

**Synopsis of 150 MW Wind Power Project Site  
Report at Bhalvadi Site, Maharashtra**

## 1 Wind Farm Location

### 1.1 Site Overview

The proposed 100 MW Bhalvadi Wind Farm is located at Injabav Village, Man Taluka and Satara district of Maharashtra State. In the proposed site, there are Open private lands with mix-up with revenue lands, tress, bushes, dry lands of different size and shapes.

Sl. No.	Parameters	Details
1	Name of the site	Bhalvadi
2	Taluka/Tehsil	Man
3	District	Satara
4	State	Maharashtra
5	Nearest town	Satara (100 Km) / Phaltan (45 Km)
6	Nearest Railway Station	Satara
7	Nearest Airport	Pune
8	Type of Land	Private agriculture and Non Agriculture.
9	Type of terrain	Open area with slight undulation.
10	Soil Type	Mix of Black and red.

Table 1: Site Descriptions of “Bhalvadi”

The proposed site is in rural village area, slightly elevated region and the elevation of the pavement is generally around 745 ~ 775m. The annual average temperature is 10°C-42°C, the average temperature is 26°C. The geographical location and topographical map of the wind farm are as,

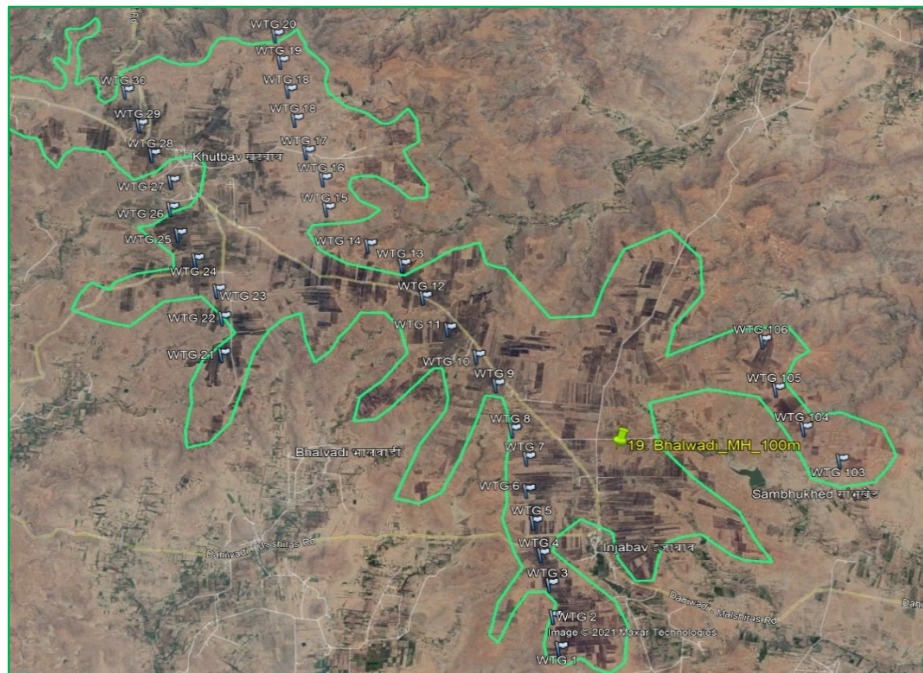


Figure-1 Geographic location of Bhalvadi Proposed Site

## 2 Wind Farm Resource Conditions

### 2.1 Wind Mast

The data set of Wind mast “Bhalvadi” 100m wind mast has considered for annual energy prediction and other calculations. Wind data availability rate is 98.61%. This proposed mast has been installed and commissioned as on 25<sup>th</sup> November 2017 with 100m height. Mast having 100m, 90m & 50m with NRG Anemometer levels and 98m & 88m having NRG wind van labels. NRG make Temp & pressure sensors are at 10m & 5 m level with NRG Symphony PRO data logger. We have collected wind mast data more than 3 years at same site for our site assessment.

<b>Mast Name</b>	Bhalvadi
<b>Coordinates</b>	Lat: 17° 44' 40.75" Long: 74° 46' 1.21"
<b>Mast Height</b>	100 m
<b>Elevation</b>	763 m
<b>Anemometer Levels</b>	100m (02), 90m (01) & 50m (01)
<b>Wind Direction Levels</b>	98m (01) & 88m (01)
<b>Temperature levels</b>	10m (01)
<b>Pressure level</b>	10m (01)
<b>Wind data period</b>	2 to 3 years
<b>Years Measured</b>	2018-20

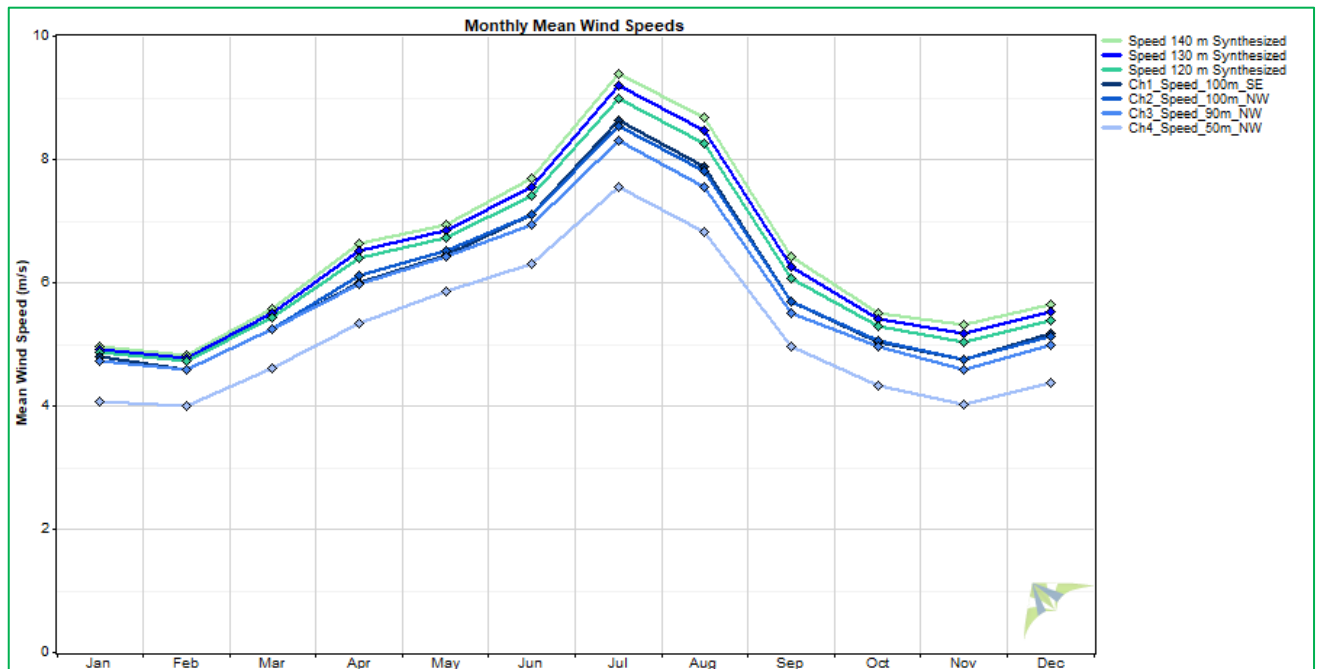
Table 2: Basics of Wind Mast “Bhalvadi”

## 2.3 Wind Data Assessment

The monthly mean wind speed, Air Density and Wind power Density of “Bhalvadi” @ 130m & 120m are extrapolated from 100 m Mast of FY-2018 are as in below.

Month	Wind Speed at 130m (m/s) (* Extrapolated)	*Air Density as per measured data kg/m <sup>3</sup>
Jan-18	4.93	1.0821
Feb-18	4.79	1.0750
Mar-18	5.51	1.0605
Apr-18	6.54	1.0520
May-18	6.85	1.0602
Jun-18	7.57	1.0794
Jul-18	9.21	1.0728
Aug-18	8.49	1.0755
Sep-18	6.27	1.0744
Oct-18	5.42	1.0697
Nov-18	5.19	1.0760
Dec-18	5.53	1.0874
AVG	6.35	1.0721

Table 3: Monthly mean wind speed



#### 4 Wind Farm

The proposed BHAVADI wind project modeling has done through WAsP 11.6 version.  
Wind Grid map of Bhalvadi WTG Locations proposed for 3 MW Class wind turbine.

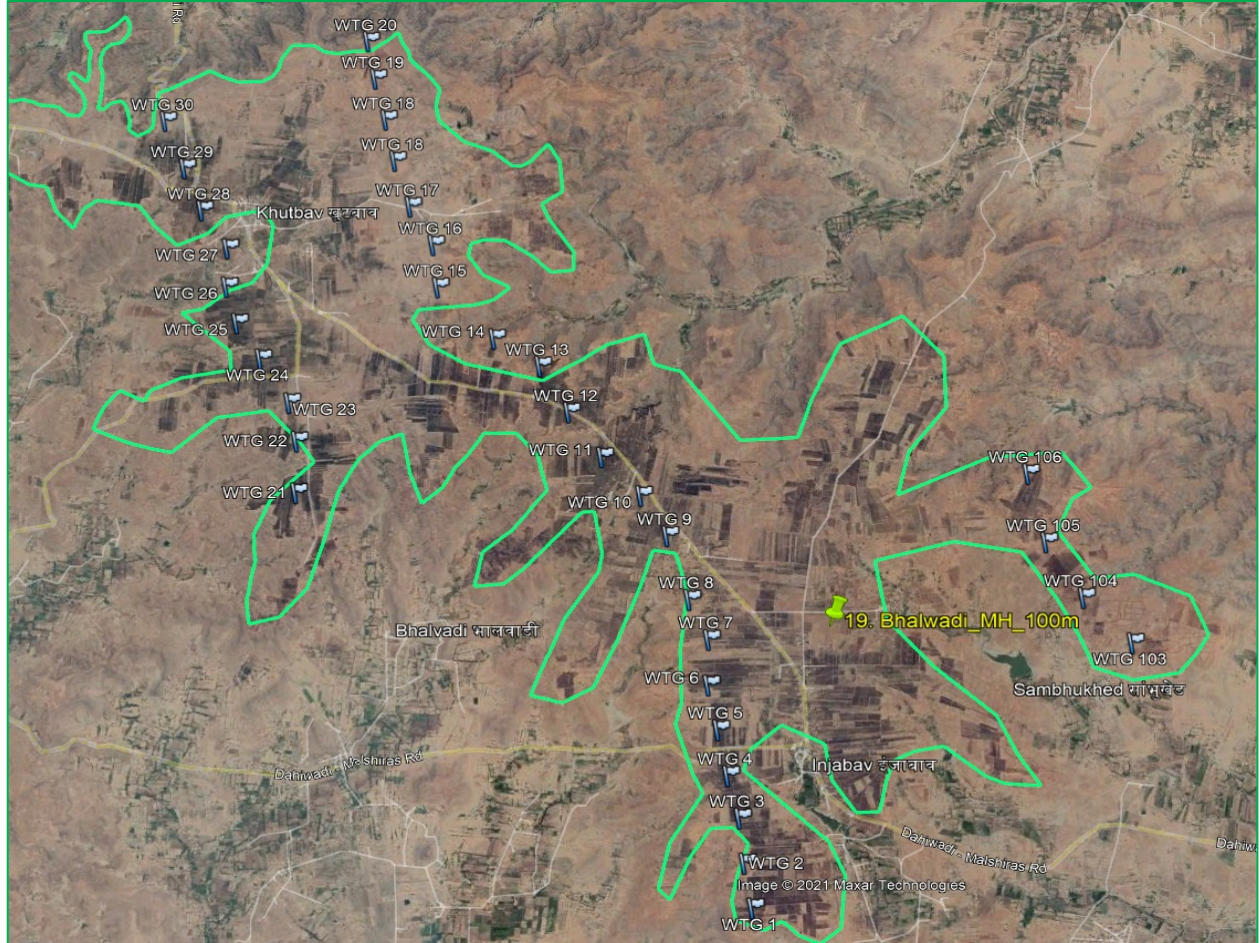


Figure-5 Micrositing Map of Bhalvadi site



## 5 Grid Connection

All other surrounding grid stations are 132/33 kV networks; 100 MW interconnection at one station is Malinagar possible as per feasibility.

Parameters	STU
Station Name	Malinagar 132/33 kV
Transmission Utility	STU
Status of the SS	Operational
Coordinates	43Q E 505374 N 1978991
Aerial distance	37 KM