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Public Consultations, the Over-Horizon Radar Project and Community Concerns in the City of Kawartha Lakes

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As part of Canada's $38.6 billion plan announced in 2022 to modernize North American Aerospace Defense Command (NORAD) over the next two decades, the Department of National Defence (DND) announced on 27 July 2025 the selection of the first transmit and receive sites for the Arctic Over-the-Horizon Radar (A-OTHR) project. The A-OTHR project is anticipated to reach initial operational capability by the end of 2029, and it will ultimately require four sites to be fully operational: two transmit sites and two receive sites.

For a permanent transmit site, DND has acquired 163 hectares of vacant property in the northern part of Thistle Trail, slightly north of Bexley Township in the City of Kawartha Lakes, Ontario. Kawartha Lakes was chosen as one of one the locations due to its flat and dry area, limited environmental constraints, being close to electrical power sources and being located in southern Ontario. The current timeline is to have the site flattened this winter, followed by site clearing happening between 2026-2028, with equipment being installed and the radar system functioning by 2029. Acquiring this site enables DND to deliver an initial, functional capability that can be implemented much sooner than the full capability. The selection of the first site sets the foundation for further development and expansion and is a major milestone toward reinforcing Canada's security and sovereignty in the Arctic.

On 10 September, DND held a public engagement session in Coboconk to answer questions about a transmit site being placed at Thistle Trail in Kawartha Lakes. The majority of residents who attended the public engagement session noted that they are entirely opposed to the project. Residents at the session – numbering around 75 – were concerned about their own personal health and safety, and the environmental impacts, of building a transmitter for the over-horizon radar system over both the short and long term. Residents of the Coboconk area highlighted fears surrounding the possibility of electromagnetic emissions of the over-horizon radar on the community and surrounding areas. These concerns are in relation to how the over-the-horizon radar system works, specifically by bouncing high-frequency (HF) radio waves off the ionosphere, a layer of charged particles high in Earth's atmosphere, to "see" around the planet's curvature. Consequently, this sparked worries that radioactive waves could negatively impact the health and well-being of the community.

In response, a DND representative noted the beam cannot be steered in a direction or power level that would put any kind of electromagnetic emissions outside of the designated safeties already in place. Defence officials illustrated that they are using radiofrequency electromagnetic fields that have no known health effects,

and are following the same Health Canada safety code six that every Ministry is obliged to follow, and will fence off the area on site so there is no danger that goes beyond the boundaries of the transmit site.

Furthermore, attendees at the public consultation session emphasized that they wanted to know what threats warrant this type of defence infrastructure development in rural Ontario, and why this system is being inaugurated to protect Canada as a whole. Defence officials noted that they were not permitted to explicitly identify countries that Canada deems as threats and competitors within the Arctic region – although Canada's April 2024 defence policy update and its December 2024 Canadian Arctic Foreign Policy statement clearly point to Russia and China. In this public forum, however, DND representatives highlighted that they are not focused on any particular countries but instead focused on what threats exist and on increasing Canada's overall domain awareness. DND officials underscored to those that attended the public engagement session that the purpose of the over-the-horizon radar system is to discern non-cooperative or unknown targets and making sure that these are addressed.

The other most notable concern surrounding the development of the over-the-horizon radar system in the Kawartha Lakes relate to environmental impacts. Attendants of the public engagement session stressed the impacts to local wildlife and ground water contamination that could affect local communities. Officials emphasized that the DND is mandated to integrate the Federal Governments sustainable development strategy and that the department's Defence Climate and Sustainability Strategy prescribes that any development undertaken by DND is governed by sustainable development practices. However, Defence representatives highlighted that within the 163 hectares of land that was purchased for the over-the-horizon radar transmit site, a kilometer section will have to be flattened to ensure that there is a flat surface for transmit antennas to be installed. Because of this, DND officials underscored that there will be some environmental impacts. They also noted that the department has nearly completed its environmental impact studies and has found no reason to believe that the transmitter cannot be built in the City of Kawartha Lakes. While there are some species at risk, such as the western chorus frog and four butternut maple trees, DND officials noted that they are in the process of acquiring the necessary permits to proceed. To conclude, officials emphasized that the department is committed to making sustainable development decision-making that contributes to an integrated, and whole-of-government view of activities that support environmental sustainability.

Writ large, DND's public engagement session in Coboconk allowed residents to question officials about development plans and to garner some "peace of mind" with respect to the over-the-horizon transmit site. The most notable observations at this information session, however, related to DND officials' inability to respond convincingly and combat misinformation narratives surrounding electromagnetic radiation and the possibility of it affecting local residents and the surrounding environment, coupled with imprecise statements about the overall justification for the over-the-horizon radar system and why Canada needs it. For future public information sessions to be successful, DND Public Affairs should construct talking points and narratives that anticipate and counter obvious misinformation, while affirming DND's commitment to sustainable development practices in a way that is respectful and meaningful to rural communities.