

Obstacles and Challenges Facing Civil Infrastructure Design of Onshore Wind Farms, Drawing on Grontmij's Experiences in Scotland

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Some Obstacles and Challenges...

Topography
&
Geometry



Some Obstacles and Challenges...

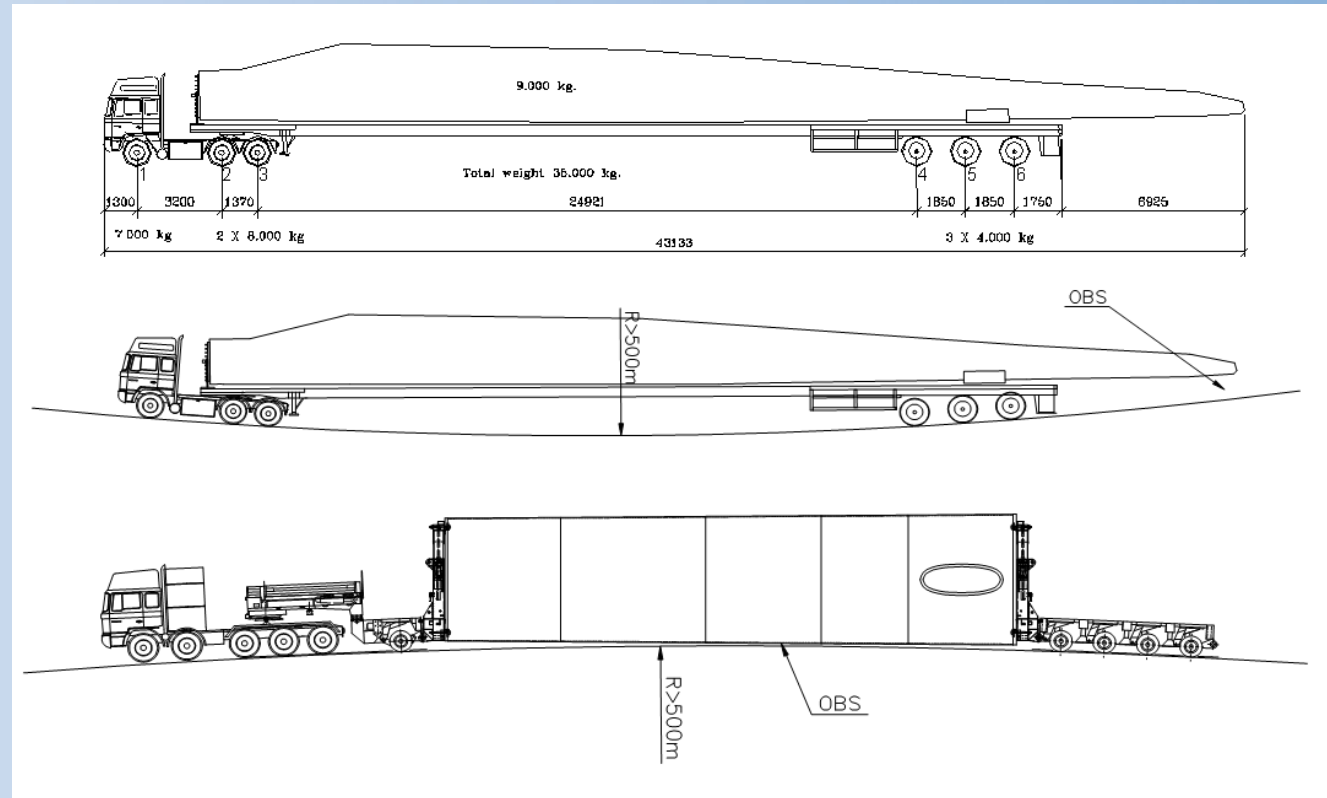
Typical Specification*

Parameter	Units	Value
Access Track Minimum Width (Straight Roads)	m	5m
Access Track Minimum Bend Radius	m	30x30m funnel
Maximum Longitudinal Gradient	-	6% with gravel / 12% with metalled
Maximum track cross-fall	-	2% cross fall
Minimum Vertical Curvature		150mm or 500mR (Assumption)
Minimum Design Axle Load	tonnes	12 t axel or 140 gross weight

**Repower's Transport Access and Assembly Manuel.*

Some Obstacles and Challenges...

Typical Vehicles



Some Obstacles and Challenges...

Which on site
looks like this...

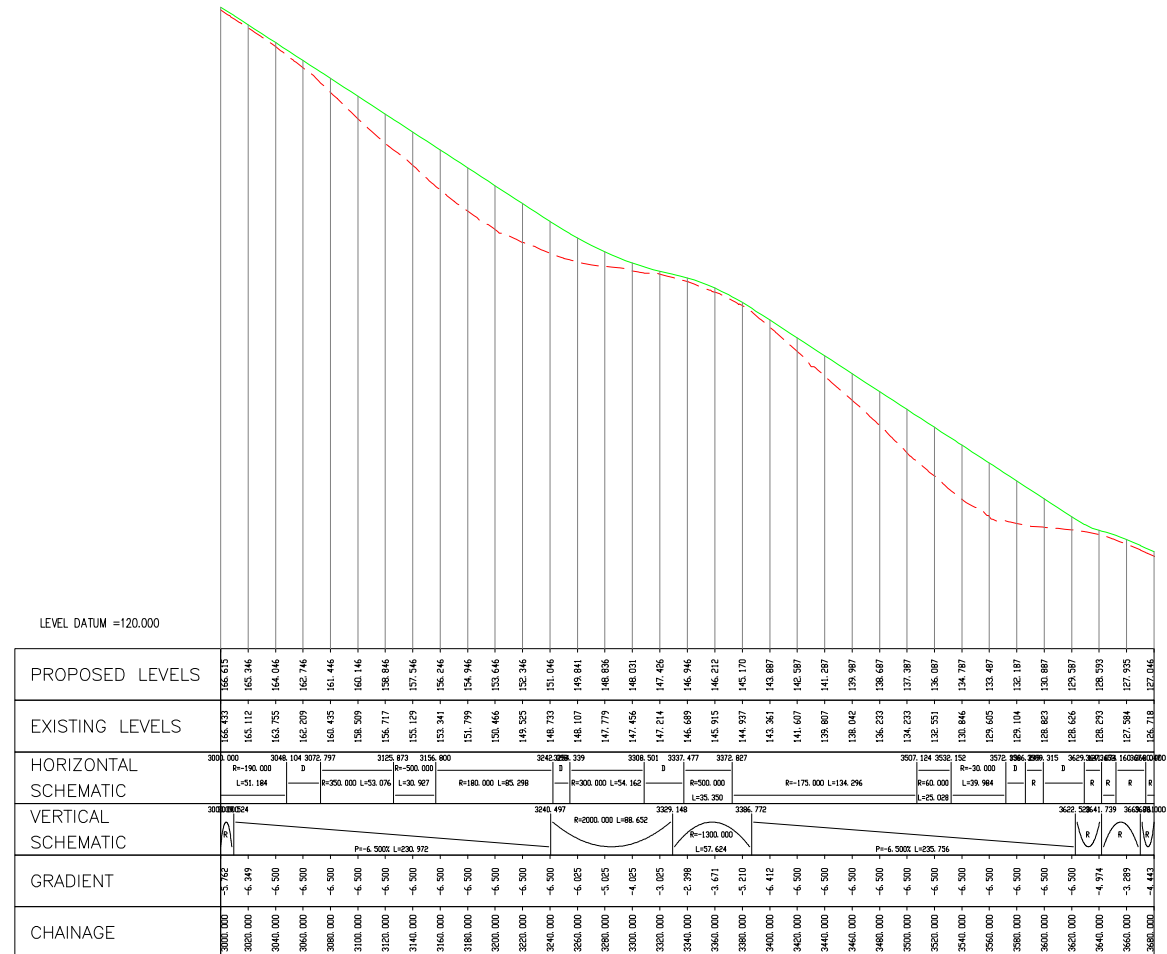


Some Obstacles and Challenges...

This leads to...

existing

designed

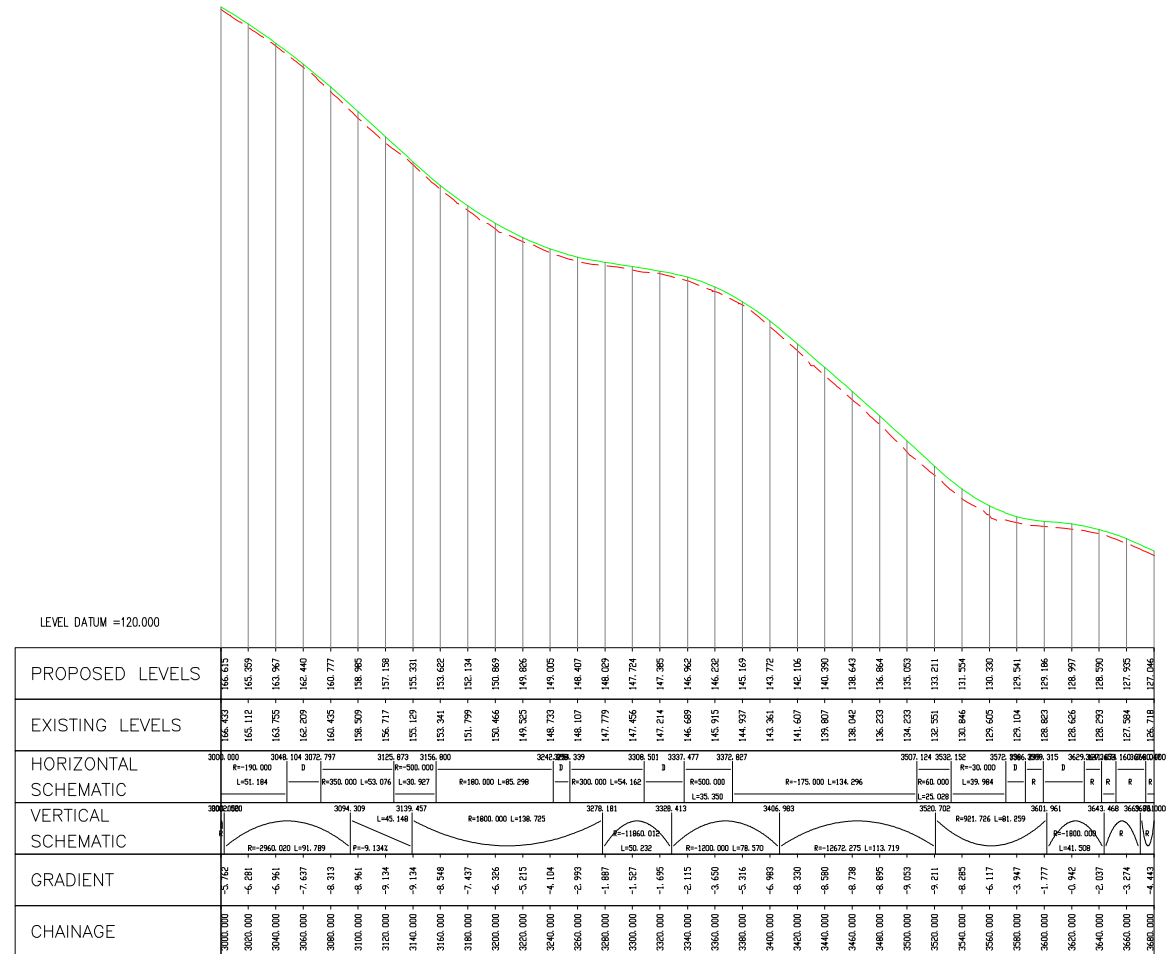


Some Obstacles and Challenges...

Alternatively...

existing

re-designed



Some Obstacles and Challenges...

Peat



Some Obstacles and Challenges...

Peat



Some Obstacles and Challenges...

Floating roads



Some Obstacles and Challenges...

Off-site works

- Geometry
- Structures
- Network Rail

Some Obstacles and Challenges...

Geometry



Some Obstacles and Challenges...

Structures



Some Obstacles and Challenges...

Structures



Some Obstacles and Challenges...

Network Rail



Some Obstacles and Challenges...

Network Rail



Some Obstacles and Challenges...

When you get
your off-site
works wrong...



Thank you

Visit the onshore wind
energy experts
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