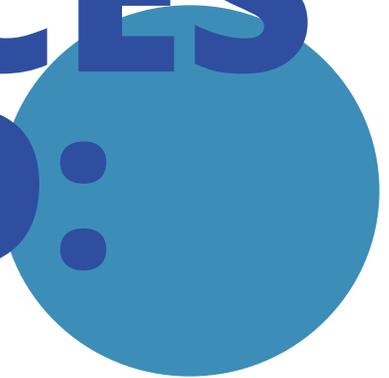


USING THE RESOURCES AT HAND:

SUSTAINABLE EXHIBITION DESIGN



A PROJECT OF THE CENTER FOR SUSTAINABLE CURATING

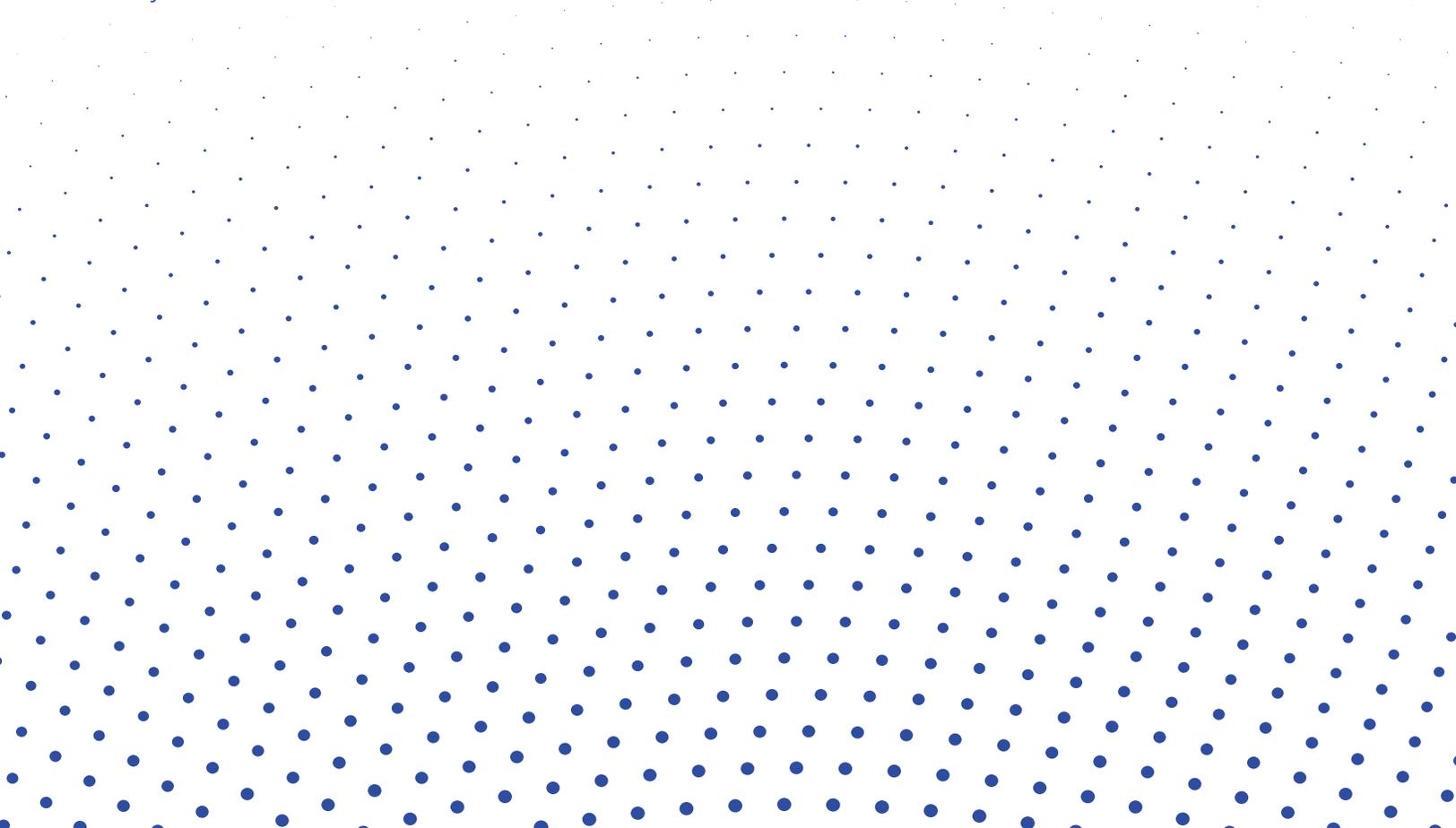


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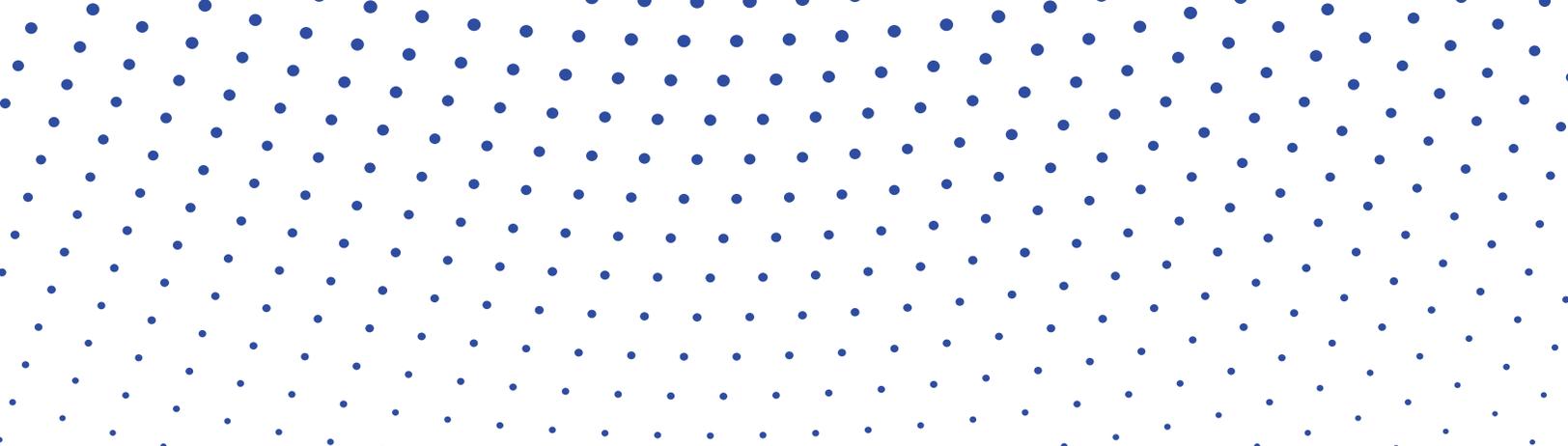
ACKNOWLEDGEMENTS

Research for this booklet was conducted by the Centre for Sustainable Curating, the Synthetic Collective, Ioana Dragomir, and Noémie Fortin.

Design by Anahí González Terán.

Funding for this project was provided by Western University, Canada and the Social Sciences and Humanities Research Council of Canada.

Research, writing, and design of this booklet took place in London, Ontario, on the traditional lands of the Anishinaabeg, Haudenosaunee, Lūnaapéewak, and Neutral (Chonnonton) peoples, on lands connected to several Treaties including Treaty 6 London Township, Treaty 7 Sombra Township, Treaty 21 Longwoods and the Dish with One Spoon Wampum Belt Covenant.



**MUSEUMS AND
GALLERIES HAVE
SIGNIFICANT
CARBON
FOOTPRINTS
AND CREATE EXTENSIVE
AMOUNTS OF WASTE.**

INTRODUCTION

Using the Resources at Hand is designed primarily to help students in the Department of Visual Arts at Western University think about eco-friendly options in designing exhibitions. Skills learned here can also be used elsewhere, and can help to make the cultural sector more sustainable over the long term. The booklet offers tips for low-carbon design, outlines resources in the community, and includes information on borrowing and sharing resources and materials so that we can reduce and reuse within the department.

Every step of exhibition design, from the initial organization to the deinstallation, can benefit from a lower carbon footprint.

Using the Resources at Hand is open-source and can be adapted and used by anyone hoping to share information about ecologically-friendly forms of exhibition design. Email us at sustainable.curating@uwo.ca for the source files.

As the Synthetic Collective writes, “low carbon exhibitions require extra planning, innovation, and shifting of some of the aesthetic standards of traditional exhibitions. Such approaches should be seen as in line with a global turn in curating towards socially-engaged projects and slow curating. Take the pressure off yourself and take some pressure off the climate.”

Synthetic Collective. *Synthetic Collective DIY Fieldguide for Reducing the Environmental Impact of Art Exhibitions*, 2020

WHY IS THIS IMPORTANT HERE AND NOW?



The Great Lakes watershed contains 21% of the world's freshwater reserves, but faces heavy pollution from industry, manufacturing, and agriculture. Chemical pollution, plastic pollution, and nutrient pollution have been devastating to the Great Lakes. We live here, work here, and go to school here, and our actions have consequences.

Many cities in Ontario, including London, are running out of space in their landfills. Creating less waste is a much better solution than building new landfills.

Plastics manufacturing in the Great Lakes region is linked with poor air and water quality. Exhibition-making uses extensive plastics, but we can change this.

Treaty responsibilities and obligations invoked in the territorial acknowledgment included in *Using the Resources at Hand* call on those living in London to work toward improving water quality in the Thames River/Deshkaan Ziibi, preventing waste export and landfills being built on Indigenous territory, and resisting air, land, and water pollution in the region.

ACTIONS



ORGANIZATION

Even the smallest changes can make an overall difference.

Everything from sending emails to designing floor plans uses energy. Online doesn't always mean "greener."

The carbon footprint of devices and personal computers, as well as the Internet and the systems supporting it, account for about 3.7% of total global greenhouse emissions.

PLANNING

QUESTION

What impact is your exhibition going to have?
How can you convey your ideas and display art in ways that won't have long term waste impacts?

Thumbnail images, smaller documents, and other low-res/low-energy solutions can lower overall energy footprints.

MEETINGS

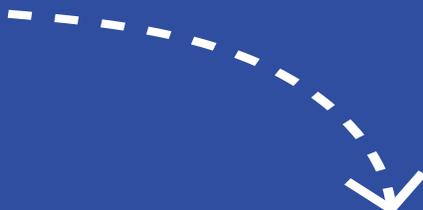
While undergraduate exhibitions likely won't involve a lot of travel, extensive travel is one of the biggest contributors to the carbon output of the art world.

Is it possible to walk or take public transit to a meeting or class?

Phone calls and video-free communications are excellent alternatives to energy intensive programs like Zoom.

Poor planning and leaving everything until the last minute often results in waste as hasty decisions are made. Eco-conscious exhibitions take careful time-management and allocation of resources.

MAKING



What are the long-term impacts of the industrial processes used in making all of the materials used in the exhibition? Knowing what materials are made of and where they come from can lead to more ecologically-friendly choices.

Is it possible to salvage materials, or to re-use materials from previous exhibitions or artworks? Re-using is always better than buying new.

Think about scale: is large scale necessary? In most circumstances scale is linked to energy and materials consumption. Small scale can still have high impact!

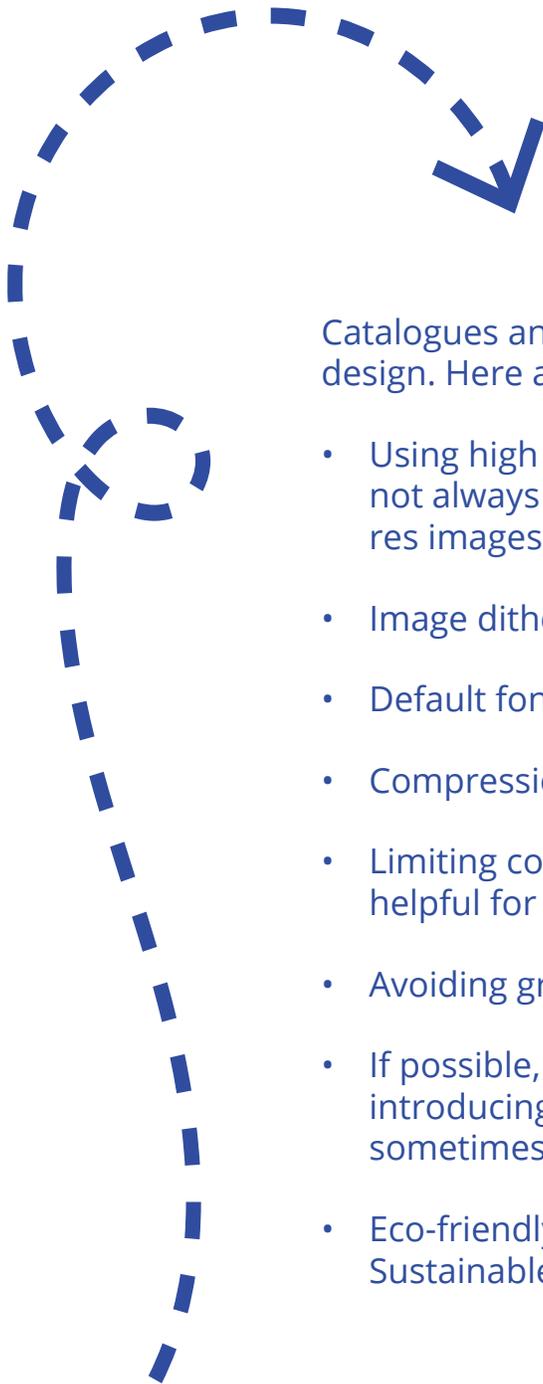
Collaborating with the gallery, other students, and other classes, can lead to trades and re-use of materials.

Researching and choosing low-impact materials when new materials are required is essential. This includes paints made from natural substances with no added plastics, unbleached paper, and printing on recycled paper with non-toxic inks.

Low-resolution and low-frequency can affect overall carbon footprints.

The Department of Visual Arts has extensive equipment that can be borrowed and shared by all students. If there is something missing, let us know. Sharing equipment, materials, and technology is a goal of the CSC.

Can your electronics be powered with a solar charger? The CSC has a charging kit that can be loaned for exhibitions in the Artlab or Cohen Commons.



Catalogues and brochures are important elements of exhibition design. Here are some tips to keep file sizes small:

- Using high res images is the norm in publishing, but they are not always necessary, especially for online publication. Low res images can lessen file size dramatically.
- Image dithering can render images even smaller.
- Default fonts minimize conversion times and data use.
- Compression of final PDF leads to faster downloads.
- Limiting colour choices leads to smaller file size and can be helpful for eco-printing with soy-based inks.
- Avoiding graphics-heavy design aesthetics can lessen file size.
- If possible, circulating your catalogue as a small pdf file avoids introducing new material objects to the world. However, sometimes printing is necessary.
- Eco-friendly printing companies are included in the Sustainable Companies list at the end of the Resource guide.

ECO-DESIGN

Vinyl PVC lettering is frequently used in exhibitions because it is cheap and looks professional. However, PVC is highly toxic and does not biodegrade, remaining in the world for at least 1000 years.

Greener alternatives take three factors into account:

DIDACTICS

- *The materials used (plastic, paint, paper, etc.)*
- *The quantity of materials needed*
- *The overall need for a text to be printed*

A major issue with vinyl lettering is that a whole sheet is used to make the labels. All of the negative space becomes waste that is toxic and takes centuries to break down. There are many alternatives:

Make a map of the gallery and customize it with the placement of the artworks and the information that would usually go on a label.

There are many options for hand-making labels including: writing labels in natural inks or watercolours (make sure the writing meets accessibility criteria). Experimental options include using stencils and light to fade construction paper, cyanotypes, cut paper or magazines wheat pasted on the wall, light and shadow, and projections.

Write with a pencil or pencil crayon directly on the wall.

Hiring professionals to hand-paint the text and signage directly on the wall is a costly but visually impressive alternative to vinyl labels and title walls.

Use custom stencils made by laser cutting paper (preferably recycled) - this can be done on the vinyl cutter in the department.

Use a direct-to-substrate dye-sublimation printing method directly on a panel made of sustainable materials (recycled, recyclable, or biodegradable) to print labels, exhibition title, and other didactics.

Plastic-free adhesive wall lettering and signage exists but is difficult to find.

Digital labels.

Some technologies can be recharged using the CSC's portable solar charger. Be aware that using the solar charger requires planning and sunshine. Make sure you know when the charging will take place.

Limiting the scale of video works to smaller screens (i.e. tablets) uses a much lower wattage than projectors or televisions.

Creating low-resolution video for smaller screens, and planning sound/ audio for lower energy requirements (e.g. low frequency sound requires less energy than high frequency sound) can lessen the energy consumption of the exhibition as a whole.

TECHNOLOGY

QUESTION

Balancing energy consumption with creating powerful exhibitions is a difficult task. How can we inspire without causing further harm?

CARBON OFFSETS

The CSC recommends *against* using carbon offsets (for example, calculating carbon output of an exhibition and purchasing credits for reforestation) as they have been shown not to work and can lead to profligate pollution. The CSC is currently working on a project on local alternatives to carbon offsets. What might an exchange that focuses on local remediation and pollution reduction as part of curatorial projects look like?

Conclusion: Building sustainability into exhibitions involves a constant process of learning, unlearning, and self-criticality. Difficult decisions must be made and new forms of exhibition-making privileged.

KI CULTURE'S HIERARCHY of WASTE MANAGEMENT

REFUSE

Don't use toxic materials. Refuse to buy new materials. Refuse to use materials that do not biodegrade or do not break down over time.

REDUCE

Buy and use fewer materials. Reduce carbon footprints. Question consumption.

REUSE

Reuse materials. Share materials. Build new exhibitions and artworks from old ones.

REPURPOSE

Recycle laterally by giving old materials a new purpose. If something is broken can it be used for something else?

RECYCLE

Recycling should be a last, rather than a first, response. Recycling is often not good for the environment. It can produce toxic waste and paradoxically, access to recycling often leads to MORE consumption.

RESOURCES



THIS IS A LIVING DOCUMENT AND WILL BE UPDATED FREQUENTLY.

WE DO NOT RECEIVE MONEY FROM ANY OF THESE COMPANIES. IN ALL CASES, THE CSC DECIDES THE THRESHOLD FOR INCLUSION. PLEASE CONTACT US AT [SUSTAINABLE.CURATING@UWO.CA](mailto:sustainable.curating@uwo.ca) IF YOU THINK SOMETHING SHOULD OR SHOULD NOT BE INCLUDED.

REUSABLE ITEMS

THAT CAN BE BORROWED FROM THE CENTER FOR SUSTAINABLE CURATING:



THINGS THAT NEED TO BE RETURNED:

Solar charger

Picture frames (light oak):

5x7 (4)

8 x 10 (4)

8.5 x 11 (4)

12 x 16 (4)

16 x 20 (4)

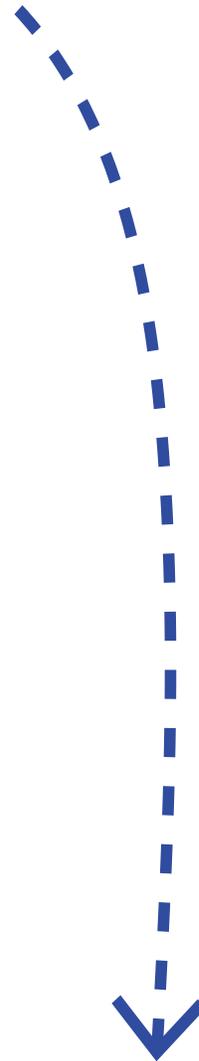
18 x 24 (4)

19.75 x 27.5 (4)

Frame Mats

Lettering stencils in multiple sizes

Geodesic dome (9ft x 17ft)



ART SUPPLIES THAT DO NOT NEED TO BE RETURNED:

Interior wall paints, watercolours, paintbrushes, scrap paper, scrap wallpaper, maps, newspapers, glue, fabrics (including large amounts of blue felt), thread, yarn, knitting needles, tape, scissors, cellophane, fun fur, stickers, brushes

REUSABLE ITEMS

THAT CAN BE BORROWED FROM OTHER LOCATIONS ON CAMPUS:

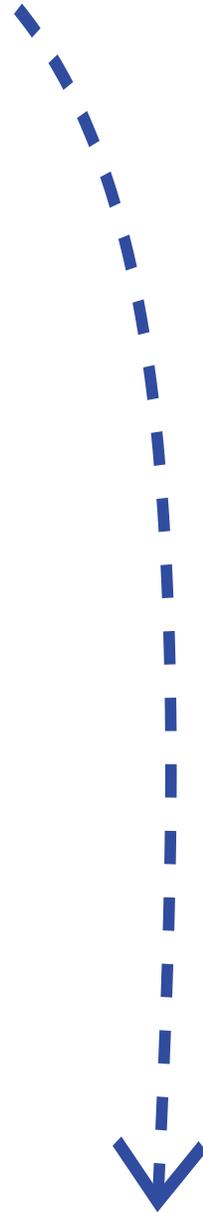
VISUAL ARTS SIGN OUT OFFICE:

Students registered in Visual Arts classes can borrow a wide range of audio, visual, and media equipment from the Sign Out office.

See an up-to-date list and make reservations here:

<https://www.uwo.ca/visarts/resources/signout.html>

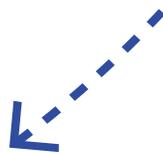
Instructional and educational videos for using equipment and learning about art are available.



WELDON LIBRARY

The libraries at Western loan equipment as well as books, including adaptors, chargers, headphones, calculators, safety goggles, and interactive pens:

https://www.lib.uwo.ca/services/equipment_for_loan.html



DEPARTMENT OF TECHNICAL SERVICES:

Arts and Humanities students and faculty can borrow equipment and films from the Department of Technical Services. Reservations are a must:

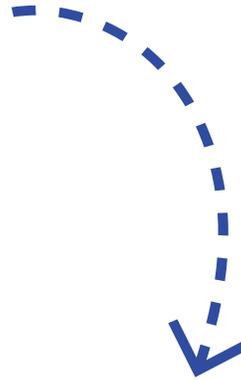
https://www.uwo.ca/arts/tech/equipment_lending.html

REUSABLE ITEMS

THAT CAN BE BORROWED FROM OTHER LOCATIONS ON CAMPUS:

ARTLAB:

If you are installing an exhibition in the Artlab or Cohen Commons, Artlab has some media, paint, tools, and installation materials for re-use. Artlab also has some disposable dishes left over from past exhibitions, a velvet curtain, and two display tables in addition to plinths and moveable walls.



WESTERN FURNITURE DEPOT

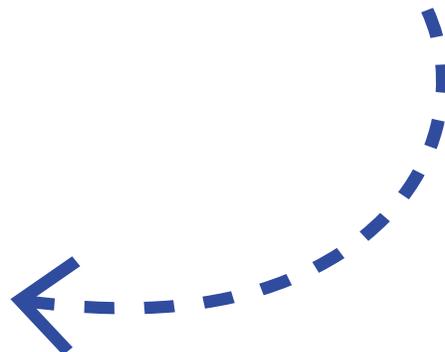
An annual free furniture exchange, usually held outside, near Richmond Gates, in late April-early May.

OTHER RESOURCES:

Sustainability Western has lots of tips, resources and funding opportunities:
<https://sustainability.uwo.ca/>

Western Active Transportation Society advocates for cycling and walking at Western:
<http://wats.uwo.ca/>

The Centre for Environment and Sustainability offers courses, modules, and graduate programs dedicated to sustainability:
<https://www.uwo.ca/enviro/>



SUSTAINABLE RESOURCES

PRINTERS

Navigating sustainable printing is difficult as there is a lot of greenwashing and misinformation. Large-format printing is particularly difficult to find. For this reason, some of these businesses are not in London, but will mail finished work.

ACCELL

657 Wilton Grove Rd
London, Ontario
www.accellgraphics.com

- zero toxic waste from the plate making process
- 99% recycling
- renewable power sources to run establishment
- FSC approved paper (unknown if they can print large-scale)

WATT SOLUTIONS INC

40 Micro Court,
London, Ontario
www.wattsolutions.com

- tree farm rather than old growth paper
- chemicals and solvents that are almost 100% water soluble, bio-degradable, and recyclable

MINUTEMEN PRINT

100 Bessemer Rd Unit 7
London, Ontario
<https://www.minutemanlondon.ca/>

- all paper stock is FSC certified (60-80% post-consumer) with the option of bringing in paper that is 100% post-consumer
- can print books on recycled paper with no minimum order. Most sustainable binding option is saddle-stitch

- large format printing available on recycled paper
- printing is toner-based, not ink based. Toner process is 95% efficient and the waste gets sent back to the manufacturers to be re-incorporated instead of sending to landfill
- rigorous recycling on the back-end
- free local delivery

A&B PRINT

45 Meg Drive Unit 104
London, Ontario
519 685-0321
am@anbprint.com
<https://www.anbprint.com/>

- FSC certified paper
- vegetable-based inks for off-set and large format printing
- post-consumer supplies

WARREN'S WATERLESS PRINTING

Toronto, Ontario
416-745-8200
info@warrenswaterless.com
<https://www.warrenswaterless.com/contact/>

- recycled paper, eco-inks
- waterless printers
- Bullfrog powered

COLOUR INNOVATIONS

161 Norfinch Dr
Toronto ON
416-663-6703
questions@colourinnovations.com
<https://colourinnovations.com/>

- low VOC
- partially powered by Bullfrog Power

NEW PRINT

25-2450 Lancaster Road
Ottawa
613-738-0531
support@newprint.ca
<https://www.newprint.ca/environmental-printing>

- printing on FSC papers and 100% post-consumer papers
- large-scale printing (up to 24" x 36") on post-consumer paper
- vegetable-based inks
- books/catalogues printed with vegetable-based ink only if quantity is over 500. If under, they will be printed digitally which uses toner instead.

ENUIRO DIGITAL PRINTING

91B Caroline St. South
Waterloo, ON N2L 1X4
tel. 519 885 2333
[email. edp@edprinting.com](mailto:edp@edprinting.com)
www.edprinting.com

GREEN PRINTER

www.greenprinteronline.com

- many choices in recycled paper
- vegetable based inks
- some limits (i.e. large format is only available on glossy photo paper)

The CSC recommends risograph printing as an eco-conscious choice for 2-3 colour and any size up to 11x17

VIDE PRESS

101 Sheridan Ave
Toronto, Ontario
www.videpress.ca
info@videpress.ca

SUSTAINABLE RESOURCES

PRINTERS/OTHER

ROOTREE

1-5295 John Lucas Drive
Burlington, ON L7L 6A8
email. info@rootree.ca
www.rootree.ca

- compostable and recyclable packaging

PDF COMPRESSOR

<https://smallpdf.com/compress-pdf>

- makes digital files smaller for a lower carbon footprint

REZONANCE PRINTING (SCREEN PRINTING)

www.rezonanceprinting.ca

- Indigenous-run
- internships for local Indigenous artists
- screen printing on posters, clothing, bags
- all products are eco-friendly with the exception of plastic-based ink. A water-based ink is also available.

ECO FONT

<https://www.ecofont.com/>
- converts font to a version that is more efficient to print
- uses 50% less ink than printing raw document
- undetectable difference

Still confused? Here is a good resource on inks:
<https://www.ecoenclose.com/blog/what-is-the-most-sustainable-ink/>

RENEWABLE ENERGY WEBHOSTING

WEB HOSTING CANADA

<https://whc.ca/green-hosting/>

- web hosting powered with renewable energy
- no fossil fuels
- they use solid state drives which are more energy efficient than traditional servers
- green cooling methods for servers
- can host Wordpress, and provide a drag and drop site builder

GREEN GEEKS

www.greengeeks.com

- mostly working to offset carbon usage by putting renewable energy back into the grid.
- they work with Bonneville Environmental Foundation

ETHICAL HOST

<https://www.ethicalhost.ca/renewable-energy-hosting/>

- they reduce their own emissions with a combo of green energy and offsets

WEB NEUTRAL POWER

www.webneutralproject.com

- solar web hosting
- they reduce their own emissions with a combo of green energy and offsets

HOME BREW SERVER

<https://homebrewserver.club/low-tech-website-howto.html>

- specifics for low-energy web design, and the Pelican code for the solar theme <https://github.com/lowtechmag/solar>

SOLAR WEB HOST

www.solarwebhost.net

SOLAR WEB HOST MAGAZINE

<https://solar.lowtechmagazine.com/>

- guide for low energy websites, along with source code from their own site

<https://solar.lowtechmagazine.com/2020/01/how-sustainable-is-a-solar-powered-website.html>

- info about the sustainability specifics of solar websites.

SOLAR PROTOCOL

<http://solarprotocol.net/>

- a DIY web platform powered by a network of solar panels and small batteries.

SOLAR-POWERED MEDIA

<http://lowcarbonmethods.com/local/zine.html>

- guide for building a solar-powered media storage and sharing server

SUSTAINABLE RESOURCES

COMPOSTING, RE-USE, AND RECYCLING

Composting and Food Waste

URBAN ROOTS COMPOSTING PROGRAM

21 Norlan Ave
London Ontario
<https://www.urbanrootslondon.ca/composting-program/>

- accepts compost donations
- possible to donate post-event food waste

THE WORMERY

Western Fair District
London, Ontario
<https://www.thegrovewfd.com/the-wormery>

- workshops on vermiculture

Resource Sharing and Re-use

HOME DEPOT

multiple locations

- tool rental program

Re-use: frames, books, lighting, furniture, kitchenware, paint, tarpaulins, countertops, tools, used sheets for dustcovers and dropcloths etc.

GOODWILL

Many locations:
255 Horton St E.
3410 White Oak Rd
1225 Wonderland Rd N.
1165 Oxford St E.
For other locations:
www.goodwillindustries.ca

FOREST CITY SURPLUS

tel. 519 451 0246
www.fcsurplus.com

LIFESPIN FREESTORE

866A Dundas St

<https://www.lifespın.org/free-store>
currently online only

RESTORE

611 Wonderland Rd N.
5-40 Pacific Court
317 Adelaide St
tel. 519 659 1949
<https://habitat4home.ca/restore/>

VALUE VILLAGE

4465 Wellington Rd S.
1553 Dundas St
30 Oxford St W
London, Ontario

GOOD VALUE

140 Dundas St
London, Ontario
226-777-7596

MISSION STORE

797 York St
London, Ontario
519-439-3056

The CSC recommends reducing and reusing where possible. recycling should be a last choice.

WESTERN RECYCLING PORTAL

1151 Richmond St
London ON
sustainability@uwo.ca
https://sustainability.uwo.ca/Campus/waste_reduction/waste_recycling_portal.html

- Western has a recycling portal for things like lightbulbs, toner cartridge, hazardous waste, repurposing wood/furniture

GREEN VALLEY RECYCLING

1200 Green Valley Road
London, Ontario, N6N 1E3
tel. 519 681 0606

info@greenvalleyrecycling.ca
www.greenvalleyrecycling.ca

- local recycling program for construction waste including drywall
- electronic recycling (free)
- non-hazardous waste recycling

TERRACYCLE

<https://www.terraceycle.com/en-CA>
and
<https://zerowasteboxes.terraceycle.ca/collections/zero-waste-boxes>

- provides services for recycling things that are otherwise not recyclable (office supplies, cleaning supplies, plastic gloves, lightbulbs, e-waste).

TRY RECYCLING

3544 Dingman Drive
21463 Clark Rd
London, Ontario N6E 3X1
www.tryrecycling.com

- there is a charge for dropoff
- accepted materials include construction debris including lumber and drywall, freon units, metal, and electronics

ENVIRO DEPOT

1450 Oxford St W.
28 Clarke Rd

Ask around. There are many manufacturers in London, and some of them are happy to give away offcuts, waste, and other materials that would otherwise go to the landfill. Let us know who has helped you out - we'll add them to our resources file.

SUSTAINABLE RESOURCES

MATERIALS - NEW - LUMBER

AFA FOREST

98 Clarke Rd
London, Ontario
519-457-2311
info@afaforest.com
<https://www.afaforest.com>

- FSC certified lumber in London
- plywood, hardwood, joints, framing for construction for building plinths, temporary structures, and moveable walls

COMMONWEALTH PLYWOOD CO

1010 Green Valley Rd
London
519-681-5304
webmaster@commonwealthplywood.com
<https://www.commonwealthplywood.com/en/>

HOME DEPOT

multiple locations in London

- look for PureBond formaldehyde-free plywood

SOURCING CLIMATE-SMART WOOD

<https://sourcing.climatesmartwood.org/>

- a useful resource for sourcing wood across North America

CANADIAN WOOD SUPPLIES

156642 Line 15 R.R #1,
Lakeside ON
647-638-8404
sales@sonofawoodcutter.ca
<https://sonofawoodcutter.ca/pages/raw-lumber-supplies>

- sustainably-sourced, Canadian lumber

ECO BUILDING RESOURCE

136 Wellington St E
Aurora ON
905-841-3535
info@eco-building.ca
<https://eco-building.ca/>

- environmentally friendly cleaners, hardware, paints/stains/finishes, adhesives
- works with contractors aiming

for LEEDS certifications

CANADIAN SALVAGED TIMBER

442 Dufferin St Unit J
Toronto ON
info@cstimber.ca
<https://www.canadiansalvagedtimber.ca/about-cst/>

- reclaimed wood
- sourced from Southern Ontario
- also sells natural, low VOC wood finishes

TIMELESS MATERIAL CO

305 Northfield Dr E
Waterloo ON
519-883-8683
info@timelessmaterials.com
<https://www.timelessmaterials.com/wood-products>

- reclaimed wood, barnboard, flooring, timber

PAINT

Wall paint for gallery installation, moveable walls and large surfaces

HOME DEPOT

multiple locations in London

- off-tint cans of paint (rejects)
- low and zero VOC paint (BEHR Premium line; look for the Ecologo)

MILK PAINT

available at Lee Valley
2100 Oxford St E

London Ontario
<https://shop.homesteadhouse.ca>

- 100% organic, biodegradable paint
- 0 VOC, non-toxic
- based on a milk protein
- good for painting plinths, shelves, lettering on walls, but not entire walls

You can also make your own milk paint - there are many recipes online.

BOOMERANG PAINT

available at RONA
820 Blythwood Road
London, Ontario
<https://www.peintureboomerang.com/en/>

- recycled interior paint
- low VOC
- they do recycle paint, but only in Quebec at this time

SUSTAINABLE RESOURCES

PAINT CON'T

RONA
ECO RECYCLED INTERIOR PAINT
www.rona.ca

- recycled from unused paint
- limited range of premixed colours
- low VOC

CHALK PAINT
available in multiple locations in London

- water-based paint
- very low VOC
- non-toxic
- unlike Milk Paint it is not completely organic and has acrylic binder

BIOSHIELD PAINT

Note - there is currently no Canadian dealer

<https://bioshieldpaint.com/pages/clay-paint-info>

- clay paint that is non-toxic, no-VOC
- ingredients are water, clay, chalk, alcohol, cellulose, pigments, and preservatives
- no plastics
- also sell organic wood stains/finishes, and household cleaners

LOOP PAINT

available at Giant Tiger locations
<https://www.looppaints.com/>

- recycled paint
- low VOC
- free paint for non-profits

Pigments for painting (i.e. canvasses)

EARTH PIGMENTS

www.earthpigments.com

- synthetic-free, natural materials made from mineral and mica powders
- these have to be shipped from France
- non-toxic
- not a renewable resource but the company has a small carbon footprint
- binder (like milk paint) is needed to use these pigments

NATURAL EARTH PIGMENTS

<https://shop.naturalearthpaint.ca/>

- based in Oregon but with a Canadian website
- pigments are collected in France by small companies who collect them responsibly
- their installations use solar power
- they use recycled, biodegradable and locally produced packaging
- the company has a strong ecological ethos

KAMA PIGMENTS

<https://www.kamapigment.com/>

- a smaller selection of colours than Earth Pigments or Natural Earth Pigments, but the company is based in Quebec and most pigments are collected nearby, meaning a much lower carbon footprint from shipping.

Watercolours and inks

BEAM PAINTS

info@beampaints.com
www.beampaints.com

- Indigenous-owned company
- beautiful watercolour paints and inks made from lightfast pigments, tree sap, gum arabic, and Manitoulin honey
- paints are wrapped in beeswax
- paint pans are made from cedar and birch offcuts from an Indigenous sustainable lumber operation
- some other supplies (paint brushes, mixing trays etc. are also available)
- some colours are available through <https://www.chapters.indigo.ca>

TORONTO INK COMPANY

email. jasonslogan@gmail.com
www.torontoinkcompany.com/

- street foraged inks
- custom colours available

You can also make your own ink from local supplies. Black walnut, black raspberry, sumac, and coffee grounds can all be used to make ink. There are lots of recipes online (but please forage responsibly).

SUSTAINABLE RESOURCES

TEXTILES AND DYES

LENS MILLS

360 Exeter Rd
Building 2, London ON
<https://lensmill.com/pages/london>

- sells fabric offcuts, including scrap vinyl, upholstery fabric, cottons, poly-leather
- although these fabrics are not sustainable materials, buying offcuts is better than buying them from scratch/off the roll
- textiles for reusable (not plastic) dustcovers in sustainable fabrics like Tencel or linen

To the best of our knowledge there is no specific dealer of sustainable textiles in the London-region.

Here is a very useful guide on the most and least environmentally sustainable textiles:

<https://www.eco-stylist.com/a-guide-to-the-most-and-least-sustainable-fabrics/>

RIVERSIDE TEXTILES

1007 Gerrard St E.
Toronto, Ontario
info@riversidetextiles.ca
<https://riversidetextiles.ca/>

- Hemp, TENCEL, linen fabrics available

EARTH INDIGO

4279 Elgin Mills Rd E
Markham ON
info@earthindigo.com
<https://earthindigo.com/>

- natural fibres
- Tencel, linen
- organic cotton, lenzing certified, Oeko-Tex certified

CANADIAN TEXTILE RECYCLING LTD

5385 Munro Court
Burlington ON
<http://canadiantextilerecycling.com/clothing.html>

- bundles of used textiles
- supply to companies that use them for industrial cleaning

AJAX TEXTILES

170 Commercial Dr
Ajax ON
<https://ajaxtextile.com/sustainability-ethics/#sustainability>

- Global Organic Textile Standard certified
- certification addresses source material plus processing methods

SIMPLIFI TEXTILES

<https://www.simplififabric.com/#>

- online only
- family-owned
- they only work with textile companies that are certified organic, and they are very up to date on what organic certification actually means
- some of their textiles have travelled a long way - remember to weigh the carbon footprint of travel against organic when making choices.

FABCYCLE

This is Vancouver-based and included here only for information as we would love to see something like this in Southwestern Ontario.
<https://www.fabcycle.shop/>

- collection service for textile waste
- TexTile re-use centre for artists and sewers.

THE COLOUR FARM

560 Terrace Road
Callander ON
hello@thecolourfarm.ca
<https://thecolourfarm.ca/natural-dyes/>

- natural, plant-based dyes
- grown and sold in Ontario
- farm also supports an apiary

G&S DYES

250 Dundas St W, Unit 8
Toronto ON
sales@gsdye.com
<https://www.gsdye.com/index.html>

- natural dyes; mostly plant-based although some are insect
- plant-based fabrics

MAIWA NATURAL DYES

www.naturaldyes.ca

This Vancouver-based company sells natural-based dyes such as cochineal and brazilwood, and also carries made resources on how to forage (responsibly) to create your own dyes from local materials. They also offer free tutorials on their teaching platform.

SUSTAINABLE RESOURCES

ART SUPPLIES

Keep an eye out for CSC-hosted art supply exchanges!

BEAM PAINTS

info@beampaints.com
www.beampaints.com

- Indigenous-owned company
- beautiful watercolour paints and inks made from lightfast pigments, tree sap, gum arabic, and Manitoulin honey
- paints are wrapped in beeswax
- paint pans are made from cedar and birch offcuts from an Indigenous sustainable lumber operation
- some other supplies (paint brushes, mixing trays etc. are also available)
- some colours are available through <https://www.chapters.indigo.ca>

BIJAN'S ART STUDIO

673 Richmond St
London ON
<https://bijansartstudio.ca/>

- Strathmore recycled paper <https://www.strathmoreartist.com/green-recycled.html>
- sand erasers <https://bijansartstudio.ca/product/tombo-mono-sand-eraser-set-2-pack/?v=3e8d115eb4b3>
- FSC certified pastel paper <https://bijansartstudio.ca/product/bee-papers-pastel-papers/?v=3e8d115eb4b3> and more recycled/sustainable products

CURRY'S ARTIST MATERIALS

820 Wharncliffe Rd S.
London, Ontario
<https://www.currys.com>

- a variety of recycled paper and sketchbooks
- Tri-Art re-harvested mediums "use re-harvested particles from other manufacturing processes to create beautiful, texture mediums." https://www.currys.com/catalogpc.htm?Category=TRI_ART_RE-HARVESTED_MEDIUMS&Source=Search

DESERRES

Multiple locations in Toronto
<https://www.deserres.ca/pages/reart-a-social-responsibility-program>

- recycling program for things like paint tubes, markers, brushes (drop-off in store)
- collection of environmentally responsible products, identifiable by eco-logo

SHARED RESOURCES + FILM

LONDON COMMUNITY WORKSHOP

195 Horton St East
London ON
info@londonwoodshop.ca
<https://www.londonwoodshop.ca/>

- woodshop
- locally-sourced wood available on site or to order through local distributors
- monthly or yearly memberships

LONDON THING LIBRARY

(opening Spring 2022)
<https://thinglibrary.ca/about-us>

- Food Processing Tools

- Garden Tools
- Hand Tools
- Building Tools
- Household items, such as door gear and arts and crafts equipment
- Low waste community event items such as cutlery, serving plates and coffee makers.
- outdoor gear and arts and crafts equipment

BULK BARN and REIMAGINE

(multiple locations and 206 Picadilly St) encourage you to bring your own containers for no-waste exhibition opening treats and installation fuel.

The CSC has some reusable

dishes that can be borrowed once COVID-regulations allow.

CAFFENOL LAB

<https://www.caffenollab.com/>

Caffenol Lab in Brantford will develop black and white film for you using environmentally friendly processes. They also sell Cawanol, their in-house film developer, which uses coffee and other eco-friendly ingredients.

SUSTAINABLE RESOURCES

MATERIALS - NEW - FRAMES

Currently, to our knowledge, there are no framers in London using FSC certified woods. We would be happy to update this section. Please note that the CSC does have a limited number of frames that can be borrowed.

SUPERFRAME

100 Geary Ave, Toronto
416-913-7590
sales@superframe.ca
<http://www.superframe.ca/>

- Frames made from sustainably harvested North American hardwood
- they can also source FSC (Forest Stewardship Council)-certified wood
- finishes are low VOC and water-based

- wood offcuts are used by pizza restaurants to burn in their ovens; foamcore and matboard offcuts are given to schools and art programs

THE ART STORE

91 Caroline St
Waterloo ON
519-744-1103
theartstoreofwaterloo@bellnet.ca

- carry a line of mouldings made from FSC certified wood

CUSTOM ART CONCEPTS

101 - 507 King Street E.,
Toronto
416-861-0544
info@customartconcepts.com
<https://www.customartcon->

[cepts.com/html/fsc/fsc-approved-products.html](https://www.customartconcepts.com/html/fsc/fsc-approved-products.html)

- the only FSC certified framing store
- all packaging and paper are recycled
- wood is FSC certified

DESERRES

multiple locations in Toronto and Oakville and online
<https://www.deserres.ca/>
<https://www.deserres.ca/pages/custom-framing>

- FSC certified mouldings are available (requires a search through the web page)

DIDACTICS AND SIGNAGE

Alternatives to vinyl lettering and labels in museums are a topic of current study at the CSC. Check in frequently for updates and see page 11 of the Resource Guide for more information.

TORONTO SIGN PAINTING

Toronto-based but will travel to London
www.traditionalsignpainting.ca/

- a pricey but stunning alternative to vinyl lettering

PVC and solvent-free vinyl is very difficult to find, and is still ecologically questionable. The CSC suggests avoiding if possible, but has included one source.

ECO-FRIENDLY CRAFT VINYL

Suwanne, GA
<https://ecofriendlycrafts.com/products/pvc-free-self-adhesive-vinyl-permanent-gloss>

- green certified
- phthalate free
- PVC-free
- solvent free adhesive
- recyclable
- it's still plastic and derived from petroleum products, with an extensive lifespan. Use with awareness of its impact.

LETTERING STENCILS

Available in multiple locations, including the CSC. If the CSC does not have the sizes you need, we suggest Above

Ground Art Supplies' cardboard lettering stencils.

<https://store.abovegroundartsupplies.com/departments/letter-stencils--amp--templates-%7CL8%7CL8B.html>

The vinyl cutter can also cut paper stencils.

The CSC encourages experimentation with signage, and has tried Beam paints and ink, black walnut ink, fabric and stencils, light and construction paper, cut letters from old posters and wall paper, chlorophyll ink, digital signage, and cyanotype. We would love to hear about your experiments!

SUSTAINABLE RESOURCES

CLEANING SUPPLIES

REIMAGINE CO

206 Piccadilly St
London Ontario
<https://reimagineco.ca/>

- cleaning supplies with zero waste packaging
- vinegar for cleaning
- all products are plant-based
- laundry detergent for washing gloves, blankets, etc

RE-USABLE GLOVES

- cotton gloves as an alternative to disposable plastic gloves

- Tencel is also a good sustainable material (plant-based and less water-intensive than cotton; less chemically intensive than bamboo)

- cotton gloves are available at Shoppers Drugmart

- Tencel gloves are available at Walmart (sold as "Eczema gloves")

<https://www.walmart.ca/en/ip/RemedyWear-Eczema-Gloves-for-Kids-Relief-From-Eczema-and-Inflammation-with-TENCEL-and-Zinc-Youth-10-12-White/1GTIRO8SE7MI>

- Lee Valley sells tencel gloves as liners: <https://www.leevalley.com/en-ca/shop/tools/apparel-and-safety-gear/gloves/31204-cotton-glove-liners>

IONIZED WATER

The Water Store
371 Wellington Rd
London ON

<https://thewaterstorelondon.com/index.php>

- ionized water is used by institutions like the Field Museum in Chicago to clean display glass, since it's a cleaner that is non-toxic, not heavily processed, etc.

- it seems very counterintuitive to recommend it since it's a bottled product that the zero-waste stores don't have, but it can be purchased in a refillable tank and decanted into reusable spray bottles.

- info about cleaning with ionized water: <http://www.dscleaning.co.uk/8-cleaning-tips/18-ionized-water-as-an-effective-cleaning-product>

MISCELLANEOUS

LONDON ENVIRONMENTAL NETWORK

https://www.londonenvironment.net/member_resources

- offers resources for running events to its members (plastic-free water stations, tents, tables, reusable cutlery and plates)
- info is also available on running green events.

If an event is longer than one day and registered with London Tourism, it may be eligible for an LTC Convention Pass which

provides free bus transit

LONDON ENVIRONMENTAL ACTION INCUBATOR

https://www.londonenvironment.net/environmental_incubator

- \$1000 grants available for orgs trying to reduce emissions, reduce waste, and enhance waterways

SUSTAINABILITY AT WESTERN

<https://sustainability.uwo.ca/>

Lots of resources here for on campus initiatives

SUSTAINABLE RESOURCES

PACKAGING AND SHIPPING

BEST BOX

Forest City Storage
277 Maitland Street
London Ontario
<https://bestbox.ca/used-boxes>

- used boxes sold for \$2.99
- multiple locations in London
<https://bestbox.ca/locations>

UHAUL

112 Clarke Rd
London ON
<https://www.uhaul.com/Articles/Sustainability/Box-Sharing-And-Green-Products-112/>

- reusable plastic bins for rent
- biodegradable packing peanuts (starch)

ULINE

www.uline.ca

Uline has many packing materials, most of which are not sustainable. They do have some starch peanuts and cellulose packing materials.

Starch peanuts: <https://tinyurl.com/jxph9xd8>

Cellulose Wadding: <https://tinyurl.com/2xmvx9ch>

Starch foam sheets: https://www.uline.ca/BL_3167/Starch-Foam-Sheets

PARADISE PACKAGING

not available in Canada. we have included it for interest
5399 Clark Rd
Paradise CA
<https://www.paradisepackaging.co/store>

- mycelium packaging made from mushrooms
- Other companies working on mycelium packaging include Evocative Designs, based in New York
- IKEA is going to use it for their packaging

If you're interested, check out this DIY workshop in Toronto
<https://nanopod.tv/tag/mycelium/>

CONTAINER EXCHANGE

Online database
Filter by location

- variety of used containers available locally
- can search by type and location
- includes wood crates, plastic bins, metal boxes, etc

- kijiji is also a good option for this, along with facebook marketplace, and buy nothing groups

PAPER PACKING TAPE

- This kind of tape can be removed without damaging boxes, written on, and recycled.
- the adhesive is natural
- it is available at multiple locations including Home Depot:
<https://www.homedepot.ca/product/duck-brand-ez-tear-paper-tape-tan-1-88-inch-x-25-yd-/1001384344>

TURTLEBOX

no fixed Canadian location – ships through fine art shippers
info@turtlenorthamerica.com

<https://turtlebox.com/en/>

- re-usable crates for shipping artwork
- flexible design makes it possible to pack and secure multiple works in a single crate
- available from Toronto through art-shippers, but they can also ship to other parts of Ontario
- rentals are very pricey, but they are used by major institutions and might be a good resource when transporting borrowed work from institutions

VIRTUAL COURRIERS

While this program may not be particularly useful for students, it is something to keep in mind for the future.

Developed by Ki Culture and Tate Gallery, here is a guide for couriating things virtually rather than sending a person with the work. This is likely not something most student curators will be doing but might provide helpful guidelines for how to navigate shipping work while minimizing non-essential travel.

https://cimam.org/documents/154/Tate_Courier_Guidelines_-_Realising_a_virtual_courier_January_2021.pdf

SUSTAINABLE RESOURCES

TRANSPORTATION

London lacks many eco-options like bike courriers, easy cargo bike rentals, electric car rentals, and so on. Many of the options included here are nascent or only periodically available. Hopefully over time, the call for more ecological solutions will lead to more options.

LONDON CYCLE LINK

London Cycle Link doesn't rent bicycles or cargo bicycles, but they advocate on behalf of cyclists in London. If you think cargo bike rentals are a good idea, London Cycle Link might be able to help make that happen.

<https://www.londoncyclelink.ca/>

BIKE WINDSOR ESSEX

Windsor, Ontario

<https://bikewindsorsex.com/programs/bike-rental/>

This is not in London, but is a good example of what could happen here.

- electric cargo bike rentals for transporting art, supplies, and other items

- approximately \$100 per day for an e-cargo bike

PUROLATOR

1070 Wellington Rd
London ON

<https://www.purolator.com/en>

- offers FSC certified packaging
- they have electric vehicle fleets in Toronto, Vancouver and Montreal but not London
- if you ship using Purolator in London, please request this service for the future:

<https://sustainablebiz.ca/purolator-first-courier-to-launch-electric-vehicle-fleet/>

ENTERPRISE

288 Horton St
1652 Dundas St
London, Ontario

<https://www.enterprise.ca/en/home.html>

- electric and hybrid vehicles available for rent (select from

"Vehicle Class" dropdown menu)

- multiple locations in different cities; can do pickup in one city and drop-off in another to save making round-trips (sometimes this costs more, check first)

COMMUNAUTO

no actual location; use the app to find cars in your area

available in Ottawa, Kingston, Kitchener-Waterloo, Cambridge, Hamilton, London, Guelph, Toronto

<https://ontario.communauto.com/>

- car sharing program (downside: there is a monthly fee, so it might not be a good choice for individuals)
-electric and hybrid vehicles available,
- Communauto pays for carbon offsetting their gas cars

LEARN MORE

The Synthetic Collective DiY Fieldguide for Reducing the Environmental Impact of Art Exhibitions can be downloaded from the solar powered website at:

www.plasticheart.solar

The website is solar powered. If it isn't sunny outside, you can download from:

<https://syntheticcollective.org/fieldguide/>

Ki Culture has produced an extremely useful series of guides on lessening waste in curatorial practice. You have to sign in to download, but the books are free:

<https://www.kiculture.org/ki-books/>

The Toolkit on Environmental Sustainability in Museum Practice provides lots of tips and great ideas for exhibition and event organization:

<https://cimam.org/sustainability-and-ecology-museum-practice/cimams-toolkit-on-environmental-sustainability/>

Art/Switch hosts well-attended virtual conferences on sustainability in the arts:

<https://www.artswitch.org/>

The Coalition of Museums for Climate Justice lists organizations that incorporate the climate crisis in their programming and programming methodology:

<https://cmcj.ca/>

The Canadian Museums Association Sustainable Development Guide includes helpful guidelines for museums:

<https://www.museums.ca/client/document/documents.html?categoryId=361>

WHAT WE LEARNED

It's tough to navigate what is really sustainable and what is greenwashing. This is especially true for printing and waste disposal. We had many disappointing phonecalls! Hopefully this guide will help you to make more sustainable decisions and to learn what to look for. We also learned a lot about making our guide and files more accessible. Our intention is to share the source files so that anyone else can adjust and use for their own location. However, because we used proprietary software, the files won't be as open as we hoped - other editors will need to use the same software. Lesson learned - next time we will start with open source and freely available editing software. This guide is a living document and will be updated frequently. Please feel free to contact us to suggest updates.

SYNTHETIC COLLECTIVE MANIFESTO

FOR CURATING AND MAKING ART IN A TIME OF ENVIRONMENTAL CRISIS



- 1.** If you're going to make it, make it count.
- 2.** Lead by example.
- 3.** Take steps to mitigate environmental damage of art making and exhibitions. Doing so reveals other economies of inequality and acknowledges the art world's culpability in upholding systems of oppression. Projects should enhance initiatives aimed at preventing, reducing, and mitigating harm.
- 4.** Learn about the toxicity and harm of materials involved in the production of artworks/exhibitions. Consider what is involved in their production and what that means for the environment. Weigh this information against point 1.
- 5.** Reuse and recycling can happen at every stage: different aesthetics for exhibition curation that privilege reuse over new materials should become the norm.
- 6.** Invest in alternate shipping systems and packing practices. Borrowing from a smaller geographic region, reusing packing materials and crates, and finding low-carbon methods of transportation should be standard.
- 7.** Avoid transferring responsibility: carbon offsets alone are not enough and should be understood as greenwashing.

8. Negotiate exhibition, acquisition, and preservation policies. Upon the acquisition of artworks, artist contracts should include clear choices with regards to whether or not artworks should be preserved/conserved. Not all art works need to be thought of as permanent or unchanging.

9. Build circularity into in-house materials and energy use: use exhibitions to implement longer term strategies for carbon reduction, which may include contracts with museums or galleries for concrete measures to reduce fossil fuel dependency such as sourcing energy from green(er) suppliers or establishing exchange systems among local museums for exhibition furniture. Establish in-house standards and measurement protocols to reach targets. LEED programs are not enough if it means that new capital plans and building projects are foregrounded as the only way forward for museums.

10. Embrace enough: an aesthetic goal of achieving maximum impact with the minimum of resources. That goal requires drawing a line of “enough” at every decision point, including energy systems and work schedules.

The Synthetic Collective espouses an approach of enough. We see this as meaning that ecological footprints must be taken into account when weighing aesthetic decisions. An aesthetic of enough is one that simultaneously acknowledges and values the past, present, and future—enough already!—in its refusal of high carbon, high energy, high waste productions. An approach of enough requires humility, and practicality: sustainability, in terms of resources and human energy, is directly linked to systems that can break if we overspend them. It means we should put in a lot of effort to build more equitable worlds, but that should be accompanied with an ethic of care, mindful that we don't burn out and the planet doesn't burn up. Enough is an aesthetic based in achieving maximum impact with the minimum of resources. Enough is a counterpoint to the implied goal of museum-standard perfection and a culture that valorizes work above all else.

www.sustainablecurating.ca

sustainable.curating@uwo.ca



Western
Arts & Humanities