estimate for the Chainlink Fencing to protect the crops from wild / stray animals for perimeter length of 2000 meter (Angle Iron Post)

Sr. No.	Description	No.	Length (M)	Breadth (M)	Height (M)	Qty.	Weight per Mtr.	Total Weight	Rate Rs.	Amount Rs.
1	Excavation in earth work and disposal of excavated earth upto a lead of 20metres	802	0.4	0.4	0.40	51.328			282.00	**14474.50**
2	Providing and laying cement concrete 1:3:6(1 Cement : 3 Sand: 6 Graded stone aggregate 20mm nominal size) and curing complete excluding cost of form work in foundation and plinth	802	0.4	0.4	0.40	51.328			5874.00	**301500.67**
3	Steel Work welded in built up sections , trusses and framed work , including cutting , hoisting , fixing in position and applying a priming coat of red lead paint									
	In grating framed guard bars, ladders , raining , brackets and similar works									
	Post of Angle iron (40mm x40mm x 5mm) 3.00M C/C Spacing	668			1.85	1235.8	3.00	3707.4	75.00	**278055.00**
	Corner Posts (40mm x40mm x 5mm) 15.00M C/C Spacing	134			1.85	247.9	3.00	743.7	75.00	**55777.50**
	Flat for Angle Iron to support Chainlink Fence Fabric (40mm x 5mmthick)	668			1.50	1002	1.57	1573.14	75.00	**117985.50**
	Total :-							**6024.24**		**767793.17**
4	Supplying & Fixing woven plain G.I. Wires fencing of mesh 50mm to 150mm to any type of standards rails straining bolts etc including provision of binding wire , staples.	1	2000		1.50	3000.00			175.00	**525000.00**
	G.Total:-									1292793.17
	Cost per running meter	**2000**	**RM**							**650**

Annexure-XV

Name of Work:-Standard Estimate for the Chainlink Fencing to protect the crops from wild / stray animals for perimeter length of 3000 meter (Angle Iron Post)

Sr. No.	Description	No.	Length (M)	Breadth (M)	Height (M)	Qty.	Weight per Mtr.	Total Weight	Rate Rs.	Amount Rs.
1	Excavation in earth work and disposal of excavated earth upto a lead of 20metres	1202	0.4	0.4	0.40	76.928			282.00	21693.70
2	Providing and laying cement concrete 1:3:6(1 Cement : 3 Sand: 6 Graded stone aggregate 20mm nominal size) and curing complete excluding cost of form work in foundation and plinth	1202	0.4	0.4	0.40	76.928			5874.0	451875.07
3	Steel Work welded in built up sections , trusses and framed work , including cutting , hoisting , fixing in position and applying a priming coat of red lead paint									
	In grating framed guard bars, ladders , raining , brackets and similar works									
	Post of Angle iron (40mm x40mm x 5mm) 3.00M C/C Spacing	1001			1.85	1851.85	3.00	5555.55	75.00	416666.25
	Corner Posts (40mm x40mm x 5mm) 15.00M C/C Spacing	201			1.85	371.85	3.00	1115.55	75.00	83666.25
	Flat for Angle Iron to support Chainlink Fence Fabric (40mm x 5mmthick)	1001			1.50	1501.5	1.57	2357.36	75.00	176801.63
	Total :-							**9028.46**		**1150702.90**
4	Supplying & Fixing woven planis G.I. Wires fencing of mesh 50mm to 150mm to any type of standards rails straining bolts etc including provision of binding wire , staples.	1	3000		1.50	4500.00			175.00	**787500.00**
	G.Total:-									1938202.90
	Cost per running meter	**3000**	**RM**							**650**

Interlink Chain Fencing with Angle Iron Posts.

1.20 mtr. high fencing with 1.55 mtr.M.S. Angle Posts 40 x 40 x5 mm (minimum 3.00 mtr. Centre to centre with Interlink chain (Galvanised Steel Chain Link Fence Fabric) intended for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.

M.S. Angle Iron Post 40x40x5 mm

Flat 40x5mm thick to support chainlink with Angle Iron post.

Inter Link Chain (Galvanised Steel Chain Link Fence Fabric)

Gate at suitable entry point.

G.

1.20m

1.55m

L

0.40m

0.40m

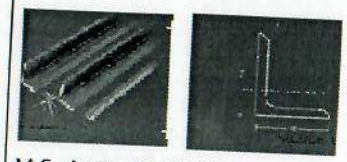
3.00m

3.00m

3.00m

3.00m

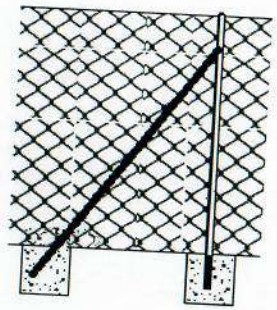
Cem. Conc. 1:3:6, 20mm nominal size in foundation Pits.



M.S. Angle 40x40x5mm

Hot dipped gavanised Inter Link Chain 50 to 150 mm Mesh, 5.00 mm thick

Corner Post 40x40x5mm, 15M C/C



Annexure-XVI

Name of Work:-Standard Estimate for the Chainlink Fencing to protect the crops from wild / stray animals for perimeter length of100meter(R.C.C. Fence Post)

Sr. No.	Description	No.	Length (M)	Breadth (M)	Height (M)	Qty.	Weight per Mtr.	Total Weight	Rate Rs.	Amount Rs.
1	Excavation in earth work and disposal of excavated earth upto a lead of 20metres	42	0.40	0.40	0.40	2.688			282.00	**758.02**
2	Providing and laying cement concrete 1:3:6(1 Cement : 3 Sand: 6 Graded stone aggregate 20mm nominal size) and curing complete excluding cost of form work in foundation and plinth	42	0.40	0.40	0.40	2.688			5874.0	**15789.31**
3	RCC Fence line posts of bottom size 150x150mm , top size 125x125mm (3METER C/C SPACING)	34				34			719.00	**24446.00**
	Corner Posts (110mmX110mm) 15.00M C/C Spacing	8				8			719.00	**5752.00**
	Total :-									**30198.00**
4	Supplying & Fixing woven plain G.I. Wires fencing of mesh 50mm to 150mm to any type of standards rails straining bolts etc including provision of binding wire ,	1	100		1.20	120.00			175.00	**21000.00**
	G.Total:-									**67745.33**
	Cost per running meter	**100**	**RM**							**680**

Annexure-XVII

Name of Work:-Standard Estimate for the Chainlink Fencing to protect the crops from wild / stray animals for perimeter length of 500meter(R.C.C. Fence Post)

Sr. No.	Description	No.	Length (M)	Breadth (M)	Height (M)	Qty.	Weight per Mtr.	Total Weight	Rate Rs.	Amount Rs.
1	Excavation in earth work and disposal of excavated earth upto a lead of 20metres	202	0.40	0.40	0.40	12.928			282.00	**3646**
2	Providing and laying cement concrete 1:3:6(1 Cement : 3 Sand: 6 Graded stone aggregate 20mm nominal size) and curing complete excluding cost of form work in foundation and plinth	202	0.40	0.40	0.40	12.928			5874.0	**75939**
3	RCC Fence line posts of bottom size 150x150mm , top size 125x125mm (3METER C/C SPACING)	168				168			719.00	**120792.00**
	Corner Posts (110mmX110mm) 15.00M C/C Spacing	34				34			719.00	**24446.00**
	Total :-									**145238.00**
4	Supplying & Fixing woven plain G.I. Wires fencing of mesh 50mm to 150mm to any type of standards rails straining bolts etc including provision of binding wire , staples.	1	500		1.20	600.00			175.00	**105000.00**
	G.Total:-									**329822.77**
	Cost per running meter	**500**	**RM**							**660**

Annexure-XVIII

Name of Work:-Standard Estimate for the Chainlink Fencing to protect the crops from wild / stray animals for perimeter length of 1000meter(R.C.C. Fence Post)

Sr. No.	Description	No.	Length (M)	Breadth (M)	Height (M)	Qty.	Weight per Mtr.	Total Weight	Rate Rs.	Amount Rs.
1	Excavation in earth work and disposal of excavated earth upto a lead of 20metres	402	0.40	0.40	0.40	25.728			282.00	**7255.30**
2	Providing and laying cement concrete 1:3:6(1 Cement : 3 Sand: 6 Graded stone aggregate 20mm nominal size) and curing complete excluding cost of form work in foundation and plinth	402	0.4	0.4	0.40	25.728			5874.00	**151126.27**
3	RCC Fence line posts of bottom size 150x150mm , top size 125x125mm (3METER C/C SPACING)	334				334			719.00	**240146.00**
	Corner Posts (110mmX110mm) 15.00M C/C Spacing	68				68			719.00	**48892.00**
4	Supplying & Fixing woven plain G.I. Wires fencing of mesh 50mm to 150mm to any type of standards rails straining bolts etc including provision of binding wire , staples.	1	1000		1.50	1500.00			175.00	**262500.00**
	G.Total:-									**709919.57**
	Cost per running meter	**1000**	**RM**							**710**

Annexure-XIX

Name of Work:-Standard Estimate for the Chainlink Fencing to protect the crops from wild / stray animals for perimeter length of 2000meter(R.C.C. Fence Post)

Sr. No.	Description	No.	Length (M)	Breadth (M)	Height (M)	Qty.	Weight per Mtr.	Total Weight	Rate Rs.	Amount Rs.
1	Excavation in earth work and disposal of excavated earth upto a lead of 20metres	802	0.40	0.40	0.40	51.328			282.00	**14474.50**
2	Providing and laying cement concrete 1:3:6(1 Cement : 3 Sand: 6 Graded stone aggregate 20mm nominal size) and curing complete excluding cost of form work in foundation and plinth	802	0.4	0.4	0.40	51.328			5874.0	**301500.67**
3	RCC Fence line posts of bottom size 150x150mm , top size 125x125mm (3METER C/C SPACING)	668				668			719.00	**480292.00**
	Corner Posts (110mmX110mm) 15.00M C/C Spacing	134				134			719.00	**96346.00**
4	Supplying & Fixing woven plain G.I. Wires fencing of mesh 50mm to 150mm to any type of standards rails straining bolts etc including provision of binding wire , staples.	1	2000		1.50	3000.00			175.00	**525000.00**
	G.Total:-									**1417613.17**
	Cost per running meter	**2000**	**RM**							**710**

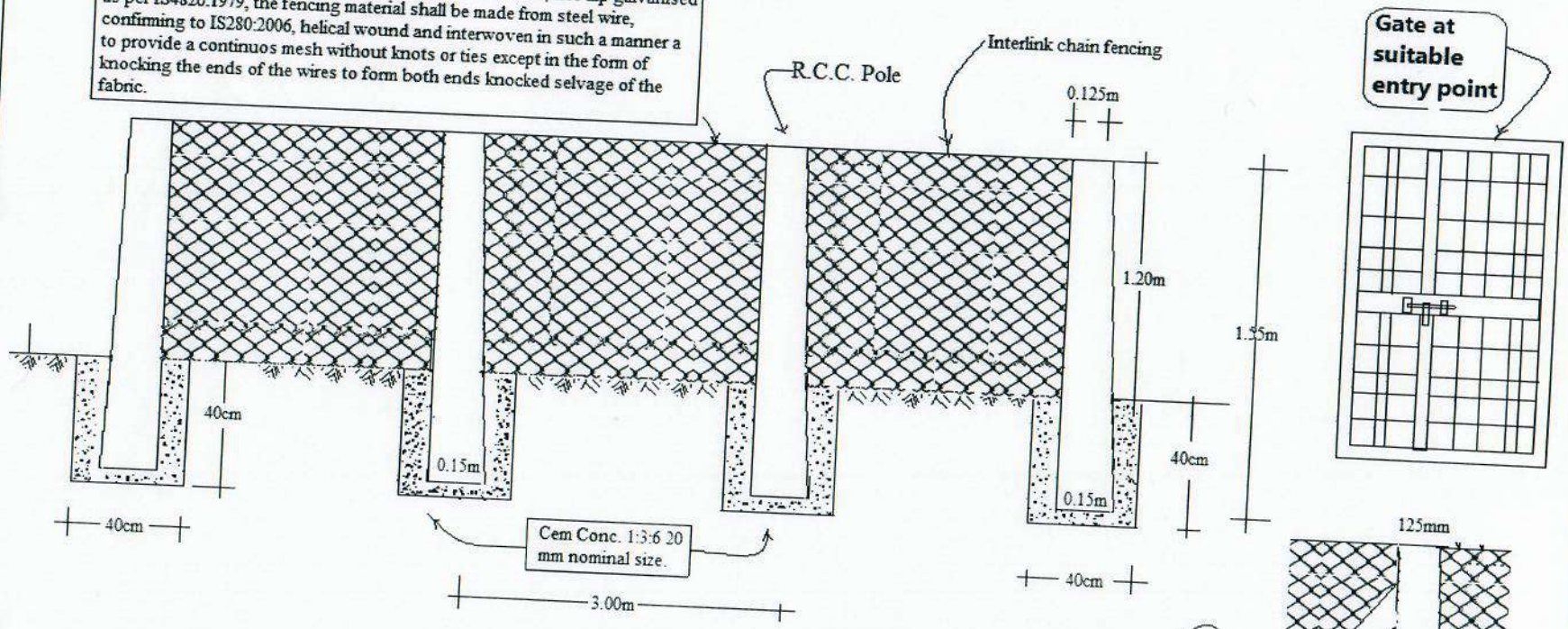
Annexure-XX

Name of Work:-Standard Estimate for the Chainlink Fencing to protect the crops from wild / stray animals for perimeter length of 3000meter(R.C.C. Fence Post)

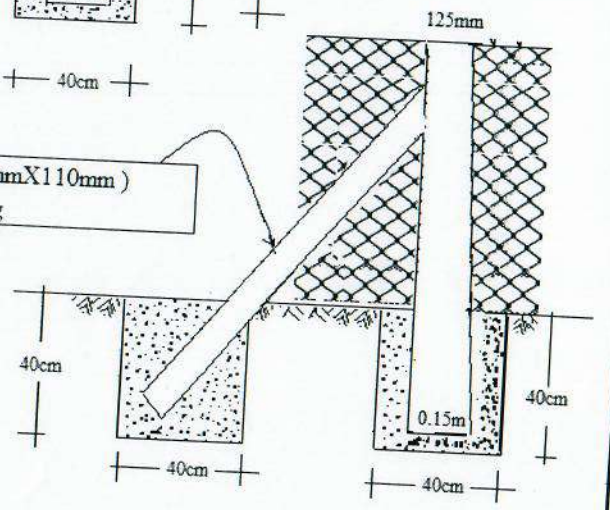
Sr. No.	Description	No.	Length (M)	Breadth (M)	Height (M)	Qty.	Weight per Mtr.	Total Weight	*Rate Rs.*	*Amount Rs.*
1	Excavation in earth work and disposal of excavated earth upto a lead of 20metres	1202	0.40	0.40	0.40	76.928			282.00	**21693.70**
2	Providing and laying cement concrete 1:3:6(1 Cement : 3 Sand: 6 Graded stone aggregate 20mm nominal size) and curing complete excluding cost of form work in foundation and plinth	1202	0.4	0.4	0.40	76.928			5874.0	**451875.07**
3	RCC Fence line posts of bottom size 150x150mm , top size 125x125mm (3METER C/C SPACING)	1001				1001			719.00	**719719.00**
	Corner Posts (110mmX110mm) 15.00M C/C Spacing	201				201			719.00	**144519.00**
4	Supplying & Fixing woven plain G.I. Wires fencing of mesh 50mm to 150mm to any type of standards rails straining bolts etc including provision of binding wire , staples.	1	3000		1.50	4500.00			175.00	**787500.00**
	G.Total:-									**2125306.77**
	Cost per running meter	**3000**	**RM**							**710**

Chainlink fencing with R.C.C. Posts to protect the Crops from wild/stray animals

1.20 mtr. high fencing with 1.55 mtr. R.C.C. Posts (minimum 3.00 mtr. Centre to Centre with Interlink Chain (Galvanised Steel Chain Link Fence Fabric) intended for various purposes confirming to IS:2721:2003, hot dip galvanised as per IS4826:1979, the fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner a to provide a continuos mesh without knots or ties except in the form of knocking the ends of the wires to form both ends knocked selvage of the fabric.




Barbed wire symbol.



COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 0.60m height and Solar Electric Fencing of 0.90m height for the perimeter length of 100meters.

Sr .No.	Particular	Unit	Quantity			
1	Fence Length (Perimeter)	Meter	100			
2	Total Fence Height above ground level	Meter	1.50			
a	Height of wire mesh	Meter	0.60			
b	Height of wire rows	Meter	0.90			
3	Number of wire rows / strands	Number	4			
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15 + 0.30+ 0.30			
5	Pole to Pole distance	Meter	5			
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	1.95			

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	5.51	Cum	282.00	1553.82	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	1.28	Cum	282.00	360.96	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	6.79	Cum	5874.00	39884.46	
4	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 0.60m high . 20 Nos. of (0.60+0.40)=1.00m height @2.60 Kg./m =	52.00	Kg.	75.00	3900.00	
5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (0.60 m height)	7.20	Kg	75.00	540.00	

6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	60	Sqm	175.00	10500.00	
	Total of A				**56739.24**	
B.	**Solar Fencing work**					
	The Electrical Unit					
8	Energizer(Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
9	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
10	Battery-80 Ah	1	Each	11500.00	11500.00	
11	Hooter-118 DB	1	Each	220.00	220.00	
12	Lightening Diverter-Copper	2	Each	885.00	1770.00	
13	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
14	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
15	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
16	Xenon Flash Tube	1	No.	700.00	700.00	
17	Neon Tester	1	No.	525.00	525.00	
18	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp	1	No.	800.00	800.00	
19	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	500	Meters	6.25	3125.00	Total perimeter for protection X no. of wire rows + 100 m extra
20	Section / Corner Posts- MS with Galvanised, 40 mm dia pipe, 1.95 meter with PP Insulator rivetung, marked in blue colour for identification.	4	No.	804.20	3216.80	
21	Support Posts -MS with Galvanised, 25 mm dia pipe, 1.95 m with PP Insulator riveting, marked in blue colour for identification.	10	No.	592.50	5925.00	2 each at corner/end post + 2 at each post at 10 m
22	Intermediate Posts -MS with Galvanised, 25 mm dia pipe, 1.95 m with PP Insulator riveting, marked in blue colour for identification.	20	No.	592.50	11850.00	As per spacing
23	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	16	No.	14.00	224.00	No. of Corner post and end post X number of wire rows

24	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	80	No.	8.00	640.00	No. of intermediate posts X number of wire rows
25	MS-Wire Tightners	4	No.	62.00	248.00	One each at 100 m fence length
26	Tension Spring -Galvanized coated as per Indian Spring	4	No.	147.00	588.00	One each at 100 m fence length
27	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
28	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
29	Joint Clamps-GI	4	No.	8.00	32.00	One each at 100 m fence length
30	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
31	Earth Kits (Galvanizing)-Copper	1	No.	450.00	450.00	One at each 500 m fence length
32	Warning Sign Boards-PVC	1	No.	30.00	30.00	One each at 100 m fence length
	Total of B				**70763.80**	
	Grand Total (A+B)				**127503.04**	
III	Installation Charges	100.00	Meters	75.00	7500.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**137363.04**	
	Cost per meter of fence length				**1370**	

Model -2

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 0.60m height and Solar Electric Fencing of 0.90m height for the perimeter length of 200meters.

Sr .No.	Particular	Unit	Quantity
1	Fence Length (Perimeter)	Meter	200
2	Total Fence Height above ground level	Meter	1.50
a	Height of wire mesh	Meter	0.60
b	Height of wire rows	Meter	0.90
3	Number of wire rows / strands	Number	4
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15 + 0.30+ 0.30
5	Pole to Pole distance	Meter	5
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	1.95

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	G.I. Wire Mesh					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	10.04	Cum	282.00	2831.28	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	2.56	Cum	282.00	721.92	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	12.60	Cum	5874.00	74012.40	
4	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 0.60m high . 40 Nos. of (0.60+0.40)=1.00m height @2.60 Kg./m =	104.00	Kg.	75.00	7800.00	
6	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (0.60 m height)	14.40	Kg	75.00	1080.00	

7	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	120	Sqm	175.00	21000.00	
	Total of A				**107445.60**	
B.	**Solar Fencing work**					
	The Electrical Unit					
8	Energizer(Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
9	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
10	Battery-80 Ah	1	Each	11500.00	11500.00	
11	Hooter-118 DB	1	Each	220.00	220.00	
12	Lightening Diverter-Copper	2	Each	885.00	1770.00	
13	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
14	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
15	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
16	Xenon Flash Tube	1	No.	700.00	700.00	
17	Neon Tester	1	No.	525.00	525.00	
18	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
19	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	900	Meters	6.25	5625.00	Total perimeter for protection X no. of wire rows + 100 m extra
20	Section / Corner Posts- MS with Galvanised, 40 mm dia pipe, 1.95 meter with PP Insulator rivetung, marked in blue colour for identification.	6	No.	804.20	4825.20	
21	Support Posts -MS with Galvanised, 25 mm dia pipe, 1.95 m with PP Insulator riveting, marked in blue colour for identification.	16	No.	592.50	9480.00	2 each at corner/end post + 2 at each post at 10 m

22	Intermediate Posts -MS with Galvanised, 25 mm dia pipe, 1.95 m with PP Insulator riveting, marked in blue colour for identification.	40	No.	592.50	23700.00	As per spacing
23	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	24	No.	14.00	336.00	No. of Corner post and end post X number of wire rows
24	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	160	No.	8.00	1280.00	No. of intermediate posts X number of wire rows
25	MS-Wire Tightners	8	No.	62.00	496.00	One each at 100 m fence length
26	Tension Spring -Galvanized coated as per Indian Spring	8	No.	147.00	1176.00	One each at 100 m fence length
27	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
28	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
29	Joint Clamps-GI	8	No.	8.00	64.00	One each at 100 m fence length
30	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
31	Earth Kits (Galvanizing)-Copper	1	No.	450.00	450.00	One at each 500 m fence length
32	Warning Sign Boards-PVC	2	No.	30.00	60.00	One each at 100 m fence length
	Total of B				**91927.20**	
	Grand Total (A+B)				**199372.80**	
III	Installation Charges	200.00	Meters	75.00	15000.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**216732.80**	
	Cost per meter of fence length				**1080**	

Model -3

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 0.60m height and Solar Electric Fencing of 0.90m height for the perimeter length of 300meters.

Sr .No.	Particular	Unit	Quantity
1	Fence Length (Perimeter)	Meter	300
2	Total Fence Height above ground level	Meter	1.50
a	Height of wire mesh	Meter	0.60
b	Height of wire rows	Meter	0.90
3	Number of wire rows / strands	Number	4
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15 + 0.30+ 0.30
5	Pole to Pole distance	Meter	5
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	1.95

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	14.58	Cum	282.00	4111.56	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	3.84	Cum	282.00	1082.88	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	18.42	Cum	5874.00	108199.08	

5	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 0.60m high 60 Nos. of (0.60+0.40)=1.00m height @2.60 Kg./m =	156.00	Kg.	75.00	11700.00	
6	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (0.60 m height)	21.60	Kg	75.00	1620.00	
7	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	180	Sqm	175.00	31500.00	
	Total of A				**158213.52**	
B.	**Solar Fencing work**					
	The Electrical Unit					
8	Energizer(Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
9	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
10	Battery-80 Ah	1	Each	11500.00	11500.00	
11	Hooter-118 DB	1	Each	220.00	220.00	
12	Lightening Diverter-Copper	2	Each	885.00	1770.00	
13	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
14	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
15	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
16	Xenon Flash Tube	1	No.	700.00	700.00	
17	Neon Tester	1	No.	525.00	525.00	
18	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	

19	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	1300	Meters	6.25	8125.00	Total perimeter for protection X no. of wire rows + 100 m extra
20	Section / Corner Posts- MS with Galvanised, 40 mm dia pipe, 1.95 meter with PP Insulator rivetung, marked in blue colour for identification.	8	No.	804.20	6433.60	
21	Support Posts -MS with Galvanised, 25 mm dia pipe, 1.95 m with PP Insulator riveting, marked in blue colour for identification.	22	No.	592.50	13035.00	2 each at corner/end post + 2 at each post at 10 m
22	Intermediate Posts -MS with Galvanised, 25 mm dia pipe, 1.95 m with PP Insulator riveting, marked in blue colour for identification.	60	No.	592.50	35550.00	As per spacing
23	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	32	No.	14.00	448.00	No. of Corner post and end post X number of wire rows
24	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	240	No.	8.00	1920.00	No. of intermediate posts X number of wire rows
25	MS-Wire Tightners	12	No.	62.00	744.00	One each at 100 m fence length
26	Tension Spring -Galvanized coated as per Indian Spring	12	No.	147.00	1764.00	One each at 100 m fence length
27	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
28	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
29	Joint Clamps-GI	12	No.	8.00	96.00	One each at 100 m fence length
30	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
31	Earth Kits (Galvanizing)-Copper	1	No.	450.00	450.00	One at each 500 m fence length
32	Warning Sign Boards-PVC	3	No.	30.00	90.00	One each at 100 m fence length
	Total of B				**113090.60**	
	Grand Total (A+B)				**271304.12**	
III	Installation Charges	300.00	Meters	75.00	22500.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**296164.12**	
	Cost per meter of fence length				**990**	

Model -4

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 0.60m height and Solar Electric Fencing of 0.90m height for the perimeter length of 500meters.

Sr .No.	Particular	Unit	Quantity
1	Fence Length (Perimeter)	Meter	500
2	Total Fence Height above ground level	Meter	1.50
a	Height of wire mesh	Meter	0.60
b	Height of wire rows	Meter	0.90
3	Number of wire rows / strands	Number	4
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15 + 0.30+ 0.30
5	Pole to Pole distance	Meter	5
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	1.95

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	23.65	Cum	282.00	6669.30	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	6.40	Cum	282.00	1804.80	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	30.05	Cum	5874.00	176513.70	
4	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 0.60m high 60 Nos. of (0.60+0.40)=1.00m height @2.60 Kg./m =	260.00	Kg.	75.00	19500.00	
5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (0.60 m height)	36.00	Kg	75.00	2700.00	
6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	300	Sqm	175.00	52500.00	
	Total of A				**259687.80**	
B.	**Solar Fencing work**					
	The Electrical Unit					

8	Energizer(Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
9	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
10	Battery-80 Ah	1	Each	11500.00	11500.00	
11	Hooter-118 DB	1	Each	220.00	220.00	
12	Lightening Diverter-Copper	2	Each	885.00	1770.00	
13	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
14	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
15	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
16	Xenon Flash Tube	1	No.	700.00	700.00	
17	Neon Tester	1	No.	525.00	525.00	
18	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
19	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	2100	Meters	6.25	13125.00	Total perimeter for protection X no. of wire rows + 100 m extra
20	Section / Corner Posts- MS with Galvanised, 40 mm dia pipe, 1.95 meter with PP Insulator rivetung, marked in blue colour for identification.	12	No.	804.20	9650.40	
21	Support Posts -MS with Galvanised, 25 mm dia pipe, 1.95 m with PP Insulator riveting, marked in blue colour for identification.	34	No.	592.50	20145.00	2 each at corner/end post + 2 at each post at 10 m
22	Intermediate Posts -MS with Galvanised, 25 mm dia pipe, 1.95 m with PP Insulator riveting, marked in blue colour for identification.	100	No.	592.50	59250.00	As per spacing
23	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	48	No.	14.00	672.00	No. of Corner post and end post X number of wire rows
24	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	400	No.	8.00	3200.00	No. of intermediate posts X number of wire rows
25	MS-Wire Tightners	20	No.	62.00	1240.00	One each at 100 m fence length
26	Tension Spring -Galvanized coated as per Indian Spring	20	No.	147.00	2940.00	One each at 100 m fence length
27	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
28	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
29	Joint Clamps-GI	20	No.	8.00	160.00	One each at 100 m fence length
30	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
31	Earth Kits (Galvanizing)-Copper	1	No.	450.00	450.00	One at each 500 m fence length
32	Warning Sign Boards-PVC	5	No.	30.00	150.00	One each at 100 m fence length
	Total of B				**155417.40**	
	Grand Total (A+B)				**415105.20**	
III	Installation Charges	500.00	Meters	75.00	37500.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**454965.20**	
	Cost per meter of fence length				**910**	

Model -5

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 0.60m height and Solar Electric Fencing of 0.90m height for the perimeter length of 750meters.

Sr .No.	Particular	Unit	Quantity
1	Fence Length (Perimeter)	Meter	750
2	Total Fence Height above ground level	Meter	1.50
a	Height of wire mesh	Meter	0.60
b	Height of wire rows	Meter	0.90
3	Number of wire rows / strands	Number	4
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15 + 0.30+ 0.30
5	Pole to Pole distance	Meter	5
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	1.95

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	34.99	Cum	282.00	9867.18	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	9.60	Cum	282.00	2707.20	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	44.59	Cum	5874.00	261921.66	
4	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 0.60m high -100Nos. of (0.60+0.40)=1.00m height @2.60 Kg./m =	390.00	Kg.	75.00	29250.00	
5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (0.60 m height)	54.00	Kg	75.00	4050.00	

6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	450	Sqm	175.00	78750.00	
	Total of A				**386546.04**	
B.	**Solar Fencing work**					
	The Electrical Unit					
8	Energizer(Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
9	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
10	Battery-80 Ah	1	Each	11500.00	11500.00	
11	Hooter-118 DB	1	Each	220.00	220.00	
12	Lightening Diverter-Copper	2	Each	885.00	1770.00	
13	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
14	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
15	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
16	Xenon Flash Tube	1	No.	700.00	700.00	
17	Neon Tester	1	No.	525.00	525.00	
18	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
19	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	3100	Meters	6.25	19375.00	Total perimeter for protection X no. of wire rows + 100 m extra
20	Section / Corner Posts- MS with Galvanised, 40 mm dia pipe, 1.95 meter with PP Insulator rivetung, marked in blue colour for identification.	17	No.	804.20	13671.40	
21	Support Posts -MS with Galvanised, 25 mm dia pipe, 1.95 m with PP Insulator riveting, marked in blue colour for identification.	49	No.	592.50	29032.50	2 each at corner/end post + 2 at each post at 10 m
22	Intermediate Posts -MS with Galvanised, 25 mm dia pipe, 1.95 m with PP Insulator riveting, marked in blue colour for identification.	150	No.	592.50	88875.00	As per spacing

23	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	68	No.	14.00	952.00	No. of Corner post and end post X number of wire rows
24	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	600	No.	8.00	4800.00	No. of intermediate posts X number of wire rows
25	MS-Wire Tightners	30	No.	62.00	1860.00	One each at 100 m fence length
26	Tension Spring -Galvanized coated as per Indian Spring	30	No.	147.00	4410.00	One each at 100 m fence length
27	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
28	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
29	Joint Clamps-GI	30	No.	8.00	240.00	One each at 100 m fence length
30	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
31	Earth Kits (Galvanizing)-Copper	2	No.	450.00	900.00	One at each 500 m fence length
32	Warning Sign Boards-PVC	8	No.	30.00	240.00	One each at 100 m fence length
	Total of B				**208790.90**	
	Grand Total (A+B)				**595336.94**	
III	Installation Charges	750.00	Meters	75.00	56250.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**653946.94**	
	Cost per meter of fence length				**870**	

Model -6

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 0.60m height and Solar Electric Fencing of 0.90m height for the perimeter length of 1000meters.

Sr .No.	Particular	Unit	Quantity			
1	Fence Length (Perimeter)	Meter	1000			
2	Total Fence Height above ground level	Meter	1.50			
a	Height of wire mesh	Meter	0.60			
b	Height of wire rows	Meter	0.90			
3	Number of wire rows / strands	Number	4			
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15 + 0.30+ 0.30			
5	Pole to Pole distance	Meter	5			
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	1.95			

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	46.33	Cum	282.00	13065.06	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	12.80	Cum	282.00	3609.60	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	59.13	Cum	5874.00	347329.62	
4	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 0.60m high -100Nos. of (0.60+0.40)=1.00m height @2.60 Kg./m =	520.00	Kg.	75.00	39000.00	

5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (0.60 m height)	72.00	Kg	75.00	5400.00	
6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	600	Sqm	175.00	105000.00	
	Total of A				**513404.28**	
B.	**Solar Fencing work**					
	The Electrical Unit					
7	Energizer(Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
8	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
9	Battery-80 Ah	1	Each	11500.00	11500.00	
10	Hooter-118 DB	1	Each	220.00	220.00	
11	Lightening Diverter-Copper	2	Each	885.00	1770.00	
12	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
13	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
14	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
15	Xenon Flash Tube	1	No.	700.00	700.00	
16	Neon Tester	1	No.	525.00	525.00	
17	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
18	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	4100	Meters	6.25	25625.00	Total perimeter for protection X no. of wire rows + 100 m extra
19	Section / Corner Posts- MS with Galvanised, 40 mm dia pipe, 2.51 meter with PP Insulator rivetung, marked in blue colour for identification.	22	No.	804.20	17692.40	

20	Support Posts -MS with Galvanised, 25 mm dia pipe, 1.90m with PP Insulator riveting, marked in blue colour for identification.	64	No.	592.50	37920.00	2 each at corner/end post + 2 at each post at 10 m
21	Intermediate Posts -MS with Galvanised, 25 mm dia pipe, 1.90m with PP Insulator riveting, marked in blue colour for identification.	200	No.	592.50	118500.00	As per spacing
22	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	88	No.	14.00	1232.00	No. of Corner post and end post X number of wire rows
23	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	800	No.	8.00	6400.00	No. of intermediate posts X number of wire rows
24	MS-Wire Tightners	40	No.	62.00	2480.00	One each at 100 m fence length
25	Tension Spring -Galvanized coated as per Indian Spring	40	No.	147.00	5880.00	One each at 100 m fence length
26	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
27	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
28	Joint Clamps-GI	40	No.	8.00	320.00	One each at 100 m fence length
29	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
30	Earth Kits (Galvanizing)-Copper	2	No.	450.00	900.00	One at each 500 m fence length
31	Warning Sign Boards-PVC	10	No.	30.00	300.00	One each at 100 m fence length
	Total of B				**261684.40**	
	Grand Total (A+B)				**775088.68**	
III	Installation Charges	1000.00	Meters	75.00	75000.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**852448.68**	
	Cost per meter of fence length				**850**	

Model -7

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 0.60m height and Solar Electric Fencing of 0.90m height for the perimeter length of 1500meters.

Sr .No.	Particular	Unit	Quantity
1	Fence Length (Perimeter)	Meter	1500
2	Total Fence Height above ground level	Meter	1.50
a	Height of wire mesh	Meter	0.60
b	Height of wire rows	Meter	0.90
3	Number of wire rows / strands	Number	4
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15 + 0.30+ 0.30
5	Pole to Pole distance	Meter	5
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	1.95

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	69.01	Cum	282.00	19460.82	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	19.20	Cum	282.00	5414.40	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	88.21	Cum	5874.00	518145.54	
4	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 0.60m high -100Nos. of (0.60+0.40)=1.00m height @2.60 Kg./m =	780.00	Kg.	75.00	58500.00	
5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (0.60 m height)	108.00	Kg	75.00	8100.00	

6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	900	Sqm	175.00	157500.00	
	Total of A				**767120.76**	
B.	**Solar Fencing work**					
	The Electrical Unit					
7	Energizer(Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
8	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
9	Battery-80 Ah	1	Each	11500.00	11500.00	
10	Hooter-118 DB	1	Each	220.00	220.00	
11	Lightening Diverter-Copper	2	Each	885.00	1770.00	
12	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
13	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
14	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
15	Xenon Flash Tube	1	No.	700.00	700.00	
16	Neon Tester	1	No.	525.00	525.00	
17	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
18	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	6100	Meters	6.25	38125.00	Total perimeter for protection X no. of wire rows + 100 m extra
19	Section / Corner Posts- MS with Galvanised, 40 mm dia pipe, 2.51 meter with PP Insulator rivetung, marked in blue colour for identification.	32	No.	804.20	25734.40	
20	Support Posts -MS with Galvanised, 25 mm dia pipe, 2.25m with PP Insulator riveting, marked in blue colour for identification.	94	No.	592.50	55695.00	2 each at corner/end post + 2 at each post at 10 m
21	Intermediate Posts -MS with Galvanised, 25 mm dia pipe, 2.25 m with PP Insulator riveting, marked in blue colour for identification.	300	No.	592.50	177750.00	As per spacing

22	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	128	No.	14.00	1792.00	No. of Corner post and end post X number of wire rows
23	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	1200	No.	8.00	9600.00	No. of intermediate posts X number of wire rows
24	MS-Wire Tightners	60	No.	62.00	3720.00	One each at 100 m fence length
25	Tension Spring -Galvanized coated as per Indian Spring	60	No.	147.00	8820.00	One each at 100 m fence length
26	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
27	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
28	Joint Clamps-GI	60	No.	8.00	480.00	One each at 100 m fence length
29	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
30	Earth Kits (Galvanizing)-Copper	3	No.	450.00	1350.00	One at each 500 m fence length
31	Warning Sign Boards-PVC	15	No.	30.00	450.00	One each at 100 m fence length
	Total of B				**367951.40**	
	Grand Total (A+B)				**1135072.16**	
III	Installation Charges	1500.00	Meters	75.00	112500.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**1249932.16**	
	Cost per meter of fence length				**830**	

Model -8

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 0.60m height and Solar Electric Fencing of 0.90m height for the perimeter length of 2000meters.

Sr .No.	Particular	Unit	Quantity			
1	Fence Length (Perimeter)	Meter	2000			
2	Total Fence Height above ground level	Meter	1.50			
a	Height of wire mesh	Meter	0.60			
b	Height of wire rows	Meter	0.90			
3	Number of wire rows / strands	Number	4			
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15 + 0.30+ 0.30			
5	Pole to Pole distance	Meter	5			
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	1.95			

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	91.69	Cum	282.00	25856.58	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	25.60	Cum	282.00	7219.20	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	117.29	Cum	5874.00	688961.46	
4	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 0.60m high -100Nos. of (0.60+0.40)=1.00m height @2.60 Kg./m =	1040.00	Kg.	75.00	78000.00	
5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (0.60 m height)	144.00	Kg	75.00	10800.00	

6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	1200	Sqm	175.00	210000.00	
	Total of A				**1020837.24**	
B.	**Solar Fencing work**					
	The Electrical Unit					
7	Energizer(Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
8	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
9	Battery-80 Ah	1	Each	11500.00	11500.00	
10	Hooter-118 DB	1	Each	220.00	220.00	
11	Lightening Diverter-Copper	2	Each	885.00	1770.00	
12	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
13	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
14	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
15	Xenon Flash Tube	1	No.	700.00	700.00	
16	Neon Tester	1	No.	525.00	525.00	
17	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
18	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	8100	Meters	6.25	50625.00	Total perimeter for protection X no. of wire rows + 100 m extra
19	Section / Corner Posts- MS with Galvanised, 40 mm dia pipe, 2.51 meter with PP Insulator rivetung, marked in blue colour for identification.	42	No.	804.20	33776.40	
20	Support Posts -MS with Galvanised, 25 mm dia pipe, 2.25m with PP Insulator riveting, marked in blue colour for identification.	124	No.	592.50	73470.00	2 each at corner/end post + 2 at each post at 10 m
21	Intermediate Posts -MS with Galvanised, 25 mm dia pipe, 2.25 m with PP Insulator riveting, marked in blue colour for identification.	400	No.	592.50	237000.00	As per spacing

22	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	168	No.	14.00	2352.00	No. of Corner post and end post X number of wire rows
23	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	1600	No.	8.00	12800.00	No. of intermediate posts X number of wire rows
24	MS-Wire Tightners	80	No.	62.00	4960.00	One each at 100 m fence length
25	Tension Spring -Galvanized coated as per Indian Spring	80	No.	147.00	11760.00	One each at 100 m fence length
26	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
27	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
28	Joint Clamps-GI	80	No.	8.00	640.00	One each at 100 m fence length
29	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
30	Earth Kits (Galvanizing)-Copper	4	No.	450.00	1800.00	One at each 500 m fence length
31	Warning Sign Boards-PVC	20	No.	30.00	600.00	One each at 100 m fence length
	Total of B				**474218.40**	
	Grand Total (A+B)				**1495055.64**	
III	Installation Charges	2000.00	Meters	75.00	150000.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**1647415.64**	
	Cost per meter of fence length				**820**	

Model -9

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 0.60m height and Solar Electric Fencing of 0.90m height for the perimeter length of 3000meters.

Sr .No.	Particular	Unit	Quantity			
1	Fence Length (Perimeter)	Meter	3000			
2	Total Fence Height above ground level	Meter	1.50			
a	Height of wire mesh	Meter	0.60			
b	Height of wire rows	Meter	0.90			
3	Number of wire rows / strands	Number	4			
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15 + 0.30+ 0.30			
5	Pole to Pole distance	Meter	5			
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	1.95			

Estimate cost

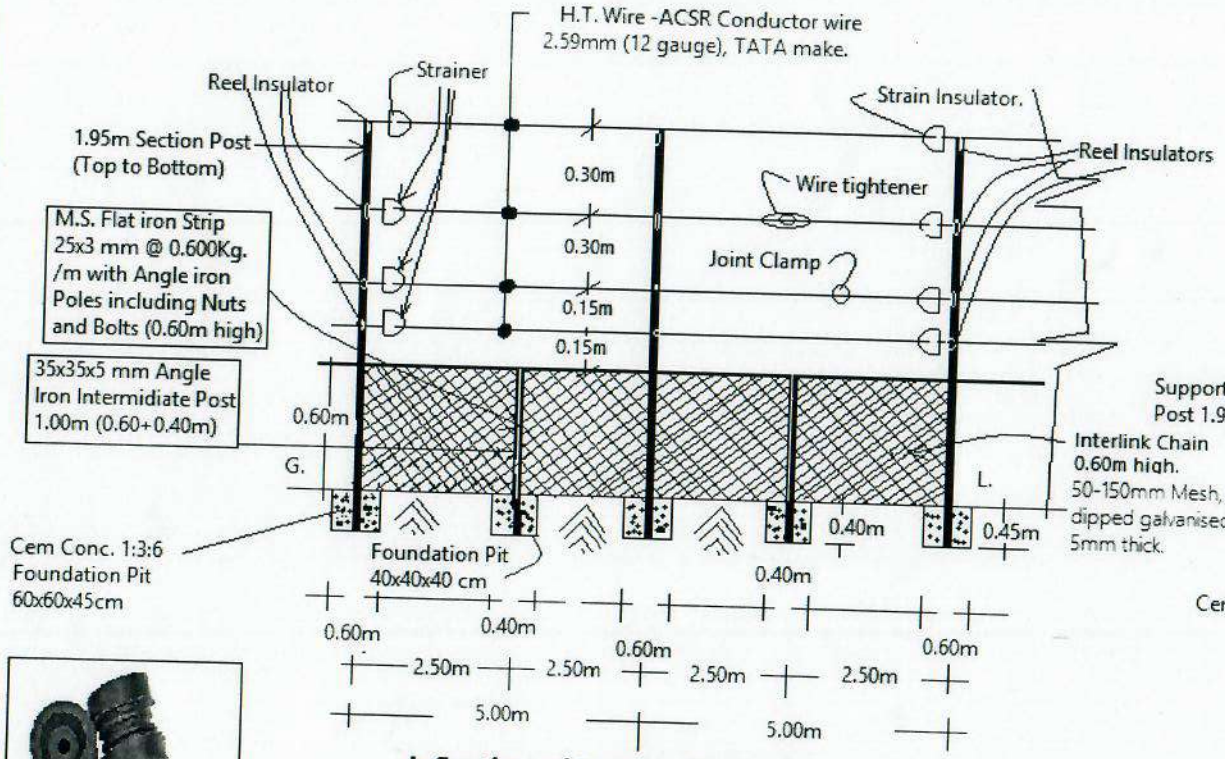
Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	137.05	Cum	282.00	38648.10	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	38.40	Cum	282.00	10828.80	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	175.45	Cum	5874.00	1030593.30	
4	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 0.60m high -100Nos. of (0.60+0.40)=1.00m height @2.60 Kg./m =	1560.00	Kg.	75.00	117000.00	
5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (0.60 m height)	216.00	Kg	75.00	16200.00	

6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	1800	Sqm	175.00	315000.00	
	Total of A				**1528270.20**	
B.	**Solar Fencing work**					
	The Electrical Unit					
7	Energizer(Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
8	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
9	Battery-80 Ah	1	Each	11500.00	11500.00	
10	Hooter-118 DB	1	Each	220.00	220.00	
11	Lightening Diverter-Copper	2	Each	885.00	1770.00	
12	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
13	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
14	Digital Multi meter-Range Upto - 12 KV	1	No.	4720.00	4720.00	
15	Xenon Flash Tube	1	No.	700.00	700.00	
16	Neon Tester	1	No.	525.00	525.00	
17	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
18	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	12100	Meters	6.25	75625.00	Total perimeter for protection X no. of wire rows + 100 m extra
19	Section / Corner Posts- MS with Galvanised, 40 mm dia pipe, 2.51 meter with PP Insulator rivetung, marked in blue colour for identification.	62	No.	804.20	49860.40	
20	Support Posts -MS with Galvanised, 25 mm dia pipe, 2.25m with PP Insulator riveting, marked in blue colour for identification.	184	No.	592.50	109020.00	2 each at corner/end post + 2 at each post at 10 m
21	Intermediate Posts -MS with Galvanised, 25 mm dia pipe, 2.25 m with PP Insulator riveting, marked in blue colour for identification.	600	No.	592.50	355500.00	As per spacing
22	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	248	No.	14.00	3472.00	No. of Corner post and end post X number of wire rows
23	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	2400	No.	8.00	19200.00	No. of intermediate posts X number of wire rows

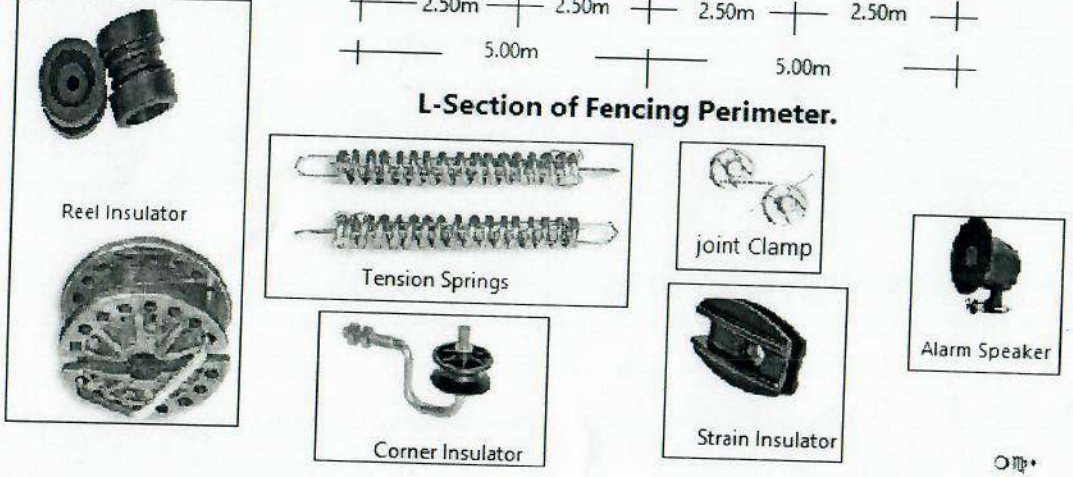
24	MS-Wire Tightners	120	No.	62.00	7440.00	One each at 100 m fence length
25	Tension Spring -Galvanized coated as per Indian Spring	120	No.	147.00	17640.00	One each at 100 m fence length
26	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
27	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
28	Joint Clamps-GI	120	No.	8.00	960.00	One each at 100 m fence length
29	Double Insulated Cable Single Core ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
30	Earth Kits (Galvanizing)-Copper	6	No.	450.00	2700.00	One at each 500 m fence length
31	Warning Sign Boards-PVC	30	No.	30.00	900.00	One each at 100 m fence length
	Total of B				**686752.40**	
	Grand Total (A+B)				**2215022.60**	
III	Installation Charges	3000.00	Meters	75.00	225000.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**2442382.60**	
	Cost per meter of fence length				**810**	

Drawing of Composite Fencing Integrated with 0.60m high G.I. Wire mesh and 0.90m high Solar Electric Fencing.

Not to Scale



L-Section of Fencing Perimeter.



Cross Section of Corner Post or Support Post

1. Section / Corner Posts-M.S. Galvanised, 40mm dia Pipe,1.95 mtr. with PP Insulator reveting, marked in blue colour for identification.
2. Support Posts- M.S. Galvanised, 25mm dia pipe, 1.95 mtr. with PP Insulator reveting, marked in blue colour for identification.
3. Intermidiate Posts-M.S. with Galvanised, 25mm dia Pipe, 1.95 mtr. with PP Insulator reveting, marked in blue colour for identification.

Annexure-XXX

Model -1

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 0.60m height and Solar Electric Fencing of 1.20m height for the perimeter length of 100 meters.

Sr .No.	Particular	Unit	Quantity
1	Fence Length (Perimeter)	Meter	100
2	Total Fence Height above ground level	Meter	1.80
a	Height of wire mesh	Meter	0.60
b	Height of wire rows	Meter	1.20
3	Number of wire rows / strands	Number	5
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15+ 0.30+ 0.30+0.30
5	Pole to Pole distance	Meter	5
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	2.25

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	5.51	Cum	282.00	1553.82	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	1.28	Cum	282.00	360.96	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	6.79	Cum	5874.00	39884.46	
4	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 0.60m high . 20 Nos. of (0.60+0.40)=1.00m height @2.60 Kg./m =	52.00	Kg.	75.00	3900.00	
5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (0.60 m height)	7.20	Kg	75.00	540.00	
6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	60	Sqm	175.00	10500.00	
	Total of A				**56739.24**	
B.	**Solar Fencing work**					

	The Electrical Unit					
7	Energizer(Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
8	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
9	Battery-80 Ah	1	Each	11500.00	11500.00	
10	Hooter-118 DB	1	Each	220.00	220.00	
11	Lightening Diverter-Copper	2	Each	885.00	1770.00	
12	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
13	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
14	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
15	Xenon Flash Tube	1	No.	700.00	700.00	
16	Neon Tester	1	No.	525.00	525.00	
17	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
18	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	600	Meters	6.25	3750.00	Total perimeter for protection X no. of wire rows + 100 m extra
19	Section/Corner posts - MS with Galvanised, 40mm dia Pipe, 2.51 meter with PP Insulator riveting, marked in blue colour for identification	4	No.	928.00	3712.00	
20	Support Posts- MS with Galvanised, 25mm dia Pipe, 2.25m with PP Insulator riveting, marked in blue colour for identification	10	No.	684.00	6840.00	2 each at corner/end post + 2 at each post at 10 m
21	Intermediate posts - MS with Galvanised, 25mm dia Pipe, 2.25meter with PP Insulator riveting, marked in blue colour for identification	20	No.	684.00	13680.00	As per spacing
22	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	20	No.	14.00	280.00	No. of Corner post and end post X number of wire rows
23	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	100	No.	8.00	800.00	No. of intermediate posts X number of wire rows
24	MS-Wire Tightners	5	No.	62.00	310.00	One each at 100 m fence length
25	Tension Spring -Galvanized coated as per Indian Spring	5	No.	147.00	735.00	One each at 100 m fence length
26	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
27	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
28	Joint Clamps-GI	5	No.	8.00	40.00	One each at 100 m fence length
29	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
30	Earth Kits (Galvanizing)-Copper	1	No.	450.00	450.00	One at each 500 m fence length
31	Warning Sign Boards-PVC	1	No.	30.00	30.00	One each at 100 m fence length
	Total of B				**75062.00**	
	Grand Total (A+B)				**131801.24**	
III	Installation Charges	100.00	Meters	75.00	7500.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**141661.24**	
	Cost per meter of fence length				**1420**	

Model -2

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 0.60m height and Solar Electric Fencing of 1.20m height for the perimeter length of 200 meters.

Sr .No.	Particular	Unit	Quantity
1	Fence Length (Perimeter)	Meter	200
2	Total Fence Height above ground level	Meter	1.80
a	Height of wire mesh	Meter	0.60
b	Height of wire rows	Meter	1.20
3	Number of wire rows / strands	Number	5
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15+ 0.30+ 0.30+0.30
5	Pole to Pole distance	Meter	5
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	2.25

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	G.I. Wire Mesh					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	10.04	Cum	282.00	2831.28	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	2.56	Cum	282.00	721.92	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	12.60	Cum	5874.00	74012.40	
5	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 0.60m high . 20 Nos. of (0.60+0.40)=1.00m height @2.60 Kg./m =	104.00	Kg.	75.00	7800.00	
6	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (0.60 m height)	14.40	Kg	75.00	1080.00	

7	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the	120	Sqm	175.00	21000.00	
	Total of A				**107445.60**	
B.	**Solar Fencing work**					
	The Electrical Unit					
8	Energizer(Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
9	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
10	Battery-80 Ah	1	Each	11500.00	11500.00	
11	Hooter-118 DB	1	Each	220.00	220.00	
12	Lightening Diverter-Copper	2	Each	885.00	1770.00	
13	Mounting box with post - Mild Steel with Powder coating	1	Each	5500.00	5500.00	
14	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
15	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
16	Xenon Flash Tube	1	No.	700.00	700.00	
17	Neon Tester	1	No.	525.00	525.00	
18	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
19	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	1100	Meters	6.25	6875.00	Total perimeter for protection X no. of wire rows + 100 m extra
20	Section/Corner posts - MS with Galvanised, 40mm dia Pipe, 2.51 meter with PP Insulator riveting, marked in blue colour for identification	6	No.	928.00	5568.00	
21	Support Posts- MS with Galvanised, 25mm dia Pipe, 2.25m with PP Insulator riveting, marked in blue colour for identification	16	No.	684.00	10944.00	2 each at corner/end post + 2 at each post at 10 m
22	Intermediate posts - MS with Galvanised, 25mm dia Pipe, 2.25meter with PP Insulator riveting, marked in blue colour for identification	40	No.	684.00	27360.00	As per spacing
23	Corner Poles/End Insulators (Strain Insulator) -Poly					No. of Corner post and end post X number of

24	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	200	No.	8.00	1600.00	No. of intermediate posts X number of wire rows
25	MS-Wire Tightners	10	No.	62.00	620.00	One each at 100 m fence length
26	Tension Spring -Galvanized coated as per Indian Spring	10	No.	147.00	1470.00	One each at 100 m fence length
27	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
28	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
29	Joint Clamps-GI	10	No.	8.00	80.00	One each at 100 m fence length
30	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
31	Earth Kits (Galvanizing)-Copper	1	No.	450.00	450.00	One at each 500 m fence length
32	Warning Sign Boards-PVC	2	No.	30.00	60.00	One each at 100 m fence length
	Total of B				**99882.00**	
	Grand Total (A+B)				**207327.60**	
III	Installation Charges	200.00	Meters	75.00	15000.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**224687.60**	
	Cost per meter of fence length				**1120**	

Model -3

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 0.60m height and Solar Electric Fencing of 1.20m height for the perimeter length of 300 meters.

Sr .No.	Particular	Unit	Quantity			
1	Fence Length (Perimeter)	Meter	300			
2	Total Fence Height above ground level	Meter	1.80			
a	Height of wire mesh	Meter	0.60			
b	Height of wire rows	Meter	1.20			
3	Number of wire rows / strands	Number	5			
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15+ 0.30+ 0.30+0.30			
5	Pole to Pole distance	Meter	5			
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	2.25			

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	14.58	Cum	282.00	4111.56	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	3.84	Cum	282.00	1082.88	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	18.42	Cum	5874.00	108199.08	
4	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 0.60m high . 20 Nos. of (0.60+0.40)=1.00m height @2.60 Kg./m =	156.00	Kg.	75.00	11700.00	
5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (0.60 m height)	21.60	Kg	75.00	1620.00	

6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	180	Sqm	175.00	31500.00	
	Total of A				**158213.52**	
B.	**Solar Fencing work**					
	The Electrical Unit					
8	Energizer(Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
9	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
10	Battery-80 Ah	1	Each	11500.00	11500.00	
11	Hooter-118 DB	1	Each	220.00	220.00	
12	Lightening Diverter-Copper	2	Each	885.00	1770.00	
13	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
14	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
15	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
16	Xenon Flash Tube	1	No.	700.00	700.00	
17	Neon Tester	1	No.	525.00	525.00	
18	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
19	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	1600	Meters	6.25	10000.00	Total perimeter for protection X no. of wire rows + 100 m extra
20	Section/Corner posts - MS with Galvanised, 40mm dia Pipe, 2.51 meter with PP Insulator riveting, marked in blue colour for identification	8	No.	928.00	7424.00	
21	Support Posts- MS with Galvanised, 25mm dia Pipe, 2.25m with PP Insulator riveting, marked in blue colour for identification	22	No.	684.00	15048.00	2 each at corner/end post + 2 at each post at 10 m
22	Intermediate posts - MS with Galvanised, 25mm dia Pipe, 2.25meter with PP Insulator riveting, marked in blue colour for identification	60	No.	684.00	41040.00	As per spacing
23	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	40	No.	14.00	560.00	No. of Corner post and end post X number of wire rows

24	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	300	No.	8.00	2400.00	No. of intermediate posts X number of wire rows
25	MS-Wire Tightners	15	No.	62.00	930.00	One each at 100 m fence length
26	Tension Spring -Galvanized coated as per Indian Spring	15	No.	147.00	2205.00	One each at 100 m fence length
27	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
28	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
29	Joint Clamps-GI	15	No.	8.00	120.00	One each at 100 m fence length
30	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
31	Earth Kits (Galvanizing)-Copper	1	No.	450.00	450.00	One at each 500 m fence length
32	Warning Sign Boards-PVC	3	No.	30.00	90.00	One each at 100 m fence length
	Total of B				**124702.00**	
	Grand Total (A+B)				**282915.52**	
III	Installation Charges	300.00	Meters	75.00	22500.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**307775.52**	
	Cost per meter of fence length				**1030**	

Model -4

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 0.60m height and Solar Electric Fencing of 1.20m height for the perimeter length of 500 meters.

Sr .No.	Particular	Unit	Quantity			
1	Fence Length (Perimeter)	Meter	500			
2	Total Fence Height above ground level	Meter	1.80			
a	Height of wire mesh	Meter	0.60			
b	Height of wire rows	Meter	1.20			
3	Number of wire rows / strands	Number	5			
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15+ 0.30+ 0.30+0.30			
5	Pole to Pole distance	Meter	5			
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	2.25			

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	23.65	Cum	282.00	6669.30	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	6.40	Cum	282.00	1804.80	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	30.05	Cum	5874.00	176513.70	
4	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 0.60m high . 20 Nos. of (0.60+0.40)=1.00m height @2.60 Kg./m =	260.00	Kg.	75.00	19500.00	
5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (0.60 m height)	36.00	Kg	75.00	2700.00	

6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	300	Sqm	175.00	52500.00	
	Total of A				**259687.80**	
B.	**Solar Fencing work**					
	The Electrical Unit					
8	Energizer(Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
9	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
10	Battery-80 Ah	1	Each	11500.00	11500.00	
11	Hooter-118 DB	1	Each	220.00	220.00	
12	Lightening Diverter-Copper	2	Each	885.00	1770.00	
13	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
14	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
15	Digital Multi meter-Range Upto - 12 KV	1	No.	4720.00	4720.00	
16	Xenon Flash Tube	1	No.	700.00	700.00	
17	Neon Tester	1	No.	525.00	525.00	
18	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
19	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	2600	Meters	6.25	16250.00	Total perimeter for protection X no. of wire rows + 100 m extra
20	Section/Corner posts - MS with Galvanised, 40mm dia Pipe, 2.51 meter with PP Insulator riveting, marked in blue colour for identification	12	No.	928.00	11136.00	
21	Support Posts- MS with Galvanised, 25mm dia Pipe, 2.25m with PP Insulator riveting, marked in blue colour for identification	34	No.	684.00	23256.00	2 each at corner/end post + 2 at each post at 10 m
22	Intermediate posts - MS with Galvanised, 25mm dia Pipe, 2.25meter with PP Insulator riveting, marked in blue colour for identification	100	No.	684.00	68400.00	As per spacing
23	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	60	No.	14.00	840.00	No. of Corner post and end post X number of wire rows
24	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	500	No.	8.00	4000.00	No. of intermediate posts X number of wire rows
25	MS-Wire Tightners					One each at 100 m

26	Tension Spring -Galvanized coated as per Indian Spring	25	No.	147.00	3675.00	One each at 100 m fence length
27	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
28	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
29	Joint Clamps-GI	25	No.	8.00	200.00	One each at 100 m fence length
30	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
31	Earth Kits (Galvanizing)-Copper	1	No.	450.00	450.00	One at each 500 m fence length
32	Warning Sign Boards-PVC	5	No.	30.00	150.00	One each at 100 m fence length
	Total of B				**174342.00**	
	Grand Total (A+B)				**434029.80**	
III	Installation Charges	500.00	Meters	75.00	37500.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**473889.80**	
	Cost per meter of fence length				**950**	

Model -5

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 0.60m height and Solar Electric Fencing of 1.20m height for the perimeter length of 750 meters.

Sr .No.	Particular	Unit	Quantity
1	Fence Length (Perimeter)	Meter	750
2	Total Fence Height above ground level	Meter	1.80
a	Height of wire mesh	Meter	0.60
b	Height of wire rows	Meter	1.20
3	Number of wire rows / strands	Number	5
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15+ 0.30+ 0.30+0.30
5	Pole to Pole distance	Meter	5
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	2.25

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size -0.60MX0.60MX0.45M)	34.99	Cum	282.00	9867.18	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size -0.40MX0.40MX0.40M) for Angle posts	9.60	Cum	282.00	2707.20	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	44.59	Cum	5874.00	261921.66	
4	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 0.60m high . 150 Nos. of (0.60+0.40)=1.00m height @2.60 Kg./m =	390.00	Kg.	75.00	29250.00	
5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (0.60 m height)	54.00	Kg	75.00	4050.00	

6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	450	Sqm	175.00	78750.00	
	Total of A				**386546.04**	
B.	**Solar Fencing work**					
	The Electrical Unit					
8	Energizer(Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
9	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
10	Battery-80 Ah	1	Each	11500.00	11500.00	
11	Hooter-118 DB	1	Each	220.00	220.00	
12	Lightening Diverter-Copper	2	Each	885.00	1770.00	
13	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
14	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
15	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
16	Xenon Flash Tube	1	No.	700.00	700.00	
17	Neon Tester	1	No.	525.00	525.00	
18	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
19	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	3850	Meters	6.25	24062.50	Total perimeter for protection X no. of wire rows + 100 m extra
20	Section/Corner posts - MS with Galvanised, 40mm dia Pipe, 2.51 meter with PP Insulator riveting, marked in blue colour for identification	17	No.	928.00	15776.00	
21	Support Posts- MS with Galvanised, 25mm dia Pipe, 2.25m with PP Insulator riveting, marked in blue colour for identification	49	No.	684.00	33516.00	2 each at corner/end post + 2 at each post at 10 m
22	Intermediate posts - MS with Galvanised, 25mm dia Pipe, 2.25meter with PP Insulator riveting, marked in blue colour for identification	150	No.	684.00	102600.00	As per spacing
23	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	85	No.	14.00	1190.00	No. of Corner post and end post X number of wire rows

24	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	750	No.	8.00	6000.00	No. of intermediate posts X number of wire rows
25	MS-Wire Tightners	38	No.	62.00	2356.00	One each at 100 m fence length
26	Tension Spring -Galvanized coated as per Indian Spring	38	No.	147.00	5586.00	One each at 100 m fence length
27	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
28	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
29	Joint Clamps-GI	38	No.	8.00	304.00	One each at 100 m fence length
30	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
31	Earth Kits (Galvanizing)-Copper	2	No.	450.00	900.00	One at each 500 m fence length
32	Warning Sign Boards-PVC	8	No.	30.00	240.00	One each at 100 m fence length
	Total of B				**236965.50**	
	Grand Total (A+B)				**623511.54**	
III	Installation Charges	750.00	Meters	75.00	56250.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**682121.54**	
	Cost per meter of fence length				**910**	

Annexure-XXXV

Model -6

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 0.60m height and Solar Electric Fencing of 1.20m height for the perimeter length of 1000meters.

Sr .No.	Particular	Unit	Quantity			
1	Fence Length (Perimeter)	Meter	1000			
2	Total Fence Height above ground level	Meter	1.80			
a	Height of wire mesh	Meter	0.60			
b	Height of wire rows	Meter	1.20			
3	Number of wire rows / strands	Number	5			
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15+ 0.30+ 0.30+0.30			
5	Pole to Pole distance	Meter	5			
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	2.25			

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	46.33	Cum	282.00	13065.06	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	12.80	Cum	282.00	3609.60	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	59.13	Cum	5874.00	347329.62	
5	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 0.60m high . 200 Nos. of (0.60+0.40)=1.00m height @2.60 Kg./m =	520.00	Kg.	75.00	39000.00	
6	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (0.60 m height)	72.00	Kg	75.00	5400.00	

7	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	600	Sqm	175.00	105000.00	
	Total of A				**513404.28**	
B.	**Solar Fencing work**					
	The Electrical Unit					
8	Energizer(Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
9	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
10	Battery-80 Ah	1	Each	11500.00	11500.00	
11	Hooter-118 DB	1	Each	220.00	220.00	
12	Lightening Diverter-Copper	2	Each	885.00	1770.00	
13	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
14	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
15	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
16	Xenon Flash Tube	1	No.	700.00	700.00	
17	Neon Tester	1	No.	525.00	525.00	
18	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
19	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	5100	Meters	6.25	31875.00	Total perimeter for protection X no. of wire rows + 100 m extra
20	Section/Corner posts - MS with Galvanised, 40mm dia Pipe, 2.51 meter with PP Insulator riveting, marked in blue colour for identification	22	No.	928.00	20416.00	
21	Support Posts- MS with Galvanised, 25mm dia Pipe, 2.25m with PP Insulator riveting, marked in blue colour for identification	64	No.	684.00	43776.00	2 each at corner/end post + 2 at each post at 10 m
22	Intermediate posts - MS with Galvanised, 25mm dia Pipe, 2.25meter with PP Insulator riveting, marked in blue colour for identification	200	No.	684.00	136800.00	As per spacing
23	Corner Poles/End Insulators					No. of Corner post

24	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	1000	No.	8.00	8000.00	No. of intermediate posts X number of wire rows
25	MS-Wire Tightners	50	No.	62.00	3100.00	One each at 100 m fence length
26	Tension Spring -Galvanized coated as per Indian Spring	50	No.	147.00	7350.00	One each at 100 m fence length
27	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
28	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
29	Joint Clamps-GI	50	No.	8.00	400.00	One each at 100 m fence length
30	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
31	Earth Kits (Galvanizing)-Copper	2	No.	450.00	900.00	One at each 500 m fence length
32	Warning Sign Boards-PVC	10	No.	30.00	300.00	One each at 100 m fence length
	Total of B				**298892.00**	
	Grand Total (A+B)				**812296.28**	
III	Installation Charges	1000.00	Meters	75.00	75000.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**889656.28**	
	Cost per meter of fence length				**890**	

Annexure-XXXVI

Model -7

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 0.60m height and Solar Electric Fencing of 1.20m height for the perimeter length of 1500meters.

Sr .No.	Particular	Unit	Quantity			
1	Fence Length (Perimeter)	Meter	1500			
2	Total Fence Height above ground level	Meter	1.80			
a	Height of wire mesh	Meter	0.60			
b	Height of wire rows	Meter	1.20			
3	Number of wire rows / strands	Number	5			
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15+ 0.30+ 0.30+0.30			
5	Pole to Pole distance	Meter	5			
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	2.25			

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	69.01	Cum	282.00	19460.82	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	19.20	Cum	282.00	5414.40	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	88.21	Cum	5874.00	518145.54	
5	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 0.60m high . 200 Nos. of (0.60+0.40)=1.00m height @2.60 Kg./m =	780.00	Kg.	75.00	58500.00	
6	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (0.60 m height)	108.00	Kg	75.00	8100.00	

7	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	900	Sqm	175.00	157500.00	
	Total of A				**767120.76**	
B.	**Solar Fencing work**					
	The Electrical Unit					
8	Energizer(Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
9	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
10	Battery-80 Ah	1	Each	11500.00	11500.00	
11	Hooter-118 DB	1	Each	220.00	220.00	
12	Lightening Diverter-Copper	2	Each	885.00	1770.00	
13	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
14	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
15	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
16	Xenon Flash Tube	1	No.	700.00	700.00	
17	Neon Tester	1	No.	525.00	525.00	
18	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
19	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	7600	Meters	6.25	47500.00	Total perimeter for protection X no. of wire rows + 100 m extra
20	Corner / End Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -MS with Galvanised, 40x 40 Sq.mm or round Pipe (Medium Class), 6.5 Feet with PP Insulator riveting	32	No.	928.00	29696.00	
21	Support Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) MS with Galvanised, 25x 25 Sq.mm or round Pipe (Medium Class), 6.5 Feet with PP Insulator riveting	94	No.	684.00	64296.00	2 each at corner/end post + 2 at each post at 10 m

22	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -MS with Galvanised, 25x 25 Sq.mm Pipe or round Pipe (Medium Class) , 6.5 Feet with PP Insulator revetting	300	No.	684.00	205200.00	As per spacing
23	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	160	No.	14.00	2240.00	No. of Corner post and end post X number of wire rows
24	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	1500	No.	8.00	12000.00	No. of intermediate posts X number of wire rows
25	MS-Wire Tightners	75	No.	62.00	4650.00	One each at 100 m fence length
26	Tension Spring -Galvanized coated as per Indian Spring	75	No.	147.00	11025.00	One each at 100 m fence length
27	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
28	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
29	Joint Clamps-GI	75	No.	8.00	600.00	One each at 100 m fence length
30	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
31	Earth Kits (Galvanizing)-Copper	3	No.	450.00	1350.00	One at each 500 m fence length
32	Warning Sign Boards-PVC	15	No.	30.00	450.00	One each at 100 m fence length
	Total of B				**423442.00**	
	Grand Total (A+B)				**1190562.76**	
III	Installation Charges	1500.00	Meters	75.00	112500.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**1305422.76**	
	Cost per meter of fence length				**870**	

Annexure-XXXVII

Model -8

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 0.60m height and Solar Electric Fencing of 1.20m height for the perimeter length of 2000meters.

Sr .No.	Particular	Unit	Quantity			
1	Fence Length (Perimeter)	Meter	2000			
2	Total Fence Height above ground level	Meter	1.80			
a	Height of wire mesh	Meter	0.60			
b	Height of wire rows	Meter	1.20			
3	Number of wire rows / strands	Number	5			
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15+ 0.30+ 0.30+0.30			
5	Pole to Pole distance	Meter	5			
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	2.25			

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size -0.60M X 0.60M X 0.45M)	91.69	Cum	282.00	25856.58	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	25.60	Cum	282.00	7219.20	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	117.29	Cum	5874.00	688961.46	
5	Steel work welded in built up section, Trusses & framed work, including cutting,hoisting, fixing in position & applying a priming coat of red lead paint in gratings framed guard bars, ladders, railing, brakets & similar works: Angle iron Post 35 x 35 x 5 mm post. 400 Nos. of (0.60+0.40)=1.00m height @2.60 Kg./m =	1040.00	Kg.	75.00	78000.00	

6	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (0.60 m height)	144.00	Kg	75.00	10800.00	
7	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	1200	Sqm	175.00	210000.00	
	Total of A				**1020837.24**	
B.	**Solar Fencing work**					
	The Electrical Unit					
8	Energizer(Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
9	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
10	Battery-80 Ah	1	Each	11500.00	11500.00	
11	Hooter-118 DB	1	Each	220.00	220.00	
12	Lightening Diverter-Copper	2	Each	885.00	1770.00	
13	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
14	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
15	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
16	Xenon Flash Tube	1	No.	700.00	700.00	
17	Neon Tester	1	No.	525.00	525.00	
18	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
19	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	10100	Meters	6.25	63125.00	Total perimeter for protection X no. of wire rows + 100 m extra
20	Corner / End Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -MS with Galvanised, 40x 40 Sq.mm or round Pipe (Medium Class), 6.5 Feet with PP Insulator riveting	42	No.	928.00	38976.00	

21	Support Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) MS with Galvanised, 25x 25 Sq.mm or round Pipe (Medium Class), 6.5 Feet with PP Insulator riveting	124	No.	684.00	84816.00	2 each at corner/end post + 2 at each post at 10 m
22	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -MS with Galvanised, 25x 25 Sq.mm Pipe or round Pipe (Medium Class) , 6.5 Feet with PP Insulator revetting	400	No.	684.00	273600.00	As per spacing
23	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	210	No.	14.00	2940.00	No. of Corner post and end post X number of wire rows
24	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	2000	No.	8.00	16000.00	No. of intermediate posts X number of wire rows
25	MS-Wire Tightners	100	No.	62.00	6200.00	One each at 100 m fence length
26	Tension Spring -Galvanized coated as per Indian Spring	100	No.	147.00	14700.00	One each at 100 m fence length
27	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
28	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
29	Joint Clamps-GI	100	No.	8.00	800.00	One each at 100 m fence length
30	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
31	Earth Kits (Galvanizing)-Copper	4	No.	450.00	1800.00	One at each 500 m fence length
32	Warning Sign Boards-PVC	20	No.	30.00	600.00	One each at 100 m fence length
	Total of B				**547992.00**	
	Grand Total (A+B)				**1568829.24**	
III	Installation Charges	2000.00	Meters	75.00	150000.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**1721189.24**	
	Cost per meter of fence length				**860**	

Annexure-XXXVIII

Model -9

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 0.60m height and Solar Electric Fencing of 1.20m height for the perimeter length of 3000meters.

Sr .No.	Particular	Unit	Quantity
1	Fence Length (Perimeter)	Meter	3000
2	Total Fence Height above ground level	Meter	1.80
a	Height of wire mesh	Meter	0.60
b	Height of wire rows	Meter	1.20
3	Number of wire rows / strands	Number	5
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15+ 0.30+ 0.30+0.30
5	Pole to Pole distance	Meter	5
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	2.25

Estimate cost

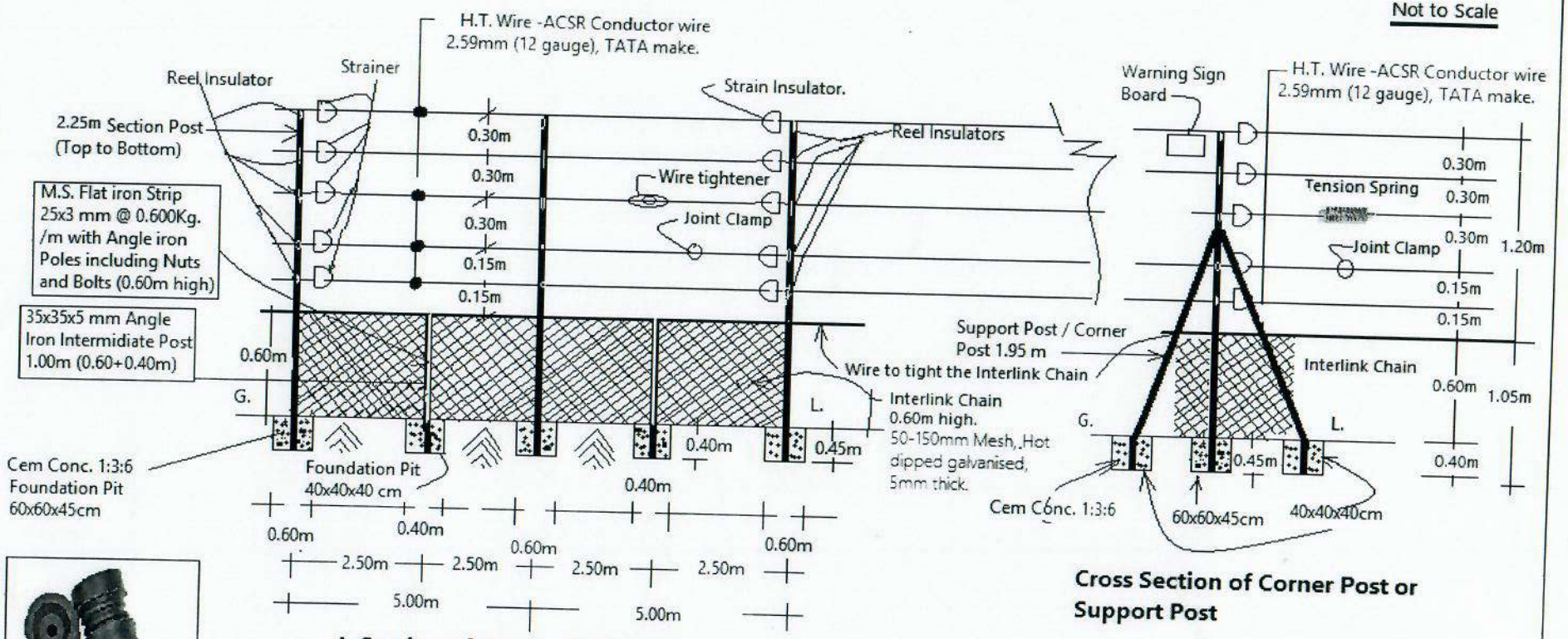
Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	137.05	Cum	282.00	38648.10	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	38.40	Cum	282.00	10828.80	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	175.45	Cum	5874.00	1030593.30	
5	Steel work welded in built up section, Trusses & framed work, including cutting,hoisting, fixing in position & applying a priming coat of red lead paint in gratings framed guard bars, ladders, railing, brakets & similar works: Angle iron Post 35 x 35 x 5 mm post. 600 Nos. of (0.60+0.40)=1.00m height					

6	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (0.60 m height)	216.00	Kg	75.00	16200.00	
7	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	1800	Sqm	175.00	315000.00	
	Total of A				**1528270.20**	
B.	**Solar Fencing work**					
	The Electrical Unit					
8	Energizer(Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
9	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
10	Battery-80 Ah	1	Each	11500.00	11500.00	
11	Hooter-118 DB	1	Each	220.00	220.00	
12	Lightening Diverter-Copper	2	Each	885.00	1770.00	
13	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
14	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
15	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
16	Xenon Flash Tube	1	No.	700.00	700.00	
17	Neon Tester	1	No.	525.00	525.00	
18	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
19	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	15100	Meters	6.25	94375.00	Total perimeter for protection X no. of wire rows + 100 m extra

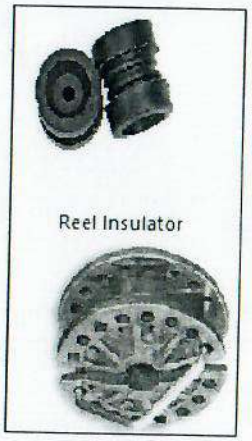
20	Corner / End Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -MS with Galvanised, 40x 40 Sq.mm or round Pipe (Medium Class), 6.5 Feet with PP Insulator riveting	62	No.	928.00	57536.00	
21	Support Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) MS with Galvanised, 25x 25 Sq.mm or round Pipe (Medium Class), 6.5 Feet with PP Insulator riveting	184	No.	684.00	125856.00	2 each at corner/end post + 2 at each post at 10 m
22	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -MS with Galvanised, 25x 25 Sq.mm Pipe or round Pipe (Medium Class) , 6.5 Feet with PP Insulator revetting	600	No.	684.00	410400.00	As per spacing
23	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	310	No.	14.00	4340.00	No. of Corner post and end post X number of wire rows
24	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	3000	No.	8.00	24000.00	No. of intermediate posts X number of wire rows
25	MS-Wire Tightners	150	No.	62.00	9300.00	One each at 100 m fence length
26	Tension Spring -Galvanized coated as per Indian Spring	150	No.	147.00	22050.00	One each at 100 m fence length
27	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
28	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
29	Joint Clamps-GI	150	No.	8.00	1200.00	One each at 100 m fence length
30	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
31	Earth Kits (Galvanizing)-Copper	6	No.	450.00	2700.00	One at each 500 m fence length
32	Warning Sign Boards-PVC	30	No.	30.00	900.00	One each at 100 m fence length
	Total of B				**797092.00**	
	Grand Total (A+B)				**2325362.20**	
III	Installation Charges	3000.00	Meters	75.00	225000.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**2552722.20**	
	Cost per meter of fence length				**850**	

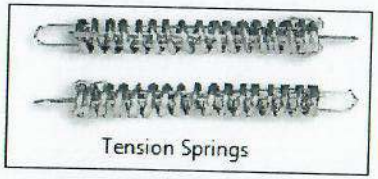
Drawing of Composite Fencing Integrated with 0.60m high G.I. Wire Mesh and 1.20m high Solar Electric Fencing.

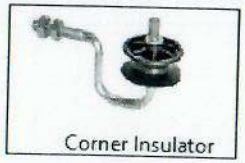
Not to Scale



L-Section of Fencing Perimeter.







Cross Section of Corner Post or Support Post

1. Section / Corner Posts-M.S. Galvanised, 40mm dia Pipe, 2.25 mtr. with PP Insulator reveting, marked in blue colour for identification.
2. Support Posts- M.S. Galvanised, 25mm dia pipe, 2.25 mtr. with PP Insulator reveting, marked in blue colour for identification.
3. Intermidiate Posts-M.S. with Galvanised, 25mm dia Pipe, 2.25 mtr. with PP Insulator reveting, marked in blue colour for identification.

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Annexure-XXXIX

Model -1

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 1.20 m height and Solar Electric Fencing of 0.30m height for the perimeter length of 100 meters.

Sr . No.	Particular	Unit	Quantity
1	Fence Length (Perimeter)	Meter	100
2	Total Fence Height above ground level	Meter	1.50
a	Height of wire mesh	Meter	1.20
b	Height of wire rows	Meter	0.30
3	Number of wire rows / strands	Number	2
4	Spacing between wire rows above wire mesh to	Meter	0.15+ 0.15
5	Pole to Pole distance	Meter	5
6	Total Pole Height (Above+Below Ground level	Meter	1.95

Estimate cost

Sr.	Name of items	Quantity	Unit	Rate (Rs.)	Amount	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size -0.60MX0.60MX0.45M)	5.51	Cum	282.00	1553.82	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size -0.40MX0.40MX0.40M) for Angle posts	1.28	Cum	282.00	360.96	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	6.79	Cum	5874.00	39884.46	
4	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 1.20m high . 20 Nos. of (1.20+0.40)=1.60m height @2.60 Kg./m =	83.20	Kg.	75.00	6240.00	
5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (1.20m height)	14.40	Kg	75.00	1080.00	
6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	120	Sqm	175.00	21000.00	
	Total of A				**70119.24**	
B.	**Solar Fencing work**					
	The Electrical Unit					
7	Energizer (Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
8	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
9	Battery-80 Ah	1	Each	11500.00	11500.00	
10	Hooter-118 DB	1	Each	220.00	220.00	

11	Lightening Diverter-Copper	2	Each	885.00	1770.00	
12	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
13	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
14	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
15	Xenon Flash Tube	1	No.	700.00	700.00	
16	Neon Tester	1	No.	525.00	525.00	
17	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
18	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	300	Meters	6.25	1875.00	Total perimeter for protection X no. of wire rows + 100 m extra
19	Section/Corner posts - MS with Galvanised, 40mm dia Pipe, 1.95 meter with PP Insulator riveting, marked in blue colour for identification	4	No.	804.20	3216.80	
20	Support Posts- MS with Galvanised, 25mm dia Pipe, 1.95 m with PP Insulator riveting, marked in blue colour for identification	10	No.	592.50	5925.00	2 each at corner/end post + 2 at each post at 10 m
21	Intermediate posts - MS with Galvanised, 25mm dia Pipe, 1.95 meter with PP Insulator riveting, marked in blue colour for identification	20	No.	592.50	11850.00	As per spacing
22	Corner Poles/End Insulators (Strain Insulator) - Poly Propylene	8	No.	14.00	112.00	No. of Corner post and end post X number of wire rows
23	Intermediate Poles Insulators (Reel Insulators) - Poly Propylene	40	No.	8.00	320.00	No. of intermediate posts X number of wire rows
24	MS-Wire Tightners	2	No.	62.00	124.00	One each at 100 m fence length
25	Tension Spring -Galvanized coated as per Indian Spring	2	No.	147.00	294.00	One each at 100 m fence length
26	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
27	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
28	Joint Clamps-GI	2	No.	8.00	16.00	One each at 100 m fence length
29	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
30	Earth Kits (Galvanizing)-Copper	1	No.	450.00	450.00	One at each 500 m fence length
31	Warning Sign Boards-PVC	1	No.	30.00	30.00	One each at 100 m fence length
	Total of B				**68647.80**	
	Grand Total (A+B)				**138767.04**	
III	Installation Charges	100.00	Meters	75.00	7500.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**148627.04**	
	Cost per meter of fence length				**1490**	

Annexure-XL

Model -2

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 1.20 m height and Solar Electric Fencing of 0.30m height for the perimeter length of 200 meters.

Sr. No.	Particular	Unit	Quantity
1	Fence Length (Perimeter)	Meter	200
2	Total Fence Height above ground level	Meter	1.50
a	Height of wire mesh	Meter	1.20
b	Height of wire rows	Meter	0.30
3	Number of wire rows / strands	Number	2
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15
5	Pole to Pole distance	Meter	5
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	1.95

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	10.04	Cum	282.00	2831.28	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	2.56	Cum	282.00	721.92	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	12.60	Cum	5874.00	74012.40	
4	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 1.20m high . 40 Nos. of (1.20+0.40)=1.60m height @2.60 Kg./m =	166.40	Kg.	75.00	12480.00	
5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (1.20m height)	28.80	Kg	75.00	2160.00	
6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	240	Sqm	175.00	42000.00	
	Total of A				**134205.60**	
B.	**Solar Fencing work**					
	The Electrical Unit					
7	Energizer(Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
8	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
9	Battery-80 Ah	1	Each	11500.00	11500.00	
10	Hooter-118 DB	1	Each	220.00	220.00	
11	Lightening Diverter-Copper	2	Each	885.00	1770.00	
12	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
13	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
14	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
15	Xenon Flash Tube	1	No.	700.00	700.00	

16	Neon Tester	1	No.	525.00	525.00	
17	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
18	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	500	Meters	6.25	3125.00	Total perimeter for protection X no. of wire rows + 100 m extra
19	Section / Corner Posts- MS with Galvanised, 40 mm dia pipe, 1.95 meter with PP Insulator rivetung, marked in blue colour for identification.	6	No.	804.20	4825.20	
20	Support Posts -MS with Galvanised, 25 mm dia pipe, 1.95 m with PP Insulator riveting, marked in blue colour for identification.	16	No.	592.50	9480.00	2 each at corner/end post + 2 at each post at 10 m
21	Intermediate Posts -MS with Galvanised, 25 mm dia pipe, 1.95 m with PP Insulator riveting, marked in blue colour for identification.	40	No.	592.50	23700.00	As per spacing
22	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	12	No.	14.00	168.00	No. of Corner post and end post X number of wire rows
23	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	80	No.	8.00	640.00	No. of intermediate posts X number of wire rows
24	MS-Wire Tightners	4	No.	62.00	248.00	One each at 100 m fence length
25	Tension Spring -Galvanized coated as per Indian Spring	4	No.	147.00	588.00	One each at 100 m fence length
26	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
27	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
28	Joint Clamps-GI	4	No.	8.00	32.00	One each at 100 m fence length
29	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
30	Earth Kits (Galvanizing)-Copper	1	No.	450.00	450.00	One at each 500 m fence length
31	Warning Sign Boards-PVC	2	No.	30.00	60.00	One each at 100 m fence length
	Total of B				**87751.20**	
	Grand Total (A+B)				**221956.80**	
III	Installation Charges	200.00	Meters	75.00	15000.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**239316.80**	
	Cost per meter of fence length				**1200**	

Annexure-XLI

Model -3

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 1.20 m height and Solar Electric Fencing of 0.30m height for the perimeter length of 300 meters.

Sr. No.	Particular	Unit	Quantity
1	Fence Length (Perimeter)	Meter	300
2	Total Fence Height above ground level	Meter	1.50
a	Height of wire mesh	Meter	1.20
b	Height of wire rows	Meter	0.30
3	Number of wire rows / strands	Number	2
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15
5	Pole to Pole distance	Meter	5
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	1.95

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	14.58	Cum	282.00	4111.56	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	3.84	Cum	282.00	1082.88	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	18.42	Cum	5874.00	108199.08	
4	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 1.20m high 60 Nos. of (1.20+0.40)=1.60m height @2.60 Kg./m =	249.60	Kg.	75.00	18720.00	
5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (1.20 height)	43.20	Kg	75.00	3240.00	
6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	360	Sqm	175.00	63000.00	
	Total of A				**198353.52**	
B.	**Solar Fencing work**					
	The Electrical Unit					
7	Energizer (Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
8	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
9	Battery-80 Ah	1	Each	11500.00	11500.00	
10	Hooter-118 DB	1	Each	220.00	220.00	
11	Lightening Diverter-Copper	2	Each	885.00	1770.00	

12	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
13	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
14	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
15	Xenon Flash Tube	1	No.	700.00	700.00	
16	Neon Tester	1	No.	525.00	525.00	
17	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
18	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	700	Meters	6.25	4375.00	Total perimeter for protection X no. of wire rows + 100 m extra
19	Section / Corner Posts- MS with Galvanised, 40 mm dia pipe, 1.95 meter with PP Insulator rivetung, marked in blue colour for identification.	8	No.	804.20	6433.60	
20	Support Posts -MS with Galvanised, 25 mm dia pipe, 1.95 m with PP Insulator riveting, marked in blue colour for identification.	22	No.	592.50	13035.00	2 each at corner/end post + 2 at each post at 10 m
21	Intermediate Posts -MS with Galvanised, 25 mm dia pipe, 1.95 m with PP Insulator riveting, marked in blue colour for identification.	60	No.	592.50	35550.00	As per spacing
22	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	16	No.	14.00	224.00	No. of Corner post and end post X number of wire rows
23	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	120	No.	8.00	960.00	No. of intermediate posts X number of wire rows
24	MS-Wire Tightners	6	No.	62.00	372.00	One each at 100 m fence length
25	Tension Spring -Galvanized coated as per Indian Spring	6	No.	147.00	882.00	One each at 100 m fence length
26	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
27	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
28	Joint Clamps-GI	6	No.	8.00	48.00	One each at 100 m fence length
29	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
30	Earth Kits (Galvanizing)-Copper	1	No.	450.00	450.00	One at each 500 m fence length
31	Warning Sign Boards-PVC	3	No.	30.00	90.00	One each at 100 m fence length
	Total of B				**106854.60**	
	Grand Total (A+B)				**305208.12**	
III	Installation Charges	300.00	Meters	75.00	22500.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**330068.12**	
	Cost per meter of fence length				**1100**	

Model -4

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 1.20 m height and Solar Electric Fencing of 0.30m height for the perimeter length of 500 meters.

Sr. No.	Particular	Unit	Quantity
1	Fence Length (Perimeter)	Meter	500
2	Total Fence Height above ground level	Meter	1.50
a	Height of wire mesh	Meter	1.20
b	Height of wire rows	Meter	0.30
3	Number of wire rows / strands	Number	2
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15
5	Pole to Pole distance	Meter	5
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	1.95

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size -0.60MX0.60MX0.45M)	23.65	Cum	282.00	6669.30	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size -0.40MX0.40MX0.40M) for	6.40	Cum	282.00	1804.80	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and	30.05	Cum	5874.00	176513.70	
4	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 1.20m high 100 Nos. of (1.20+0.40)=1.60m height @2.60 Kg./m =	416.00	Kg.	75.00	31200.00	
5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (1.20 m	72.00	Kg	75.00	5400.00	
6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	600	Sqm	175.00	105000.00	
	Total of A				**326587.80**	
B.	**Solar Fencing work**					
	The Electrical Unit					
7	Energizer(Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5	1	Each	10400.00	10400.00	
8	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
9	Battery-80 Ah	1	Each	11500.00	11500.00	
10	Hooter-118 DB	1	Each	220.00	220.00	
11	Lightening Diverter-Copper	2	Each	885.00	1770.00	

12	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
13	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
14	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
15	Xenon Flash Tube	1	No.	700.00	700.00	
16	Neon Tester	1	No.	525.00	525.00	
17	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp	1	No.	800.00	800.00	
18	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	1100	Meters	6.25	6875.00	Total perimeter for protection X no. of wire rows + 100 m extra
19	Section / Corner Posts- MS with Galvanised, 40 mm dia pipe, 1.95 meter with PP Insulator rivetung, marked in blue colour for	12	No.	804.20	9650.40	
20	Support Posts -MS with Galvanised, 25 mm dia pipe, 1.95 m with PP Insulator riveting, marked in blue colour for identification.	34	No.	592.50	20145.00	2 each at corner/end post + 2 at each post at 10 m
21	Intermediate Posts -MS with Galvanised, 25 mm dia pipe, 1.95 m with PP Insulator riveting, marked in blue colour for identification.	100	No.	592.50	59250.00	As per spacing
22	Corner Poles/End Insulators (Strain Insulator) - Poly Propylene	24	No.	14.00	336.00	No. of Corner post and end post X number of wire rows
23	Intermediate Poles Insulators (Reel Insulators) - Poly Propylene	200	No.	8.00	1600.00	No. of intermediate posts X number of wire rows
24	MS-Wire Tightners	10	No.	62.00	620.00	One each at 100 m fence length
25	Tension Spring -Galvanized coated as per Indian Spring	10	No.	147.00	1470.00	One each at 100 m fence length
26	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
27	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
28	Joint Clamps-GI	10	No.	8.00	80.00	One each at 100 m fence length
29	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
30	Earth Kits (Galvanizing)-Copper	1	No.	450.00	450.00	One at each 500 m fence length
31	Warning Sign Boards-PVC	5	No.	30.00	150.00	One each at 100 m fence length
	Total of B				**145061.40**	
	Grand Total (A+B)				**471649.20**	
III	Installation Charges	500.00	Meters	75.00	37500.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**511509.20**	
	Cost per meter of fence length				**1020**	

Annexure-XLIII

Model -5

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 1.20 m height and Solar Electric Fencing of 0.30m height for the perimeter length of 750 meters.

Sr. No.	Particular	Unit	Quantity			
1	Fence Length (Perimeter)	Meter	750			
2	Total Fence Height above ground level	Meter	1.50			
a	Height of wire mesh	Meter	1.20			
b	Height of wire rows	Meter	0.30			
3	Number of wire rows / strands	Number	2			
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15			
5	Pole to Pole distance	Meter	5			
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	1.95			

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	34.99	Cum	282.00	9867.18	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	9.60	Cum	282.00	2707.20	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	44.59	Cum	5874.00	261921.66	
4	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) - 1.20m high for supporting Chainlink fencing of 1.20m high -150Nos. of (1.20+0.40)=1.60m height @2.60 Kg./m =	624.00	Kg.	75.00	46800.00	
5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (1.20 m height)	108.00	Kg	75.00	8100.00	
6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	900	Sqm	175.00	157500.00	
	Total of A				**486896.04**	
B.	**Solar Fencing work**					
	The Electrical Unit					
7	Energizer(Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
8	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
9	Battery-80 Ah	1	Each	11500.00	11500.00	
10	Hooter-118 DB	1	Each	220.00	220.00	
11	Lightening Diverter-Copper	2	Each	885.00	1770.00	
12	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	

13	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
14	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
15	Xenon Flash Tube	1	No.	700.00	700.00	
16	Neon Tester	1	No.	525.00	525.00	
17	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
18	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	1600	Meters	6.25	10000.00	Total perimeter for protection X no. of wire rows + 100 m extra
19	Section / Corner Posts- MS with Galvanised, 40 mm dia pipe, 1.95 meter with PP Insulator rivetung, marked in blue colour for identification.	17	No.	804.20	13671.40	
20	Support Posts -MS with Galvanised, 25 mm dia pipe, 1.95 m with PP Insulator riveting, marked in blue colour for identification.	49	No.	592.50	29032.50	2 each at corner/end post + 2 at each post at 10 m
21	Intermediate Posts -MS with Galvanised, 25 mm dia pipe, 1.95 m with PP Insulator riveting, marked in blue colour for identification.	150	No.	592.50	88875.00	As per spacing
22	Corner Poles/End Insulators (Strain Insulator) - Poly Propylene	34	No.	14.00	476.00	No. of Corner post and end post X number of wire rows
23	Intermediate Poles Insulators (Reel Insulators) - Poly Propylene	300	No.	8.00	2400.00	No. of intermediate posts X number of wire rows
24	MS-Wire Tightners	15	No.	62.00	930.00	One each at 100 m fence length
25	Tension Spring -Galvanized coated as per Indian Spring	15	No.	147.00	2205.00	One each at 100 m fence length
26	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
27	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
28	Joint Clamps-GI	15	No.	8.00	120.00	One each at 100 m fence length
29	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
30	Earth Kits (Galvanizing)-Copper	2	No.	450.00	900.00	One at each 500 m fence length
31	Warning Sign Boards-PVC	8	No.	30.00	240.00	One each at 100 m fence length
	Total of B				**193284.90**	
	Grand Total (A+B)				**680180.94**	
III	Installation Charges	750.00	Meters	75.00	56250.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**738790.94**	
	Cost per meter of fence length				**990**	

Model -6

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 1.20 m height and Solar Electric Fencing of 0.30m height for the perimeter length of 1000 meters.

Sr .No.	Particular	Unit	Quantity			
1	Fence Length (Perimeter)	Meter	1000			
2	Total Fence Height above ground level	Meter	1.50			
a	Height of wire mesh	Meter	1.20			
b	Height of wire rows	Meter	0.30			
3	Number of wire rows / strands	Number	2			
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15			
5	Pole to Pole distance	Meter	5			
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	1.95			

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	46.33	Cum	282.00	13065.06	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	12.80	Cum	282.00	3609.60	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	59.13	Cum	5874.00	347329.62	
4	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 1.20m high -200Nos. of (1.20+0.40)=1.60m height @2.60 Kg./m =	832.00	Kg.	75.00	62400.00	
5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (1.20m height)	144.00	Kg	75.00	10800.00	

6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	1200	Sqm	175.00	210000.00	
	Total of A				**647204.28**	
B.	**Solar Fencing work**					
	The Electrical Unit					
7	Energizer (Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
8	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
9	Battery-80 Ah	1	Each	11500.00	11500.00	
10	Hooter-118 DB	1	Each	220.00	220.00	
11	Lightening Diverter-Copper	2	Each	885.00	1770.00	
12	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
13	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
14	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
15	Xenon Flash Tube	1	No.	700.00	700.00	
16	Neon Tester	1	No.	525.00	525.00	
17	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
18	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	2100	Meters	6.25	13125.00	Total perimeter for protection X no. of wire rows + 100 m extra
19	Section / Corner Posts- MS with Galvanised, 40 mm dia pipe, 1.95 meter with PP Insulator rivetung, marked in blue colour for identification.	22	No.	804.20	17692.40	
20	Support Posts -MS with Galvanised, 25 mm dia pipe, 1.95 m with PP Insulator riveting, marked in blue colour for identification.	64	No.	592.50	37920.00	2 each at corner/end post + 2 at each post at 10 m
21	Intermediate Posts -MS with Galvanised, 25 mm dia pipe, 1.95 m with PP Insulator riveting, marked in blue colour for identification.	200	No.	592.50	118500.00	As per spacing

22	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	44	No.	14.00	616.00	No. of Corner post and end post X number of wire rows
23	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	400	No.	8.00	3200.00	No. of intermediate posts X number of wire rows
24	MS-Wire Tightners	20	No.	62.00	1240.00	One each at 100 m fence length
25	Tension Spring -Galvanized coated as per Indian Spring	20	No.	147.00	2940.00	One each at 100 m fence length
26	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
27	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
28	Joint Clamps-GI	20	No.	8.00	160.00	One each at 100 m fence length
29	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
30	Earth Kits (Galvanizing)-Copper	2	No.	450.00	900.00	One at each 500 m fence length
31	Warning Sign Boards-PVC	10	No.	30.00	300.00	One each at 100 m fence length
	Total of B				**241028.40**	
	Grand Total (A+B)				**888232.68**	
III	Installation Charges	1000.00	Meters	75.00	75000.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**965592.68**	
	Cost per meter of fence length				**970**	

Annexure-XLV

Model -7

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 1.20 m height and Solar Electric Fencing of 0.30m height for the perimeter length of 1500meters.

Sr. No.	Particular	Unit	Quantity			
1	Fence Length (Perimeter)	Meter	1500			
2	Total Fence Height above ground level	Meter	1.50			
a	Height of wire mesh	Meter	1.20			
b	Height of wire rows	Meter	0.30			
3	Number of wire rows / strands	Number	2			
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15			
5	Pole to Pole distance	Meter	5			
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	1.95			

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	69.01	Cum	282.00	19460.82	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	19.20	Cum	282.00	5414.40	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	88.21	Cum	5874.00	518145.54	
4	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 1.20m high -300Nos. of (1.20+0.40)=1.60m height @2.60 Kg./m =	1248.00	Kg.	75.00	93600.00	
5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (1.20m height)	216.00	Kg	75.00	16200.00	

6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	1800	Sqm	175.00	315000.00	
	Total of A				**967820.76**	
B.	**Solar Fencing work**					
	The Electrical Unit					
7	Energizer (Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
8	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
9	Battery-80 Ah	1	Each	11500.00	11500.00	
10	Hooter-118 DB	1	Each	220.00	220.00	
11	Lightening Diverter-Copper	2	Each	885.00	1770.00	
12	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
13	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
14	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
15	Xenon Flash Tube	1	No.	700.00	700.00	
16	Neon Tester	1	No.	525.00	525.00	
17	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
18	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	3100	Meters	6.25	19375.00	Total perimeter for protection X no. of wire rows + 100 m extra
19	Section / Corner Posts- MS with Galvanised, 40 mm dia pipe, 1.95 meter with PP Insulator rivetung, marked in blue colour for identification.	32	No.	804.20	25734.40	
20	Support Posts -MS with Galvanised, 25 mm dia pipe, 1.95 m with PP Insulator riveting, marked in blue colour for identification.	94	No.	592.50	55695.00	2 each at corner/end post + 2 at each post at 10 m
21	Intermediate Posts -MS with Galvanised, 25 mm dia pipe, 1.95 m with PP Insulator riveting, marked in blue colour for identification.	300	No.	592.50	177750.00	As per spacing

22	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	64	No.	14.00	896.00	No. of Corner post and end post X number of wire rows
23	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	600	No.	8.00	4800.00	No. of intermediate posts X number of wire rows
24	MS-Wire Tightners	30	No.	62.00	1860.00	One each at 100 m fence length
25	Tension Spring -Galvanized coated as per Indian Spring	30	No.	147.00	4410.00	One each at 100 m fence length
26	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
27	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
28	Joint Clamps-GI	30	No.	8.00	240.00	One each at 100 m fence length
29	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
30	Earth Kits (Galvanizing)-Copper	3	No.	450.00	1350.00	One at each 500 m fence length
31	Warning Sign Boards-PVC	15	No.	30.00	450.00	One each at 100 m fence length
	Total of B				**336995.40**	
	Grand Total (A+B)				**1304816.16**	
III	Installation Charges	1500.00	Meters	75.00	112500.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**1419676.16**	
	Cost per meter of fence length				**950**	

Annexure-XLVI

Model -8

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 1.20 m height and Solar Electric Fencing of 0.30m height for the perimeter length of 2000meters.

Sr. No.	Particular	Unit	Quantity
1	Fence Length (Perimeter)	Meter	2000
2	Total Fence Height above ground level	Meter	1.50
a	Height of wire mesh	Meter	1.20
b	Height of wire rows	Meter	0.30
3	Number of wire rows / strands	Number	2
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15
5	Pole to Pole distance	Meter	5
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	1.95

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	91.69	Cum	282.00	25856.58	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	25.60	Cum	282.00	7219.20	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	117.29	Cum	5874.00	688961.46	
4	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 1.20m high -400Nos. of (1.20+0.40)=1.60m height @2.60 Kg./m =	1664.00	Kg.	75.00	124800.00	
5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (1.20 m height)	288.00	Kg	75.00	21600.00	

6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	2400	Sqm	175.00	420000.00	
	Total of A				**1288437.24**	
B.	**Solar Fencing work**					
	The Electrical Unit					
7	Energizer (Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
8	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
9	Battery-80 Ah	1	Each	11500.00	11500.00	
10	Hooter-118 DB	1	Each	220.00	220.00	
11	Lightening Diverter-Copper	2	Each	885.00	1770.00	
12	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
13	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
14	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
15	Xenon Flash Tube	1	No.	700.00	700.00	
16	Neon Tester	1	No.	525.00	525.00	
17	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
18	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	4100	Meters	6.25	25625.00	Total perimeter for protection X no. of wire rows + 100 m extra
19	Section / Corner Posts- MS with Galvanised, 40 mm dia pipe,1.95 meter with PP Insulator rivetung, marked in blue colour for identification.	42	No.	804.20	33776.40	
20	Support Posts -MS with Galvanised, 25 mm dia pipe, 1.95 m with PP Insulator riveting, marked in blue colour for identification.	124	No.	592.50	73470.00	2 each at corner/end post + 2 at each post at 10 m
21	Intermediate Posts -MS with Galvanised, 25 mm dia pipe,1.95 m with PP Insulator riveting, marked in blue colour for identification.	400	No.	592.50	237000.00	As per spacing

22	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	84	No.	14.00	1176.00	No. of Corner post and end post X number of wire rows
23	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	800	No.	8.00	6400.00	No. of intermediate posts X number of wire rows
24	MS-Wire Tightners	40	No.	62.00	2480.00	One each at 100 m fence length
25	Tension Spring -Galvanized coated as per Indian Spring	40	No.	147.00	5880.00	One each at 100 m fence length
26	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
27	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
28	Joint Clamps-GI	40	No.	8.00	320.00	One each at 100 m fence length
29	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
30	Earth Kits (Galvanizing)-Copper	4	No.	450.00	1800.00	One at each 500 m fence length
31	Warning Sign Boards-PVC	20	No.	30.00	600.00	One each at 100 m fence length
	Total of B				**432962.40**	
	Grand Total (A+B)				**1721399.64**	
III	Installation Charges	2000.00	Meters	75.00	150000.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**1873759.64**	
	Cost per meter of fence length				**940**	

Model -9

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 1.20 m height and Solar Electric Fencing of 0.30m height for the perimeter length of 3000meters.

Sr. No.	Particular	Unit	Quantity
1	Fence Length (Perimeter)	Meter	3000
2	Total Fence Height above ground level	Meter	1.50
a	Height of wire mesh	Meter	1.20
b	Height of wire rows	Meter	0.30
3	Number of wire rows / strands	Number	2
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15
5	Pole to Pole distance	Meter	5
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	1.95

Estimate cost

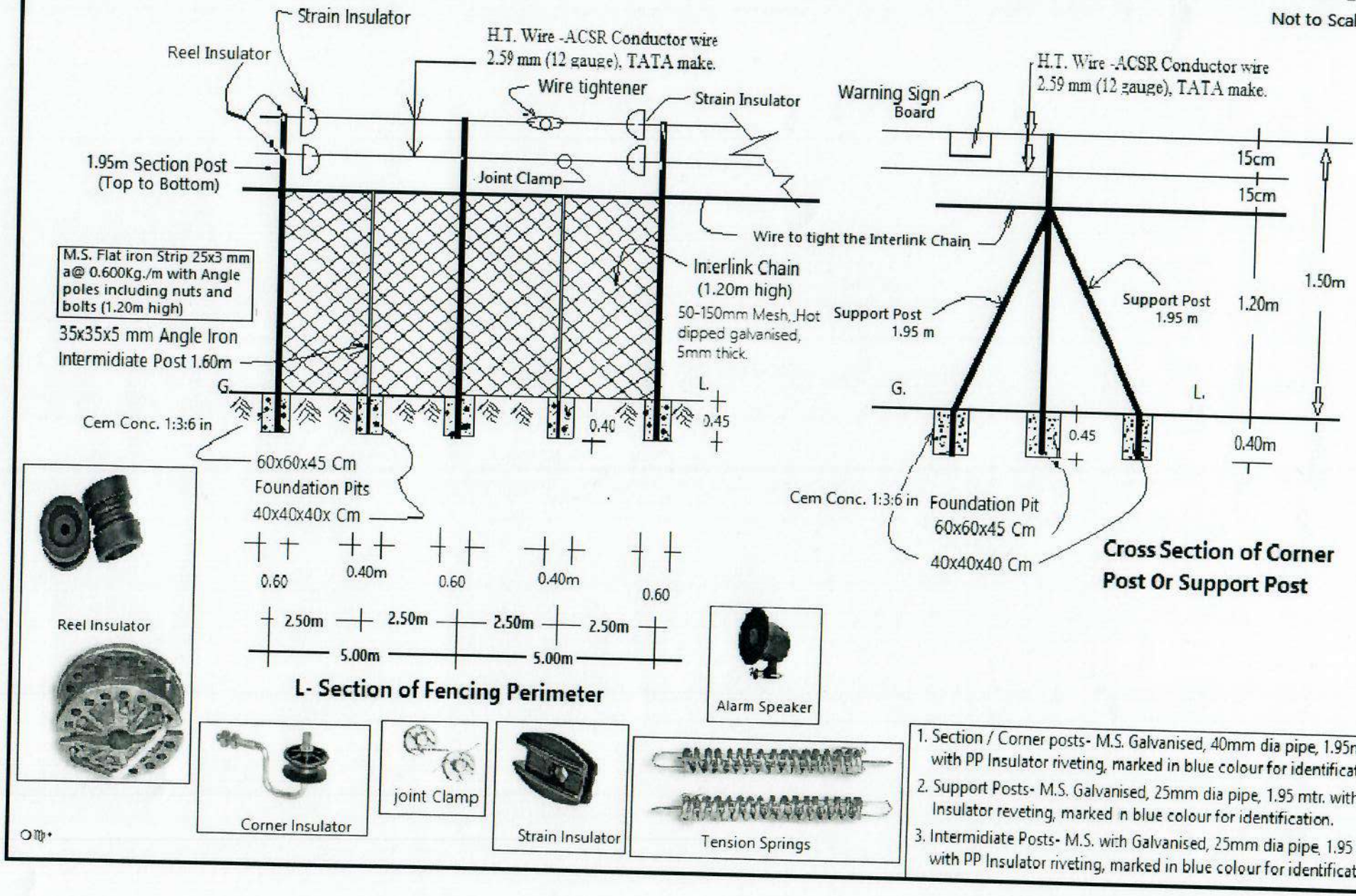
Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	137.05	Cum	282.00	38648.10	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	38.40	Cum	282.00	10828.80	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	175.45	Cum	5874.00	1030593.30	
4	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 1.20m high -600Nos. of (1.20+0.40)=1.60m height @2.60 Kg./m =	2496.00	Kg.	75.00	187200.00	
5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (1.20 m height)	432.00	Kg	75.00	32400.00	

6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	3600	Sqm	175.00	630000.00	
	Total of A				**1929670.20**	
B.	**Solar Fencing work**					
	The Electrical Unit					
7	Energizer (Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
8	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
9	Battery-80 Ah	1	Each	11500.00	11500.00	
10	Hooter-118 DB	1	Each	220.00	220.00	
11	Lightening Diverter-Copper	2	Each	885.00	1770.00	
12	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
13	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
14	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
15	Xenon Flash Tube	1	No.	700.00	700.00	
16	Neon Tester	1	No.	525.00	525.00	
17	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
18	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	6100	Meters	6.25	38125.00	Total perimeter for protection X no. of wire rows + 100 m extra
19	Section / Corner Posts- MS with Galvanised, 40 mm dia pipe, 1.95 meter with PP Insulator rivetung, marked in blue colour for identification.	62	No.	804.20	49860.40	
20	Support Posts -MS with Galvanised, 25 mm dia pipe, 1.95 m with PP Insulator riveting, marked in blue colour for identification.	184	No.	592.50	109020.00	2 each at corner/end post + 2 at each post at 10 m
21	Intermediate Posts -MS with Galvanised, 25 mm dia pipe, 1.95 m with PP Insulator riveting, marked in blue colour for identification.	600	No.	592.50	355500.00	As per spacing
22	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	124	No.	14.00	1736.00	No. of Corner post and end post X number of wire rows

23	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	1200	No.	8.00	9600.00	No. of intermediate posts X number of wire rows
24	MS-Wire Tightners	60	No.	62.00	3720.00	One each at 100 m fence length
25	Tension Spring -Galvanized coated as per Indian Spring	60	No.	147.00	8820.00	One each at 100 m fence length
26	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
27	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
28	Joint Clamps-GI	60	No.	8.00	480.00	One each at 100 m fence length
29	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
30	Earth Kits (Galvanizing)-Copper	6	No.	450.00	2700.00	One at each 500 m fence length
31	Warning Sign Boards-PVC	30	No.	30.00	900.00	One each at 100 m fence length
	Total of B				**624896.40**	
	Grand Total (A+B)				**2554566.60**	
III	Installation Charges	3000.00	Meters	75.00	225000.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**2781926.60**	
	Cost per meter of fence length				**930**	

Drawing of Composite Fencing Integrated with 1.20m high G.I. Wire Mesh and 0.30m high Solar Electric Fencing.

Not to Scale



1. Section / Corner posts- M.S. Galvanised, 40mm dia pipe, 1.95mtr. with PP Insulator riveting, marked in blue colour for identification.
2. Support Posts- M.S. Galvanised, 25mm dia pipe, 1.95 mtr. with PP Insulator reveting, marked n blue colour for identification.
3. Intermidiate Posts- M.S. with Galvanised, 25mm dia pipe, 1.95 mtr. with PP Insulator riveting, marked in blue colour for identification.

Annexure-XLVIII

Model -1

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 1.20 m height and Solar Electric Fencing of 0.60m height for the perimeter length of 100 meters.

Sr .No.	Particular	Unit	Quantity
1	Fence Length (Perimeter)	Meter	100
2	Total Fence Height above ground level	Meter	1.80
a	Height of wire mesh	Meter	1.20
b	Height of wire rows	Meter	0.60
3	Number of wire rows / strands	Number	3
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15+ 0.30
5	Pole to Pole distance	Meter	5
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	2.25

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	5.51	Cum	282.00	1553.82	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	1.28	Cum	282.00	360.96	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	6.79	Cum	5874.00	39884.46	
4	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 1.20 m high . 20 Nos. of (1.20+0.40)=1.60m height @2.60 Kg./m =	83.20	Kg.	75.00	6240.00	
5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (1.20m height)	14.40	Kg	75.00	1080.00	
6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	120	Sqm	175.00	21000.00	
	Total of A				**70119.24**	
B.	**Solar Fencing work**					
	The Electrical Unit					
7	Energizer (Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
8	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
9	Battery-80 Ah	1	Each	11500.00	11500.00	
10	Hooter-118 DB	1	Each	220.00	220.00	
11	Lightening Diverter-Copper	2	Each	885.00	1770.00	
12	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	

13	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
14	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
15	Xenon Flash Tube	1	No.	700.00	700.00	
16	Neon Tester	1	No.	525.00	525.00	
17	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
18	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	400	Meters	6.25	2500.00	Total perimeter for protection X no. of wire rows + 100 m extra
19	Section/Corner posts - MS with Galvanised, 40mm dia Pipe, 2.25 meter with PP Insulator riveting, marked in blue colour for identification	4	No.	928.00	3712.00	
20	Support Posts- MS with Galvanised, 25mm dia Pipe, 2.25 m with PP Insulator riveting, marked in blue colour for identification	10	No.	684.00	6840.00	2 each at corner/end post + 2 at each post at 10 m
21	Intermediate posts - MS with Galvanised, 25mm dia Pipe, 2.25 meter with PP Insulator riveting, marked in blue colour for identification	20	No.	684.00	13680.00	As per spacing
22	Corner Poles/End Insulators (Strain Insulator) - Poly Propylene	12	No.	14.00	168.00	No. of Corner post and end post X number of wire rows
23	Intermediate Poles Insulators (Reel Insulators) - Poly Propylene	60	No.	8.00	480.00	No. of intermediate posts X number of wire rows
24	MS-Wire Tightners	3	No.	62.00	186.00	One each at 100 m fence length
25	Tension Spring -Galvanized coated as per Indian Spring	3	No.	147.00	441.00	One each at 100 m fence length
26	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
27	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
28	Joint Clamps-GI	3	No.	8.00	24.00	One each at 100 m fence length
29	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
30	Earth Kits (Galvanizing)-Copper	1	No.	450.00	450.00	One at each 500 m fence length
31	Warning Sign Boards-PVC	1	No.	30.00	30.00	One each at 100 m fence length
	Total of B				**72946.00**	
	Grand Total (A+B)				**143065.24**	
III	Installation Charges	100.00	Meters	75.00	7500.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**152925.24**	
	Cost per meter of fence length				**1530**	

Annexure-XLIX

Model -2

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 1.20 m height and Solar Electric Fencing of 0.60m height for the perimeter length of 200meters.

Sr .No.	Particular	Unit	Quantity
1	Fence Length (Perimeter)	Meter	200
2	Total Fence Height above ground level	Meter	1.80
a	Height of wire mesh	Meter	1.20
b	Height of wire rows	Meter	0.60
3	Number of wire rows / strands	Number	3
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15+ 0.30
5	Pole to Pole distance	Meter	5
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	2.25

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size -0.60MX0.60MX0.45M)	10.04	Cum	282.00	2831.28	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size -0.40MX0.40MX0.40M) for Angle posts	2.56	Cum	282.00	721.92	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	12.60	Cum	5874.00	74012.40	
5	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 1.20 m high . 40 Nos. of (1.20+0.40)=1.60m height @2.60 Kg./m =	166.40	Kg.	75.00	12480.00	
6	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (1.20 m height)	28.80	Kg	75.00	2160.00	
7	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	240	Sqm	175.00	42000.00	
	Total of A				**134205.60**	
B.	**Solar Fencing work**					
	The Electrical Unit					
8	Energizer(Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
9	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
10	Battery-80 Ah	1	Each	11500.00	11500.00	
11	Hooter-118 DB	1	Each	220.00	220.00	

12	Lightening Diverter-Copper	2	Each	885.00	1770.00	
13	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
14	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
15	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
16	Xenon Flash Tube	1	No.	700.00	700.00	
17	Neon Tester	1	No.	525.00	525.00	
18	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
19	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	700	Meters	6.25	4375.00	Total perimeter for protection X no. of wire
20	Section/Corner posts - MS with Galvanised, 40mm dia Pipe, 2.25 meter with PP Insulator riveting, marked in blue colour for identification	6	No.	928.00	5568.00	
21	Support Posts- MS with Galvanised, 25mm dia Pipe, 2.25 m with PP Insulator riveting, marked in blue colour for identification	16	No.	684.00	10944.00	2 each at corner/end post + 2 at each post at 10 m
22	Intermediate posts - MS with Galvanised, 25mm dia Pipe, 2.25 meter with PP Insulator riveting, marked in blue colour for identification	40	No.	684.00	27360.00	As per spacing
23	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	18	No.	14.00	252.00	No. of Corner post and end post X number of
24	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	120	No.	8.00	960.00	No. of intermediate posts X number of wire
25	MS-Wire Tightners	6	No.	62.00	372.00	One each at 100 m fence length
26	Tension Spring -Galvanized coated as per Indian Spring	6	No.	147.00	882.00	One each at 100 m fence length
27	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
28	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
29	Joint Clamps-GI	6	No.	8.00	48.00	One each at 100 m fence length
30	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
31	Earth Kits (Galvanizing)-Copper	1	No.	450.00	450.00	One at each 500 m fence length
32	Warning Sign Boards-PVC	2	No.	30.00	60.00	One each at 100 m fence length
	Total of B				**95706.00**	
	Grand Total (A+B)				**229911.60**	
III	Installation Charges	200.00	Meters	75.00	15000.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**247271.60**	
	Cost per meter of fence length				**1240**	

Annexure-L

Model -3

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 1.20 m height and Solar Electric Fencing of 0.60m height for the perimeter length of 300meters.

Sr .No.	Particular	Unit	Quantity
1	Fence Length (Perimeter)	Meter	300
2	Total Fence Height above ground level	Meter	1.80
a	Height of wire mesh	Meter	1.20
b	Height of wire rows	Meter	0.60
3	Number of wire rows / strands	Number	3
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15+ 0.30
5	Pole to Pole distance	Meter	5
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	2.25

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size -0.60MX0.60MX0.45M)	14.58	Cum	282.00	4111.56	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size -0.40MX0.40MX0.40M) for Angle posts	3.84	Cum	282.00	1082.88	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	18.42	Cum	5874.00	108199.08	
4	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 1.20 m high . 60 Nos. of (1.20+0.40)=1.60m height @2.60 Kg./m =	249.60	Kg.	75.00	18720.00	
5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (1.20 m height)	43.20	Kg	75.00	3240.00	
6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	360	Sqm	175.00	63000.00	
	Total of A				**198353.52**	
B.	**Solar Fencing work**					
	The Electrical Unit					
8	Energizer (Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
9	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
10	Battery-80 Ah	1	Each	11500.00	11500.00	
11	Hooter-118 DB	1	Each	220.00	220.00	
12	Lightening Diverter-Copper	2	Each	885.00	1770.00	

13	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
14	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
15	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
16	Xenon Flash Tube	1	No.	700.00	700.00	
17	Neon Tester	1	No.	525.00	525.00	
18	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
19	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	1000	Meters	6.25	6250.00	Total perimeter for protection X no. of wire rows + 100 m extra
20	Section/Corner posts - MS with Galvanised, 40mm dia Pipe, 2.25 meter with PP Insulator riveting, marked in blue colour for identification	8	No.	928.00	7424.00	
21	Support Posts- MS with Galvanised, 25mm dia Pipe, 2.25 m with PP Insulator riveting, marked in blue colour for identification	22	No.	684.00	15048.00	2 each at corner/end post + 2 at each post at 10 m
22	Intermediate posts - MS with Galvanised, 25mm dia Pipe, 2.25 meter with PP Insulator riveting, marked in blue colour for identification	60	No.	684.00	41040.00	As per spacing
23	Corner Poles/End Insulators (Strain Insulator) - Poly Propylene	24	No.	14.00	336.00	No. of Corner post and end post X number of wire rows
24	Intermediate Poles Insulators (Reel Insulators) - Poly Propylene	180	No.	8.00	1440.00	No. of intermediate posts X number of wire rows
25	MS-Wire Tightners	9	No.	62.00	558.00	One each at 100 m fence length
26	Tension Spring -Galvanized coated as per Indian Spring	9	No.	147.00	1323.00	One each at 100 m fence length
27	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
28	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
29	Joint Clamps-GI	9	No.	8.00	72.00	One each at 100 m fence length
30	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
31	Earth Kits (Galvanizing)-Copper	1	No.	450.00	450.00	One at each 500 m fence length
32	Warning Sign Boards-PVC	3	No.	30.00	90.00	One each at 100 m fence length
	Total of B				**118466.00**	
	Grand Total (A+B)				**316819.52**	
III	Installation Charges	300.00	Meters	75.00	22500.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**341679.52**	
	Cost per meter of fence length				**1140**	

Annexure-LI

Model -4

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 1.20 m height and Solar Electric Fencing of 0.60m height for the perimeter length of 500meters.

Sr. No.	Particular	Unit	Quantity
1	Fence Length (Perimeter)	Meter	500
2	Total Fence Height above ground level	Meter	1.80
a	Height of wire mesh	Meter	1.20
b	Height of wire rows	Meter	0.60
3	Number of wire rows / strands	Number	3
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15+ 0.30
5	Pole to Pole distance	Meter	5
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	2.25

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	23.65	Cum	282.00	6669.30	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	6.40	Cum	282.00	1804.80	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	30.05	Cum	5874.00	176513.70	
4	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 1.20 m high . 100 Nos. of (1.20+0.40)=1.60m height @2.60 Kg./m =	416.00	Kg.	75.00	31200.00	
5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (1.20m height)	72.00	Kg	75.00	5400.00	
6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	600	Sqm	175.00	105000.00	
	Total of A				**326587.80**	
B.	**Solar Fencing work**					
	The Electrical Unit					

7	Energizer (Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
8	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
9	Battery-80 Ah	1	Each	11500.00	11500.00	
10	Hooter-118 DB	1	Each	220.00	220.00	
11	Lightening Diverter-Copper	2	Each	885.00	1770.00	
12	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
13	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
14	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
15	Xenon Flash Tube	1	No.	700.00	700.00	
16	Neon Tester	1	No.	525.00	525.00	
17	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
18	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	1600	Meters	6.25	10000.00	Total perimeter for protection X no. of wire rows + 100 m
19	Section/Corner posts - MS with Galvanised, 40mm dia Pipe, 2.25 meter with PP Insulator riveting, marked in blue colour for identification	12	No.	928.00	11136.00	
20	Support Posts- MS with Galvanised, 25mm dia Pipe, 2.25 m with PP Insulator riveting, marked in blue colour for identification	34	No.	684.00	23256.00	2 each at corner/end post + 2 at each post at 10 m
21	Intermediate posts - MS with Galvanised, 25mm dia Pipe, 2.25 meter with PP Insulator riveting, marked in blue colour for identification	100	No.	684.00	68400.00	As per spacing
22	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	36	No.	14.00	504.00	No. of Corner post and end post X number of wire rows
23	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	300	No.	8.00	2400.00	No. of intermediate posts X number of wire rows
24	MS-Wire Tightners	15	No.	62.00	930.00	One each at 100 m fence length
25	Tension Spring -Galvanized coated as per Indian Spring	15	No.	147.00	2205.00	One each at 100 m fence length
26	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
27	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
28	Joint Clamps-GI	15	No.	8.00	120.00	One each at 100 m fence length
29	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
30	Earth Kits (Galvanizing)-Copper	1	No.	450.00	450.00	One at each 500 m fence length
31	Warning Sign Boards-PVC	5	No.	30.00	150.00	One each at 100 m fence length
	Total of B				**163986.00**	
	Grand Total (A+B)				**490573.80**	
III	Installation Charges	500.00	Meters	75.00	37500.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**530433.80**	
	Cost per meter of fence length				**1060**	

Annexure-LII

Model -5

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 1.20 m height and Solar Electric Fencing of 0.60m height for the perimeter length of 750meters.

Sr .No.	Particular	Unit	Quantity
1	Fence Length (Perimeter)	Meter	750
2	Total Fence Height above ground level	Meter	1.80
a	Height of wire mesh	Meter	1.20
b	Height of wire rows	Meter	0.60
3	Number of wire rows / strands	Number	3
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15+ 0.30
5	Pole to Pole distance	Meter	5
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	2.25

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size -0.60MX0.60MX0.45M)	34.99	Cum	282.00	9867.18	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size -0.40MX0.40MX0.40M) for Angle posts	9.60	Cum	282.00	2707.20	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	44.59	Cum	5874.00	261921.66	
4	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 1.20m high . 150 Nos. of (1.20+0.40)=1.60m height @2.60 Kg./m =	624.00	Kg.	75.00	46800.00	
5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (1.20 m height)	108.00	Kg	75.00	8100.00	
6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	900	Sqm	175.00	157500.00	
	Total of A				**486896.04**	
B.	**Solar Fencing work**					
	The Electrical Unit					
8	Energizer(Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
9	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
10	Battery-80 Ah	1	Each	11500.00	11500.00	

11	Hooter-118 DB	1	Each	220.00	220.00	
12	Lightening Diverter-Copper	2	Each	885.00	1770.00	
13	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
14	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
15	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
16	Xenon Flash Tube	1	No.	700.00	700.00	
17	Neon Tester	1	No.	525.00	525.00	
18	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
19	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	2350	Meters	6.25	14687.50	Total perimeter for protection X no. of wire rows + 100 m extra
20	Section/Corner posts - MS with Galvanised, 40mm dia Pipe, 2.25 meter with PP Insulator riveting, marked in blue colour for identification	17	No.	928.00	15776.00	
21	Support Posts- MS with Galvanised, 25mm dia Pipe, 2.25 m with PP Insulator riveting, marked in blue colour for identification	49	No.	684.00	33516.00	2 each at corner/end post + 2 at each post at 10 m
22	Intermediate posts - MS with Galvanised, 25mm dia Pipe, 2.25 meter with PP Insulator riveting, marked in blue colour for identification	150	No.	684.00	102600.00	As per spacing
23	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	51	No.	14.00	714.00	No. of Corner post and end post X number of wire rows
24	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	450	No.	8.00	3600.00	No. of intermediate posts X number of wire rows
25	MS-Wire Tightners	23	No.	62.00	1426.00	One each at 100 m fence length
26	Tension Spring -Galvanized coated as per Indian Spring	23	No.	147.00	3381.00	One each at 100 m fence length
27	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
28	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
29	Joint Clamps-GI	23	No.	8.00	184.00	One each at 100 m fence length
30	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
31	Earth Kits (Galvanizing)-Copper	2	No.	450.00	900.00	One at each 500 m fence length
32	Warning Sign Boards-PVC	8	No.	30.00	240.00	One each at 100 m fence length
	Total of B				**221459.50**	
	Grand Total (A+B)				**708355.54**	
III	Installation Charges	750.00	Meters	75.00	56250.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**766965.54**	
	Cost per meter of fence length				**1020**	

Annexure-LIII

Model -6

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 1.20 m height and Solar Electric Fencing of 0.60m height for the perimeter length of 1000meters.

Sr. No.	Particular	Unit	Quantity
1	Fence Length (Perimeter)	Meter	1000
2	Total Fence Height above ground level	Meter	1.80
a	Height of wire mesh	Meter	1.20
b	Height of wire rows	Meter	0.60
3	Number of wire rows / strands	Number	3
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15+ 0.30
5	Pole to Pole distance	Meter	5
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	2.25

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	46.33	Cum	282.00	13065.06	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	12.80	Cum	282.00	3609.60	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	59.13	Cum	5874.00	347329.62	
4	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) - 1.20m high for supporting Chainlink fencing of1.20m high . 200 Nos. of (1.20+0.40)=1.60m height @2.60 Kg./m =	832.00	Kg.	75.00	62400.00	
5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (1.20 m height)	144.00	Kg	75.00	10800.00	

6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	1200	Sqm	175.00	210000.00	
	Total of A				**647204.28**	
B.	**Solar Fencing work**					
	The Electrical Unit					
7	Energizer (Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
8	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
9	Battery-80 Ah	1	Each	11500.00	11500.00	
10	Hooter-118 DB	1	Each	220.00	220.00	
11	Lightening Diverter-Copper	2	Each	885.00	1770.00	
12	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
13	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
14	Digital Multi meter-Range Upto - 12 KV	1	No.	4720.00	4720.00	
15	Xenon Flash Tube	1	No.	700.00	700.00	
16	Neon Tester	1	No.	525.00	525.00	
17	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
18	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	3100	Meters	6.25	19375.00	Total perimeter for protection X no. of wire rows + 100 m extra
19	Section/Corner posts - MS with Galvanised, 40mm dia Pipe, 2.25 meter with PP Insulator riveting, marked in blue colour for identification	22	No.	928.00	20416.00	
20	Support Posts- MS with Galvanised, 25mm dia Pipe, 2.25 m with PP Insulator riveting, marked in blue colour for identification	64	No.	684.00	43776.00	2 each at corner/end post + 2 at each post at 10 m
21	Intermediate posts - MS with Galvanised, 25mm dia Pipe, 2.25 meter with PP Insulator riveting, marked in blue colour for identification	200	No.	684.00	136800.00	As per spacing

22	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	66	No.	14.00	924.00	No. of Corner post and end post X number of wire rows
23	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	600	No.	8.00	4800.00	No. of intermediate posts X number of wire rows
24	MS-Wire Tightners	30	No.	62.00	1860.00	One each at 100 m fence length
25	Tension Spring -Galvanized coated as per Indian Spring	30	No.	147.00	4410.00	One each at 100 m fence length
26	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
27	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
28	Joint Clamps-GI	30	No.	8.00	240.00	One each at 100 m fence length
29	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
30	Earth Kits (Galvanizing)-Copper	2	No.	450.00	900.00	One at each 500 m fence length
31	Warning Sign Boards-PVC	10	No.	30.00	300.00	One each at 100 m fence length
	Total of B				**278236.00**	
	Grand Total (A+B)				**925440.28**	
III	Installation Charges	1000.00	Meters	75.00	75000.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**1002800.28**	
	Cost per meter of fence length				**1000**	

Model -7

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 1.20 m height and Solar Electric Fencing of 0.60m height for the perimeter length of 1500meters.

Sr. No.	Particular	Unit	Quantity
1	Fence Length (Perimeter)	Meter	1500
2	Total Fence Height above ground level	Meter	1.80
a	Height of wire mesh	Meter	1.20
b	Height of wire rows	Meter	0.60
3	Number of wire rows / strands	Number	3
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15+ 0.30
5	Pole to Pole distance	Meter	5
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	2.25

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	69.01	Cum	282.00	19460.82	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	19.20	Cum	282.00	5414.40	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	88.21	Cum	5874.00	518145.54	
4	Intermediate Posts including Nut Bolts with support at end of Angle Iron 35x35x5mm (2Piece) -1.20m high for supporting Chainlink fencing of 1.20m high 300 Nos. of (1.20+0.40)=1.60m height @2.60 Kg./m =	1248.00	Kg.	75.00	93600.00	

5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (1.20m height)	216.00	Kg	75.00	16200.00	
6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	1800	Sqm	175.00	315000.00	
	Total of A				**967820.76**	
B.	**Solar Fencing work**					
	The Electrical Unit					
7	Energizer (Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
8	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
9	Battery-80 Ah	1	Each	11500.00	11500.00	
10	Hooter-118 DB	1	Each	220.00	220.00	
11	Lightening Diverter-Copper	2	Each	885.00	1770.00	
12	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
13	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
14	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
15	Xenon Flash Tube	1	No.	700.00	700.00	
16	Neon Tester	1	No.	525.00	525.00	
17	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
18	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	4600	Meters	6.25	28750.00	Total perimeter for protection X no. of wire rows + 100 m extra
19	Section/Corner posts - MS with Galvanised, 40mm dia Pipe, 2.25 meter with PP Insulator riveting, marked in blue colour for identification	32	No.	928.00	29696.00	
20	Support Posts- MS with Galvanised, 25mm dia Pipe, 2.25 m with PP Insulator riveting, marked in blue colour for identification	94	No.	684.00	64296.00	2 each at corner/end post + 2 at each post at 10 m

21	Intermediate posts - MS with Galvanised, 25mm dia Pipe, 2.25 meter with PP Insulator riveting, marked in blue colour for identification	300	No.	684.00	205200.00	As per spacing
22	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	96	No.	14.00	1344.00	No. of Corner post and end post X number of wire rows
23	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	900	No.	8.00	7200.00	No. of intermediate posts X number of wire rows
24	MS-Wire Tightners	45	No.	62.00	2790.00	One each at 100 m fence length
25	Tension Spring -Galvanized coated as per Indian Spring	45	No.	147.00	6615.00	One each at 100 m fence length
26	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
27	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
28	Joint Clamps-GI	45	No.	8.00	360.00	One each at 100 m fence length
29	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
30	Earth Kits (Galvanizing)-Copper	3	No.	450.00	1350.00	One at each 500 m fence length
31	Warning Sign Boards-PVC	15	No.	30.00	450.00	One each at 100 m fence length
	Total of B				**392486.00**	
	Grand Total (A+B)				**1360306.76**	
III	Installation Charges	1500	Meters	75.00	112500.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**1475166.76**	
	Cost per meter of fence length				**980**	

Annexure-LV

Model -8

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 1.20 m height and Solar Electric Fencing of 0.60m height for the perimeter length of 2000meters.

Sr. No.	Particular	Unit	Quantity
1	Fence Length (Perimeter)	Meter	2000
2	Total Fence Height above ground level	Meter	1.80
a	Height of wire mesh	Meter	1.20
b	Height of wire rows	Meter	0.60
3	Number of wire rows / strands	Number	3
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15+ 0.30
5	Pole to Pole distance	Meter	5
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	2.25

Estimate cost

Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size -0.60M X 0.60M X 0.45M)	91.69	Cum	282.00	25856.58	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	25.60	Cum	282.00	7219.20	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	117.29	Cum	5874.00	688961.46	
4	Steel work welded in built up section, Trusses & framed work, including cutting,hoisting, fixing in position & applying a priming coat of red lead paint in gratings framed guard bars, ladders, railing, brakets & similar works: Angle iron Post 35 x 35 x 5 mm post. 400 Nos. of (1.20+0.40)=1.60m height @2.60 Kg./m =	1664.00	Kg.	75.00	124800.00	

5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (1.20 m height)	288.00	Kg	75.00	21600.00	
6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	2400	Sqm	175.00	420000.00	
	Total of A				**1288437.24**	
B.	**Solar Fencing work**					
	The Electrical Unit					
7	Energizer (Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
8	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
9	Battery-80 Ah	1	Each	11500.00	11500.00	
10	Hooter-118 DB	1	Each	220.00	220.00	
11	Lightening Diverter-Copper	2	Each	885.00	1770.00	
12	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
13	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
14	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
15	Xenon Flash Tube	1	No.	700.00	700.00	
16	Neon Tester	1	No.	525.00	525.00	
17	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
18	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	6100	Meters	6.25	38125.00	Total perimeter for protection X no. of wire rows + 100 m extra
19	Section/Corner posts - MS with Galvanised, 40mm dia Pipe, 2.25 meter with PP Insulator riveting, marked in blue colour for identification	42	No.	928.00	38976.00	
20	Support Posts- MS with Galvanised, 25mm dia Pipe, 2.25 m with PP Insulator riveting, marked in blue colour for identification	124	No.	684.00	84816.00	2 each at corner/end post + 2 at each post at 10 m

21	Intermediate posts - MS with Galvanised, 25mm dia Pipe, 2.25 meter with PP Insulator riveting, marked in blue colour for identification	400	No.	684.00	273600.00	As per spacing
22	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	126	No.	14.00	1764.00	No. of Corner post and end post X number of wire rows
23	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	1200	No.	8.00	9600.00	No. of intermediate posts X number of wire rows
24	MS-Wire Tightners	60	No.	62.00	3720.00	One each at 100 m fence length
25	Tension Spring -Galvanized coated as per Indian Spring	60	No.	147.00	8820.00	One each at 100 m fence length
26	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
27	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
28	Joint Clamps-GI	60	No.	8.00	480.00	One each at 100 m fence length
29	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
30	Earth Kits (Galvanizing)-Copper	4	No.	450.00	1800.00	One at each 500 m fence length
31	Warning Sign Boards-PVC	20	No.	30.00	600.00	One each at 100 m fence length
	Total of B				**506736.00**	
	Grand Total (A+B)				**1795173.24**	
III	Installation Charges	2000.00	Meters	75.00	150000.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**1947533.24**	
	Cost per meter of fence length				**970**	

Annexure-LVI

Model -9

COST ESTMATE (AS PER APPROVED RATES)

Indicative requirement of material for Composite Fencing integrated with G.I. Wire Mesh of 1.20 m height and Solar Electric Fencing of 0.60m height for the perimeter length of 3000meters.

Sr. No.	Particular	Unit	Quantity
1	Fence Length (Perimeter)	Meter	3000
2	Total Fence Height above ground level	Meter	1.80
a	Height of wire mesh	Meter	1.20
b	Height of wire rows	Meter	0.60
3	Number of wire rows / strands	Number	3
4	Spacing between wire rows above wire mesh to up wards	Meter	0.15+ 0.15+ 0.30
5	Pole to Pole distance	Meter	5
6	Total Pole Height (Above+Below Ground level (0.45m)	Meter	2.25

Estimate cost

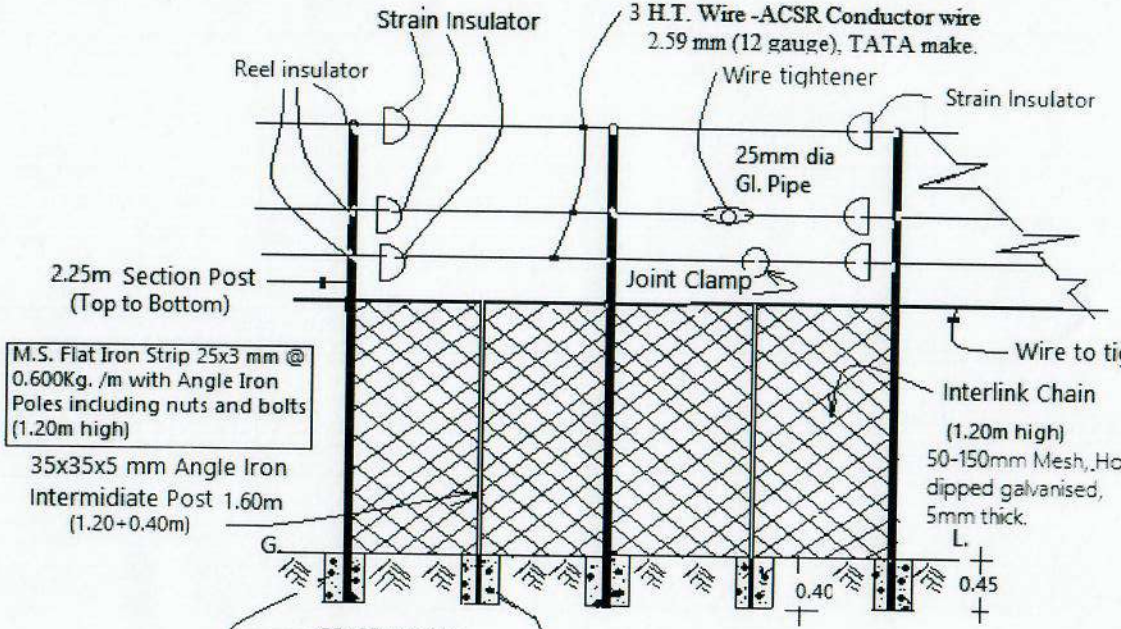
Sr. No.	Name of items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
A	**G.I. Wire Mesh**					
1	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.60MX0.60MX0.45M)	137.05	Cum	282.00	38648.10	CuM x number of corner/end, intermediate and support posts
2	Excavation in earth work and disposal of all excavated earth up to a lead of 20 metres and lift up to 1.50 metres disposed earth to be levelled and neatly dressed in P.J.W. 50% each.(Pit Size - 0.40MX0.40MX0.40M) for Angle posts	38.40	Cum	282.00	10828.80	CuM x number of intermediate Angle posts
3	Providing and laying cement concrete 1:3:6 (1 Cement : 3 Sand: 6 Graded stone aggregate 20 mm nominal size) and curing complete excluding cost of form work in foundation and plinth:	175.45	Cum	5874.00	1030593.30	
4	Steel work welded in built up section, Trusses & framed work, including cutting,hoisting, fixing in position & applying a priming coat of red lead paint in gratings framed guard bars, ladders, railing, brakets & similar works: Angle iron Post 35 x 35 x 5 mm post. 600 Nos. of (1.20+0.40)=1.60m height @2.60 Kg./m =	2496.00	Kg.	75.00	187200.00	

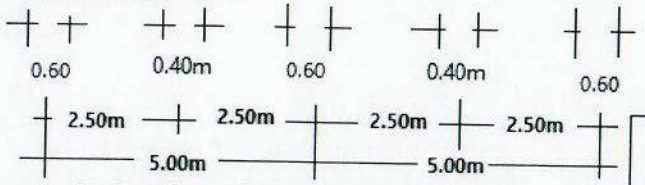
5	Providing and fixing of Wire mesh by M.S Flat iron Strip (25x3 mm @0.600Kg./m) with Angle poles including nuts and bolts. (1.20m height)	432.00	Kg	75.00	32400.00	
6	Interlink chain (Galvanised Steel Chain Link Fence Fabric) intendeed for various purposes confirming to IS:2721-2003, hot dip galvanised as per IS4826: 1979, The fencing material shall be made from steel wire, confirming to IS280:2006, helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling the ends of the wires to form both ends knucked selvage of the fabric.	3600	Sqm	175.00	630000.00	
	Total of A				**1929670.20**	
B.	**Solar Fencing work**					
	The Electrical Unit					
7	Energizer (Input Voltage: 12V DC, Input Current: 500MA, Output Voltage: 6.0 KV - 10.0 KV, Pulse Interval: 1.2 Second, Pulse Duration: 0.3 Milli Second, Output energy: 2.5 Joules)	1	Each	10400.00	10400.00	
8	Solar PV Module-72 Wp	1	Each	4500.00	4500.00	
9	Battery-80 Ah	1	Each	11500.00	11500.00	
10	Hooter-118 DB	1	Each	220.00	220.00	
11	Lightening Diverter-Copper	2	Each	885.00	1770.00	
12	Mounting box with post -Mild Steel with Powder coating	1	Each	5500.00	5500.00	
13	Module Mounting Structure with Pole-Mild Steel with Powder coating	1	Each	850.00	850.00	
	Instruments / tools					
14	Digital Multi meter-Range Upto -12 KV	1	No.	4720.00	4720.00	
15	Xenon Flash Tube	1	No.	700.00	700.00	
16	Neon Tester	1	No.	525.00	525.00	
17	Tool kit (wire tightener handle twisting tool, pliers, double ended spanner for joining clamp tighteninig	1	No.	800.00	800.00	
18	H.T. Wire-ACSR Conductor wire, 2.59 mm (12 guage), TATA make	9100	Meters	6.25	56875.00	Total perimeter for protection X no. of wire rows + 100 m extra
19	Section/Corner posts - MS with Galvanised, 40mm dia Pipe, 2.25 meter with PP Insulator riveting, marked in blue colour for identification	62	No.	928.00	57536.00	
20	Support Posts- MS with Galvanised, 25mm dia Pipe, 2.25 m with PP Insulator riveting, marked in blue colour for identification	184	No.	684.00	125856.00	2 each at corner/end post + 2 at each post at 10 m

21	Intermediate posts - MS with Galvanised, 25mm dia Pipe, 2.25 meter with PP Insulator riveting, marked in blue colour for identification	600	No.	684.00	410400.00	As per spacing
22	Corner Poles/End Insulators (Strain Insulator) -Poly Propylene	186	No.	14.00	2604.00	No. of Corner post and end post X number of wire rows
23	Intermediate Poles Insulators (Reel Insulators) -Poly Propylene	1800	No.	8.00	14400.00	No. of intermediate posts X number of wire rows
24	MS-Wire Tightners	90	No.	62.00	5580.00	One each at 100 m fence length
25	Tension Spring -Galvanized coated as per Indian Spring	90	No.	147.00	13230.00	One each at 100 m fence length
26	Flood Gate Controller with Drop Chain	1	No.	200.00	200.00	
27	Cutout Switch -Poly Propylene	1	No.	1500.00	1500.00	One at the Gate or at system
28	Joint Clamps-GI	90	No.	8.00	720.00	One each at 100 m fence length
29	Double Insulated Cable Single Core-ACSR wire, 2.0mm Dia	50	mtr	25.00	1250.00	LS
30	Earth Kits (Galvanizing)-Copper	6	No.	450.00	2700.00	One at each 500 m fence length
31	Warning Sign Boards-PVC	30	No.	30.00	900.00	One each at 100 m fence length
	Total of B				**735236.00**	
	Grand Total (A+B)				**2664906.20**	
III	Installation Charges	3000.00	Meters	75.00	225000.00	
IV	**System Testing & Commissioning**				**2360.00**	
	Total				**2892266.20**	
	Cost per meter of fence length				**960**	

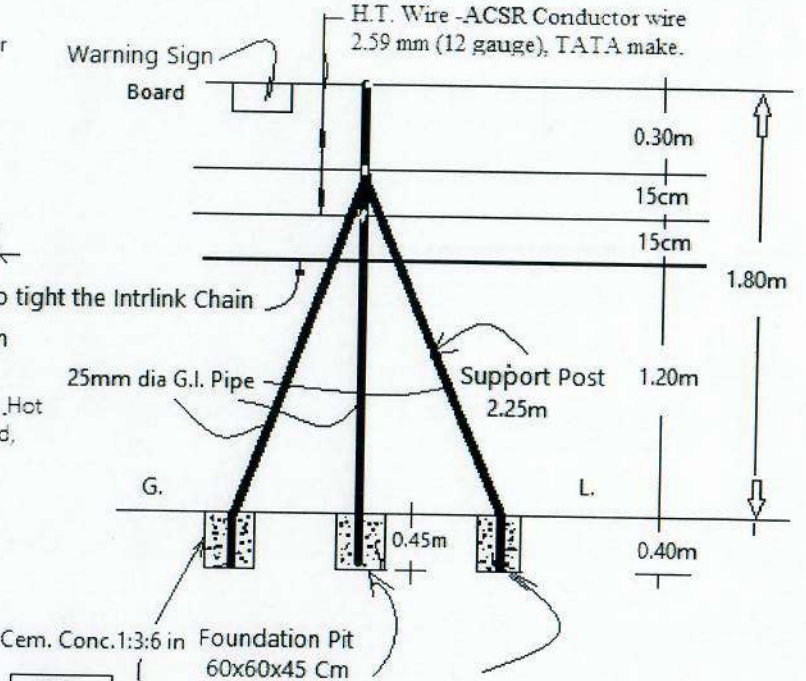
Drawing of Composite Fencing Integrated with 1.20m high G.I. Wire Mesh and 0.60m high Solar Electric Fencing.

Not to Scale





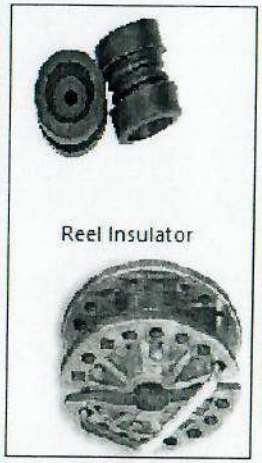
L- Section of Fencing Perimeter

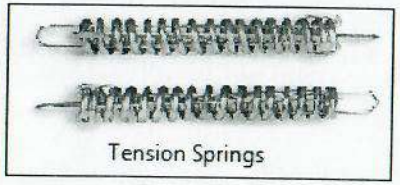


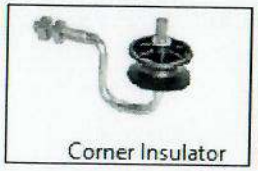
Cross Section of Corner Post Or Support Post

Alarm Speaker

joint Clamp







1. Section/Corner Posts- M.S. with Galvanised, 40mm dia Pipe, 2.25mtr. with PP insulator reveting, marked in blue colour for identification.

2. Support Posts- M.S. with Galvanised, 25mm dia Pipe, 2.25 mtr. with PP Insulator reveting, marked in blue colour for identification.

3. Intermidiate Posts- M.S. with Galvanised, 25mm dia Pipe, 2.25 mtr. with PP Insulator reveting, marked in blue colour for identification.