SUMMARY

Milton Logistics Hub Project Environmental Assessment Report



prepared by The Review Panel for the Joint Process for the Review of the Milton Logistics Hub Project

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Summary

The Project

The Canadian National Railway Company (CN) is proposing to build an intermodal logistics hub on land in the Town of Milton, in the Greater Toronto and Hamilton Area, an area experiencing rapid urban growth. It would enable the transfer of shipping containers between railcars and trucks, and increase capacity of the intermodal network in Canada. The Project would be constructed adjacent to the existing mainline, covering approximately 400 hectares of CN-owned land. It would realign and double a portion of the mainline, and include construction of new pad and service tracks, a large work pad, an administration building and maintenance garage, a truck entrance gate and roadways to access the facility. The Project would also require the development of a stormwater management system, the realignment of two watercourses, and replacement of the existing grade crossing at Lower Base Line with a grade-separated rail over road underpass. At full operation the Project would handle approximately 450,000 containers per year, transporting primarily finished products, such as appliances, furniture, and household goods. Approximately 2.7 percent of the containers would contain dangerous goods, such as household cleaning and lawn care products. The Terminal would be serviced by four intermodal trains per day, two of which are already moving along the Halton Subdivision mainline through the Town of Milton. A maximum of 800 trucks per day would enter and exit the terminal.

This Summary

This summary contains some of the key points from the Report. We encourage you to read the full list of recommendations. Over the last three years the Panel conducted a comprehensive environmental assessment closely examining whether the Project was likely to cause significant adverse environmental effects, as defined under section 5 of CEAA 2012. Our findings on environmental effects of the Project are set out in boxed conclusions. For most of the factors reviewed, the Panel concluded that, with the mitigation proposed by CN and, in some cases, with additional mitigation recommended by the Panel, the Project would not have significant adverse environment effects. However, the Panel has concluded that the Project is likely to cause significant adverse environmental effects on air quality and on human health as it relates to air quality, and significant adverse cumulative environment effects on air quality, human health, wildlife habitat, and the availability of agricultural land. The Panel emphasizes that in each case, direct Project effects are relatively small but would be added to an environment where air quality, wildlife habitat and the available agricultural land have already been affected by development, and would continue to be affected by a substantial amount of planned future development in the region. The Panel notes that most of the adverse environmental effects identified by the Panel as significant are likely to occur whether or not the Project proceeds because the lands have been designated for future development.

Alternative Means of Carrying out the Project

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CN described how it selected South Milton to be the Project site, looking at general location, size, slope and potential environmental effects. The Panel concluded that CN's criteria for site selection were reasonable and their application supported the choice of the South Milton site. CN also assessed alternatives for Project components including the truck entrance, the grade separation, water supply and wastewater management, stormwater management system design, Indian Creek, and lift equipment. The Panel was satisfied with the options selected by CN.

Air Quality

CN reported that baseline levels of air contaminants were in general below the relevant federal and provincial ambient air quality standards except for benzo(a)pyrene and benzene. CN's dispersion modelling results showed that in 2021, with the Project, in certain areas benzo(a)pyrene, benzene and PM₁₀ would exceed standards on a few days a year. Halton Municipalities suggested that CN had not included road dust in their modelling and also underestimated the number of idling trucks.

CN then proposed additional mitigation that it predicted would reduce dust by 25 percent and emissions from idling trucks by 70 percent.

The Panel found that three contaminants would exceed the relevant ambient air quality criteria: Benzo(a)pyrene (by 2600%), Benzene (by 128%) and PM₁₀ (by 112%). In the Milton area, transportation and other activities have had an effect on air quality that the Panel considers to be already significant, as reflected in the existing baseline air quality data. The Panel concluded that, although the Project contribution would be limited, it would increase benzene, benzo(a)pyrene and cause new exceedances for PM₁₀ and PM_{2.5}, and therefore be likely to result in a significant adverse environmental effect. Similarly, because residential, industrial and commercial development in Milton will continue, the Panel concluded that the Project, in combination with other projects and activities, is likely to cause a significant adverse cumulative environmental effect to air quality.

Greenhouse Gases

CN predicted the total Project greenhouse gas emissions would be 23 kt of carbon dioxide equivalents (CO₂e) annually during construction and 63 kt CO₂e during operations. CN committed to various mitigation methods such as a no-idling policy, regular maintenance, and using high fuel efficiency engines. The Project would result in net reduced greenhouse gas emissions because containers would be moved by railway rather than long-haul trucks, which CN estimated would reduce emissions from 200 million truck kilometres annually.

Light

The Project would be a source of three types of obtrusive lighting effects: light trespass, glare and sky glow. Some night work requiring lighting would be necessary during construction. During operations, the Terminal would function day and night, lit by 30-meter high mast light fixtures on the pad area and 15-meter high light fixtures along roadways. CN's mitigation would include berms, landscaping, glare shields, and downward focused luminaires. Halton Municipalities asserted that the Project, with taller light fixtures and more powerful lights would have a much greater effect than other types of lighting in the area. The Panel recommended that the more stringent international standard for changes in light (rural rather than suburban) should be applied to the Project for light trespass and glare, noting that this

would likely require some additional mitigation. The Panel also acknowledged the value of preserving dark skies to the extent possible and, following Halton Municipalities' suggestion, recommended that CN use amber light technology if feasible, as it may cut sky glow by a substantial amount.

Noise and Vibration

CN indicated that the existing noise levels were typical of a suburban environment and dominated by existing train traffic, local vehicular traffic, and urban hum from the developed areas. During operations, noise would be generated 24 hours per day, although 85 percent of truck movements would occur during business hours. Only two new trains would be added to the mainline. Noise mitigation would include speed limits, berms, barriers, enclosure of noise sources, and selection of quieter equipment. CN would install measures such as sound barriers during the early stages of construction. Noise sources along the mainline north of Britannia Road would include locomotive movements, idling and coupling noise. Developers would be required by the Town of Milton to extend the noise barriers along the main tracks. Halton Municipalities expressed concern about the lack of detail for proposed mitigation. Developers with land north of Britannia recommended additional barriers between future adjacent homes and noise sources. Health Canada raised concerns about sleep disturbance.

CN expressed confidence that all noise criteria would be met through mitigation, and the Panel has made recommendations to ensure this while also noting that additional enforcement would be available through the Canadian Transportation Agency. The Panel concluded that the limited Project noise north of Britannia would be adequately mitigated by the existing and future noise barriers and that the main Project activities at the terminal would occur more than 300 metres from all homes. The Panel was satisfied that vibrations from construction or trains on the mainline would not cause significant adverse effects.

Surface Water

Once construction is complete, approximately 50 hectares of the area would be covered by an impervious surface. CN would construct a stormwater management system with diversion ditches, culverts and stormwater management ponds to control drainage so that post-development peak flow rates would not change, up to and including the Regional Storm event. As a result, CN predicted that there would be no increase in flood risk to downstream areas. CN said that their proposed channel realignments would address channel erosion and instability, increase the environmental buffer, account for meander belt migration, and provide floodplain capacity. CN also said that the Project would potentially improve water quality through treatment of runoff and plantings along streams. Conservation Halton and Halton Municipalities had many questions and criticisms relating to CN's assessment of headwater drainage features, limited local flow data, channel design, floodplain mapping, thermal effects, and the capacity of the stormwater system to deal with an extreme storm event such as Hurricane Hazel.

The Panel concluded that additional water conveyance and storage infrastructure would be required and that CN has enough land available for such work to build this infrastructure. The Panel's recommendations included performance objectives that CN must meet to ensure there are no changes

to flows or water quality offsite, and collaboration with other agencies to ensure the Project can satisfactorily manage the range of climate conditions.

Groundwater

CN found, and Natural Resources Canada agreed, that the Project site has low groundwater recharge potential and therefore groundwater is not vulnerable to hazardous material spills and other effects. The Panel was satisfied that proposed mitigation measures would avoid adverse changes to groundwater systems.

Changes to Wetlands

CN stated that it would remove 3.7 hectares of low-quality wetland habitat, and replace it by creating 7.1 hectares of new wetland habitat, with native vegetation. Halton Municipalities expressed concern that constructed wetlands can take a long time to establish, and need to be monitored regularly to manage invasive vegetation species. Conservation Halton stated that feature-based water balances should be completed for potentially affected wetlands. The Panel concluded that CN's wetland compensation proposal is appropriate and recommended consultation with Conservation Halton about its implementation.

Terrestrial environment

CN's geotechnical investigation found that soils on the site would provide stable support for infrastructure, and soil could be safely re-used on site. The Panel made recommendations regarding soil management and monitoring, and addressed issues relating to habitat protection and compensation in other sections.

Wildlife

CN identified habitat for species at risk and assessed potential effects on migratory birds. It proposed a variety of habitat creation and mitigation measures to protect these species, including exclusion fencing and awareness training for CN employees and contractors. The Panel concluded that the Project alone would not cause a significant adverse environmental effect on wildlife and wildlife habitat connectivity, but is likely to cause a significant adverse cumulative environmental effect in combination with the effects of past losses of agricultural and wild lands and the future effects of continuing rapid growth and development.

Fish and Fish Habitat

CN concluded that parts of Indian Creek and Tributary A provide poor to moderate quality fish habitat supporting a commercial, recreational or Aboriginal fishery, but no aquatic species at risk. CN's plans to realign sections of Indian Creek and Tributary A would require an authorization issued by Fisheries and Oceans Canada and a Habitat Compensation Plan. CN stated that meeting the terms of the Fisheries and Oceans Canada authorization would ensure no significant residual effect on fish or fish habitat. Fisheries and Oceans Canada agreed that the Project would be unlikely to cause serious harm to fish. Conservation Halton expressed concern that channel realignments and culverts could create barriers to fish passage and that the stormwater ponds could cause thermal effects. The Panel concluded that the proposed fish habitat compensation would satisfactorily offset effects on fish and fish habitat.

Air Quality: Health Effects

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CN assessed the human health risks of exposure to a range of air pollutants, including particulate matter, matter, nitrogen oxide, and diesel exhaust and its constituents, including diesel particulate matter, benzo(a)pyrene and benzene. CN stated that its relative risk analysis of diesel exhaust demonstrated that the Milton airshed would be essentially the same with the Project as it would be without it, and that the relative risk to health would be at the lowest end of the risk range in Southern Ontario. Health Canada pointed out that there is no human health threshold for certain air quality parameters, and stated that CN had not adequately assessed the health risks from diesel exhaust. Halton Municipalities said that CN had failed to assess a range of other adverse health effects including premature non-cancer mortality, asthma, cardiovascular and acute respiratory symptoms. Health Canada recommended that CN reduce emissions of non-threshold contaminants associated with diesel exhaust. CN subsequently agreed to prepare a human health risk assessment of the effects of diesel exhaust, in consultation with Health Canada.

As air quality has already deteriorated due to human activities, especially traffic-related emissions, and the Project would further contribute air emissions, especially benzo(a)pyrene, benzene and cause new exceedances for particulate matter, the Panel found that the effects of Project air emissions on human health would be low on their own, but significant when combined with existing and anticipated background exceedances and human health exposure ratios that are near the maximum acceptable level, and therefore concluded there would be a likely significant cumulative adverse environmental effect.

Country Foods and Water Quality: Health Effects

CN modelled future concentrations of benzo(a)pyrene in soils and predicted that they would be well below health guidelines. The Panel concluded that risks to health associated with eating country foods would be low but recommended that CN implement a follow-up program. The Panel also concluded that the Project was unlikely to affect any groundwater sources used for drinking water and confirmed that surface water in or near the Project Development Area is not used for drinking water or recreation.

Noise: Health Effects

CN predicted that operation of the Project would result in only minor additional noise. In response to Health Canada's concerns, CN agreed to further analyse sleep disturbance to evaluate the impact of impulsive nighttime noise events – for example, the sound caused by two railcars connecting. The Panel recommended that CN should, if necessary, implement additional mitigation measures, such as noise barriers or operational changes to ensure that individual noise events remain under the target of 10 to 15 events of 60 dBA L_{max} outdoor per night. Other recommendations included noise monitoring and reporting, good communications with the community and a complaints response process.

Outdoor Recreation

CN reported that cycling is popular in the area and that the Mattamy National Cycling Centre is an important nearby sports facility. The truck entrance on Britannia Road would be designed to safely accommodate pedestrians and cyclists and the grade separation at Lower Base Line would include separate cycle lanes, which would allow cyclists to avoid crossing the mainline. CN would construct vegetated berms in key locations to reduce effects on the viewscapes and noise from Project activities. Halton Municipalities stated that increased truck traffic would deter cyclists, and Milton Says No was

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concerned about the effects of air emissions and risks to cyclist safety particularly at roundabouts. The Panel noted that truck numbers would increase and arterial roads would be expanded even without the Project, making the roads less conducive to cycling. The Panel recommended that CN consult with cycling organizations about cyclist safety, and develop a cycling awareness program for truck drivers accessing the terminal. CN also concluded that, even with the addition of Project lighting, it would still be possible to view stars on nights with good viewing conditions.

Property Value and Enjoyment of Property

CN stated that many parameters can affect property values and that all but one of the neighbourhoods adjacent to CN's mainline had been approved after CN acquired the land for railway-based infrastructure. Halton Municipalities stated that major industrial facilities should be appropriately designed, buffered or separated from sensitive land uses. Milton Says No reported that, according to local real estate agents, the Project could cause an initial short-term drop of 5-10 percent for properties close to the Project. However, the Panel did not hear evidence, other than conjecture, that the Project would cause a widespread, severe or permanent decline in property values.

Agriculture

The Project Development Area is mostly leased to local farmers, growing row crops like soybeans, corn, wheat, and hay. The Project would remove 147 hectares of agricultural land, including 30 hectares of Prime Agricultural land (0.1% of the total amount in the Region). Mitigation for this loss could include improvement of adjacent lands or a contribution to agricultural research. CN stated that the Regional Official Plan for Halton includes 36,011 hectares of agricultural land and that planned development in the Town of Milton, in combination with the Project, would convert 1,732 hectares, while future urban growth would require an additional 3,000 to 4,200 hectares of land. Halton Municipalities stated that the Project would not create enough jobs to compensate for the loss of agricultural land. The Panel observed that the Project would remove agricultural land sooner than might otherwise be expected, but this would happen eventually even without the Project. While the Project would cause only a small loss of agricultural land, in combination with past conversions and future rapid urbanization, in the Panel's view that loss becomes significant. The Panel concluded, considering those past and future losses, that the Project is likely to cause a significant adverse cumulative environmental effect to the availability of land for agricultural use in the region of Halton.

Land Use Planning

CN said that the Project was compatible with regional and provincial planning because Project lands had been designated for employment, and the Project would not impinge on the Greenbelt Plan areas. Under the 2019 Regional Official Plan, individual sites within the greenfield area are not required to meet the employment density targets. Halton Municipalities stated that Milton is aiming to ensure a complete community that balances housing and employment, and wishes to attract knowledge-based industries and innovation employment. Warehousing and logistics centers would be directed to locations close to the 400-series highways. Further, because the Project is only proposing 130 direct jobs, Halton Region would need to look at other opportunities and lands to achieve their employment targets. The Panel understands that Milton wants a larger, more diverse employment base, but, as CN owned this land and was not necessarily bound by the Regional Official Plan, the Panel concluded that Halton Region should have foreseen the possible need to alter its plans.

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Demand for Community Services and Infrastructure

CN would use contractors to supply water and to collect and dispose of solid waste and wastewater at licensed facilities, but would consider connecting to the municipal network if services later became available. CN did not anticipate additional costs to public services such as road maintenance, fire-fighting or snow removal. Halton Municipalities expressed concern that CN would not connect to the municipal system, which had been sized for CN's original 2008 proposal, and was also concerned that the proposed on-site water supply would not be sufficient for fire protection. Other concerns included increased wear and tear on arterial roads, and costs to upgrade intersections and the eventual future replacement of the Lower Base Line underpass. The Panel agrees that CN would mostly not rely on local services, but recommended that CN negotiate with Halton Region for provision of regional water and wastewater services.

Municipal Finances

CN predicted that the Project would contribute approximately \$1 million annually in property taxes, and attract intermodal-oriented development to Milton, generating between \$130 and \$213 million in property taxes and \$36-74 million in development charges over a 30-year period. Halton Municipalities stated that they had based their budget planning on CN's original 2008 concept for rail-based industrial development, and suggested this would have generated \$49 million in development charges and \$7 million annually in property taxes. Halton Municipalities considered these to be lost opportunity costs. The Panel recommended that that CN, Halton Region and the Town of Milton hold discussions to identify ways in which CN might contribute to Milton's vision of developing the complete community with a diverse employment base that includes but is not limited to an expanded logistics industry.

Effects on Road Transportation Networks

CN used provincial trip origin and destination-based surveys to estimate the proportion of trucks likely to follow each of the identified truck routes, concluding that primary truck routes would connect to the northeast. The Ontario Ministry of Transportation stated that Project traffic would have minimal impact on provincial highways. Halton Municipalities suggested that the route options with the least impact in the short term would be via James Snow Parkway or Trafalgar Road to Highway 401. Other participants questioned the implications of accidents and obstructions on Highway 401. CN stated that truck movements would be dispersed over a 24-hour period. The busiest time for trucks would not conflict with peak traffic and Project trucks would use 2% or less of the future capacity at signalized intersections, with the exception of the access intersection on Britannia Road. CN concluded that, at most, the Project would cause the percentage of heavy vehicles to increase by 0.75 to 1.5% during peak periods. Halton Municipalities argued that Project traffic could cause considerable delays at key intersections, particularly at Britannia Road and Trafalgar Road, and would impact sensitive residential and institutional land uses. Other participants were concerned about traffic on Tremaine Road and effects on road safety, particularly for cyclists and at roundabouts.

The Panel observed that a maximum of 800 trucks entering and exiting the Project per day is only a small percentage of the total number of vehicles currently operating on Milton roads (several thousand vehicles per hour). The Panel recommended that if the Project starts operating before the widening of Britannia Road has been completed, CN should reduce the number of trucks during peak traffic hours.

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Effects on Passenger, Commuter and Freight Rail Services

CN noted that there are no passenger train movements along the portion of the Halton Subdivision where the Project would be located. While the Project would add two new trains per day to the Brampton-Georgetown corridor, this increase falls within the expected variability of existing train traffic (25-30 trains/day). The Panel concluded that the Project would not have an adverse impact on passenger, commuter or freight rail services.

Cultural Heritage

CN stated that heritage properties within the Project Development Area would be vacated. The Project would remove one 19th century heritage building, a shed. Several cultural heritage properties could be vulnerable to vibration effects during construction. CN would protect vacant properties from weather and vandalism by boarding up windows and doors, and inspecting them regularly, until an adaptive reuse has been identified. Both Ontario Ministry of Tourism, Culture and Sport, and Halton Municipalities spoke of the risk of demolition by neglect. The Panel was satisfied with the proposed mitigation to address both the removal of the shed and the risk of vibration effects during construction, and made additional recommendations to determine the future for the vacated buildings.

Archaeology

CN carried out the four-stage archaeological assessment required by Ontario Ministry of Tourism, Culture and Sport, and conducted controlled salvage excavations at ten Aboriginal sites and three 19th century Euro-Canadian sites. Three Indigenous communities participated in the investigations. The Huron-Wendat Nation explained that their burial sites are typically ossuaries, of great spiritual and cultural value, and indicated that more than 2,000 Huron-Wendat Nation archaeological and burial sites had been destroyed by development in southern Ontario, without their knowledge or consent. The Mississaugas of the Credit indicated CN had collaborated with them to ensure that archaeological resources had been dealt with respectfully. They stated that many sites had been irretrievably lost because of past developments. The Six Nations of the Grand River stated that they are actively involved in archaeological monitoring throughout their area. The Panel recognizes that excavation, however respectful, represents a loss for Indigenous groups. However, the Panel believes that CN has worked diligently to build relationships with respect to this Project. The Panel recommended that any ossuary discovered remain permanently undisturbed unless the Huron-Wendat Nation agrees to an alternative, and that CN consult with Indigenous groups about mitigation.

Aboriginal and Treaty Rights and Current Use of Lands by Indigenous Communities

The Huron-Wendat Nation, the Mississaugas of the Credit First Nation and the Six Nations of the Grand River all presented information regarding their history, rights and treaties. The Huron-Wendat indicated that their interest was primarily related to their archaeological sites and protection of their ossuaries. The Mississaugas of the Credit stressed the importance of wetlands at the headwaters of Bronte Creek and Sixteen Mile Creek, where their members harvest plants and animals for food, medicinal and cultural purposes. The Six Nations of the Grand River want to be involved with air quality monitoring. At the hearing CN responded in turn to each Indigenous group, and made commitments with respect to archaeological monitoring, and employment and contracting opportunities. The Panel has made recommendations in the Report to mitigate adverse environmental effects on surface water, air quality and habitat connectivity, and concludes that the Project would not affect the use of lands and resources

for traditional purposes. The Panel recommends that CN provide opportunities to strengthen the land base, the economies and cultural capacity of the affected Indigenous groups.

Accidents and Malfunctions

CN stated that Project features that would reduce both the probability and severity of environmental effects resulting from accidents include low train speeds, low volumes of dangerous goods, shut-off valves on the stormwater management system, and CN's network-wide safety culture. CN considered that the effects of a fire on air quality would be the main risk to human health, but the risk would be low because of the small volumes of combustible material on site. Transport Canada reported that intermodal terminals in Canada have an excellent safety record. Halton Municipalities suggested that numerous injuries and fatalities could be expected over the life of the Project, but CN clarified that Halton Municipalities had made those predictions based on data from all railway operations, not intermodal terminals. The Panel concluded that the risk of a serious accident, including a major derailment, was low and the environmental effects could be adequately mitigated through design and prompt and effective emergency response. The Panel recommended that CN regularly update emergency response plans; collaborate with local authorities; and work with the Community Liaison Group to address issues of concern to the community.

Effects of the Environment on the Project

CN considered how the Project could be affected by natural hazards such as extreme winds, severe precipitation, ice storms, tornadoes, lightning, and climate change. CN's mitigation includes addressing extreme conditions through design, storm warning systems, and safe working procedures. CN said that they had designed the proposed stormwater management system based on a reasonable worst case climate change scenario. Some participants stated that CN's stormwater management system would not have sufficient capacity to store and convey the Regional Storm in a changing climate. The Panel made recommendations regarding flood retention capability, and an emergency response plan to safeguard and restore Project infrastructure in the event of an extreme weather event.

Environmental Management

CN proposed monitoring most Project effects during construction and for a short period of operations to confirm the effectiveness of mitigation. CN also committed to prepare environmental management plans and establish a Community Liaison Group to address issues of concern to the community. Participants raised concerns about the lack of detail on monitoring, monitoring duration during operations (since the Project would not be operating at maximum capacity for a number of years), and the need to identify specific indicators to trigger corrective action. The Panel made recommendations addressing an overall environmental management strategy, adaptive management, a Community Liaison Group, a formal agreement between CN and Conservation Halton, and enforcement of mitigation measures.

Need for the Project

The *Canadian Environmental Assessment Act, 2012* did not require the Panel to address the need for the Project as one of the specific factors to be considered in its assessment. Nevertheless, the Panel heard a substantial volume of information on the need for the Project, which is summarized within the report. The Greater Toronto and Hamilton Area has been experiencing rapid growth and increased demand for

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household goods, which is expected to double by 2040. Customers, such as grocery stores and retailers, are demanding quicker container turnaround time for goods delivery, which require a more flexible, efficient and reliable supply chain. Congestion at intermodal terminals will cause delays and inefficiencies all along the supply chain and slow economic growth. This view was shared by many business presenters. The Panel agreed there is a need for additional intermodal facility capacity in the Greater Toronto and Hamilton Area.

Ultimate Capacity

CN indicated the Project would handle approximately 450,000 containers per year at full operation for the foreseeable future, and that if they increased this throughput, efficiency and customer satisfaction would diminish. Halton Municipalities suggested that the Project could be expanded to handle up to a million containers a year, with increased environmental effects. The Panel found CN's predicted container throughput was reasonable and based its assessment and conclusions on the Project as proposed. However, the Panel has made additional recommendations that would limit air emissions and changes to water quality and quantity, even if capacity were to expand.