



Oxford Street West and Gideon Drive Intersection Environmental Impact Study (EIS)



Environmental and Ecological Planning Advisory
Committee (EEPAC)

January 20, 2022 at 5pm

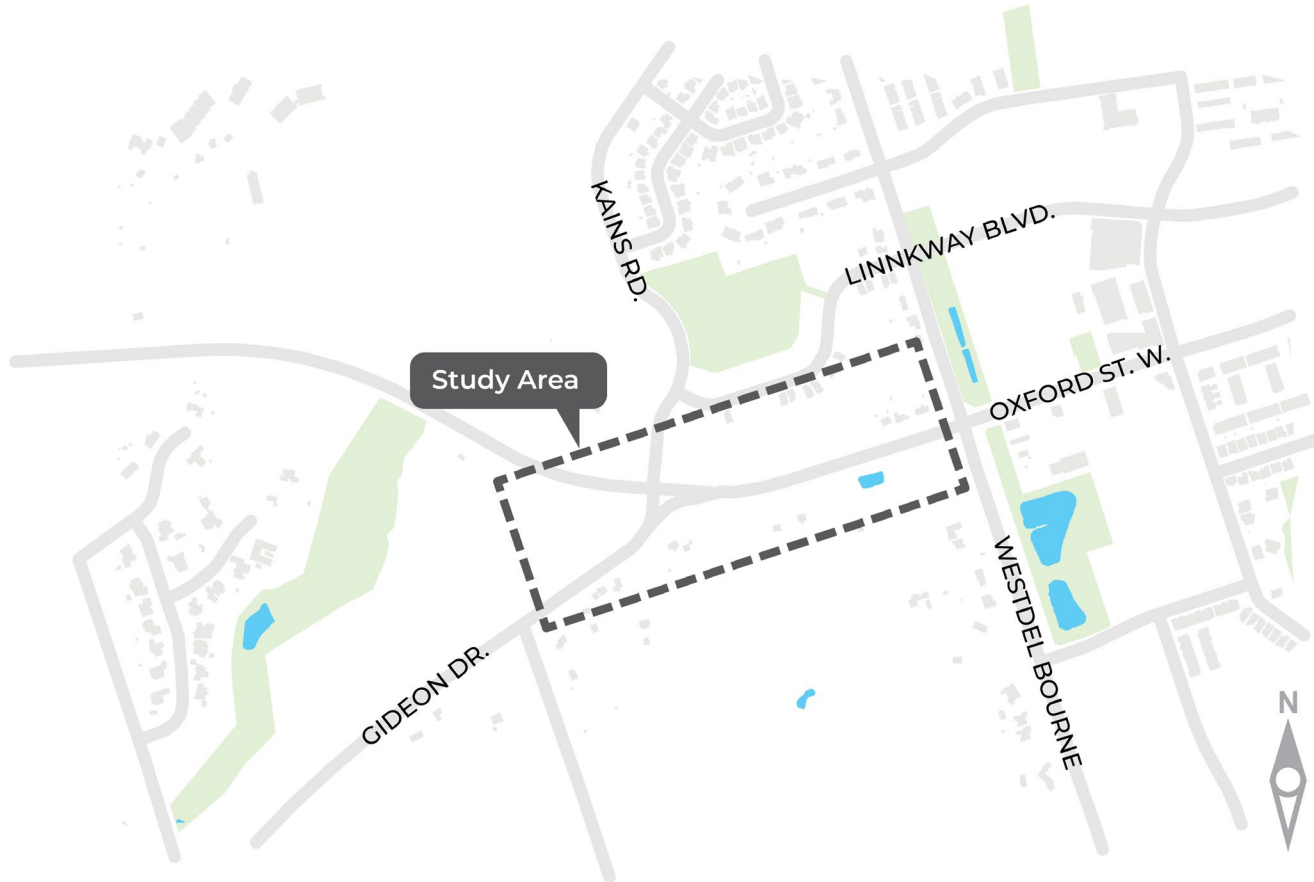
Agenda



- Study Area
- Municipal Class Environmental Assessment
- Environmental Impact Study Objectives
- Existing Conditions – Natural Environment
- Alternative Solutions
- Impact Assessment and Recommendations

Study Area

The Study Area consists of the Oxford Street West and Gideon Drive intersection and includes up to 200 meters in each direction of the intersection.



Municipal Class Environmental Assessment (MECA)

The Oxford Street West & Gideon Drive Intersection project was initiated in response to ongoing and planned development on the west side of the City, the connection of Kains Road, and associated increases in traffic through the intersection.

This project is classified as a Schedule 'B' Municipal Class Environmental Assessment (MCEA) which will be undertaken prior to the municipal construction project to ensure all reasonable alternatives, including 'Do Nothing', are considered and that the preferred alternative will have minimal impact on the natural, cultural, social and economic environment.

Part of this process includes the preparation of an Environmental Impact Study (EIS).



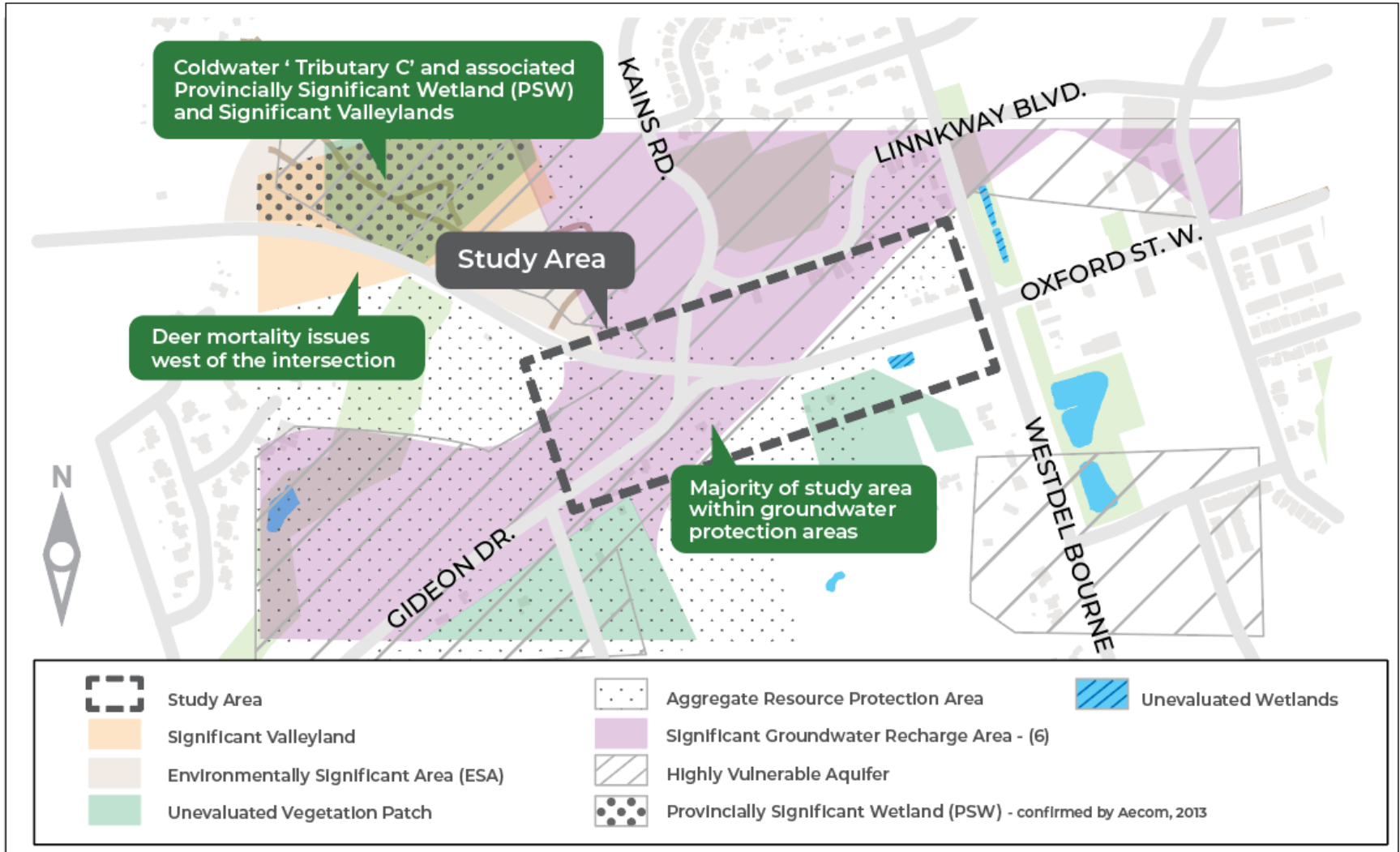


Environmental Impact Study (EIS) Objectives

The objectives of the Environmental Impact Study (EIS) for this project include:

- Characterize the existing natural heritage features within the Study Area;
- Evaluate the significance of the identified natural heritage features and functions;
- Identify potential constraints and opportunities;
- Assess the potential impacts of the alternative solutions on the natural heritage features/functions; and
- Determine mitigation measures to minimize the impacts and recommend potential enhancement.

Existing Conditions – Natural Environment



Existing Conditions – Natural Environment

ELC / Vegetation

- Ecological Land Classification (ELC) – the majority of the Study Area consists of cultural meadows and woodlands
- Surrounding Tributary C, ELCs consist of various swamps and meadow-marshes
- Rare floral species noted in background documents were not observed during inventory
- Invasive species noted – European Common Reed (*Phragmites australis*), Common Buckthorn (*Rhamnus cathartica*), and Autumn Olive (*Elaeagnus umbellate*)

Tree Inventory

- Tree inventory – 64 individual trees over 10 cm DBH
- No rare species or significant specimens, all trees inventoried were common and typical of the current land uses



Existing Conditions – Natural Environment

Wildlife and Significant Wildlife Habitat (SWH)

- Several Species at Risk (SAR) were noted in background studies
- No reptiles were observed; a Green Frog (*Rana clamitans*) was noted in Tributary C
- Area of wildlife crossing with white-tailed deer (*Odocoileus virginianus*) carcasses and game trail was noted immediately west of intersection
- Potential bat habitat is very limited within the right-of way and areas of impact
- One Monarch (*Danaus plexippus*) was noted on Common Milkweed (*Asclepias syriaca*) within the roadside south of Oxford Street

Breeding Birds

- Rare species/SAR – foraging Barn Swallow (*Hirundo rustica*) noted, no nesting
- All other species noted during surveys were common and secure in Ontario



Existing Conditions – Natural Environment

Designated Natural Areas

- Provincially Significant Wetland (PSW) associated with Tributary C, and an unevaluated wetland at eastern extent
- Kains Woods Environmentally Significant Area (ESA) includes the PSW
- Significant Valleylands are also associated with Tributary C
- Upper Thames River Conservation Authority (UTRCA) regulates the area surrounding Tributary C

Fish and Fish Habitat

- Study Area located in the River Bend subwatershed of the Upper Thames River
- Tributary C – coldwater stream with groundwater upwellings
- Resident Brook Trout (*Salvelinus fontinalis*) population and important spawning habitat



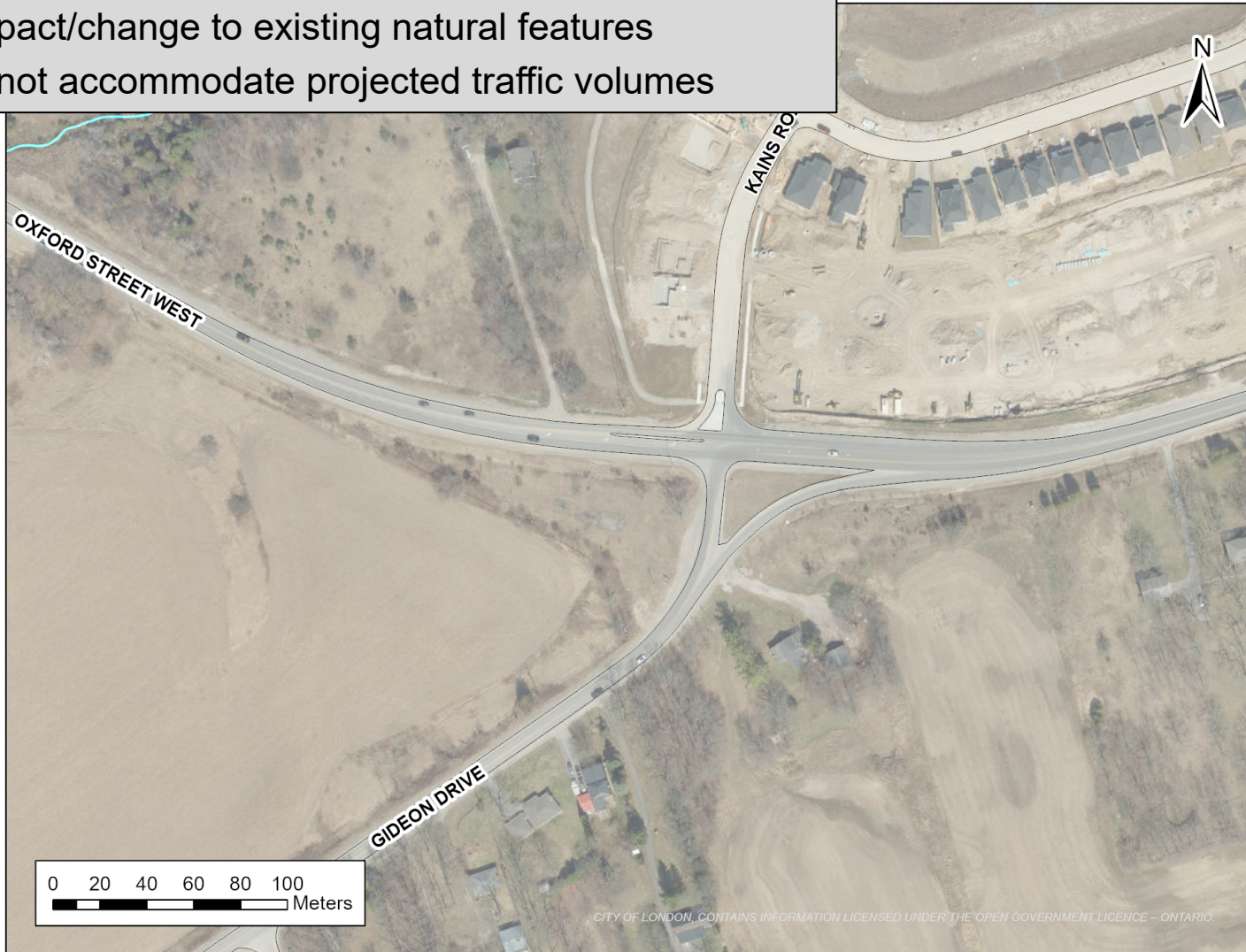
Alternative Solutions

The following alternative solutions were identified and developed for evaluation:

- **Alternative 1: Do Nothing** – Maintain existing condition of Oxford and Gideon
- **Alternative 2: Signalized Intersection** – Improvements consist of installation of traffic signals, crosswalks and cycling facilities.
- **Alternative 3: Single-Lane Roundabout** – Implement a single lane roundabout, crosswalks and cycling facilities.
- **Alternative 4: Multi-Lane Roundabout**– Implement a multi-lane roundabout with additional lanes to accommodate heavier traffic movements. Install crosswalks and cycling facilities.

Alternative 1 – Do Nothing

- No impact/change to existing natural features
- Does not accommodate projected traffic volumes



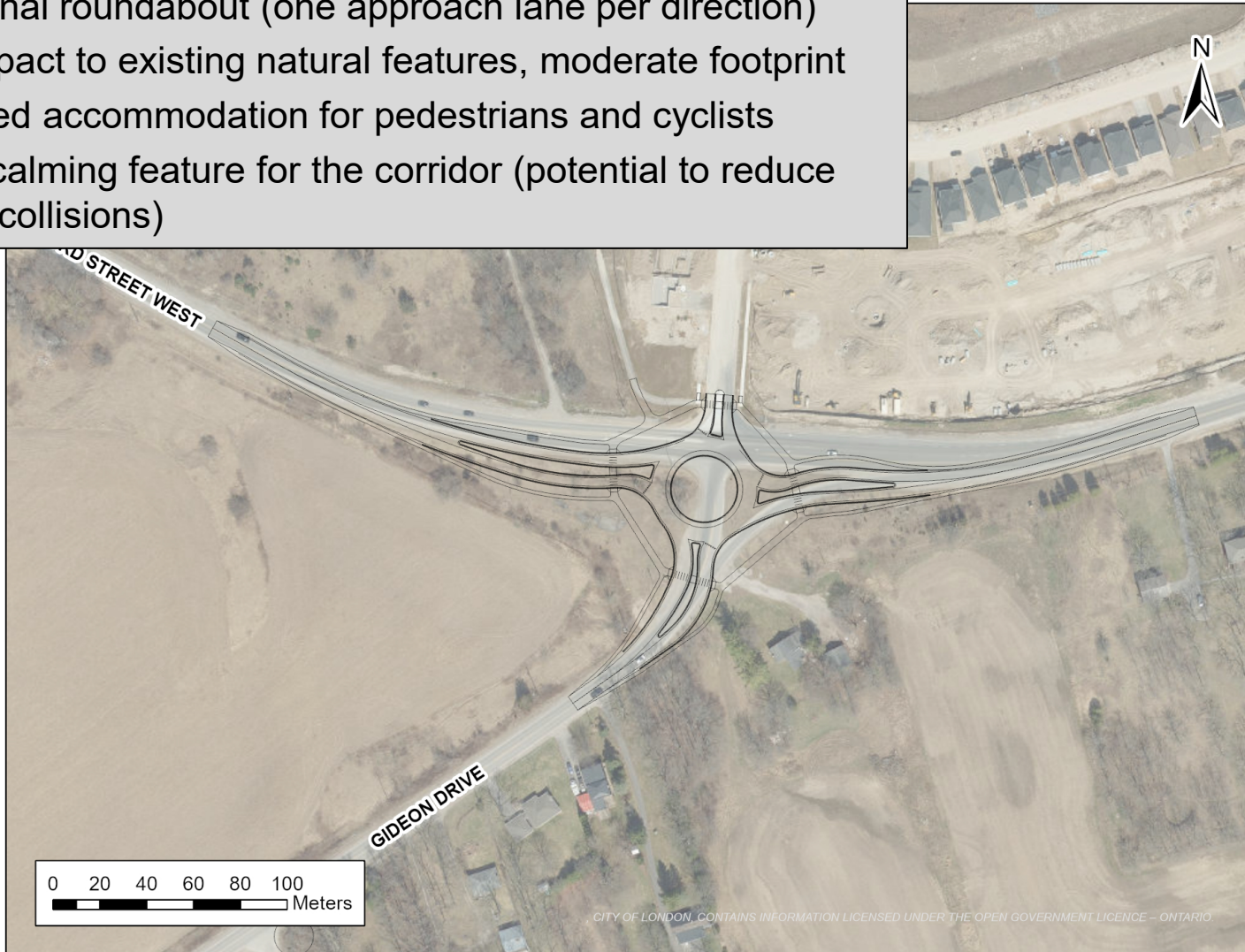
Alternative 2 – Signalized Intersection

- Low impact to existing natural features, small footprint
- Increased noise/air pollution from starts/stops and vehicle idling
- Some traffic calming (potential to reduce wildlife collisions)



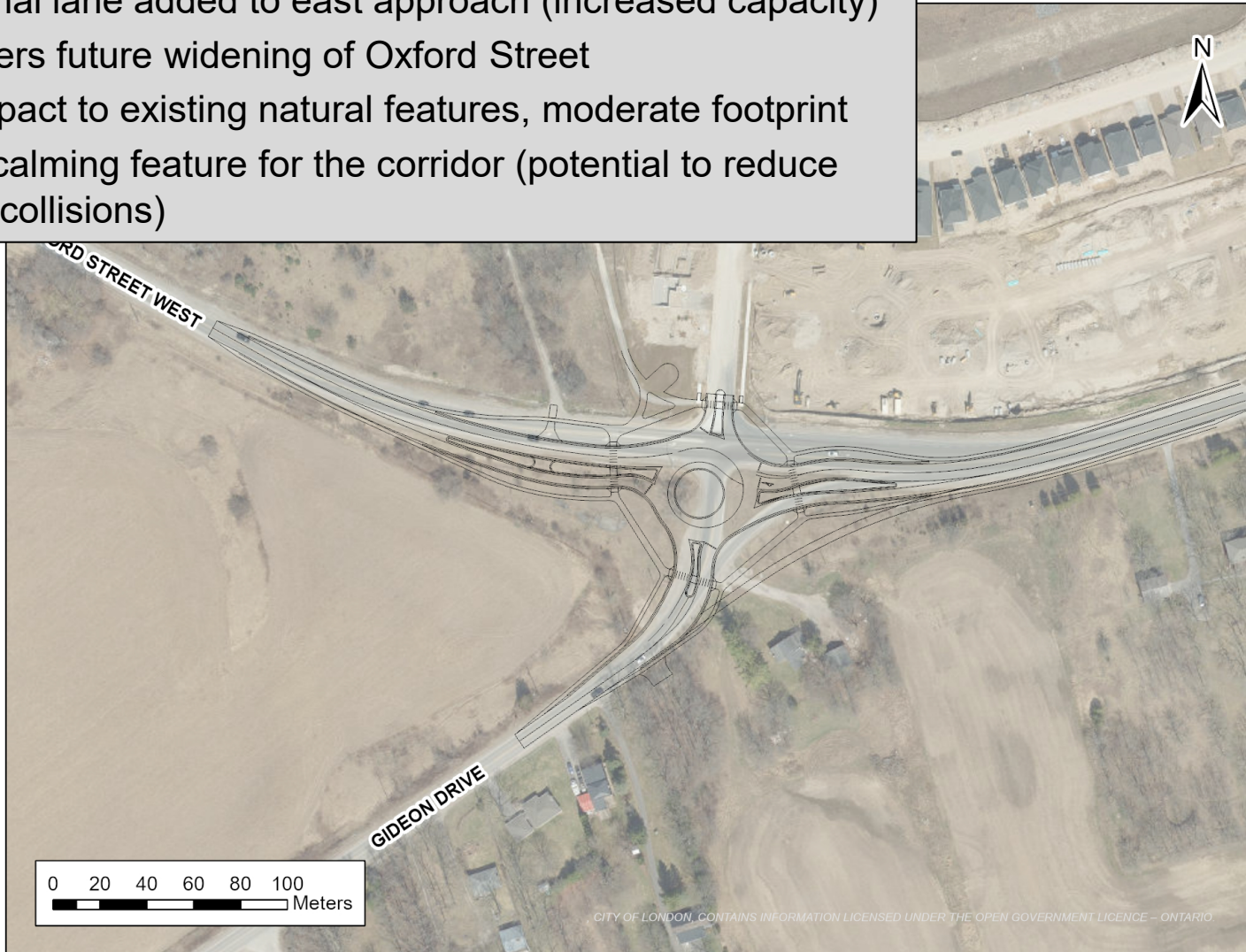
Alternative 3 – Single-Lane Roundabout

- Traditional roundabout (one approach lane per direction)
- Low impact to existing natural features, moderate footprint
- Improved accommodation for pedestrians and cyclists
- Traffic calming feature for the corridor (potential to reduce wildlife collisions)






Alternative 4 – Multi-Lane Roundabout

- Additional lane added to east approach (increased capacity)
- Considers future widening of Oxford Street
- Low impact to existing natural features, moderate footprint
- Traffic calming feature for the corridor (potential to reduce wildlife collisions)



Overall Evaluation of Alternative Solutions

Eliminates opportunities for invasive removal and wildlife habitat enhancements

Alternative Solutions	Traffic Operations & Safety	Social Environment	Natural Environment	Cultural Heritage Resources	Cost	Evaluation Summary
Alternative 1 - Do Nothing	○	◐	◐	●	●	Not Recommended
 Alternative 2 - Signalized Intersection	◐	◐	◐	●	◐	Not Recommended
 Alternative 3 - Single-Lane Roundabout	◐	●	◐	●	◐	Not Recommended
 Alternative 4 - Multi-Lane Roundabout	●	●	◐	●	◐	Recommended to be Carried Forward

Alternative 4 - Multi-lane roundabout is the recommended solution to be carried forward



Impact Assessment – Multi-Lane Roundabout

- **Vegetation** – Loss of 0.36 ha of cultural meadow, savannah and thicket in the new footprint. Additional areas will be disturbed during construction and provides opportunity for enhancement during restoration.
- **SWH and candidate SAR habitat** – Cultural meadow provides SWH (Monarch) and 0.012 ha of candidate habitat for SAR bats.
- **Trees** – In total, 20 trees over 10 cm dbh were identified for removal. These specimens are common, and the loss will be addressed by the preservation plan.
- **Surface water and Tributary C** – Potential sediment transfer from the work area to the water features during construction. No direct impacts to the tributary or riparian habitat.
- **PSW** – Dewatering during construction has potential to impact local groundwater. Additional studies required in detailed design.



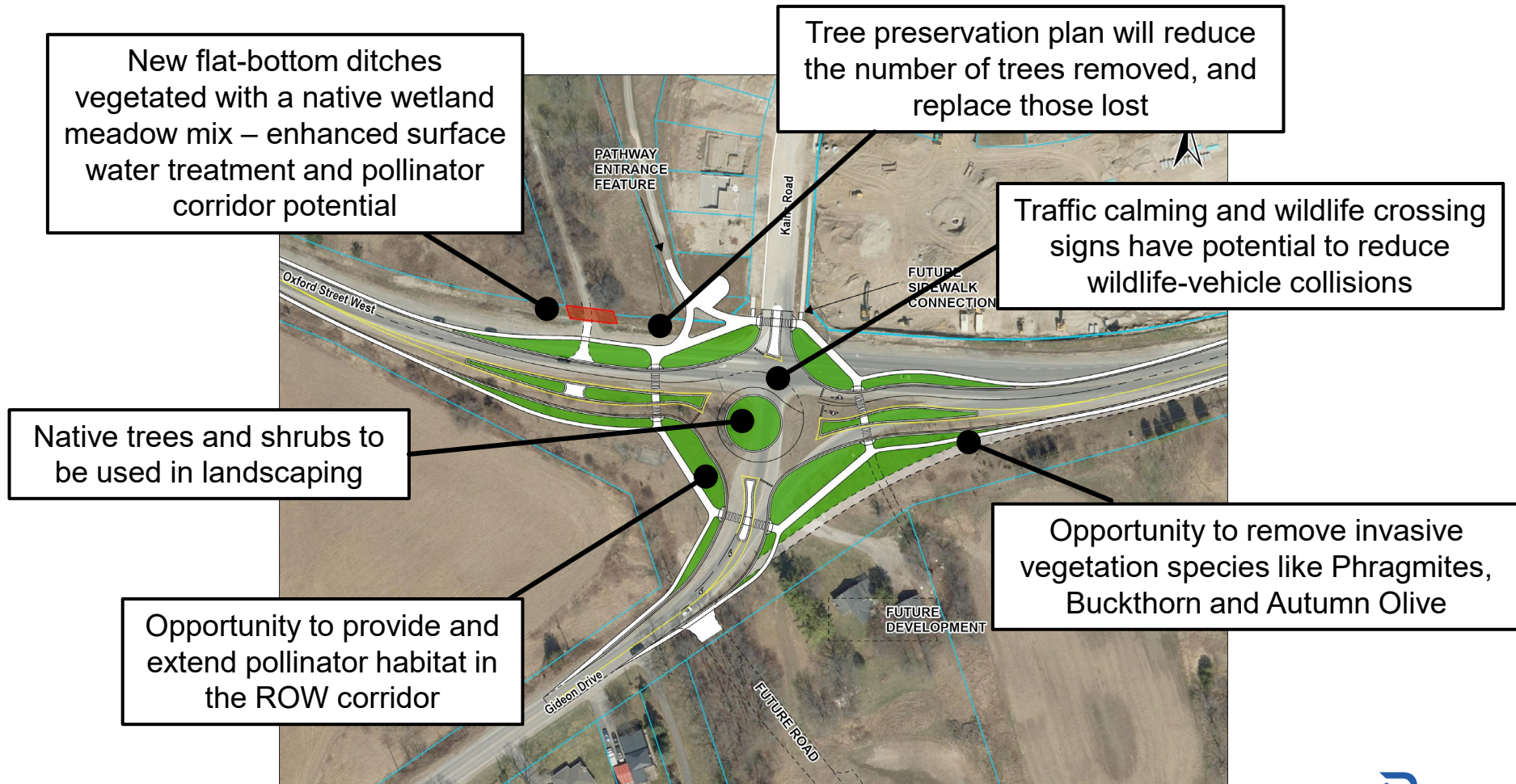
Recommendations – Mitigation Measures

Measures to mitigate the potential project impacts will include:

- Minimize removals and delineate work area. Tree preservation and landscape plan with native grasses, flowers, and trees to mitigate impacts to vegetation.
- Timing windows for vegetation removal to avoid wildlife impacts during sensitive life stages.
- Implement the Clean Equipment Protocol during construction. Invasive species treatment/removal plan (prior to construction).
- Erosion and sediment controls (ESCs) installed prior to disturbance and adapted/maintained until vegetative cover is restored.
- Light shields and bird-friendly roadway lighting to mitigate impacts of new lighting and reduce wildlife collision potential.
- Monitoring during construction: ESC, wildlife presence, etc.

Recommendations – Enhancement Opportunities

This project provides several opportunities for wildlife habitat enhancement:





Thank you!

- Questions or comments?



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