

**Ashbridges Bay Treatment Plant**

**Landscape Site Design Project**



# Hello!



**Joint NLC/ICMC Meeting**

**Ashbridges Bay Treatment Plant**

**Landscape Site Design Project**

## Who are we?

Consultants for the Phase 1 Detailed Landscape Plan;  
*'The Grove'*

## Our Team



Landscape Architects & Planners



Engineers & Landscape Architects

- Suzanne Barrett  
Public Communications & Consultation
- Terry Heard Design  
Interpretive Programming
- Utility Security Inc.  
Site Security
- Dougan & Associates  
Ecological Restoration & Stewardship
- MJS Consultants  
Lighting Consultants
- Creative Irrigation Solutions Ltd.  
Irrigation Consultants
- Public Art  
David Pearl



**Joint NLC/ICMC Meeting**

**Ashbridges Bay Treatment Plant**

**Landscape Site Design Project**

**Why are we here?**



Left  
Phase 3 Master Plan  
Submitted by  
Diana Gerrard  
Landscape Architecture  
+  
architectsAlliance  
26 May 2003



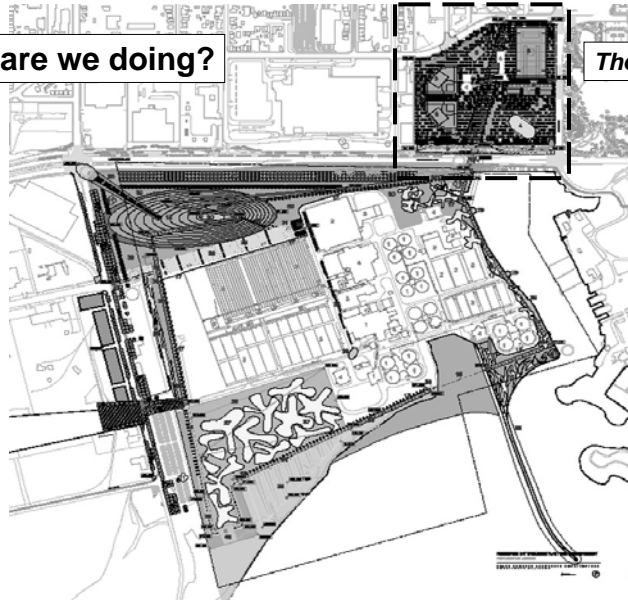
**Joint NLC/ICMC Meeting**

**Ashbridges Bay Treatment Plant**

**Landscape Site Design Project**

**What are we doing?**

**The Grove**



Left  
Phase 3 Master Plan  
Submitted by  
Diana Gerrard  
Landscape Architecture  
+  
architectsAlliance  
26 May 2003



**Joint NLC/ICMC Meeting**

**Ashbridges Bay Treatment Plant**

**Landscape Site Design Project**

**How are we doing it?**

**When are we doing it?**

|  |                               |
|--|-------------------------------|
| <b>Stage 1</b><br>Background Analysis, Information Updates & Engineering Studies | June – November 2007          |
| <b>Stage 2</b><br>Preliminary Design and Refinements                             | November 2007 – February 2008 |
| <b>Stage 3</b><br>Detailed Design  | February – July 2008          |
| <b>Stage 4</b><br>Contract Documents & Tender                                    | July - November 2008          |
| <b>Stage 5</b><br>Implementation of Phase 1 Works                                | November 2008 – November 2009 |



**Joint NLC/ICMC Meeting**

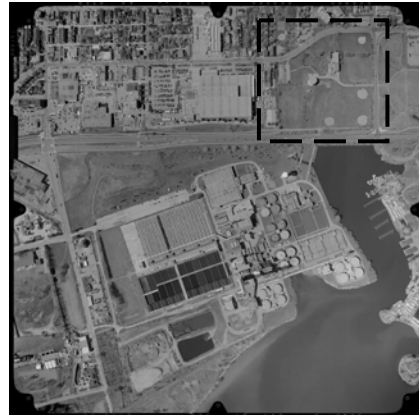
**Ashbridges Bay Treatment Plant**

**Landscape Site Design Project**

**Where are we at?**

**Stage 1**  
Background Analysis, Information Updates & Engineering Studies

- Components**
- Contamination Characterization
  - Compilation of Contextual Planning Information
  - Site Traffic Control Study
  - Underpass Assessment & Geotechnical Investigation
  - Confirmation of Circuit Alignment & Connections
  - Confirmation of Recreational Requirements
  - Options for Interpretive Programming
  - Review & Recommendations for SWM
  - Irrigation
  - Artist Selection
  - Heritage Review
  - Stakeholder & Public Meetings



**Joint NLC/ICMC Meeting**

**Thank you!**

1100 Yonge St  
Tor M4W 2L6  
23 Oct. 07

Attachment B

Councillor Paula Fletcher attn. Pablo Vivanco  
Councillor Sandra Bussin attn. Harold Becker

Subject: Phase I Detailed Landscape Plan for  
the Ashbridges Bay Treatment Plant pumping  
station grounds: N.W. side of Lakeshore Blvd & Coxwell.

To enhance habitat is one of the goals.

I would suggest/recommend that the landscape  
Plan include a portion of the site that is  
brought down in elevation to approximately  
one (1) metre below lake level.

This could take the form of broad vegetated  
gently sloping ditches. They would contribute to  
aquatic & meiotic habitat — and could be linked  
to similar features in the area. It could also help  
with stormwater run-off.

The larger, broader area needs to be connected  
with aquatic habitat improvements to the Base of  
the Leslie Spit; to the North edge of Lake Ontario  
Park; to the Don Greenway south of the Ship Channel

Chester Springs Marsh up in the Valley will be  
replicated in the lower Don Portland; exact location  
to be determined — but in conjunction with Don Greenway  
this feature at ABTP can be part of greening the area!

Sincerely,

Dalton Shipway  
DALTON C. SHIPWAY

cc Mayor Miller  
cc John R. Carley  
cc Chris. Hume; Torstar  
cc Karen Buck ICMC  
cc EMVision - The Hough Group

# **ABTP optimization**

---

## **Update on Mediation Agreement**

**Mark Rupke, Senior Engineer**  
**October 23, 2007**



## **Resolution 4 item 1**

---

- City agrees to ongoing optimization of existing operations at ABTP
  - Table 17-2
  - 1.1.1 WAS cothickening
  - 1.1.2 Centrate
  - 1.1.3 Digester HRT
  - 1.1.4 Digester operation and technology



## Table 17.2

---

- 4 new grit tanks and screens to be installed
  - Grit operation improved, new tanks not needed
  - Completed
  - New screens being installed under odour control project
- WAS cothickening / 1.1.1
  - Reduced from 190 t/d to 28 t/d at time of MA
  - 2000-2005 reduction in DAF capacity
  - 2006 Subnatant pipe inspection
  - 2007 pipe cleaning
  - 2008 predicted <10 t/d



## Table 17.2

---

- Reduce Centrate load / 1.1.2
  - 4 new centrifuges installed
  - Centrate quality acceptable
  - completed
- Reduce sludge recycles / solids train audit
  - Audit conducted in 1998 –
  - Sludge recycle reduced from >70 d/t to zero
  - Primary tank pumping controls in place
  - completed
- Liquid train audit
  - Completed in 1993

## Table 17.2

---

- Capacity and Nitrification testing
  - Originally planned as part of outfall project
  - Responding to future regulation
  - Need is still pending
  - Planning as part of odour control
- Fine bubble aeration
  - Planned for post 2007
  - Being implemented under odour control project
- WAS thickening upgrade
  - Planned for post 2007
  - Included in capital forecasts



## 1.1.3 and 1.1.4

---

- 1.1.3 increase digestion HRT
  - New digesters completed
  - Sludge recycles controlled
  - HRT > 15 days
- 1.1.4 Digester optimization
  - Refurbishing digesters 1-8
  - Improving digester mixing system
  - Funding digestion research



# 'Green' fuel worsens global warming

Nobel chemist finds corn farming methods can hurt the Earth more than burning gasoline

**EMMA GRAHAM-HARRISON**  
REUTERS NEWS AGENCY

Most crops grown in North America and Europe to make a "green" alternative transport fuel actually speed up global warming because of industrial farming methods, says a report by Dutch atmospheric chemist Paul Crutzen, who won a Nobel prize in 1995 for his work on the hole in the Earth's ozone layer.

The findings could spell special worries for alternative fuels derived from rapeseed, used in Europe, which the study concluded could produce up to 70 per cent more planet-warming greenhouse gases than conventional diesel.

The report suggested scientists and farmers focus on crops needing little fertilizer and harvesting methods that were not energy intensive in order to produce benefits for the environment.

Biofuels are derived from plants that absorb the planet-warming greenhouse gas carbon dioxide as they grow, and so are meant as a climate-friendly substitute for fossil fuels.

But the new study shows that some biofuels actually release more greenhouse gases than they save, because of the fertilizer used in modern farming practices.

The problem greenhouse gas, nitrous oxide, is more famous as the dentists' anaesthetic "laughing gas," and is about 300 times more insulating than the most common man-made greenhouse gas carbon dioxide.

"The nitrous oxide emission on its own can cancel out the overall benefit," co-author professor Keith Smith said in a telephone interview from Edinburgh in Scotland.

The study casts further doubts on the credibility of biofuels as a climate cure after the revelation of

other unintended side effects, such as rain-forest clearance and higher food prices, from competing with forests and food for land. Brazil and the United States produce most of the world's bioethanol, as a substitute for gasoline, while the European Union is the main supplier of biodiesel.

Using biodiesel derived from rapeseed would produce between 1 and 1.7 times more greenhouse gas than using conventional diesel, the study estimated.

Biofuels derived from sugar cane, as in Brazil, fared better, producing between 0.5 and 0.9 times as much

greenhouse gases as gasoline.

Corn, also known as maize, is the main biofuels feedstock used in North America, and produced between 0.9 and 1.5 times the global warming effect of conventional gasoline, it said.

"As it's used at the moment, bioethanol from maize seems to be a pretty futile exercise," Smith said.

The study did not account for the extra global warming effect of burning fossil fuels in biofuel manufacture, or for the planet-cooling effect of using biofuel by-products as a substitute for coal in electricity generation.

"Even if somebody decides that our numbers are too big ... if you add together the undoubted amount of nitrous oxide that is formed, plus the fossil-fuel usage, with most of the biofuels of today you are not going to get any benefit," Smith said.

The study did not condemn all biofuels, however, suggesting that scientists and farmers should focus on crops needing little fertilizer, and harvesting methods that were not energy intensive.

"In future, if you use low nitrogen demanding crops, and low impact agriculture, then we could get a

benefit," Smith said.

The study singled out grasses and woody coppice species — such as willows and poplars — as crops with potentially more favourable impacts on the climate.

Nitrogen makes up a large portion of the atmosphere, and is a vital component for the growth of plants. Massive production of synthetic fertilizer in a 20th century "green revolution" has almost doubled the amount of nitrogen in the global system, adding nearly 100 million tonnes, Smith said.

"That has increased the production of nitrous oxide."

## ENERGY &lt; BUSINESS

# U.S. draining giant aquifer for ethanol, report warns

## Increased irrigation of corn used in fuel may threaten water supplies

**TIMOTHY GARDNER**  
REUTERS NEWS AGENCY

NEW YORK—The ethanol rush in the United States could drain drinking water supplies in parts of the country because corn — a key source of the alternative fuel — requires vast quantities of water for irrigation, the National Research Council reported yesterday.

U.S. President George W. Bush has called for production of 35 billion gallons per year of alternative motor fuels including ethanol by 2017, as part of an effort to wean the country from foreign oil. U.S. capacity to make the fuel, believed to emit low levels of greenhouse gases, has spiked about 28 per cent this year to nearly seven billion gallons.

But the use of more corn to make ethanol could drain water supplies like the Ogallala, or High Plains, aquifer, which extends from west Texas up into South Dakota and Wyoming.

“The aquifer is already being mined to the extent that recharge of precipitation into it is much, much less than withdrawals, and that would be exacerbated by any increase in corn or any increase in irrigated agriculture in the region,”

Jerald Schnoor, a professor of environmental engineering at the University of Iowa, told reporters on a conference call about the report.

Large portions of Ogallala show water declines of more than 30 metres, said the report from the council, which advises Congress and the federal government on scientific matters.

Corn requires more irrigation than other crops such as soybeans and cotton in the Plains states across the middle of the country, the report said.

Much of the water used to irrigate corn, the main source of U.S. ethanol, is lost to the ecosystem as it evaporates from the plant and from the ground.

Schnoor said poor water supplies in some parts of the U.S. midwest have already stopped a few ethanol refineries, also heavy water users, from being built in Iowa and Minnesota. If they had been built, water supplies to a few towns there may have suffered, he said.

In addition, fertilizers used to produce corn could increase the runoff of oxygen-starving nitrogen into streams that run down the Mississippi River into the Gulf of Mexico. Such runoff has been blamed for forming “dead zones” in the Gulf where many forms of marine life cannot survive.

Schnoor said each gallon of ethanol made from corn can leave behind about eight grams, or about the weight of three pennies, of nitrogen that can wind up in water supplies.

A similar report from non-profit group Environmental Defense this summer said ethanol could increase demand for scarce water supplies by two billion gallons a year. Ethanol industry sources said ethanol plants will not be locating where water availability is a question.

The NRC report said technological developments could help protect water supplies. Ethanol producers are learning to recycle water in refineries that make the fuel, and an emerging fuel could lead to reliance on feedstocks such as switchgrass, which may require less irrigation.