

## ASSESSMENT OF THE IMPACT OF THE WIND PARK ON LANDSCAPE AND FUTURE LAND USE

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### ABSTRACT

Wind power is a source of renewable energy produced by harnessing the kinetic energy of the wind. Wind energy is converted into electricity using wind generators or wind turbines installed in wind farms. It is linked to the kinetic energy of the wind, which is produced when air moves. The energy can be used to create mechanical motion, such as the rotation of the rotors of a wind turbine. To harness wind energy, wind turbines or generators are installed to convert the kinetic energy of the wind into electricity.

According to the General Provisions of Chapter 1 of the Law on Spatial Development Planning issued by the Parliament of the Republic of Latvia on 1 December 2011, a number of plans are defined that are relevant to the long-term development of a city, county, municipality or property. Local plan is the long-term development of a local area planning document, which is developed for a part of a national city, a town or part of a township, a village or part of a village, or a part of a rural area to solve a planning task or to detail or amend a spatial plan.

In the face of climate change and geopolitics, wind parks for electricity generation is essential both globally and in Latvia. Wind energy resources is an environmentally friendly solution for energy generation. However, it is important to consider that wind power plants cannot be installed in every location to be cost-effective. Increasing the height of the wind turbine, the rotor diameter, also increases the electricity efficiency and becomes more commercially viable.

The exact location of wind power plants is important for their construction. The siting is strongly influenced by the opinions and proposals of local residents, the topography of the area, nearby settlements and the layout of the area.

The location of wind farms in relation to the landscape is one of the most important aspects when planning their construction.

Very little research has been carried out on the impact of wind farms on future land use, and as a result this study places a strong emphasis on future land use after wind farms are built.

In the research are used monographic method, data processing and analysis method, balance method. During the research, geographical and meteorological maps of the Republic of Latvia were analyzed and used.

**Keywords:** land use, wind park, renewable energies, territory planning