



SUBMISSION TO ENVISION DURHAM

Comments on Draft Official Plan

April 3, 2023

Introduction

In March the United Nations warned yet again that we are in an urgent climate crisis that demands rapid and sweeping changes both in the next seven years and through the following twenty years.¹ This is virtually the same time horizon as is covered by the Durham Official Plan.

However, in spite of the declaration of a climate emergency by Durham Region Council, the draft Regional Official Plan is, in key respects, a plan to continue “business as usual” through the years up to 2051.

This business-as-usual approach is characterized by the continuing conversion of precious farmland to low- and medium-density suburban development, and the continuing reliance on high-energy transportation options to move between geographically dispersed activity centres. A business-as-usual approach will make it difficult or impossible for Durham Region to meet its expressed climate mitigation goals, while simultaneously making Durham communities more vulnerable to the damaging impacts of climate destabilization as the crisis becomes increasingly severe.

This is not to say there are no good ideas in the draft Official Plan. There are many good ideas, reflecting in part the very progressive approach taken by Durham Region planning staff and the public consultation process in 2021 and early 2022. However, these good ideas are undercut by other policies enacted by Durham Region, particularly the substantial additions to urban settlement areas reflected in the current draft Official Plan.

In this response to the Draft Regional Official Plan (hereinafter, “the Plan”²), we will discuss some of the laudable goals set out throughout the Plan. We will also point out why, in its current form, the Plan includes provisions that will effectively make the realization of its stated goals unlikely if not impossible.

The Plan sets out this vision for Durham Region in 2051:

“Durham will flourish as an inspiring, welcoming, healthy, inclusive and walkable community. Durham’s downtowns will grow and thrive. New transit stations will be the

¹ The IPCC Synthesis Report, summarizing the consensus of climate scientists, says with “high confidence” that “Continued greenhouse gas emissions will lead to increasing global warming, with the best estimate of reaching 1.5°C in the near term in considered scenarios and modelled pathways. Every increment of global warming will intensify multiple and concurrent hazards.” The report adds, “*Deep, rapid, and sustained reductions* in greenhouse gas emissions would lead to a discernible slowdown in global warming within around two decades, and also to discernible changes in atmospheric composition within a few years.” (Emphasis added)

² Draft Official Plan, February 2023 (<https://www.durham.ca/en/doing-business/resources/Documents/PlanningandDevelopment/Envision-Durham/draft-new-Durham-ROP-online.pdf>)

focus for vibrant pedestrian-oriented places. Durham's industries, educational institutions and agricultural sector will continue to lead through innovation.

The effects of human-caused climate change are being felt around the world, and the pace of change is accelerating. Durham will make great strides to improve climate resilience and take action toward a cleaner and greener environment. Key environmental features will be protected, and our tree canopy will grow. The Oak Ridges Moraine, the Rouge National Urban Park, shorelines, rivers and creeks will be protected, connected and accessible for the enjoyment of all residents.

In 2051, Durham's reputation as a complete, healthy, sustainable, diverse and welcoming community of communities will be known worldwide as the place to live, learn and thrive.”³

This is indeed the kind of vision we should do our best to make a reality for the benefit of the next generation. For this vision to become a reality, we need policies that support these goals, not policies that conflict with the goals.

It is our belief that if this Plan is made official in its current form and is enacted over the next 28 years, Durham Region is likely to be *less* climate resilient; most residents are not likely to live in walkable neighbourhoods; transit services will struggle to provide adequately frequent service to most areas and, therefore, public transit will not be the chosen transportation mode for most residents; there will be less biodiversity, and waterways and shorelines will be degraded; Durham Region will have less prime farmland and, therefore, will be even more dependent on imported, insecure food supplies; and Durham Region will be severely challenged fiscally to service, repair, and maintain scattered infrastructure. Moreover, the goal of increasing affordable housing options within the Region will largely be symbolic in the face of unprecedented Provincial directives, combined with pressure from private interests that could subvert strong Regional policy plans.

The critical issue of land allocation

For the Plan to have a realistic chance of achieving its goals, it is of paramount importance that the right amounts of land, in the right places, be devoted to residential and job centres. This issue receives little explicit discussion in the Plan, but a land allocation framework is outlined in the Maps for the Plan. The large amount of greenfield land to be added to urban boundaries is shown on Map 1, and on Maps 3a-3e.

This approval to urbanize or sub-urbanize more of Durham Region was made by Regional Council at the request of the Building Industry and Land Development (BILD) Association⁴ and the Northeast Pickering Landowners Group. The decision was made in spite of objections by Durham Region's own planning staff, who provided detailed evidence showing that the large allocation of additional greenfield land was a) not needed to meet the Region's population growth targets up to 2051; b) would result in a less dense residential development pattern than is currently being built; c) would not represent sufficient density to make efficient and effective public transit feasible; d) would lead to continued or increased use of high-energy-consumption modes of transportation, thereby making the Region's climate mitigation goals more difficult to attain; e) would result in reduced climate resilience for areas downstream of large new

³ Draft Official Plan, page 7 (<https://www.durham.ca/en/doing-business/resources/Documents/PlanningandDevelopment/Envision-Durham/draft-new-Durham-ROP-online.pdf>)

⁴ Commissioner's Report #2022-P-11, page 26-43 (<https://calendar.durham.ca/meetings/Detail/2022-05-25-0930-Regional-Council-Meeting/e2dfbaaf-1233-42e2-b4ba-ae9f014f8b10>)

development areas in severe rainfall events; e) and would put a fiscal strain on future municipal budgets due to the burden of maintaining more far-flung infrastructure.

The scenario known as the BILD Scenario 2a, which provides for the conversion of approximately 9,000 acres of greenfield to residential and employment lands, was chosen by Durham Region councillors even though they had been told this scenario was not compatible with the goals of the Envision Durham process. This scenario is now built into the draft Official Plan, even though it remains incompatible with most of the goals expressed in the Plan.

Since the BILD scenario was chosen by Council, there has been an assignment of the 9,000 acres of urban boundary expansions to specific locations within Durham. As shown on the Maps for this Plan, the largest such expansion area (about 2,900 acres) is in Northeast Pickering. This location is at a considerable distance from current urban areas, and thus will result in expensive infrastructure needed to provide arterial roads, water and sewer services, etc. Furthermore, it surrounds the headwaters of Carruthers Creek, meaning that intensive development on this large land area will add to flooding danger for the municipality of Ajax downstream.

The next largest urban boundary expansion is slated for Clarington, on the east side of Bowmanville. This is part of the Soper Creek/Bowmanville Creek watershed, and will place additional flood and contamination risks downstream, in already urbanized areas of Bowmanville, and in the extensive lakeshore marshes that are key biodiversity sites.

An important development that is happening simultaneously with consideration of this Official Plan is the potential conversion of significant areas of formerly protected Greenbelt to development land. Although this is not a Durham Region initiative (and in fact has been denounced by the Councils of Durham Region and its member municipalities), it makes no sense to finalize the Official Plan without taking account of the Greenbelt removals.

In accordance with the wishes of BILD in 2022, Durham Council (against the advice of their Planning team) determined that they would need 9,000 acres of additional urban area by 2051. Assuming for the sake of argument that this was correct, and given that since that determination, the Province has pushed through a plan to urbanize a separate 5,000 acres of Greenbelt within Durham Region, the Region cannot now, suddenly, “need” both the 9,000 acres of whitebelt land plus the 5,000 acres from the Greenbelt. The sensible thing to do would be to re-evaluate the need for whitebelt land, once it becomes clear how much Greenbelt land is actually going to be converted to subdivisions.

Yet this Official Plan simply ignores the changes in Provincial regulation of the Greenbelt. The unfortunate result is that housing developments are likely to be even more scattered, more expensive to service, and more environmentally damaging than the Region’s Envision Durham staff warned last May.

Density and intensification

Compact, mixed-use neighbourhoods – “complete communities” – are key to meeting many of goals for a healthier, prosperous Durham Region. Complete communities make it possible for many more people to walk or bike to schools, jobs, services, and stores within their local areas – which in turn leads to healthier residents due to physical activity as a normal part of everyday life. Complete communities provide an adequate population base within walking distance of transit stops, thus making it possible to provide frequent, cost-effective transit services within and between communities. This in turn reduces the need for residents to own or regularly use cars, which in turn reduces or eliminates the pressure to increase the number of lane-kilometres of roadway. Complete communities reduce the pressure to convert more green space to pavement

or subdivisions, thereby promoting the retention of a strong agricultural sector, in close proximity to potential local markets. These factors, taken together, can also have a significant impact on the energy needs of Durham, making it feasible to decrease carbon emissions on a sustained basis.

Many of the ideals in the above paragraph are also expressed in the Official Plan. But the land allocation built into the Plan makes the achievement of these ideals more difficult and potentially unachievable.

An important objective intended to support the Plan’s goals is stated as follows:

“Promote residential growth in the region by prioritizing intensification of existing residential areas.”⁵

Accommodating population growth through infill development of existing residential areas would indeed support the growth of complete communities, active transportation, efficient public transit, climate mitigation and resilience, protection of farmland and biodiversity, and strengthened municipal finances.

As emphasized by planning staff and by public input during the Envision Durham process, the Region should accommodate at least 50% of anticipated population growth through intensifying existing residential areas. Furthermore, new greenfield developments – Designated Greenfield Areas (DGAs) – should have densities of at least 60 persons or jobs per hectare (60 PJ/Ha).

In a detailed analysis of the BILD Scenario, Commissioner of Planning, Brian Bridgeman wrote that current development applications are exceeding the target of 60 pj/ha. At the same time, he determined, “The actual density at 2051 under the BILD Scenario would be *much lower* than 57 people and jobs per hectare, and at the low end of the 2051 DGA densities in the Greater Toronto and Hamilton Area.”⁶ (italics added)

In other words, rather than increasing the density of future developments, the BILD Scenario implies a *decrease* in density.

Mr. Bridgeman also found that the BILD Scenario “plans for surplus land by assuming more than half of the planned high-density sites in the DGA will remain vacant/unbuilt by 2051, while reassigning the quantity of units and additional land need elsewhere and in lower density forms.”⁷

The effect of acceding to BILD’s request, through authorizing substantial Settlement Area Boundary Expansions (SABEs), has negative consequences for many sections of the Official Plan. As Mr. Bridgeman warned Councillors last May,

“The BILD Scenario assumes future communities will be: spread further afield, less compact, where proximity to transit and cycling facilities are likely to be more remote and less economical.”⁸

The negative consequences include:

- “The BILD Scenario moves further away from achieving **net-zero**.”

⁵ Draft Official Plan, page 21 (<https://www.durham.ca/en/doing-business/resources/Documents/PlanningandDevelopment/Envision-Durham/draft-new-Durham-ROP-online.pdf>)

⁶ Commissioner’s Report #2022-P-11, May 24, 2022, page 32 (<https://calendar.durham.ca/meetings/Detail/2022-05-25-0930-Regional-Council-Meeting/e2dfbaaf-1233-42e2-b4ba-ae9f014f8b10>)

⁷ Commissioner’s Report #2022-P-11, May 24, 2022, page 27 (<https://calendar.durham.ca/meetings/Detail/2022-05-25-0930-Regional-Council-Meeting/e2dfbaaf-1233-42e2-b4ba-ae9f014f8b10>)

⁸ Commissioner’s Report #2022-P-11, May 24, 2022, page 40 (<https://calendar.durham.ca/meetings/Detail/2022-05-25-0930-Regional-Council-Meeting/e2dfbaaf-1233-42e2-b4ba-ae9f014f8b10>)

- “detracts from the achievement of Regional **sustainability** policies and obligations”⁹
- “The BILD Scenario would place **more farmland** under pressure for urbanization than is necessary ...”⁹
- “deemphasizes Regional priorities that focus growth on existing communities, where services and **infrastructure** are either already in place or can be provided more efficiently”⁹

Sustainability and the move to net-zero greenhouse gas (GHG) emissions

In January 2020, Durham Region approved the Durham Region Climate Change Emergency Declaration and committed:

“THAT environmental sustainability and climate change be recognized as a strategic priority in the Regional Strategic Plan, in the updated Regional Official Plan;”⁹

Subsequent to the declaration, Regional Council adopted an updated GHG **target of net zero by 2050**. This target is in line with the warnings by the IPCC that all countries need to reduce GHG emissions to net-zero by 2050.

However, the large allocations of greenfield land for urban boundary expansions does not support the climate emergency declaration goals. Instead, the SABEs make Durham Region’s climate goals less likely to be achieved.

As Mr. Bridgeman advised Councillors last May,

“The lifespan of municipal infrastructure such as roads, sanitary sewer and water systems can dictate energy consumption patterns and greenhouse gas (GHG) emissions for generations. The link between density and GHG emissions is well established.”¹⁰

“Lower density built form results in higher GHG emissions because people drive more, have larger dwellings to heat, and land which would otherwise be sequestering carbon (e.g., farmland and rural areas) is converted to urban development.”¹⁰

In addition, it seems illogical to proceed with goals identified such as: “prepare built and natural environments to be low carbon and climate-resilient.”¹¹, without metrics to guide the goal. To sincerely address climate change and reach the Region’s goal of net-zero by 2050, Durham Region must wholeheartedly prioritize setting meaningful targets, while simultaneously protecting existing carbon sinks in our natural assets inventory. Taking vast natural areas into the new urban growth zones has the impact of removing existing carbon sequestration functions and future opportunities through rehabilitation and regenerative agriculture, while simultaneously pushing new residents further away from transit-supported infrastructure and car-free lifestyle opportunities.

While it may not officially be within the scope of this project, it undermines the good work of this policy guide to leave targeted and measurable reductions in greenhouse gas emissions out of the strategic goal setting. A common monitoring and evaluation framework is a carbon budget. The budget would have a region-wide figure, broken into equitable municipal chunks. The

⁹ Durham Region Climate Change Emergency Declaration, January 29, 2020, page 2 (<https://www.durham.ca/en/living-here/resources/Documents/EnvironmentalStability/Regional-Council---Emergency-Declaration.pdf>)

¹⁰ Commissioner’s Report #2022-P-11, May 24, 2022, page 38 (<https://calendar.durham.ca/meetings/Detail/2022-05-25-0930-Regional-Council-Meeting/e2dfbaaf-1233-42e2-b4ba-ae9f014f8b10>)

¹¹ Envision Durham draft Official Plan, page 20 (<https://www.durham.ca/en/doing-business/resources/Documents/PlanningandDevelopment/Envision-Durham/draft-new-Durham-ROP-online.pdf>)

Region and its municipalities would then use the budget as a guide to sustainable decision-making and as a point of reference for progress towards net-zero goals.

A second wise policy direction would be for staff reports to reference “Relationship to (or Impact on) Carbon Budget” when considering applications, projects, and initiatives to help elected leaders consider the impact on climate change goals with each vote. This overall monitoring framework would be made publicly available and used to guide government, commercial, and personal activities. The level of granularity suggested here would be seen to be an antidote to the despair many in our community currently experience based on a *perceived* lack of action by governments and elected leaders.

It is not inconceivable for more specific targets and metrics to be included in this Official Plan. In fact, the document contains targets related to population and employment, intensification and density, affordable housing, waste diversion, woodland and canopy cover, etc. The net-zero targets are non-specific and this policy, for example, is inadequate:

“3.2.4 *Encourage* area municipalities to: a) develop and implement community-wide GHG reduction and monitoring programs, policies and standards in collaboration with the Region, energy utilities and other key stakeholders;”¹²

When it matters, you measure it. Why then are we not measuring and setting greenhouse gas emission reduction targets more precisely in *this* document?

Infrastructure and financing considerations

The Provincial Growth Plan directs municipalities to undertake land-use planning and infrastructure planning in an integrated and coordinated manner, and also to make effective use of infrastructure. This is supported in principle by the Durham Region Draft Official plan, in 5.1.8.¹³

However, if development proceeds in scattered areas, at lower densities than initially planned, and over a much longer time frame than promised, then the Region will be maintaining expensive (and possibly oversized) infrastructure for many years even with relatively small numbers of new homes in each of the areas. This has already been happening due to the slow pace of the Seaton development. The problem will be compounded if developments also begin in the large area of municipal boundary expansion surrounding the Carruthers Creek headwaters, and possibly at the same time in the Greenbelt removal parcel (Duffins Rouge Agricultural Preserve) adjacent to Rouge National Urban Park. Sufficient density is a significant factor in achieving convenient, frequent, reliable transit networks which are fundamental to providing transportation choices in communities and reducing car dependency.¹⁴

The Seaton development is already years behind schedule, and through the Envision Durham Land Needs Assessment process, the projected density of Seaton was reduced from 89 P&J/ha to 83 P&J/h.¹⁵

¹² Envision Durham draft Official Plan, page 31 (<https://www.durham.ca/en/doing-business/resources/Documents/PlanningandDevelopment/Envision-Durham/draft-new-Durham-ROP-online.pdf>)

¹³ Envision Durham draft Official Plan, page 79 (<https://www.durham.ca/en/doing-business/resources/Documents/PlanningandDevelopment/Envision-Durham/draft-new-Durham-ROP-online.pdf>)

¹⁴ Ontario Ministry of Transport, Transit-Supportive Guidelines, page 24. (file:///Users/apple/Downloads/transit-supportive-guidelines%20EN%20(1).pdf)

¹⁵ Alternative Land Need Scenarios Assessment Summary Report (<https://www.durham.ca/en/doing-business/resources/Documents/PlanningandDevelopment/Envision-Durham/Land-Need-Summary-Final.pdf>)

The draft Region Official Plan provides no clear direction on phasing of developments. With large areas of whitebelt (plus former Greenbelt) being opened for development, we will potentially see projects beginning in widely separated areas within north Pickering and elsewhere in Durham. Though construction in expansion areas could begin soon, it is possible or likely that some developments will still not be completed as of 2051. Recall Mr. Bridgeman’s statement that the BILD Scenario “plans for surplus land by assuming more than half of the planned high-density sites in the DGA will remain vacant/unbuilt by 2051.”¹⁶

Given the large boundary expansions and the lack of an effective phasing plan, it will be difficult or impossible to achieve the Growth Plan objective to “undertake land-use planning and infrastructure planning in an integrated and coordinated manner, and also to make effective use of infrastructure.”

Impact of sprawl on public health

Urban sprawl has negative consequences on our physical health and wellbeing. As far back as 2005, the Environmental Health Committee, Ontario College of Family Physicians in their report on “Public Health and Urban Sprawl in Ontario, A Review of the Pertinent Literature”¹⁷, warned that studies on the impact of the built environment on health indicate that “*serious public health problems will continue to escalate unless decisive and immediate action is taken to control urban sprawl and preserve sufficient green space, improve air quality, and protect water sources.*”

With urban sprawl comes the loss of agricultural land, clean watersheds, forest cover, wetlands, natural habitats, wildlife, and open space that are fundamental to meeting our physical and mental health needs.

With a higher dependence on cars, there is more air and water pollution, with higher emissions being released into the atmosphere and increased contaminated runoff flowing into rivers and lakes. This results in many harmful effects on our health, including higher rates of cancer, obesity, high blood pressure, hypertension and chronic diseases, asthma, and bronchitis.

The extensive traffic congestion common to urban sprawl also negatively impacts our mental health through stress, road rage, and anxiety, in addition to an increase in collision fatalities among motorists, pedestrians, and cyclists.

Transportation needs and systems

It is often said that land-use planning and transportation planning are two sides of the same coin. Decisions taken in one field have important consequences in the other. In the case of the Official Plan, the current pattern and the future framework of land-use planning has obvious implications for transportation.

Compact land-use patterns encourage efficient modes of transportation – and the influences work both ways. The Plan alludes to this potentially positive interaction in the opening paragraphs of Chapter 9 – Connected Transportation System:

“The bond between land use and transportation includes connectivity between different modes of travel and compact and mixed land use patterns that encourage the use of sustainable modes

¹⁶ Commissioner’s Report #2022-P-11, May 24, 2022, page 27 (<https://calendar.durham.ca/meetings/Detail/2022-05-25-0930-Regional-Council-Meeting/e2dfbaaf-1233-42e2-b4ba-ae9f014f8b10>)

¹⁷ Report on Public Health and Urban Sprawl in Ontario, January 2005 (<https://www.jtc.sala.ubc.ca/reports/Urban%20Sprawl-Jan-0511.pdf>)

such as walking, cycling and public transit. A Connected Transportation System helps to reduce the number of vehicle trips in the system and carbon emissions.”¹⁸

But what if development areas are typically single-use as in much of Durham Region today, such that residential, commercial, and employment areas are geographically separated and are connected primarily by arterial roadways? And what if new developments are “spread further afield” and “less compact,” as described in Mr. Bridgeman’s May 2022 memo¹⁹?

In that case, it will be very difficult to provide efficient and frequent public transit between most residential areas and most employment or commercial areas; the result will be that most residents will continue to want or need to travel mostly by car. It will also be much more difficult for residents to ride bicycles or walk for a significant part of their daily travels, again leading to continued or increased car dependency.

In fact, in spite of some positive policies which will be discussed further below, Chapter 9 makes clear that the auto-dominant mode of transportation in Durham will be strengthened under the Official Plan.

Consider this policy from page 199 of the Plan²⁰:

“8.4.9 Support improvements to the provincial freeway and highway network by *encouraging the accelerated implementation* of:

- a) *the expansion of Highway 401*, including the construction of new or improved interchanges;
- b) the extension of Highway 404 and the related *widenings of Highways 12 and 48*;
- c) *improvements to Highways 7, 7A, 7/12, 35 and 35/115; ...*” (italics added)

Clearly, infrastructure projects such as expanding the 401, building new interchanges, or widening other highways, will have costs that will dwarf anything spent to date or proposed for active transportation or for nearly all public transit improvements.

While many of the above-cited roadway projects would be Provincial undertakings, they would also entail substantial expansion of the vehicle capacities of the connecting arterial roads. Much of the traffic in Durham Region uses a combination of expressway, highway, and arterial routes, and an increase in capacity of the expressways would demand a commensurate capacity increase in arterials.

To be consistent with the Goals of moving toward net-zero emissions, complete communities, better transit, and promotion of active transportation, the Region should advocate that the Province *not widen the 401 or other provincial routes* in Durham, and that the Province devote equivalent funding to rapid improvement of public transit and active transportation services and infrastructure instead.

Councillors should recognize that even a small percentage reduction in vehicle traffic allows for much smoother flow of traffic on existing roadways. Improvements to public transit that result in a modest number of people switching modes, from car to transit, would help Durham Region avoid the need for very costly expansions of roadways.

¹⁸ Draft Official Plan, February 2023, page 183 (<https://www.durham.ca/en/doing-business/resources/Documents/PlanningandDevelopment/Envision-Durham/draft-new-Durham-ROP-online.pdf>)

¹⁹ Commissioner’s Report #2022-P-11, May 24, 2022, page 40 (<https://calendar.durham.ca/meetings/Detail/2022-05-25-0930-Regional-Council-Meeting/e2dfbaaf-1233-42e2-b4ba-ae9f014f8b10>)

²⁰ Draft Official Plan, February 2023, page 199 (<https://www.durham.ca/en/doing-business/resources/Documents/PlanningandDevelopment/Envision-Durham/draft-new-Durham-ROP-online.pdf>)

However, we recognize that getting a significant number of people to switch transportation modes away from private vehicles, will remain a difficult goal if these people have to travel between distant, dispersed, low-density development areas. That is the major hurdle that the BILD Scenario, with its Settlement Area Boundary Expansions, builds into the framework of the current Draft Official Plan.

Public transit network

There are many positive Goals, Objectives, and Policies in the Plan in relation to improved public transit.

From an individual user's access point, the following Objective is important:

“8.1.5 Create a network of Commuter Stations, terminals and bus stops within Urban Areas that allow for 80% of residents and workers to be within a reasonable walking distance (500 metres, representing a five-minute walk) from the nearest one.”²¹

A dense network of transit stops is a necessary, but not sufficient, condition for widespread modal change between private car use and public transit use. In addition, the transit schedules need to provide for service frequencies in the 5 to 15-minute range. Less frequent services make a missed connection a big problem for a traveller, which can be a cascading problem for all those trips that rely on at least one connection.

For example, a traveller misses a bus, or the bus is late, so that the traveller misses the next connection as well, and if the service is every 30 minutes or less, the traveller may well be an hour late in arriving at the destination. Such problems and potential problems go beyond mere inconvenience, leading most daily travellers to avoid infrequent transit options unless they have no other transportation choice.

Figure 17 – Transit Priority Network Characteristics²² shows “Typical Peak Frequency” for transit services ranging from Commuter Rail to Bus Rapid Transit to Local Buses. It should be noted that while some of the services foreseen will run every 5 to 10-minutes, others would run only every 30 minutes or less, even at peak times. This would mean that many or most services would not be frequent enough to make them truly convenient, attractive options, and thus would not induce many travellers to switch away from routine car travel.

More priority and funding share given to a full network of frequent transit services (and less to the expansion of automobile infrastructure) will be needed to achieve a rapid and substantial modal share shift. Even then, of course, modal shift will be difficult to achieve in dispersed, low-density neighbourhoods.

It is worth pointing out that while the gradual adoption of electric vehicles will change the picture somewhat, a modal shift away from private vehicles remains a very important goal for several reasons.

First, while electric vehicles eliminate tailpipe emissions, they do not reduce some of the other significant pollutions from car travel, such as highway salt runoff, tire particles and brake dust.

²¹ Draft Official Plan, February 2023, page 187 (<https://www.durham.ca/en/doing-business/resources/Documents/PlanningandDevelopment/Envision-Durham/draft-new-Durham-ROP-online.pdf>)

²² Draft Official Plan, February 2023, page 186 (<https://www.durham.ca/en/doing-business/resources/Documents/PlanningandDevelopment/Envision-Durham/draft-new-Durham-ROP-online.pdf>)

These pollutants, which can blow into the air and wash into waterways through ditches or storm sewers, are now recognized as damaging to many life forms including species already at stress in our creeks, lakes and marshes.²³

Second, it will be many years before the automobile fleet in Durham Region is mostly or all electric. Even if Canada meets its current official target of ending the sale of combustion-engine cars by 2035, a significant number of combustion cars will remain on the roads for years thereafter. We need to be drastically cutting carbon emissions long before 2040, so it is important that vehicle miles drop significantly during the remainder of the 2020s.

Third, electric vehicles result in similar ongoing damages to road infrastructure as combustion cars. (Or more, since electric vehicles are typically heavier.) This will result in ongoing high costs of roadway maintenance and reconstruction.

Fourth, electric vehicles are as inefficient in the use of space as combustion vehicles. Thus if most people keep driving, Durham Region will need to keep expanding paved areas, both for travel lanes and for parking.

Finally, electric vehicles are just as dangerous to vulnerable road users as combustion cars (or more, since electric vehicles tend to be heavier). Roads filled with fast-moving electric vehicles will remain dangerous places for vulnerable road users, will make it difficult or impossible for Durham to meet its Vision Zero goals, and will make active transportation options unattractive to most people concerned about their safety.

Active transportation

The Plan outlines the intention to promote Active Transportation through Objectives including:

- i. Promote the importance of active transportation in achieving healthy and complete communities that support quality of life and help municipalities maximize their investments in infrastructure. (page 188 of the Plan)
- ii. Support a reduced reliance on automobiles, and single-occupant vehicles in particular, and support access to transit through active transportation modes for work, school and other utilitarian trips. (page 189 of the Plan)

In the section on Transportation Demand Management, the Plan lists an objective to “Support investments that advance active transportation, transit, goods movement and overall safety over those that primarily benefit single-occupant vehicle capacity.”²⁴

These are all important Objectives. However, it is not clear that advocating for the widening of Highway 401 would advance the stated goals more than it would advance single-occupant vehicle use. This is especially significant in that widening the 401 would require far greater public investment than most other transportation infrastructure projects.

Furthermore, it is not clear the Policies in the Official Plan are adequate to promote Active Transportation and to encourage significant travel mode shifts.

²³ LAKE SIMCOE UNDER PRESSURE IN 2021: key stressors and solutions (<https://rescuelakesimcoe.org/wp-content/uploads/2021/03/Under-Pressure-Report-2021.pdf>)

²⁴ Draft Official Plan, February 2023, page 192 (<https://www.durham.ca/en/doing-business/resources/Documents/PlanningandDevelopment/Envision-Durham/draft-new-Durham-ROP-online.pdf>)

For Active Transportation to be a realistic replacement for many daily car uses, residents need to have safe and convenient routes all the way from the doors of their homes to the doors of their schools, workplaces, shopping destinations, or other common services. In that sense every address, be it residential or commercial, must be located along an “active transportation network.” Put another way, active transportation routes need to go everywhere people go. If active transportation routes don’t go everywhere – if active transportation routes only reach partway to the destinations residents need to access – they will not be considered a realistic or safe choice for daily transport by most residents.

This is the ideal (and an ideal that is a reality, in 2023, in some regions, cities and countries). The Policies in the Plan, particularly as shown in Map 3d, do not appear to be sufficient to achieve the Objectives, certainly not in the near term and perhaps not even by 2051.

Map 3d – Active Transportation Network, shows only one type of active transportation provision, which is termed the “Priority Cycling Network.” It is clear at a glance that most roads and streets, and therefore most specific destinations, are not part of the Priority Cycling Network.

Equally concerning, many major urban roads with a heavy concentration of stores and services are not part of the Priority Cycling Network. (To cite one example, King Street through the built-up areas in Clarington is not part of the illustrated Cycling Network.) This means that a large proportion of the most frequently accessed destinations are not safely and conveniently accessible via cycling.

These critical shortcomings could be remedied in the Plan by adopting objectives and policies now being put into practice in some leading jurisdictions. Such policies provide that:

- all routes that typically have vehicle traffic traveling faster than 30 km/hr must have safe, separated walking/cycling lanes adjacent, such that addresses along these routes are safely accessible via active transportation; and,
- other routes, including most streets within predominantly residential neighbourhoods, must have traffic calming measures sufficient to keep vehicle speeds below 30 km/hr.

Discussion of cycling infrastructure has often been hampered by a clear set of guidelines and nomenclature for cycling routes. The journal *Health Promotion and Chronic Disease Prevention* in Canada addressed this in a 2020 article entitled “The Canadian Bikeway Comfort and Safety (Can-BICS) Classification System: A Common Naming Convention for Cycling Infrastructure.”²⁵ The authors summarized three tiers in the common types of bicycle infrastructure:

High-comfort bikeways. These *low-stress* cycling facilities are *comfortable for most people*. Route types include cycle tracks alongside busy roads, local street bikeways and off-road bike paths.

Medium-comfort bikeways. These *low-to-medium stress* cycling facilities are *considered comfortable by some people*. The off-road infrastructure multi-use path fits within this category. Multi-use paths are shared with pedestrians and other active modes and can be located along a road or in an independent corridor.

Low-comfort bikeways. These *cycling facilities are high stress and comfortable for few people*. The *infrastructure type within this category is a painted bike lane*, where people are cycling in a painted lane along busy roadways.

²⁵ The Canadian Bikeway Comfort and Safety metrics (Can-BICS): National measures of the bicycling environment for use in research and policy (<https://www150.statcan.gc.ca/n1/pub/82-003-x/2022010/article/00001-eng.htm>)

It should be clear that only a widespread implementation of low-stress bicycle infrastructure would lead to a significant number of new cyclists taking up cycling for routine transportation.

Rapid implementation of effective active transportation objectives would meet Durham's stated goals of increasing healthy physical activity in daily life for many residents; greatly improving road safety and thus realistically advancing Vision Zero goals; reducing private vehicle use, and therefore the public expenses incurred in expanding and maintaining roadways; reducing the carbon emissions of Durham Region; and reducing the pressure to pave over more green space.

As it stands, the Plan falls short of effective promotion of active transportation as a daily way of life and as a realistic replacement for car travel for a significant share of trips. It does make provisions for the expansion of what is becoming an excellent and attractive recreational, off-road trail network. These off-road trails are very positive contributions to quality of life in Durham and should be further developed – but they will not replace car travel for any significant number of residents or trips.

Aggregate resources and extraction

As noted in the Plan, “*Durham contains significant aggregate resources, with most of these resources concentrated in Uxbridge, Scugog, Brock and north Clarington, coincident with the Oak Ridges Moraine.*” The Plan sets out the following objectives:

- i. Support opportunities for the extraction of mineral aggregate resources for local, regional and provincial needs.
- ii. Encourage the protection of significant environmental features and minimizes financial and social impacts on residents, the area municipalities and the Region through mineral aggregate resource extraction.
- iii. Support the protection of high potential aggregate resource areas from incompatible land uses.²⁶

There is a fundamental conflict between aggregate extraction on one hand, and the preservation of agricultural lands, water resources, and wildlife habitat on the other. Aggregate extraction in pits and quarries generally exploits productive agricultural lands – particularly in southern Ontario – moraines, and the Greenbelt. Significant wetlands, with the wildlife habitat they provide, are often found near pits and quarries, and their critical water purification function can be jeopardized by the heavy industrial operations intrinsic to aggregate extraction.

Moraines play a critical role in Durham's watersheds by filtering and purifying water that infiltrates aquifers. Aggregate extraction below the water table exposes groundwater to surface contamination. Climate change is exacerbating the sensitivity of our water resources. Those aquifers supply potable water to wells, municipal water systems, and ultimately the rivers that feed Lake Ontario.

There are competing priorities between the need for aggregate and food/water security. With population growth, preserving local food production is under threat by the loss of an estimated 319 acres of farmland per day²⁷ in Ontario. Similarly, potable water is an increasingly fragile resource, with summer drought conditions in southern Ontario frequently experienced.

²⁶ Draft Official Plan, February 2023, page 139 (<https://www.durham.ca/en/doing-business/resources/Documents/PlanningandDevelopment/Envision-Durham/draft-new-Durham-ROP-online.pdf>)

²⁷ Ontario Losing 319 Acres of Farmland Every Day - Ontario Farmland Trust (ontariofarmlandtrust.ca)

Aggregate extraction, on the other hand, relies entirely on management by competing private, mostly non-Canadian multinational companies. Total licensed extraction from more than 5,000 licensed sites in Ontario is about thirteen times annual consumption. The total amount of “disturbed land” (i.e., non-rehabilitated extraction sites) has continued to grow for many years. There is no Provincial supply chain management system for aggregate with the result that new sites continue to proliferate while other un-depleted sites sit idle.

It is therefore critical that Regional policy reflects these current realities in addition to other impacts of pits and quarries by actively implementing measures as follows:

- Protect Prime Agricultural Areas from conversion to aggregate extraction sites.
- Ensure water resources, including wetlands, moraines, groundwater aquifers, and surface waters are given higher priority over aggregate extraction applications.
- Protect critical groundwater aquifers by prohibiting blasting and extraction in quarries and pits below the water table.
- Protect human health and safety from operational hazards arising from blasting operations in quarries, such as flyrock, by setting a minimum safe setback between blasting sites and sensitive receptors, consistent with established best practice.

Employment strategy for Rouge National Urban Park

There is a general lack of policy directions related to employment opportunities from Rouge National Urban Park and how we can protect employment areas abutting the park for tourism-related services for visitors. There is an anticipated conflict of uses when demand for industrial-warehousing zoning clashes with the areas that require safe active transport access to Park gateways. It would be prudent for the Region in collaboration with Toronto, Markham, Stouffville, and Uxbridge to establish clear buffer zones on the outskirts of RNUP that identify policy and opportunities for employment areas that are consistent with tourism and a positive visitor experience. A thoughtful strategy for this area is fundamental to creating and maximizing jobs for Durham residents.

Agriculture and farmland access

The policy directions say all the right things, however, left out is an identification of, and a way to address, the critical need for affordable farmland for new entrant farmers. A local food system policy cannot exist without recognizing the risk of lack of access to prime farmland areas.

For Durham Region to have a truly solid agricultural systems policy, staff must reflect on the loss of rich Class 1 soil that is contemplated with the new urban expansion areas. This vast loss of agricultural assets undermines the good work by agricultural stakeholders who have informed the Region’s agrifood policy to this point. Is there a quantifiable threshold below which farming activity must not fall below in order for region-wide success to be assured?

The viability of the agricultural sector was documented and illustrated in Ontario’s Prime Agricultural Areas policy directions²⁸. It considered a holistic systems approach that wisely integrated Greenbelt farms, the rich soils of the current “whitebelt,” the farm system of Rouge National Urban Park, and the Duffins Rouge Agricultural Preserve. By expanding vast urban areas into the whitebelt lands across the fertile Region, the agricultural system has been significantly compromised and the health of farm businesses will be put at risk.

²⁸ Implementation Procedures for the Agricultural System in Ontario’s Greater Golden Horseshoe (<http://www.omafra.gov.on.ca/english/landuse/imp2019.pdf>)

Farmland south of the Oak Ridges Moraine is a rare and finite resource. The systems approach was designed to highlight for elected leaders and staff that not all fertile areas are protected in conservation plans and regional governments must be mindful of their stewardship. Durham Regional Council is choosing to prioritize housing growth over the health of the local food system and future sustainability. This is a huge risk to both Durham’s agricultural economy and environment.

Access to farmland for new entrant farmers and “agripreneurs” is not mentioned as a policy priority. A healthy agrifood strategy must acknowledge that a multitude of economic constraints are limiting new entrant farmers and new farm businesses from accessing prime farmland *near* market opportunities. It could be a strong complementary policy of Durham Region to examine tools and levers that can incentivize mid-to long-term leases for farmland stewardship. Small-scale farms can offer carbon sequestration through well-managed soil and crops that grow food (e.g., Orchards are trees that bear fruit. Planting apple trees is a means of sequestering carbon and providing an agricultural crop). Just as access to affordable housing is a priority for healthy communities, access to affordable or attainable farmland needs to be prioritized for a healthy community and a fulsome food systems strategy. This would enrich the economic and environmental health of the Region and play a fundamental role in sequestering carbon.

Farmland is not a blank slate for new homes; it is an environmental resource, an economic resource, and a cultural heritage resource. Indigenous communities called this area home because of the richness of the soils, the abundance of clean water, and the moderate climate between the Oak Ridges Moraine and Lake Ontario. Our history is based on growing nourishment and valuing the lands and people that provide it.

Policy directions related to an airport in Pickering

Refer to the submission by Land Over Landings on March 6, 2023²⁹.

Implications of developing the Duffins Rouge Agricultural Preserve (Greenbelt carveout)

Refer to the submission by Green Durham Association on March 30, 2023³⁰.

Impacts on water security from urban boundary expansions

Refer to the recommendations of the Coalition of Ontario Water Guardians related to land use conversion, watershed management, agriculture, aquatic biodiversity, excess soil and aggregate regulations, The Great Lakes, infrastructure in the Greenbelt, provincial water quality objectives, sewage, and wetlands.³¹

²⁹ Comments on Envision Durham DRAFT Official Plan March 6, 2023 (<https://landoverlandings.com/wp-content/uploads/2023/03/Durham-Region-Draft-OP-Submission-6-March-2023-FINAL.pdf>)

³⁰ Draft DROP and Urban Area Expansion in Durham, March 30, 2023 (https://e74d7ede-462b-4647-bd8c-c1fdefa8d282.usrfiles.com/ugd/e74d7e_230d339481c54e949b32c498a3482c72.pdf)

³¹ Coalition of Ontario Water Guardians: Ontario’s Water Security Must Be Better Protected (<https://act.newmode.net/action/ontario-headwaters-institute/ontario%E2%80%99s-water-security-must-be-better-protected>)

Conclusion

To accommodate growth in Durham Region, we do not need to take drastic actions that compromise our valuable farmlands, watersheds, wetlands, and natural heritage systems. These biodiverse³² lands are what will help protect us from the harming effects of climate change – our duty is to protect them *urgently*.

It is unnecessary to flood our communities with harsh, highly inefficient³³ concrete skyscrapers that can depersonalize our streetscapes and downtowns. Instead, we can reduce the amount of *new* land identified for future growth areas while encouraging attractive, age-friendly bungalows, duplexes, townhomes, and courtyard apartments (The Missing Middle)³⁴ within the existing 10,000+ acres³⁵ of vacant land *already zoned* for development in Durham Region.

As highlighted in the Climate Change Emergency Declaration, knowing we are “*on the brink of missing the opportunity to limit global warming to the levels needed... to sustain human civilization*”³⁶ we must all acknowledge that there is no margin for error in the land-use decisions we make today.

By adopting new and innovative planning tools, we can grow within our current urban boundaries. We can achieve complete communities that will improve the quality of life for Durham residents, while protecting farmland, watersheds, and natural heritage systems from development, simultaneously allowing them to provide ecosystem services to protect us – all at NO cost to the taxpayer.

Growth projections and forecasts become more difficult to predict the longer the timeline involved. Official Plans are required to be reviewed every five years to assess and correct inaccurate projections or evolving realities. This Plan contemplates 28 years of growth, and occurs in parallel to humanity’s race to achieve net zero. Mounting evidence suggests that an urban expansion is not needed before 2051. Therefore, Regional Council could safely hold the urban boundary intact knowing they can correct it at the next MCR as needed. However, if Regional Council unnecessarily expands the urban boundary and subsequent information makes clear that it shouldn’t have, the rich agricultural productivity and natural heritage cannot be put back.

Simply stated, this Draft Official Plan assigns too much land to future urban expansion areas, and puts the Region’s financial and environmental sustainability at high risk. This risk is wholly unnecessary since it has been well demonstrated³⁷ that a large inventory of land is already designated for new homes and businesses across the Region.

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³² The win-wins of climate and biodiversity solutions (<https://drawdown.org/news/insights/the-win-wins-of-climate-and-biodiversity-solutions>)

³³ Getting Building Height Right for the Climate (<https://www.greentechmedia.com/articles/read/getting-building-height-right-for-the-climate?fbclid=IwAR1gCHkovrhUSy-ukRuIX2BkdcIUOX5AmD1gJbWyIPuHFrkQkugT44r5Ov0>)

³⁴ What is the Missing Middle? (https://canurb.org/wp-content/uploads/CUIPublication.What_is_the_Missing_Middle_Evergreen_CUI_s2.2018.pd_.pdf)

³⁵ #2021-INFO-100, Growth Management Study, October 1, 2021 (<https://www.durham.ca/en/regional-government/resources/Documents/Council/CIP-Reports/CIP-Reports-2021/2021-INFO-100.pdf>)

³⁶ Climate Emergency Declaration, Page 1 (<https://www.durham.ca/en/living-here/resources/Documents/EnvironmentalStability/Regional-Council---Emergency-Declaration.pdf>)

³⁷ Review of Existing Housing Unit Capacity Identified in Municipal Land Needs Assessments Prepared for Upper- and Single-Tier Municipalities in the Greater Golden Horseshoe (<https://yourstoprotect.ca/wp-content/uploads/sites/3/2023/02/REVIEW-OF-EXISTING-HOUSING-UNIT-CAPACITY-IDENTIFIED-IN-MUNICIPAL-LAND-NEEDS-ASSESSMENTS-R.pdf>)