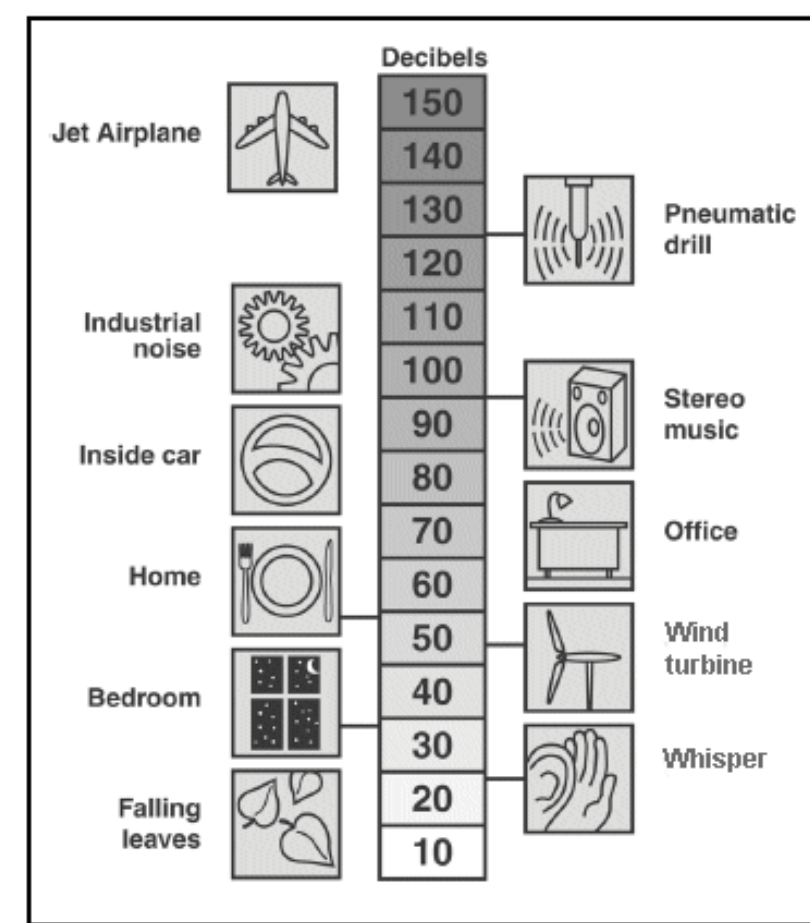
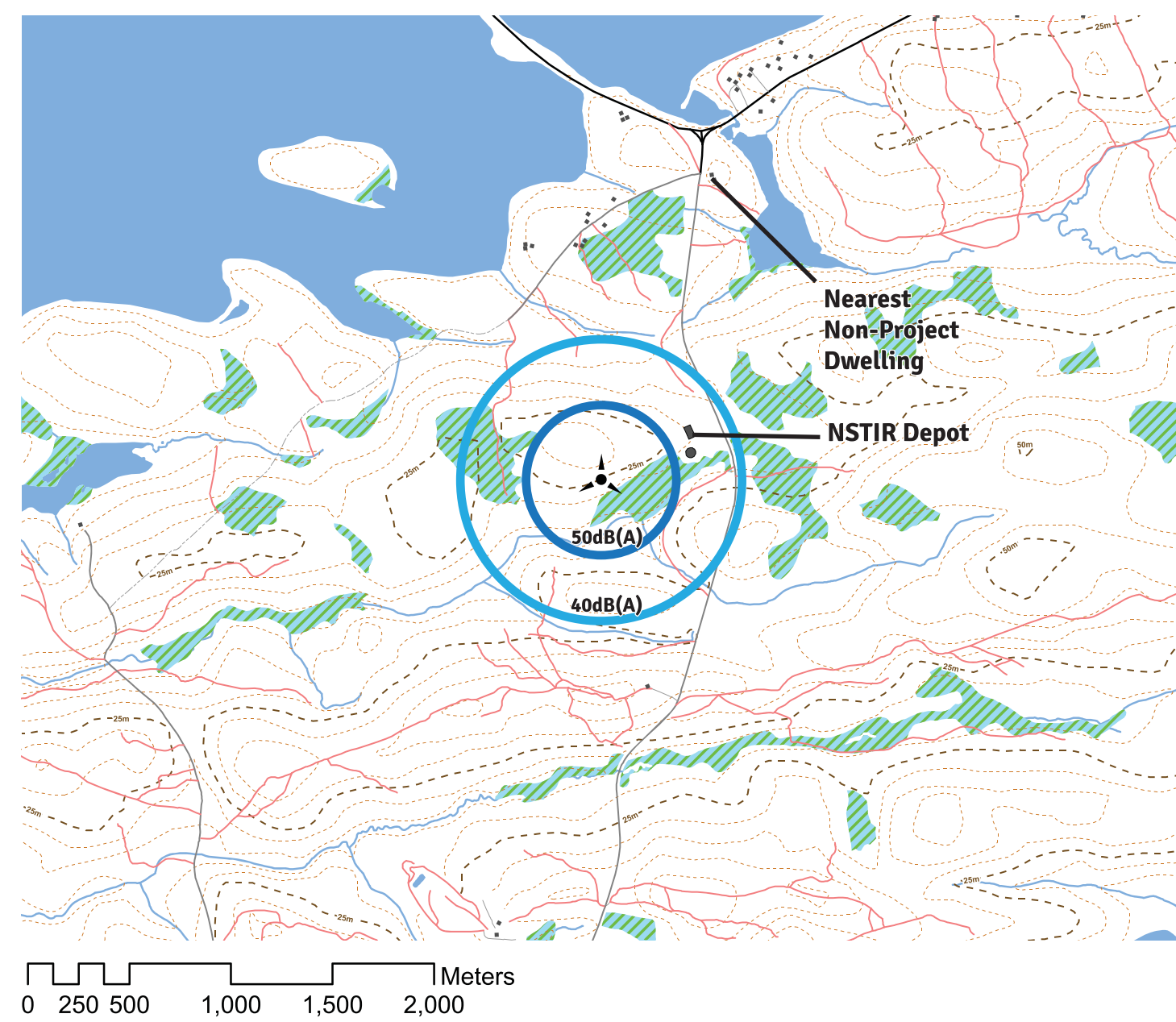


Right:
Typical sound levels; wind turbines are usually regulated to be between 40 and 45 decibels at the nearest dwelling.



Below:
Predicted sound levels.



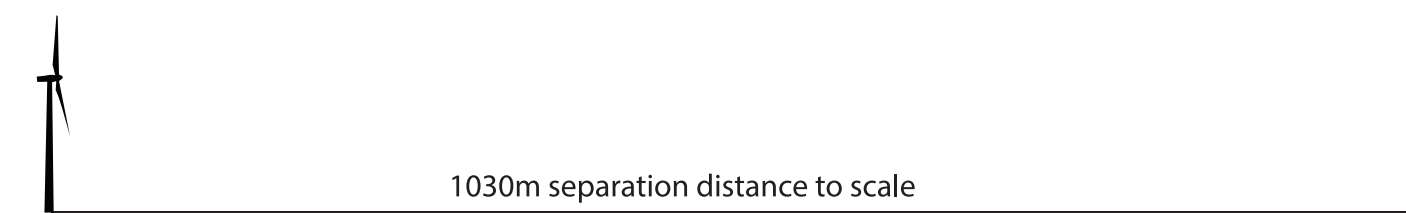
Sound

One of the most common concerns community members have when learning of a proposed wind energy project is the question of how the turbine will sound, and how noticeable it will be.

All turbines produce sound if they're producing electricity. Operating turbines are often described as producing an audible "woosh" sound as the blade passes in front of the tower. While the preference for the sound varies by personal taste, the power of the sound is measurable. Due to their size, a turbine's sound cannot be mitigated easily through engineered solutions, such as sound walls that are sometimes built along highways.

The most common method of ensuring wind turbine sound does not adversely affect quality of life is simply by locating them away from sensitive land uses, such as residences. Some debate exists over what distance is appropriate to achieve this, partially due to the fact that the distance sound travels can be affected by site specific factors, such as topography, amount of forest cover, and local weather conditions. A general rule of thumb is that the turbine will not be audible above background noise at a distance of 500m. However, due to variability, many municipalities adopt precautionary setback regulations to ensure sound is mitigated.

In Nova Scotia, set-back distances from houses vary by municipality, from around 200m up to 1000m. Our proposed location is 1030m from the closest non-project dwelling. The closest building is the NSTIR Roads Depot on Highway 206, approximately 300m away. At these distances we do not expect turbine noise to create any issues.

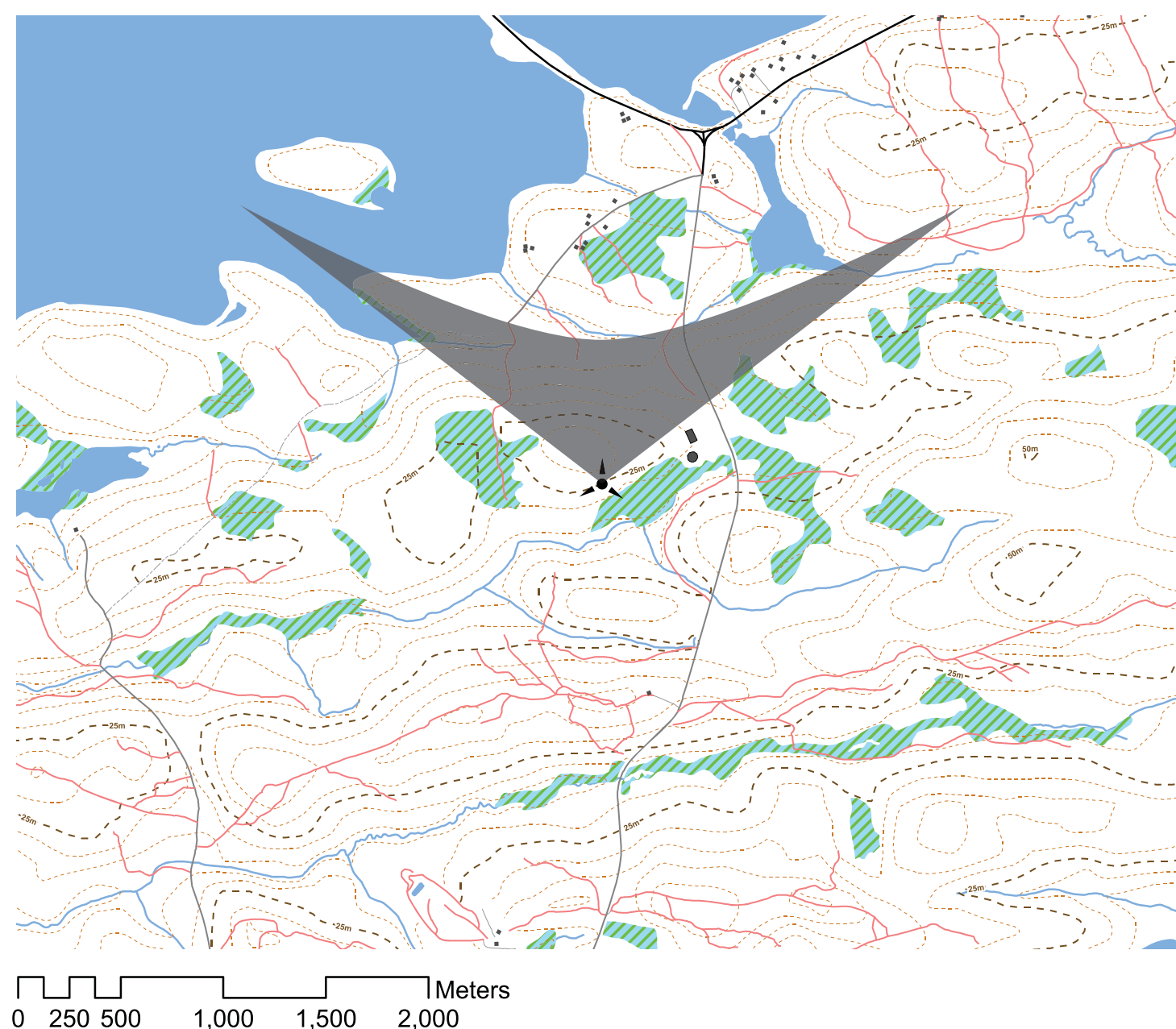


Shadow

Another common concern with large scale wind energy projects is the potential for flickering shadows to be cast on neighbouring houses if the sun is shining directly through the rotating blades.

The zone of impact for this can be estimated relatively easily. Given the location of the turbine to the west of Highway 206, shadows cast by the turbine will fall in an uninhabited area.

The graphic to the left shows a rough estimate of the maximum shadow zone; modeled for the winter solstice (approx Dec. 21) which is the day when the sun is lowest, and shadows are longest.



Environmental

While this project is not required to undergo a Class 1 Environmental Assessment, many of the same studies are still being performed. Environmental engineering consultants have already performed watercourse and wetland surveys at the site. Ongoing monitoring of migratory bird populations also forms part of the research we are doing. While the results of that work is not yet available, it will be posted publicly for review once complete.

Earlier in project development, an "Environmental Impact Statement" was completed. This is a preliminary first look at the project to try and predict potential impacts, and identify the further required studies. Additionally, an archaeological study and a watercourse and wetland survey have been completed.

Here are some of the highlights of those document:

No identified areas near the Project site are considered significant for bat habernacula.

No rare or unusual plant were found on the Project site.

There is potential habitate for 1 species at risk at the site (Rusty Blackbird).

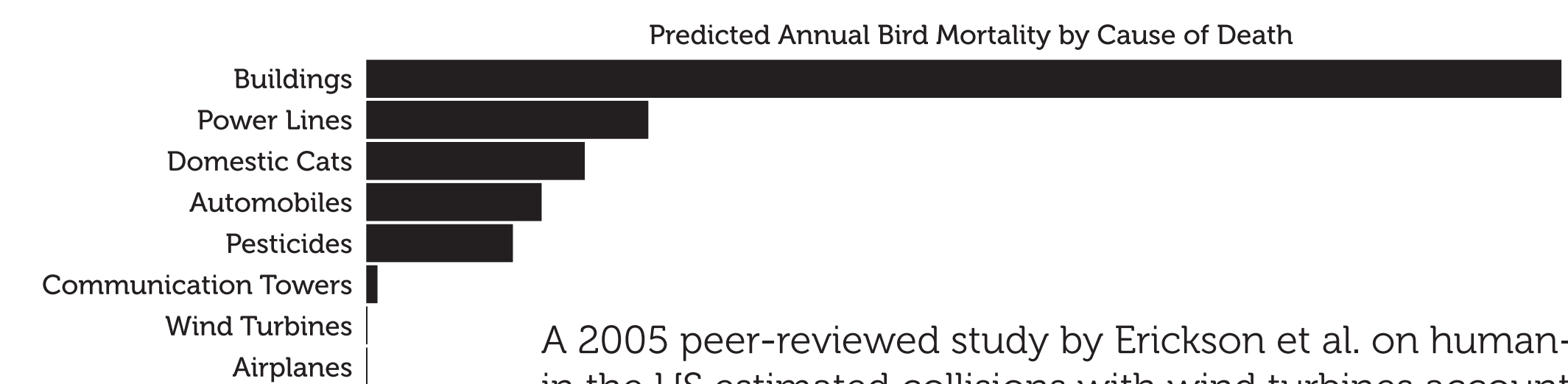
Wetlands and watercourses identified on site will not be impacted by the turbine location.

The final design of access roads may require environmental permitting by NS Environment.

No archaeological resources were found at the Project site.

Impacts in Context

No development is without its adverse impacts. While we are trying our best to ensure this project is carried out in an environmentally sensitive way, any time people alter the natural world, there are going to be negative impacts. It is important to consider the context of those impacts. For example, wind turbines are known to be a cause of bird and bat kills, but the degree to which they affect bird populations is comparatively small to many other human activities. All things considered, wind energy is still among the most environmentally friendly forms of power generation.



A 2005 peer-reviewed study by Erickson et al. on human-caused bird fatalities in the US estimated collisions with wind turbines accounted for approximately 28,500 deaths out of 500,000,000.

