

# the **edmonton** **Specifier**

Construction Specifications Canada is an organization representing diverse interests in the construction industry and related professions. It is dedicated to improving the quality and flow of information between these interests, whether in the form of specifications, contract administration or marketing.

May 2023 Edition

Editor: Tracey Stawnichy

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## CSC ANNUAL CHAPTER MEETING

**Date:** Tuesday, May 9, 2023

**Time:** 11:45am – 1:00pm

**Location:** The Matrix Hotel  
10640 – 100 Avenue, Edmonton, T5J 3N8

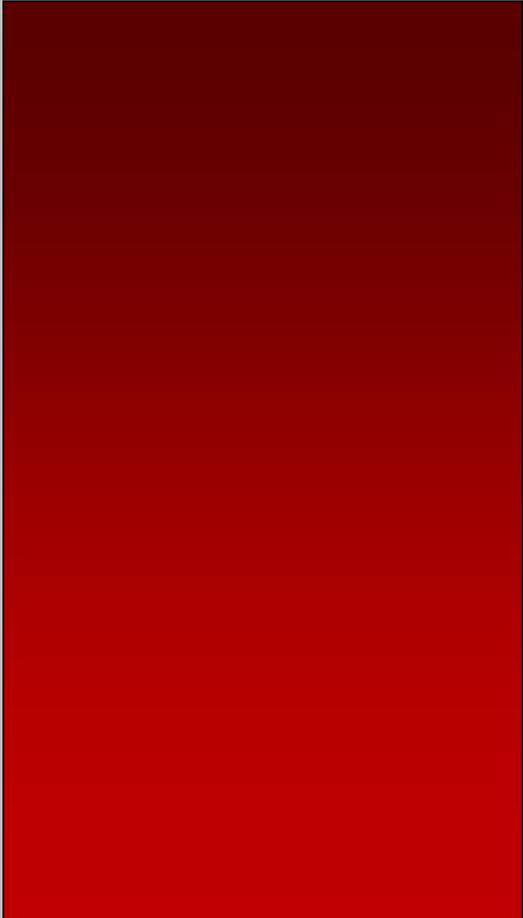
The Edmonton Chapter Executive welcomes its Chapter members to attend the Annual Chapter Meeting. As a member you will have the opportunity to learn of the initiatives and accomplishments the Chapter has done in the past year and meet the upcoming chapter executive for the 2023 - 2024 Season.

Sponsors will have the opportunity to provide a brief (5 minute) presentation on their company/product line. Please note sponsorship is limited to 2 spots.

Registration begins at 11:45AM

Lunch begins at 12:00PM

Meeting begins at 12:10PM



<b>2023 / 2024 Edmonton Chapter Executive</b>		
<b>Director</b>	Tracey Stawnichy	780 994 3699
<b>Chairman</b>	Andrew Brassington	587 341 5268
<b>Vice-Chairman</b>	Dylan Leclair	587 335 9552
<b>Secretary</b>	Jessica Prosser	587 340 7169
<b>Treasurer</b>	Catherine Osborne	780 705 7108
<b>Architectural</b>	Kevin Osborne	780 717 1007
<b>Chapter Liaison</b>	Position Open	
<b>Education</b>	Mike Ewaskiw	780 237 7844
<b>Engineer</b>	Jamie Murphy	780 983 0288
<b>General Contractor</b>	Position Open	
<b>Interior Design</b>	Corry Bent	780 995 1647
<b>Manufacturer/Supplier</b>	Mike Lafontaine	780 907 4920
<b>Marketing, Promotion, and Communications</b>	Jamie Murphy	780 983 0288
<b>Membership</b>	Dave Lawrence	780 901 7260
<b>Newsletter</b>	Tracey Stawnichy	780 994 3699
<b>Specifications</b>	David Watson	780 758 4147
<b>Website Administrator</b>	David Watson	780 758 4147
<b>Trade Contractor</b>	Kevin Kramers	587 232 0613
<b>Program</b>	Abby Sharpe	587 338 9194
<b>Owner's Rep</b>	Cam Munro	780 231 1739
<b>Sustainability</b>	Position Open	
<b>At Large</b>	Dave Lawrence	780 901 7260

<b>Advertising Rates</b>
<p><b>Business Card: April 1 to May 30</b>                      Rates cover your ad on our website 24 hours per day, 7 days per week.                      Business card on-line:                      Annual \$100 if received by May 1;                      \$75 if received by August 1;                      \$50 if received by November 1;                      \$25 if received by February 1                      Add \$50 to have a link to your company web site from the CSC Edmonton Chapter web page.</p>

<b>Chapter Sponsor</b>
<p><b>New Chapter Sponsor Bundles:</b>  <a href="http://edmonton.csc-dcc.ca/About+Us/Sponsor+Opportunities++CSC+Edmonton+Chapter/">edmonton.csc-dcc.ca/About+Us/Sponsor+Opportunities++CSC+Edmonton+Chapter/</a></p>

<b>Student Sponsor</b>

<b>Meeting Sponsor</b>
<p>\$50 for Individual (personal) Sponsor                      \$250 for Corporate Sponsor</p>

**FOR FURTHER INFORMATION**

Contact any member of the Executive, attend one of our Chapter Meetings, send your name and address to CSC Edmonton Chapter, PO Box 35093 Mid Town PO. Edmonton, AB T5J 0B7, or go to [edmonton.csc-dcc.ca](http://edmonton.csc-dcc.ca) for additional contact information.

**GOALS OF CSC**

Construction Specifications Canada is a multi-disciplinary non-profit association dedicated to the improvement of communication, contract documentation, and technical information in the Construction Industry. CSC is a national Association with Chapters in most major Canadian Cities.

To this end, CSC pursues the study of systems and procedures that will improve the coordination and dissemination of information relevant to the construction process.

We seek to enhance the quality of the design and management aspects of the construction activity through programs of publication, education, and professional development, believing that by so doing, we can contribute best to the efficiency and effectiveness of the construction industry as a whole.

**OBJECTIVES OF CSC**

To foster the interest of those who are engaged in or who are affected by the compilation or use any forms of specifications for the construction industry.

To publish literature pertaining to the construction industry.

To engage in activities to improve procedures and techniques related to the construction industry.

**The opinions and comments expressed by the authors do not necessarily reflect the official views of Construction Specifications Canada. Also, appearance of advertisements and new product or service information does not constitute an endorsement of those featured products or services.**

## Announcements:

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*Congratulations to Peter Heibert, FCSC, CTR and Steve Gusterson, FCSC, CTR on being awarded life memberships in CSC!*

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## Chair's Message

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**Andrew Brassington, CSC Edmonton | Chapter Chair**

Hello Chapter Members,

Welcome to May! It's incredible how fast summer creeps up on us. I want to say a special thank you to all the sponsors that supported INFONET this year. We also appreciate the participation of the NAIT students. Every year this event raises a significant portion of the bursary that we provide to support students in our industry. I am now halfway through my second term as chapter chair. We have our annual AGM on May 9th. If you are interested in a role on the Executive, please attend the meeting. You will also get more information about next season's events/educational opportunities. Please reach out to me or the Executive Committee if you would like more information. Don't forget to register for the ACM. Our National Conference is this month as well. If you are in attendance, make sure you come to the AGM on the Saturday to support our Chapter!

Cheers!

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## Membership in CSC

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**Dave Lawrence**



In the construction industry's fast-paced environment, the need for and value of Construction Specifications Canada is greater than ever. CSC brings together individuals from all segments of the construction industry. All who have a vested interest in Canada's largest industry are invited to join CSC. When you join CSC, you become part of the only association that brings together professionals from all aspects of the construction industry.

### DESIGN TEAM

CSC offers members of the Design Team the opportunity to meet with other members and exchange information. It also affords you the chance to help improve technology and its management, and the means to improve ways in which your ideals are translated into clear, concise, and complete documentation.

### BUILDING TEAM

If you are a member of the Building Team, CSC offers you the opportunity to become involved in formulating specifications. Your valuable input into the programs can help generate time and cost savings, as well as improve performance.

### SUPPLY TEAM

The multi-disciplinary composition of CSC allows members of the Supply Team to meet with other members of the construction team. CSC programs in data filing and information retrieval are geared to present convenient and concise information on your products for proper evaluation and specification.

## THE STUDENT

If you are a student of architecture, engineering, or construction technology, CSC will provide you with a greater exposure to, and a better understanding of, the construction industry, giving you an excellent opportunity if you plan a career in the construction field.

## People and Places – Welcome to new and past CSC Edmonton Chapter Members!

### Fresh Faces (New Members)

None this month.

### Yes, We've Moved (Contact / Mailing Address Update)

### Previous Members Re-Joining / Re-Activated

#### **Dawna Moen, Senior Associate**

Stantec Architecture Ltd.

400, 10220 – 103 Street, Edmonton, AB T5J 0K4

P: (587) 991-9520

Email: [dawna.moen@stantec.com](mailto:dawna.moen@stantec.com)

## CSC Education:

**Mike Ewaskiw, CTR, Manager, Architectural & Engineering Services, Stonhard**



### Principles of Construction Documentation

The PCD course is an introductory course that will enable the student to have a better understanding of construction documentation (specifications, drawings, and schedules), products, bidding procedures, and contracts. **It is also a prerequisite to all the other CSC education courses.**

### Specifier 1

Specifier 1 is an intermediate level course that will take the individual beyond the concepts previously introduced in the PCD Course. Although some of the same topics are included, the depth of comprehension and explanation exceed that of the PCD course. The Specifier 1 is a prerequisite for the Certified Specification Practitioner (CSP) designation from CSC. Successful completion of the course may be credited toward the experience component requirements for the Registered Specification Writer (RSW) designation.

### Technical Representative

The TR course provides a better understanding of contract documents and bidding procedures, product representation, professionalism, and ethics, and will provide a new depth of understanding and explanation of concepts beyond what was previously introduced in the PCD course. The course is designed for the individual involved in the supply section of the construction industry, such as manufacturer representatives, agents, or distributors of products. The student will have successfully completed the PCD course. **Contact Mike for all your education needs.** P: 780-237-7844 E: [mewaskiw@stonhard.com](mailto:mewaskiw@stonhard.com)

## EDUCATION COURSES

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### Upcoming Classes:

Principals of Construction Documentation (PCD) – Monday, September 11, 2023 / Location TBD  
Specifier – Monday, September 11, 2023 / Location TBD  
Construction Contract Administration (CCA) – Monday, September 11, 2023 / Location TBD  
Technical Representative (TR) – Monday, September 11, 2023 / Location TBD

### Upcoming Classes Online:

Principles of Construction Documentation (PCD) – TBD  
Construction Contract Administrator (CCA) – TBD  
Specifier – TBD  
Technical Representative (TR) – TBD

### Upcoming Virtual Classes:

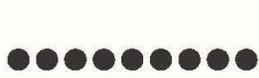
Principles of Construction Documentation (PCD) – TBD  
Construction Contract Administration (CCA) – TBD  
Specifier (SP) – TBD  
Technical Representative (TR) – TBD

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### Social Media:

Check us out:





# CSC AND ABECN ANNUAL GOLF TOURNAMENT

**\$175 EARLY BIRD  
\$225 AFTER EARLY BIRD  
CSC / ABECN MEMBERS**

**\$200 EARLY BIRD  
\$250 AFTER EARLY BIRD  
NON-MEMBERS**

**HOLE SPONSOR \$500 (17)**

**HOLE IN ONE SPONSOR \$750 (1)**

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- LOGO SIGNAGE ON ONE HOLE
- ACKNOWLEDGEMENT AT EVENT/MARKETING MATERIALS
- HOSTED HOLE AVAILABLE

- 2 PLAYER SPOTS
- LOGO SIGNAGE ON ONE HOLE
- TABLE SPACE ON ONE HOLE
- CONTACT US FOR FURTHER DETAILS

**50/50 SPONSOR \$500 (2)**

**POWER CART SPONSOR \$600 (2)**

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- 2 PLAYER SPOTS
- CARTS ADVERTISING COMPANY LOGO
- ACKNOWLEDGEMENT AT EVENT/MARKETING MATERIALS

**BREAKFAST SPONSOR \$700 (2)**

**LUNCH SPONSOR \$800 (2)**

- 2 PLAYER SPOTS
- TABLE SPACE IN CLUBHOUSE
- ACKNOWLEDGEMENT AT EVENT/MARKETING MATERIALS

- 2 PLAYER SPOTS
- TABLE SPACE IN CLUBHOUSE
- ACKNOWLEDGEMENT AT EVENT/MARKETING MATERIALS



<b>2023</b>	<b>COAL CREEK GOLF COURSE</b>
<b>JUNE 15</b>	18112 TOWNSHIP RD 492, RYLEY AB T0B 4A0



**EARLY BIRD DEADLINE: MAY 12TH, 2023  
FINAL DEADLINE: MAY 31ST, 2023**

## MEET YOUR CSC EXECUTIVE COMMITTEE MEMBERS

**Dave Lawrence, FCSC, CTR, Retired**

**Officer – Membership / Officer – At-Large**



What motivated you to join the industry?

I left the contracting business in the early 80's to join a multi-national manufacturing firm. My new manager, who was a CSC member, took me to a CSC meeting at the South Side Legion. After being warmly welcomed and experiencing the breadth of knowledge of the personnel present, I decided to join. That was the second best decision in my life, (the first was having Vicki to agree to marry me). I have had a wonderful sales career with much of it due to the strong relationships garnered through my

CSC membership. Please remember that when you travel out of town or province, you are welcome to attend another Chapter's meeting. With Canada-wide responsibilities, this is a great way to get to know the key contacts in the construction industry.

How long have you been in the industry?

I was in marketing of commercial roofing decking and siding with a Roofing Contractor from 1973. Since then, I have been in Business Development with a variety of manufacturers, all of whom have supported my involvement with CSC. Since joining CSC in the early 80's until retirement a year ago, I have enjoyed CSC activities, all that I will remember fondly. I just received a letter from our Association Executive Director that I will receive my 40-year pin at the awards luncheon at the Annual Conference in Calgary the end of May. I highly recommend that every member attend the conference. What an opportunity to broaden your experiences and knowledge with members from across Canada and some from US as well, especially being so close.

What's the one thing people would be surprised to learn about you?

I believe it would be my love of heights. No, not just the winning of the W.R Grace Salesmasters' award with all the travel perks that went with it (Vicki loved the Freedom Trail in Boston the best) but physical heights. From my home town Peace River – climbing up the long steel trestle RR bridge (yes, my friend and I were crazy daredevils), climbing the now all fenced St Paul communications tower in grade 7 (yes, it does sway a lot at the top), to hiking up Mt. Kilimanjaro (well worth the experience), I have always enjoyed getting to the highest point available in the location where I am visiting.

On the same topic, I visited the Shanghai Tower, the second tallest building in the world at 128 storeys. It had virtually no acceleration or deceleration feeling during its amazingly quick one-minute ride. It is an engineering marvel as the elevator and observatory floors are all pressurized equally so there is no ear popping. The tallest building in the world is the Burj Khalifa in Dubai with 163 usable floors. The observation platform is on the 144th floor (about 2/3 of the way up) with the rest over the 163rd floor being communications tower and steel to make it the highest. It was kind of a let down as far as technology goes, but the view was great. Every 30 minutes after dusk there are different water displays set to music (like the Bellagio in Vegas) with amazing, programmed LED lights to match the music on the tower as well.

At the local level, Vicki and I, along with a small group of CSC members, were so fortunate to be able to go to the top (mechanical floor) of the Stantec Tower in Edmonton (tallest in western Canada) during construction. Many thanks to CSC member Shaune Smith for organizing this very special event!

What's the most interesting project you have been a part of?

In the late 80's self adhesive and torch-on bituminous membranes were starting to be considered for institutional buildings as an air/vapour barrier in a ventilated rain screen assembly. One of the early innovators was a CSC member who worked for Roman Kujath Architect. He went out on a limb to adopt this concept and specified the sole sourced membrane I was representing. PCL had me out with all the exterior trades to go over the new concept and what was expected of them with regard to penetrations and junctions. This was very new to most of the trades. I am happy to report that to this day, the hospital has performed extremely well with a low mechanical heating bill compared to previous types of construction.

What's the one thing you'd like to see in the next 20 years?

I preface this with the fact that I am very much on the side of sustainability and energy conservation. We have the new building code with very high standards for institutional and many commercial buildings. This is great and really helps the environment. However, the majority of residences that use up so much of the energy needed for heating are far behind in building science technology and energy saving code requirements. We are wasting so much, using up valuable resources and putting unwanted gases into the environment. I would really like to see us push to have better constructed houses. I love the Net Zero concept as a great start.

Although that was end of questions, I recommend that every person in the construction industry strongly consider membership in CSC , not only to promote better specifications, and enhance communication in the industry, but to enjoy the social factor which will bring you an enjoyable and successful life. I know this personally written article is not of F. Ross Browne quality but thanks to your Editor, Tracey, for the chance to share my thoughts.

Kind regards, Dave.

## Articles of Interest

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### **Baking Soda May Help Concrete Absorb Carbon, MIT Researchers Find**

Sourced from: <https://archinect.com> / Niall Patrick Walsh

New research from MIT has found that adding sodium bicarbonate, otherwise known as baking soda, to concrete mixtures may make a significant dent in the material's carbon footprint. The findings, published recently in the journal PNAS Nexus, also suggest that the addition of sodium bicarbonate may accelerate construction times through quicker concrete setting.

The research was led by MIT professors of civil and environmental engineering Admir Masic and Franz-Josef Ulm, MIT postdoc Damian Stefaniuk, doctoral student Marcin Hajduczek, and James Weaver from Harvard University's Wyss Institute. With concrete production accounting for approximately 8% of global carbon dioxide emissions, and concrete being the world's second most consumed material after water, the team sees innovation in the material's environmental performance as being a key component to reducing global greenhouse gas emissions.

Half of the emissions associated with concrete production come from the burning of fossil fuels to heat up a mix of limestone and clay to ultimately create cement powder; emissions which the team notes could be limited by increased adoption of renewable solar and wind sources. The other half of emissions are generated by the release of carbon dioxide from the limestone-clay mixture during the heating process, whose mitigation is less obvious.

According to the latest MIT paper, such emissions could be partially offset through the addition of sodium bicarbonate during concrete production, when the cement mixture is combined with water, sand, and gravel. According to the team, the addition of sodium bicarbonate to the mixture has proven to induce a carbon sequestration process, whereby CO<sub>2</sub> is absorbed and crystalized within the concrete mixture before it dries, thus 'locking in' the CO<sub>2</sub>.

The concept of concrete absorbing CO<sub>2</sub> is not new. Traditional concrete has the capacity to absorb carbon for decades after construction, claiming back up to 40% of the emissions released during the initial cement mixing process according to the MIT paper. However, the absorption of CO<sub>2</sub> at this late stage is actively discouraged due to the potential for newly-formed carbon crystals to weaken the material's performance, cause cracks, and accelerate the corrosion of steel reinforcement in concrete.

MIT's new approach of adding sodium bicarbonate, by contrast, shifts the carbon absorption to the concrete mixing and curing phase, where the formation of carbon crystals occurs before the material dries, thus having no detrimental impact on its subsequent performance. In lab tests using the sodium bicarbonate substitution, the team demonstrated that up to 15% of the total amount of carbon dioxide associated with cement production could be mineralized during these early stages.

"It's all very exciting because our research advances the concept of multifunctional concrete by incorporating the added benefits of carbon dioxide mineralization during production and casting," team leader Masic said about the study. "Furthermore, through its formation, we can double the mechanical performance of the early-stage concrete." News of the research comes one week after LEVER and Atelier Ten published a paper seeking to 'debunk four mass timber myths,' and one month after a new 3D printing factory was unveiled in Mexico that aims to cut construction times by 50%. Also in March, University of Michigan researchers merged 3D printing with computational design to create 'ultra-lightweight, waste-free concrete,' while in February, an IAAC/WASP team created a 'solid and expressive' 3D printed wall made from earth.

## New Research Building in Antarctica Sealed in Time for Winter

Sourced from: <https://www.globalconstructionreview.com> / Rod Sweet

A new octagonal operations tower will give 360-degree views of the runway, wharf, and station buildings at the station (photo: Christopher Robert Lloyd)



A far-from-home construction team has managed to make a major new research building at the UK's Antarctic Rothera Research Station weathertight before winter descends on the Earth's coldest continent.

In its fourth summertime construction season, contractor BAM, with technical advisor Ramboll and designer Sweco, managed to finish the cladding and install an operations tower on the British Antarctic Survey's new Discovery Building before making the long journey back to springtime Europe.

The team of around 54 people battled harsh conditions to complete this milestone, British Antarctic Survey said. They'll return to the station on Adelaide Island in November this year for the penultimate building season, with completion scheduled for 2025.

### Past fame and future challenges

Ninety metres long and with a total area of 4,500 square metres, the two-storey Discovery Building will replace several buildings at the end of their lives and will bring scientific and operations functions together under one roof.

Rothera is the UK's largest Antarctic research hub. Scientists there study climate, biodiversity, and ocean science.

The new building is named after the Royal Research Ship (RRS) Discovery, which made its first scientific research expedition from 1901 to 1904, commanded by Captain Robert Falcon Scott with famous explorers Ernest Shackleton, Edward Wilson, and Frank Wild on board.

Ninety metres long and with a total area of 4,500 square metres, the two-storey Discovery Building will replace several buildings at the end of their lives and will bring scientific and operations functions together under one roof (photo: Christopher Robert Lloyd)



The building's design looks to the future with British Antarctic Survey's 2040 net zero ambitions in mind.

Its combined heat and power plant should cut the station's carbon emissions by 25%. This, along with photovoltaic solar panels, a thermally efficient building envelope and triple glazing, will make the building an exemplar for energy efficiency in the extreme setting.

### **One chance to get it right**

Other features include a wind deflector – the largest of its kind in Antarctica – to prevent thousands of tonnes of snow accumulating around the building, and an octagonal operations tower to provide 360-degree views of the runway, wharf and station buildings.

The project team includes construction partner BAM, design consultants Sweco and Hugh Broughton Architects providing delivery design. Ramboll is acting as technical advisors, with Norr Architects providing concept design, OFR providing fire consultancy, and Turner & Townsend providing cost and commercial advice.

Work began on the new building in 2019. Construction phases must be planned meticulously because all materials have to be shipped from the UK. Every nut and bolt must be accounted for as the nearest builders' merchant is thousands of miles away.

The construction team practiced full-scale assembly of the 45-tonne steel frames in Southampton to identify unexpected challenges or additional pieces of equipment needed whilst still in the UK.

Ahead of the 2020-21 construction season amid the covid pandemic, the crew had to quarantine for two weeks before travelling by ship to Antarctica.

## Collaborative approach to design and construction

“Reaching this milestone safely on such a complex construction project in such an extreme environment is testament to the dedication and motivation of the highly skilled project teams within BAM, BAS, Ramboll and Sweco and our supply chain partners,” said Graham Hopper, project director at BAM.

Architect Hugh Broughton said: “The works completed this season demonstrate the benefits of a collaborative approach to design and construction and are a testament to the skill and perseverance of a committed team, working on the project in Antarctica and in the UK.”

Construction phases must be planned meticulously because all materials have to be shipped from the UK (photo: Christopher Robert Lloyd)



## Inside the Discovery Centre

When complete, the new building will make work and life easier for British Antarctic Survey's staff at Rothera, who number around 100 in summer and 20 in winter.

Its plant room and energy centre will recover heat and distribute power and water to the station, as well as housing fire suppression pumps.

A new central store will consolidate equipment and cargo for more effective stock control and management, with reduced manual handling.

New workshops, operations hub, and offices will help scientists prepare for field expeditions, while a new communications tower will maintain better contact with aircraft and groups in the field.

Its medical centre is designed to modern healthcare standards. Improved training facilities include a climbing wall for expedition teams and an education centre.

Enhanced wellbeing areas include a gym, breakout areas, a music centre, and an arts and crafts facility.

## Interior Design

An end-to-end corridor through the building cuts the need to access different parts of the building from outside, thus minimising heat loss.

A central store in the middle of the building provides easier access for building users.

Health and safety features include transparent glazed screens between spaces to increase visibility, and distinct colours to quickly identify sections of the building.

Modular design so the building can be adapted for future needs.

Elen Jones, director of the British Antarctic Survey's Infrastructure Modernisation Programme, called the building's enclosure this season a "major milestone".

It was, she said, a "testament to our collaborative approach to infrastructure project delivery in Antarctica".

## Native Forests, the Landscaping that Cities Need

Sourced from: <https://www.archdaily.com> / José Tomás Franco

During the 19th century, efforts to improve the quality of urban life focused on creating gardens and parks, marking the beginning of the evolution of landscaping as a modern discipline. However, despite remarkable examples worldwide, excessive structure and artificiality in urban parks have gone against the motivations that gave rise to them. In many cases, their design has resulted in decontextualized and inefficient public spaces that are highly demanding on resources and far from being truly sustainable.

The strict use of geometry and the imposition of species that are difficult to adapt and care for are gradually giving way to a more organic approach to landscaping, tailored to local ecosystems and more efficient in its development and conservation. Native forests embody all these positive aspects. They not only ecologically restore degraded areas but also improve air quality and retain rainwater, creating biodiverse green spaces that deeply connect people with nature. We spoke with Magdalena Valdés, founder and director of Bosko, who explains why native forests are the right path towards conscious and truly ecological landscaping.

**José Tomás Franco:** To generate fast-growing native forests you use the Akira Miyawaki method of ecological restoration. What does this system consist of, and why is it important in the current context?

**Magdalena Valdés (Bosko):** The Miyawaki Method is an intensive ecological restoration system. This means that, with the objective of reconstituting a certain reference ecosystem, it aims to imitate the conditions of that ecosystem in its mature version. For example, if the ecosystem corresponds to a temperate forest, the soil conditions and plant species that would exist in that place if there had been no human intervention are observed.

So then, the soil is worked to enhance its oxygenation and enrichment with organic matter, until it reaches certain characteristics that are similar to the soil of a mature temperate forest. Similarly, the possible species are selected from all the strata typical of that ecosystem, and they are planted in high density, that is, from 3 to 5 plants per square meter. In this way, collaboration between the species that have coexisted for hundreds of thousands of years is fostered, and their competition for nutrients and light is stimulated, just as in any forest.

Finally, the soil is covered with a layer of mulch in order to protect it from solar radiation and promote the multiplication of microbiological life in it, which facilitates the interactions of the forest and makes it

increasingly complex.

*“The Miyawaki method makes it possible to recover properties of the original ecosystem and obtain environmental benefits, such as improving air quality, reducing ambient temperature, and filtering and retaining rainwater. However, one of its significant benefits is that it produces native forests with accelerated growth, which translates into highly attractive spaces from a human perspective. It allows us to perceive how degraded soils grow and transform into exuberant forests, which become shelters for biodiversity and people in a short time.”*

This makes them ideal for installation in urban spaces. Their impact is not only ecological, by capturing CO2 and other pollutants, but also profoundly social, by bringing people closer to the knowledge, attachment, and care of their own natural heritage within the city. Hundreds of Miyawaki forests have been created in cities in Asia and Europe, and now at Bosko, we are doing the same in different parts of Chile.

José Tomás Franco: The concept of restoration is widely used to bring circularity strategies closer to architecture. However, it seems to be limited only to the design of specific projects and the selection and management of their materials. How can ecological restoration help integrate an architectural project into the natural space where it is located and beyond?

Magdalena Valdés (Bosko): Ecological restoration aims to assist in the recovery of degraded, damaged, or destroyed natural environments, rebuild their biodiversity, and restore their ecosystem services.

*“The development of an architectural project necessarily impacts the location where it is situated and its ecosystem. In this context, acting with conservation logic (when it is a project located in a natural environment with minimal intervention) and following ecological restoration can be valuable perspectives to properly integrate a project into its natural environment and mitigate the intrinsic intervention’s consequences.”*

The Miyawaki system, in particular, is an excellent tool for addressing highly degraded terrain, especially in cities. Due to its high degree of work per square meter, it generates a significant positive impact in the short term, accelerating the repair and recovery of a damaged space and transforming it into a biodiverse nucleus. Our work aims to contribute to imagining a piece of land, a neighborhood, or a city as an integrated and efficient green network of forests and urban vegetation, amplifying its impact and achieving more ambitious socio-environmental objectives with a holistic vision.

Urban forests present an opportunity to reintroduce nature to our cities, creating biodiverse and dynamic sources that can also improve people's quality of life: they purify the air, reduce the effect of heat islands, improve climate resilience, and confer a multitude of well-documented benefits to people's physical and mental health.

José Tomás Franco: Landscaping associated with architectural projects appears to prioritize the selection of "trendy species" for aesthetic purposes, which seems to go against what you propose. How do you approach traditional landscaping differently, and what additional benefits can it provide? To what extent is it possible to manage and accommodate the visual appearance of a Miyawaki forest?

Magdalena Valdés (Bosko): At Bosko, we consider ourselves agents of a distinct type of landscaping that is ecological, aesthetic, and functional, with the aim of achieving a deeper connection between people and nature.

*“Native forests provide a more sensory type of landscaping that connects people in a more intimate way with nature, providing shelter, shade, intimate spaces, flows, rhythms, sounds, and smells.”*

The design of a Miyawaki forest can be highly adaptable in its layout, incorporating paths, walkways, empty and full spaces. However, ecological criteria should always be the priority, respecting the "body of forest," which is a minimum area required for nature to flourish and develop properly. We design Miyawaki forests by prioritizing the placement of species inside, creating a rich and diverse forest. For the contour, however, our criteria is more aesthetic in selecting the most attractive native species, such as herbaceous ones with showy flowers, to enhance their wild and dense appearance.

The Miyawaki forests created by the Swiss NGO SUGi, a great collaborator and inspiration for Bosko, for the Vuitton and Moët Chandon Foundation in London, are beautiful examples of the fusion between ecology and aesthetics.



Another example recently executed by Bosko in Chile is the Adriana Hoffmann Native Garden at the Mirador Interactive Museum (MIM), where the design incorporates shapes and paths, along with an adequate distribution of species and heights, creating welcoming and attractive spaces for visitors.

José Tomás Franco: Could you explain the process for restoring a "new soil"? What factors should be taken into consideration, and how long does it typically take for the soil to be restored?

Magdalena Valdés (Bosko): The soil improvement process begins with observation and analysis. The objective of a Miyawaki forest is to imitate the reference ecosystem in its mature state. This means projecting the same soil to intervene, as if there had been no human intervention. In a space where a forest should have existed, the soil should be loosened, oxygenated, and full of microbiological life associated with bacteria and fungi, as well as organic matter. Additionally, it should be covered with leaf litter typical of the forests, including twigs, decayed trunks, countless leaves, and dead insects. The mission is to loosen the soil to oxygenate it, incorporate organic matter in a dose that allows reaching an adequate minimum for the healthy development of the forest, and cover it with mulch to simulate the protective leaf litter on the forest floor.

The duration of this process, which is key in the creation of a Miyawaki forest, can range from 3 days to 2 weeks depending on factors such as the complexity of the soil and the size of the future forest.

José Tomás Franco: How have you seen the evolution of your first forests and regenerative landscaping projects after a few years? What kind of benefits can you start to notice?

Magdalena Valdés (Bosko): Our first Miyawaki forest, which covers an area of 280 m<sup>2</sup> in Pirque (Chile), was planted three and a half years ago. Currently, its canopy reaches over 8 meters in height, largely comprised of maytenus and soap bark trees. The forest boasts high biodiversity, with approximately 80% of native flora species surviving, and serving as a thriving habitat for a range of birds and insects including quebracho butterflies, giant hummingbirds, and beetles.

Its soil is soft, humid and covered with organic litter. Its temperature is considerably lower than the temperature outside, and upon entering its empty center, which is specially designed for the Japanese practice of "forest bathing" or Shinrin-yoku, one experiences a sense of peace and disconnection.

Since its planting, this Miyawaki forest has reduced water consumption by 60% and does not require maintenance, except for personal interests. As Akira Miyawaki said, "the best management of a forest is its non-management."



## ASSOCIATION LINKS

- **Alberta Construction Safety Association (ACSA)**  
[www.acsa-safety.org](http://www.acsa-safety.org)
- **Alberta Building Envelope Council (ABEC)**  
[www.abecnorth.org](http://www.abecnorth.org)
- **Building Information Modeling (BIM) Forum**  
[www.insightinfo.com/bimforum](http://www.insightinfo.com/bimforum)
- **Biomimicry Guild**  
[www.biomimicryguild.com](http://www.biomimicryguild.com)
- **Canadian Green Building Council (CaGBC)** [www.cagbc.org](http://www.cagbc.org)
- **CCDC Documents**  
[www.ccdc.org/home.html](http://www.ccdc.org/home.html)
- **Construction Specifications Institute (CSI)** [www.csinet.org](http://www.csinet.org)
- **International Construction Information Society (ICIS)** [www.icis.org](http://www.icis.org)
- **OmniClass**  
[www.omniclass.ca](http://www.omniclass.ca)  
[www.omniclass.org](http://www.omniclass.org)
- **Uniformat**  
[www.csinet.org/uniformat](http://www.csinet.org/uniformat)
- **Institute for BIM in Canada (IBM)**  
[www.ibt-bim.ca](http://www.ibt-bim.ca)
- **Architecture 2030**  
[www.architecture2030.org](http://www.architecture2030.org)
- **BuildingSMART Alliance** (North American Chapter of BuildingSMART):  
[www.buildingsmartalliance.com](http://www.buildingsmartalliance.com)  
**BuildingSMART International (formerly IAI)**  
[www.buildingsmart.com](http://www.buildingsmart.com)
- **Biomimicry Institute**  
[www.biomimicryinstitute.org](http://www.biomimicryinstitute.org)
- **Canada BIM Council**  
[www.canbim.com](http://www.canbim.com)
- **Canadian Green Building Council (CaGBC) – Alberta Chapter:**  
[www.cagbc/chapters/alberta](http://www.cagbc/chapters/alberta)
- **Construction Specifications Canada (CSC)**  
[www.csc-dcc.ca](http://www.csc-dcc.ca)
- **buildingSMART Data Dictionary**  
[bsdd.buildingsmart.org](http://bsdd.buildingsmart.org)
- **MasterFormat**  
(<https://secure.spex.ca/siteadmin/freedocuments/images/1.pdf>)
- **buildingSMART Canada**  
[www.buildingsmartcanada.ca](http://www.buildingsmartcanada.ca)
- **Ace BIM**  
[www.acebim.ca](http://www.acebim.ca)

## ASSOCIATION LIAISONS

Alberta Association of Architects (AAA)

<http://www.aaa.ab.ca/>

Alberta Painting Contractors Association (APCA)

[www.apca.ca](http://www.apca.ca)

Alberta Wall & Ceiling Association (AWCA)

<http://awca.ca>

Alberta Roofing Contractors Association (ARCA)

<http://www.arcaonline.ca>

[info@arcaonline.ca](mailto:info@arcaonline.ca)

American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)

<http://www.ashrae.org/> / [ashrae@ashrae.org](mailto:ashrae@ashrae.org)

Alberta Painting Contractors Association (APCA)

[www.apca.ca](http://www.apca.ca)

Association of Professional Engineers, Geologists, and Geophysicists of Alberta (APEGGA)

<http://www.apegga.org/> [dward@apegga.org](mailto:dward@apegga.org)

Association of Science and Engineering Technology Professionals of Alberta (ASET)

<http://www.aset.ab.ca/>

Russ Medvedev, [russm@aset.ab.ca](mailto:russm@aset.ab.ca)

Building Owners and Managers Association (BOMA)

<http://www.bomaedmonton.org/> /

[edmonton@boma.ca](mailto:edmonton@boma.ca)

The Canadian Wood Council (CWC)

<http://www.cwc.ca>

[info@cwc.ca](mailto:info@cwc.ca)

Portland Cement Association

[ConcreteTechnology@cement.org](mailto:ConcreteTechnology@cement.org)

Interior Designers of Alberta

[www.interiordesignalberta.com](http://www.interiordesignalberta.com)

Consulting Engineers of Alberta (CEA)

<http://www.cea.ca/> [info@cea.ca](mailto:info@cea.ca)

Edmonton Construction Association

[www.edmca.com](http://www.edmca.com)

[contact@edmca.com](mailto:contact@edmca.com)

Terrazzo, Tile & Marble Association of Canada  
(TTMAC)

<http://www.ttmac.com/>

[association@ttmac.com](mailto:association@ttmac.com)

## Bulletin Board

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### Message from the Executive:

We in the Executive are looking for creative-minded individuals who can take on a position and follow through with ideas...if this is YOU, send a message to [information@cscedmonton.ca](mailto:information@cscedmonton.ca) and we will be quick to get back to you!

### Open Positions Include:

Chapter Liaison  
Sustainability  
Contractor's Rep

You don't need to be a member of the Committee to come and participate in our monthly Chapter meetings but watch out if you do! You may find yourself holding a position...maybe even as Chapter Chair...

The Executive

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