

## Access roads and crane area for tubular towers

**Please contact REpower Project Management before construction of any roads is started!**

### 1 Requirements

To avoid problems during the erection of the wind turbine, the following minimum requirements to the access roads are to be observed under **normal soil conditions**:

#### 1.1 Loads

**Vehicles:**

- approx. 35 concrete and building vehicles
- up to 18 heavy lorries for crane erection
- approx. 10–12 heavy lorries with turbine components  
(4–6 for tower, 3 for rotor blades, 2 for nacelle and hub, 1 for control cabinets/small parts)
- max. length 40 m, required free height 5.00 m

**Weight of vehicles:**

- max. load per axle: approx. 12.5 t
- max. overall weight: approx. 130 t
- max. soil pressure on crane area: approx. 20 t/m<sup>2</sup>

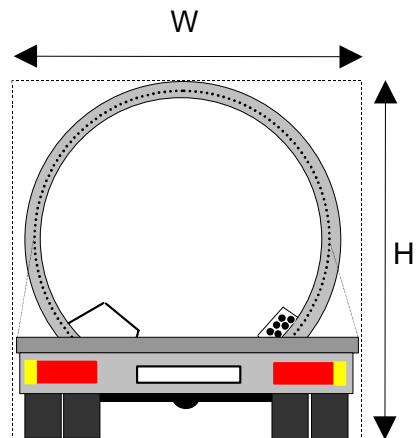
#### 1.2 Layout

**Dimensions:** All required information regarding dimensions and so on you find in the associated drawings:

MD70 and MM70: **Z-1.1-GP.ZW.01**-actuell Revision

MD77 and MM82: **Z-1.2-GP.ZW.01**-actuell Revision

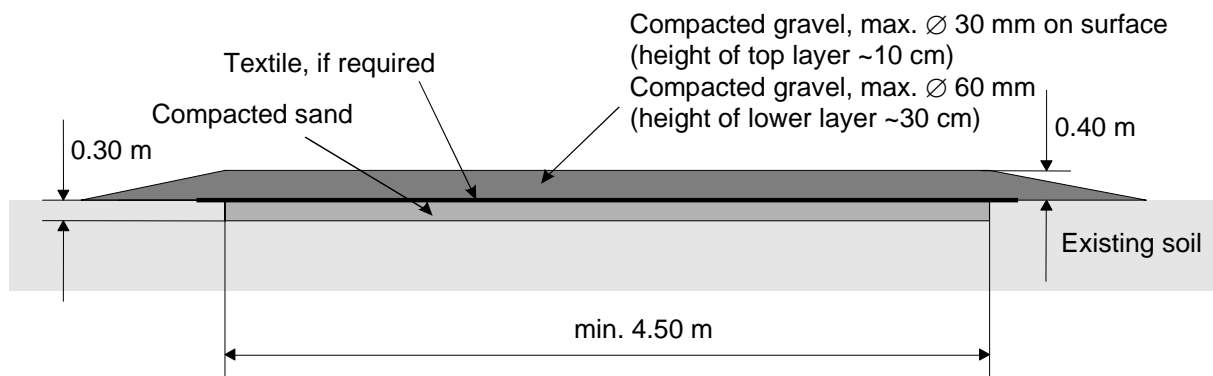
**Load profile:** minimum height = 5.00 m, width = 4.50 m



**Gradients:** maximum 10 % at normal surface (gravel or better)

**Side inclination:** maximum 2 %

## 2 Road surface



The access road should be made of gravel (diameter max. 60 mm; layer thickness 0.40 m) on compacted sand (approx. 0.30 m). The top layer may in place of gravel be made of breakage material (diameter max. 60 mm) free of any demolition waste, such as glass, ceramics, steel or wood. If breakage material is used the thickness has to be increased to approx. 0.50 m. The material used on the surface may have a maximum diameter of up to 30 mm. In order to prevent inundation, a textile layer may be needed between the base (sand) and top layers (gravel). All layers must be properly compacted by adequate machinery to avoid later access problems with heavy loads.

The road surface must in general be even; some of the lorries have a ground clearance of no more than 10 cm. Crossfall from the road axis to the banking must be 2 to 3 % to ensure proper draining.

Depending on the specific site conditions these values may change. A soil expert and road engineering company should be consulted for suggestions.

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### 3 Crane area

All required information regarding dimensions and so on you find in the associated drawings:

MD70 and MD77: **Z-1.1-GP.KF.01**-actuell Revision

MM70 and MM82: **Z-2.1-GP.KF.01**-actuell Revision

The surface of the crane area must be levelled. No obstacles should be within a radius of 75 metres of the crane.

For assembly of the crane jib a free length along the access road must be available, measured from the crane centre you need the hub height plus 20m.

Any contamination of the wind turbines after erection must be avoided, e.g. by proper compaction and graveling to ensure a dry and clean surface.

**The final layout for the specific site is to be planned after inspection of the location!**

**Note:** The data shown is *for orientation only*. Depending on the local conditions various opportunities may exist.