

BUILDING & PROPERTIES COMMITTEE
8 March 2023
1:00-3:00 p.m.

Zoom Videoconference (coordinates included with calendar invite)

Open Session			
1:00 p.m.	1. Conflict of Interest	Oral	Declaration
	2. Remarks from the Chair [Gamble]	Oral	Information
	3. Agenda/Additional Agenda Items	Oral	Decision
1:05 p.m.	4. Meeting Notes of the 18 January 2023 Open Session* [Gamble]	3	Information
	5. Business Arising from the 18 January 2023 Meeting Notes [Gamble]	Oral	Input
	a. Resolutions by Electronic Vote* [Gamble]	6	Information
	i. Minutes of the 5 October 2022 Meeting		
	ii. Optometry – Budget		
	iii. Math 4 Building – Updated Recommendation		
	iv. New Residence – Consultation Fees		
1:10 p.m.	6. Capital Financing Commitments and Construction Status [Reitsma]	Oral	Information
	a. Capital Financing Commitments Report – March 2023*	8	
	b. Construction Status Report – March 2023*	9	
	c. Capital Financing Commitments Schedule – April 30, 2022*	10	
1:20 p.m.	7. ESC Renovations* [Hunsperger, Reitsma]	11	Decision
1:40 p.m.	8. Comprehensive Sustainability Program* [Elias, Thijssen]	13	Information
	9. Deferred Maintenance Update [Reitsma]	Oral	Information
	10. Project Process Guideline – Update [Elias, Reitsma]	Oral	Information
2:10 p.m.	11. Amendment of Terms of Reference – Quorum* [Gamble]	19	Decision
2:20 p.m.	12. Execution Against the Work Plan* [Gamble]	22	Information
	13. Other Business	Oral	Input

If you require assistance or need to convey regrets, please contact the Secretariat at araynard@uwaterloo.ca.

Confidential Session

Governors, Secretariat, Vice-Presidents, Deans, Technical Staff to attend the Confidential Session

2:25 p.m.	14. Conflict of Interest	Oral	Declaration
	15. Meeting Notes of the 18 January 2023 Confidential Session* [Gamble]	23	Information
	16. Business Arising from the 18 January 2023 Meeting Notes [Gamble]	Oral	Input
	a. Resolution by Electronic Vote – Minutes of the 5 October 2022 Meeting* [Gamble]	24	Information
2:30 p.m.	17. R&T Park [Reitsma, Pereira]	Oral	Information
	18. Other Business	Oral	Input

In-Camera Session

 Governors, Associate University Secretary, Technical Staff to attend the *In Camera* Session

2:40 p.m.	19. Conflict of Interest	Oral	Declaration
	20. Meeting Notes of the 18 January 2023 In Camera Session* [Gamble]	25	Information
	21. Business Arising from the 18 January 2023 Meeting Notes [Gamble]	Oral	Input
	a. Resolution by Electronic Vote – Minutes of the 5 October 2022 Meeting* [Gamble]	26	Information
2:45 p.m.	22. Building & Properties Committee Priorities for 2023-2024 [Gamble]	Oral	input
2:55 p.m.	23. Board and Committees Effectiveness Survey* [Gamble]	27	Discussion
	24. Other Business	Oral	Input
3:00 p.m.	25. Adjournment	Oral	Input

*materials attached

 AR
1 March 2023

 Alice Raynard
Associate University Secretary

Upcoming B&P Committee Meetings:
18 May 2023
11 October 2023
17 January 2024
6 March 2024

 If you require assistance or need to convey regrets, please contact the Secretariat at araynard@uwaterloo.ca.

University of Waterloo
Board of Governors
BUILDING & PROPERTIES COMMITTEE
Notes of the 18 January 2023 Meeting
[in agenda order]

Attendees: Carol Cressman, Michael Eubanks, Murray Gamble (chair), Alice Raynard (secretary)

Administration: Christiana Alkiviades, Stepanka Elias, Vivek Goel, Rob Hunsperger, Andrea Kelman, Jacinda Reitsma

Guests: Mike Ditty, Robert Lemieux, Chris Read, Stanley Woo

Regrets: Peter Barr, Naima Samuel, Stephanie Ye-Mowe

Organization of Meeting: Murray Gamble took the chair and Alice Raynard acted as secretary. The chair welcomed members to the meeting. The agenda was approved by consensus as circulated. The secretary advised that quorum was lacking.

OPEN SESSION

1. DECLARATION OF CONFLICTS OF INTEREST

Cressman declared a conflict of interest for item 6 – Optometry. The Chair advised that the mere fact a member was assisting with fundraising for this project likely did not cause a conflict of interest as they are not benefiting from the approval of this project.

2. MINUTES OF THE 5 OCTOBER 2022 MEETING

There were no concerns or questions from the members. Eubanks and Cressman. Carried on principle (subject to an electronic vote after the meeting.)

3. BUSINESS ARISING FROM THE MINUTES

There was no business arising.

4. CAPITAL FINANCING COMMITMENTS AND CONSTRUCTION STATUS

a. Capital Financing Commitments Report – January 2023. The report was received for information.

b. Construction Status Report – January 2023. Hunsperger provided information over the various construction projects, noting: Earth Science Chemistry (ESC): analysis to be brought to March meeting for approval of construction, and contingencies in place for price escalation; Health Innovation Arena: environmental management, challenges with lowered water levels, Tier-2 risk assessment, potential delayed occupancy; Math 4: continuing to advance designs, recommendation under item 7 of this agenda; Optometry: building on business case, scope has continued to evolve along with budget needs.

Members discussed: cost management relative to supply chain issues claimed by suppliers; ability to bid early on some pieces, working with contractors to pay for increased costs outside of contingency budget to offset some possible extreme increases; assessments of cancellation of project vs. extreme prices, and possibility of canceling certain pieces of projects; dynamic market, month per month evolutions; proceeding with strategic projects while minimizing costs.

c. Capital Financing Commitments Schedule – April 30, 2022. The report was received for information.

Members would appreciate having a better understanding, when asked to review projects, of how extra costs are taken into account, and evaluating and supporting some of these recommendations. Members were informed an example is item 8 of this agenda (New Residence); projects don't normally get canceled, rather scoped and descope, e.g., to account for price volatility and for pricing of upfront designs, increasing contingency where feasible and judicious (not resorting to contingency by default). [**Action:** The Committee would appreciate receiving a guideline to help the committee determine when projects may proceed or not (no specific timeline)].

5. UNIVERSITY OF WATERLOO REAL ESTATE HOLDINGS

Reitsma provided an overview of the report, which is a standard item for information, noting that no new real estate had been added, no large transactions were expected, and several leases are long-term arrangements. Members appreciated details around square footage.

6. OPTOMETRY – BUDGET INCREASE

Rush provided context to this project, summarizing the history of the various steps, e.g., appointment of architects and initial approval of budget in 2021, noting success in assembling fundraising commitments and a secured plan to raise rest of funding and slight alterations to the project.

Members discussed Class C and class D estimates, and a summary was requested of Administration [**Action:** documents already sent to committee]; level of confidence, given market uncertainties, on bringing this health, innovation and society project over the finish line; high level of confidence, given the very effective advancement efforts and the different streams of revenue different from other Faculties (large cash basis, specialty care providing large margins, relatively low risk as revenues are to grow); currently exploring joint venture to ensure visibility and support from government.

Eubanks and Gamble. Carried on principle (subject to an electronic vote after the meeting.)

7. MATH 4 BUILDING – UPDATED RECOMMENDATION

Hunsperger spoke to the report, which is administrative in nature. This project was last presented in September 2022 and the updated recommendation aims at providing a more specific form of construction contract. Given the specs of the Davis Center (DC) building, with its large food court and longer side wing, phasing of project will be challenging, which a regular stipulated price contract (bid and lump sum) would not serve well. In starting earlier work on logistics, new construction manager would come on board sooner rather than later.

Members discussed: DC is currently occupied; difficulty in managing risks with regular type of contract, which might cause price inflation; allowing more transparency on phasing and logistics.

Cressman and Eubanks. Carried on principle (subject to an electronic vote after the meeting.)

8. NEW RESIDENCE – CONSULTATION FEES

Hunsperger spoke to the proposed appointment of the architects, noting the 2009 campus master plan held some parking lots in reserve for future construction and mixed uses; parking lot A had been identified as a preferred site for a new residence of 500 beds, as part of a 20-year housing master plan. The objective is to maintain first year residence availability to attract new students, as it makes a difference in academic performance. Pricing is premature given cost estimates and market volatility.

Members discussed: need for parking due to ION and high-rises around; transportation advisor has been hired (to report to Executive Director, Plant Operations); minimal loss of parking space; use of shuttles; new master plan for the campus to be brought to Board of Governors in the future; lots of parking on prime real estate location.

Eubank and Cressman. Carried on principle (both motions subject to an electronic vote after the meeting.)

9. WORK PLAN FOR NEXT FISCAL YEAR; ORIENTATION/BRIEFING REQUIREMENTS

Gamble indicated the work plan had been recently reviewed and queried members and attendees as to whether other items should be added for this year's plan.

Members discussed: in order to improve orientation of new board members on how decisions are being made, it might be helpful to understand the role of other committees to see the process flow of projects, e.g., when the Finance & Investment Committee of the Board has a role [**Action:** Administration to provide update on improvements to board members' onboarding to committee; no specific timeline]; continue campus tour for new/returning members; guidelines in print would clarify things before going into meetings, e.g., items that need Board's approval, 50% of funds required ahead of time so members know if they should approve, examples of steps a project needs to go through [**Action:** Administration to continue developing such guidelines].

10. EXECUTION AGAINST THE WORK PLAN

The document was received for information. Items are generally on track. Sustainability and maintenance (e.g., Comprehensive Sustainability Program, District Energy Study, Maintenance Program and Energy Conservation Efforts, Deferred Maintenance Review) to come at later meetings in March/May.

11. OTHER BUSINESS

There was no other business.

12. PROCEED INTO CONFIDENTIAL SESSION

The Committee convened in confidential session.

The Committee is scheduled to meet on Wednesday 8 March 2023, 1:00-3:00 p.m. via Teams.

25 January 2023

Alice Raynard
Associate University Secretary



UNIVERSITY OF WATERLOO

To: Building & Properties Committee

CC: Andrea Kelman, Acting University Secretary and Executive Director of the President

From: Alice Raynard, Associate University Secretary

Date: 24 January 2023

Subject: Electronic Resolutions

Dear Members,

This report is provided for information. Due to the absence of quorum at the 28 January 2023 meeting, members were asked to vote on the resolutions below. The materials in support of the resolutions may be found in the [agenda package](#) of that meeting of the Building & Properties Committee. Quorum was attained for the virtual voting.

Item in Agenda Package	Resolution Title / Motion	Outcome
2	Minutes of the 5 October 2022 Meeting (Open Session): <i>That the Building & Properties Committee approve the Minutes of the 5 October 2022 open session meeting.</i>	Eubanks and Cressman. Carried.
6	Optometry – Budget Increase: <i>That the Building & Properties Committee recommend to the Board of Governors a revised project budget of \$50.34 million (previous approval was \$45.25 million) for the Waterloo Eye Institute and that the project proceed to final design and tender.</i>	[Cressman declared a conflict of interest and abstained.] Eubanks and Gamble. Carried.
7	Math 4 Building – Updated Recommendation: <i>That the Building & Properties Committee recommend to the Board of Governors that the Math 4 building be constructed using a Construction Management form of contract rather than the previously contemplated Stipulated Price Contract form of agreement.</i>	Cressman and Eubanks. Carried.
8	New Residence – Consultation Fees:	
	Motion 1: <i>That the Board of Governors approve the appointment of Diamond Schmitt Architects</i>	Eubanks and Cressman. Carried.

Item in Agenda Package	Resolution Title / Motion	Outcome
	<i>Inc. (DSA) as the prime consultants to prepare design and construction documents for a proposed 500-bed undergraduate student residence.</i>	
	<i>Motion 2: That the Board of Governors approve the site location for the proposed building on Parking Lot A.</i>	Eubanks and Cressman. Carried.

Report to the Building & Properties Committee
Capital Financing Commitments
March 2023

The Building & Properties Committee (B&P) reviews the summary of Capital Financing Commitments at each meeting.

Activity to date in 2022/23:

- The University has collected \$2.16M in student fees:
 - Health Services Addition \$0.74M
 - PAC/SLC Addition \$1.42M
- Donations & grants totaling \$1.03M towards various projects.
- Repayments by ancillary enterprises (Housing, Food Services and Parking) of \$2.89M
- The Faculty of Health has repaid the agreed upon annual payment of \$0.66M to the addition to BMH.
- The University contributed \$1M for the Innovation Arena furniture.

Summary:

- Contributions to capital projects made fiscal year-to-date total \$7.74M
- The University remains well within its approved policy limits and below the 4.0% of annual gross revenue maximum for principal and interest payments
- The financing position for each project as of April 30, 2022 is attached

Jacinda Reitsma
Vice-President, Administration & Finance

Construction Status Report
March 2023
 \$000s

Projects	Original Budget	Current Approved Budget	Procurement Method	Contractor	percent complete	Original Schedule	Estimated Completion	Risks/Status
<u>In-Progress</u>								
Earth Science Chemistry (ESC) Third Floor Renovations	17,500	22,140	CCDC2- Stip Sum	Harbridge & Cross Ltd (pending)	100% Design 0% Construction	2022	2024	Building Permit Application submitted December 2022 Prerequisite "enabling" project currently under construction to relocate researchers from 3rd to 1st floor Prerequisite project experiencing delays. (revised completion date April 2023) Bids closed February 16, 2023 Recommendation prepared for March 8 Building and Properties meeting (refer to B&P package) Revised total project budget increased to \$28.75m (approval pending)
	<u>17,500</u>	<u>22,140</u>						

Projects	Original Budget	Current Approved Budget	Procurement Method	Contractor	percent complete	Original Schedule	Actual Completion	Risks/Status
<u>In-Progress</u>								
Health Innovation Arena 280 Joseph Street Kitchener	30,000	36,190	Design-Bid-Build CCDC2- Stip Sum	Melloul Blamey	100% Design 7% Construction	2023		Site Plan Approval application approved by the City of Kitchener Net Neutral Carbon strategy relies on future City of Kitchener District Energy Loop. Melloul Blamey awarded contract on November 7, 2022 Substantial Completion revised to January 10, 2024 Building Permit issued Nov. 25, 2022. Construction start delayed by ~3 weeks ESA2 activities ongoing. New deep monitoring well to be installed April Ongoing: Existing electrical service removed, new temp service installed. 2nd floor slab reinforcement and slab removals, 2nd floor structural reinforcement, 1st floor windows, slab removals, elevator pit, interior foundations/footings, Water penetration observed on North & South wall on the West side. Further investigation on existing weeping system and waterproofing underway Contractor/Consultants to review feasibility of a partial occupancy of the offices section for Dec 2023 City of Kitchener Small Business Centre approval pending. (not on critical path, but may increase schedule and cost risk)
	<u>30,000</u>	<u>36,190</u>						

Projects	Original Budget	Current Approved Budget	Procurement Method	Contractor	percent complete	Original Schedule	Actual Completion	Risks/Status
<u>In-Progress</u>								
Math 4	90,000	110,000	TBA	TBA	65% Design	2024		100% design development (DD) report complete Construction and bid documents in progress Project schedule anticipates issue for building permit date of July 9, 2023 Consultants and UW met with City of Waterloo building department to review complex building code issues (Feb 22) Construction expected to commence late this calendar year, pending B&P/BOG approvals Critical path item currently outstanding is the bidding of a Construction Manager as approved at recent B&P/BOG meetings
	<u>90,000</u>	<u>110,000</u>						

Projects	Original Budget	Current Approved Budget	Procurement Method	Contractor	percent complete	Original Schedule	Actual Completion	Risks/Status
<u>In-Progress</u>								
Optometry - Waterloo Eye Institute	45,250	50,340	TBA	TBA	30% Design	2023		100% Design Development milestone achieved Design Development estimate completed Class C Construction Estimate = \$42.5M up \$7.23M from Class D Estimate of \$35.2M \$2.5M attributable to market conditions with remainder due to design development Recommendation for budget increase from \$45.25M to \$50.34M approved by B&P at Jan 2023 meeting Project was approved by Board of Governor's for increased budget and to proceed to final design and tender HOK and engineering consultants re-mobilizing and revising likely schedule moving forward. Will report back with details
	<u>45,250</u>	<u>50,340</u>						

Projects	Original Budget	Current Approved Budget	Procurement Method	Contractor	percent complete	Original Schedule	Actual Completion	Risks/Status
<u>In-Progress</u>								
New Residence Building (NRB2026)	TBA	TBA	TBA	TBA	5% Design	2026		Jan 2023 B&P and subsequent Board of Governors approved Diamond Schmitt Architects as prime consultants Jan 2023 B&P and subsequent Board of Governors approved Parking Lot A as the building location Alternate sites were explored in the Campus Housing Renewal Masterplan. Lot A was the only vacant site. The other locations contemplated are: Minota Hagey Residence, On, in, or around University Club/Fed Hall, East Campus (requiring demolition of an EC building), and north of Columbia Street perhaps within the Tech Park. Project design continuing to allow us to complete a more detailed cost estimate ready for September 2023 B&P meeting Shift Neutral (net-zero carbon) goals to be preserved despite continued market price escalation. (sustainability is not among the value engineering options) Presidents Advisory Committee on Design (PACOD) to be organized once design concept is established Currently the consultants are working through options to connect NRB2026 to existing Carl Pollock Hall bridge, as well as create a new bridge link connecting NRB2026 to existing Claudette Millar Hall.
	<u>0</u>	<u>0</u>						

University of Waterloo
Capital Financing Commitments
April 30, 2022
(\$000s)

Capital Project	Currently Internally Financed	Estimated Repayment Period	Comments
Construction Completed			
Residence - UWP and MKV	12,687	8 years*	Residence fees. Payments resuming Fiscal 2023.
Engineering 7	18,556	9 years	Pledges of ~\$32.6M for Engineering buildings. Faculty payments.
Other Engineering (including E5, E6, and DWE)	8,315	1-3 years	
Health Services Addition/Renovations	1,679	3 years	Compulsory undergrad & grad student fees; donations. (Student fees for interest will continue beyond 3 years)
Blackberry Buildings (EC1-5)	399	4 years*	\$0.4M from Parking (\$0.1M/year)
Faculty of Health Addition	6,241	6 years	Faculty, University commitment, donations
Student Residence - Claudette Millar Hall	26,243	15 years*	Residence fees and Food Services revenues
North Campus Field House	15,894	9 years	University commitment and potential donations
Student Life Centre and PAC Addition	40,624	< 30 years	\$24M (+interest) undergrad & grad student fees, payments commenced Fall 2021; balance is University commitment
Completed Total	130,638		

	Expenses to Date	Total Budget	Funding On-hand	Committed Future Funding	Currently Unfunded	Currently Internally Financed	Project Completion Date	Comments
In-Progress and Recently Approved								
Health Innovation Arena	1,092	34,400	858	16,807	16,735	234		\$8.5M City of Kitchener grant, \$7.5M University commitment, >\$1.5M donations
Math4	1,305	90,000	57,500	17,500	15,000	-		\$57.5M contributed from Math and \$17.5M University commitment
Earth Sciences & Chemistry	360	22,140	1	22,139	-	359		50% to be funded from Science and 50% University commitment
Optometry Eye Institute	692	45,250	1,691	15,000	28,559	-		>\$10M in donations, \$2.2M to \$6.2M University commitment depending on receipt of matching donation
In-Progress and Recently Approved Total						593		
Total Internal Financing						131,231		

Debt Policy: Annual Principal & Interest Payments must be < 4% of annual gross revenue (currently approximately \$48M)

Conclusion: Required annual P&I payments to service this debt are < 4% of annual gross revenue

Notes:

There is a \$22M lease-back financing commitment until 2053 for Columbia Lake Village Townhouses, with minimum \$7M lease commitments being recovered through student residence fees.

* Repayments have been suspended for 2 years due to the impact of covid on operations in the ancillary units. Payments commencing Fiscal 2023.

Report to the Building & Properties Committee
Third Floor Renovation – Earth Sciences & Chemistry Building (ESC)
 February 28, 2023

Recommendation:

That the Building & Properties Committee recommend to the Board of Governors, (i) a \$6.4m (25%) increase to the project budget, and (ii) the award of a stipulated-price contract (CCDC2) to Harbridge & Cross Limited in the amount of \$23,005,000.00 (excluding HST).

Background:

The previous project budget was approved at \$22.14 million in September 2021 for renovations to the 3rd floor of the Earth Sciences & Chemistry Building (ESC); based on studies conducted by a multi-disciplinary architectural/engineering team with expertise in rehabilitating wet science buildings. The studies focused on the renewal of ESC, Biology 1 (B1), and Biology 2 (B2) Faculty of Science buildings constructed during the 1960s and 1970s. The masterplan that was commissioned identified the renewal requirements to modernize the buildings while improving space utilization. Although the multi-building renewal is planned to occur over multiple years in multiple phases, this initial phase will include the renovation of 25,000 square feet of labs located on the third floor of ESC, a new roof system as well as a standalone heat-pump HVAC system to align with the University’s Net Neutral (carbon) mandate. ESC was the sixth building constructed on campus, dating back to 1964, with minimal investment in mechanical/electrical infrastructure. This deep building retrofit investment focuses on renewing physical obsolescence (deferred maintenance), functional obsolescence (space utilization + programming) as well as sustainability.

There were 5 prequalified general contractors invited to bid the project with a closing date of February 16, 2023. A total of 5 compliant bids were received. The second lowest bid was only slightly higher (+0.24%) with the other bids closing between 5% and +19% above the lowest bid.

The revised project budget reflects the recommended tender award including net HST:

	\$000s	
	<u>September 2021</u>	<u>Tender Close (Feb.2023)</u>
Construction	18,045	23,180 (incl. \$1.2M Facility Renewal Grant)
Contingency	1,355	1,855
Professional Fees	1,960	2,400
Disbursements	165	165
Building Automation	165	600
Network/Security/AV	350	375
Permits	100	100
	22,140	28,675

The total project will be funded by a combination of central funding along with Faculty of Science reserves, using a 50/50 cost sharing model. (\$13.74m Central + \$13.74m Faculty) External funding opportunities will continue to be pursued. This funding strategy only applies to this specific phase.

Bob Lemieux
Jacinda Reitsma
James Rush

COMPREHENSIVE SUSTAINABILITY PROGRAM

UPDATE FOR BOARD BUILDING & PROPERTIES

Prepared by the Sustainability Office

1. PURPOSE

This document is to provide an update and overview for Board Building & Properties of the planning and development approach that Waterloo has taken for campus sustainability efforts, with an emphasis on operational practices.

2. BACKGROUND

Waterloo has a long history of implementing sustainability projects. Before sustainability became an institutional and sector-wide focus, Waterloo had longstanding efforts in waste, water management, energy management, and sustainable transportation, including:

- Paper and electronic waste recycling programs operating for decades
- Energy conservation projects in lighting, central plant heat recovery, and other equipment optimization
- Participation in the Region of Waterloo’s TravelWise program and strong connection to sustainable transportation amenities, with planning directions outlined in the Campus Master Plan
- Water conservation projects in certain laboratories, and
- Phase-out of chemical pesticides and fertilizers for blanket application during the 1990s

In 2009, presidents of all Ontario universities signed a [joint commitment](#) through the Council of Ontario Universities to strengthen their efforts toward sustainability, recognizing the urgency and importance of action. Throughout the 2010s, the higher-education sector across Ontario and the world increased effort toward these sustainability commitments, hiring sustainability officers, establishing more formal sustainability plans and programs, setting targets, and allocating funding.

Waterloo hired its first sustainability staff member in 2015, and at the same time established the President’s Advisory Committee on Environmental Sustainability (PACES), which was tasked with developing an institutional sustainability policy, a sustainability strategy, and an ongoing reporting process. PACES’ work built on the historical foundation, but drew it into a more formal institutional framework grounded in continuous improvement.

The outcomes from PACES have formed the core architecture of Waterloo’s sustainability commitments and approaches, as shown in Table 1.

Table 1: Architecture of Sustainability Planning

Sustainability Document	Timeframe	Outcomes	Connections
Policy 53: Environmental Sustainability	Ongoing	Establishes core requirements and guiding principles for campus sustainability planning	Connects to other finance, statutory compliance, and risk management policies
Environmental Sustainability Strategy (ESS)	2017-2025	<ol style="list-style-type: none"> 1) Defines a sustainability framework – academic, operations, and engagement 2) Sets 27 objectives within this framework (most of them SMART) 	<ul style="list-style-type: none"> • Objectives within the ESS provide additional detail commensurate with the Campus Master Plan directions • As of 2020, key objectives within the ESS are also part of the University’s Strategic Plan KPIs
Shift: Neutral climate action plan	2020-2025	<ul style="list-style-type: none"> • More detailed action plan within the ESS 	<ul style="list-style-type: none"> • Made more explicit connection to capital planning and need to

		<ul style="list-style-type: none"> • Established short, medium, and long-term climate targets • Identified key actions that are needed, structurally and technically, to make progress 	align with deferred maintenance and renewal
Shift:Zero waste action plan	2017-2025	<ul style="list-style-type: none"> • Less formal action plan to structure waste management and reduction efforts • Used to catalyze engagement and service improvements 	
TBC – Transportation action plan	TBC	<ul style="list-style-type: none"> • More detailed action plan on sustainable transportation, with an emphasis on commuting • Looking to be developed throughout 2023 	<ul style="list-style-type: none"> • Has significant connections to the Campus Master Plan • Important employee and student wellbeing and satisfaction impacts
Sustainability Reporting	Annually	<ul style="list-style-type: none"> • Provides an update on progress against all 27 ESS objectives and supplementary action plans • Highlights case studies, examples of projects, and other contextual changes to build accountability and educate the campus community • Functions as a regular “Check” of the Plan-Do-Check-Act continuous improvement process 	<ul style="list-style-type: none"> • Specific data points from the annual sustainability reports feed into the Strategic Plan KPIs • Many data points feed into external sustainability-focused rankings, ratings, and disclosure programs

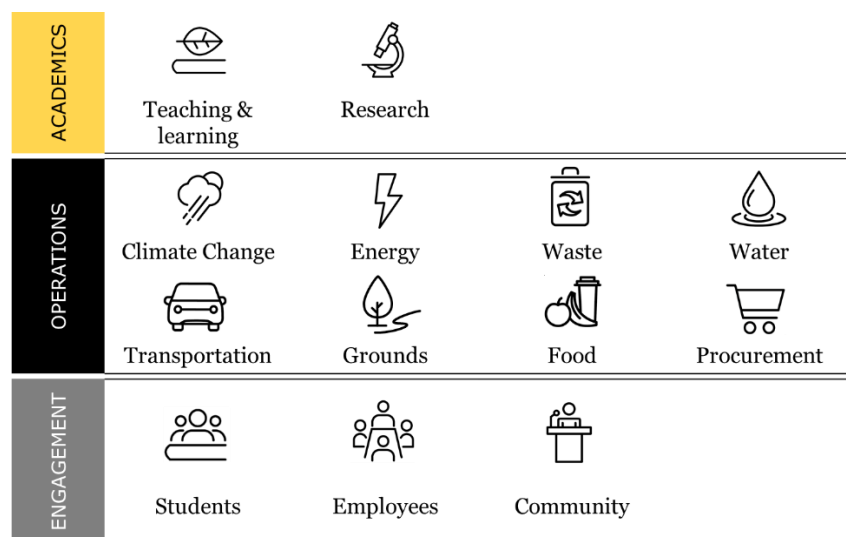
3. SUSTAINABILITY ASPECTS

Sustainability is a very multifaceted umbrella term that can encompass many topics or aspects. Within Waterloo, the planning process has focused primarily on Environmental Sustainability, which is different from the broader interpretation of sustainability that includes environmental, social, and economic pillars. PACES’ mandate was to concentrate on environmental themes, acknowledging the need for significant effort in these areas. There were also other planning processes, departmental efforts, and advisory committees working on issues such as wellbeing, equity, diversity, health & safety, fair wages, and community development topics that are often more integrated in corporate sustainability planning (though PACES and all subsequent planning acknowledges the many intersections with these topics).

In the design of the Environmental Sustainability Strategy, Waterloo has drawn on existing frameworks designed for the post-secondary sector, and specifically the Sustainability Tracking, Assessment, and Rating System ([STARS](#)), developed through the Association for the Advancement of Sustainability in Higher Education. STARS provides both a planning and an evaluation framework, by defining sustainability aspects that are typically material to a post-secondary institution.

Waterloo’s ESS is anchored around this framework, with academics, operations, and engagement being important ways that the University can make positive contributions to sustainability. Within these, there are 13 specific sustainability aspects identified, as shown in **Figure 1**.

Figure 1: Environmental Sustainability Framework



Focusing specifically on the operational aspects of the framework, **Table 2** outlines what each refers to, how it is measured, and targets that were established through the ESS or subsequent plans:

Table 2: Operational Sustainability Aspects, Measurement, and Targets

Aspect	Description	Measurement	Target
Climate Change	Refers to the emissions created by the University, directly and indirectly. Significant planning effort focuses on energy-related emissions, but when including indirect/Scope-3 emissions, all other operational aspects influence Waterloo’s greenhouse gas emissions.	KPI is absolute Scope 1 & Scope 2 emissions	17.5% below 2015 baseline by 2025
Energy	In addition to the greenhouse gas emissions of campus energy systems, this refers to the energy efficiency and associated energy costs for the campus.	KPI is ekWh per square meter per year	None
Waste	Refers to the amount of solid, non-hazardous waste created by institutional operations	Waste diversion rate (%) and absolute waste	60% diversion rate by 2025
Water	Refers to the amount of water used in operation of the campus	Water use per square meter per year	5% reduction by 2025
Transportation	Refers to a variety of transportation-related topics, including: a) student and employee commuting, b) the campus fleet, and c) business travel	a) Modal split b) Fleet fuel use c) Scope 3 travel emissions	a) 90% sustainable trips by 2025 b) 25% fuel use reduction by 2025
Grounds	Refers to a variety of practices to protect natural ecosystems, improve biodiversity, and manage green spaces on campus	Compliance with operating standard	100% compliance by 2025
Food	Refers to the purchase of low-impact food options and healthy and sustainable menus	% of food that is locally sourced, grown on-site, or certified sustainable	40% by 2025
Procurement	Refers to a variety of practices to integrate sustainability into Waterloo’s supply chain management	Sustainability disclosures from vendors Procurement targets for specific commodities	Varies

Waterloo’s engagement efforts, while creating learning and leadership opportunities for students and employees, are also largely focused on building individual support for progress against these sustainability topics and targets.

4. RECENT WORK

A thorough description of Waterloo’s progress toward its sustainability objectives can be found in the [2022 Environmental Sustainability Report](#). This section summarizes some key recent initiatives and actions from over the past year:

- **Faucet & showerhead upgrades:** Installation of over 3,500 faucet aerators and approximately 1,400 low-flow showerheads to reduce water and energy consumption
- **Steam trap repairs:** Repair/replacement of an initial ~200 steam traps within the district steam system, with considerable gas and energy savings
- **Preliminary DES Design Study:** A preliminary engineering study of the long-term options to renew and decarbonize the central plant (forthcoming)
- **Building-level submetering pilot:** Equipping an initial pair of pilot buildings with meters to accurately measure building energy consumption and enable occupant engagement
- **Electric vehicle incentive program:** An internal incentive for departments to convert to EVs, offsetting the purchase price so that the institution can benefit from lifecycle savings
- **Electric vehicle charging stations:** Expansion of 15 additional Level 2 charging stations, in a joint Waterloo-Laurier project with funding from NRCAN
- **Sustainability Action Fund:** An open call for any member of the campus community that funds projects that support the ESS, including student events, operational projects, curriculum development, and more
- **Sustainability Living Lab:** Launch of a framework and program support to connect Waterloo’s ongoing decarbonisation and operational sustainability efforts to student learning and research opportunities
- **GreenX programs:** Continued development of the Green Residence and Green Office programs to create bottom-up leadership opportunities for students and staff, and the Green Labs program to target energy-intensive spaces
- **Sustainability Certificate:** Delivery of a corporate training program to familiarize employees with and build support for sustainability concepts and the University’s sustainability actions
- **Sustainable Land Care Standard:** Development of a standard of practice for maintenance of campus grounds and green spaces
- **Capital projects:** Inclusion of energy/climate performance criteria within upcoming major building projects and renovations

5. PROGRESS ACHIEVED

Each of the 27 objectives of the ESS has a key data point or other qualitative metric for demonstrating progress. Members of Building and Properties committee are encouraged to review the 2022 Report and supplementary interactive dashboards to see more about Waterloo’s progress and methods. **Table 3** below highlights some of the most material indicators, including those which are part of Waterloo’s overall Strategic Plan KPIs.

Overall, 10/27 ESS objectives have been fully met, 8 are mostly completed, 6 are somewhat completed, and 3 are in earlier stages of progress.

Table 3: Important Progress Indicators

Target	Status	Description
STARS Gold (2025)	STARS Silver (2021)	The STARS framework provides a transparent and holistic third-party evaluation tool specifically for the higher-education sector. Waterloo was certified silver in 2018 and 2021, with increasing

		points between the submissions. Many peer institutions are rated Gold.
17.5% emissions reduction by 2025, from 2015 levels	8.6% reduction (2021)	Waterloo's emissions have decreased in 2020 and 2021, due to a mix of mild weather and campus shutdowns. While emissions will rise again with more normal winter temperatures and as activity has largely resumed, additional energy projects will improve reductions. Provincial policy on adding more gas-fired electricity will create risks.
60 % waste diversion rate by 2025	35.8% (2021)	After a dip during the first year of the pandemic, waste diversion has continued to improve year-over-year. Ongoing expansion of waste sorting facilities and resuming of reusable programs will continue to support progress.
90% sustainable transportation trips by 2025	93% sustainable commuting trips (2020)	The pandemic saw a major increase in work-from-home, which has led to large emission reductions. Waterloo completed a travel survey in late 2022 to update its data now that most on-campus activity has resumed, with findings to be published in 2023. The modal shift will drop significantly, though will likely have improvements over the 2018 baseline of 86%.
n/a	THE Impact Ranking #53	The THE Impact Ranking evaluates institutions based on their contributions to the UN Sustainable Development Goals. Waterloo is ranked 53 rd overall globally. While not a target of the ESS, it is a useful comparator to peers.

6. CONTINUED PLANNING AND NEXT STEPS

Looking forward, sustainability efforts across campus will continue to be grounded in acceleration of the ESS and action plan implementation efforts. In the coming year, for example, there is work underway in the following topic areas:

- **Grounds:** Beginning implementation of the Sustainable Land Care Standard
- **Commuting:** Development of a sustainable transportation action plan to coordinate and expand relevant programs, services, and infrastructure
- **Procurement:** Continuous improvement to existing procurement commodity targets and lifecycle costing, and more explicit efforts to build frameworks around supply chain disclosure and integration into purchasing decisions
- **Air travel:** Improving data collection for quantification of air travel emissions, and developing a suite of actions to reduce emissions wherever possible
- **Waste:** Increasing promotional efforts to encourage waste reduction, proper waste sorting, and compliance with new regulatory changes, such as single-use plastics phase-outs and extended producer responsibility requirements

However, the climate and energy actions are the most material area from an operational perspective, and will need considerable work. Following development of the climate action plan, Waterloo undertook a campus-wide energy audit that identified hundreds of energy conservation measures that could be implemented within buildings. The University is currently completing the DES study which looked at supply-side changes within the central plant.

The broad approach to the development of energy and climate projects is twofold:

- Establish long-term planning directions anchored in a commitment to carbon neutrality, and begin scaffolding detail over time onto technical roadmaps, action plans, and funding requirements. These could include deep energy retrofits of buildings, changes to the Plant and distribution infrastructure, and implementation of larger energy conservation projects.
- Scale immediate energy conservation projects that are not as tightly connected to deferred maintenance and campus renewal, and which can be acted on in the very short term, independent of other projects. In 2023/24, these will include:

- Launch of an energy revolving fund
- Continuation of the submetering program
- Expansion of the steam trap repair/replacement program
- Piloting a re/retro-commissioning program for newer existing buildings
- Piloting a window/door sealing program for medium-aged buildings
- Initiating a demand-control ventilation project
- Initiating a significant heat recovery project
- Developing a solar PV project

These immediate projects will help Waterloo work toward the 2025 target. The complexity of a large building portfolio within a central energy system and a changing economic and technology landscape will require flexibility and regular revisions of the medium and long-term technical assessments. Improved submetering, increasing staff capacity, and greater project experience will enable the campus to have more structured multi-year processes for energy and climate planning.

7. CONCLUSION

This report provides a high-level overview of Waterloo's overall sustainability program and approach – its dimensions, planning framework, specific actions, and progress. Considerable effort is needed to meet established short-term targets, and though those targets are ambitious in Waterloo's context, they are themselves not fully aligned with the scale of global action needed in areas such as climate, the circular economy, and biodiversity protection.

Nonetheless, there is substantive work underway from staff, students, and faculty to scale Waterloo's effort and impact in each of these areas.

Report to the Building & Properties Committee

Committee Terms of Reference

8 March 2023

Recommendation:

That the Building & Properties Committee recommend to the Governance Committee and to the Board of Governors the following changes to its terms of reference, by removing the struck-through text:

The quorum for the transaction of business at any meeting of the committee shall be a majority of the members of the committee, present either in person, by teleconference or by videoconference, ~~provided that not less than a majority of those constituting the quorum shall be members appointed to the board by the Lieutenant Governor in Council or elected by the board from the community at large.~~

Background:

Over the years, the application of the “double quorum rule” has been a hinderance in holding meetings and has caused slowdowns in decision-making process. Moreover, B&P’s terms of reference are the only ones of the University’s governance committees to require double quorum. The proposed recommendation would contribute to streamlining governance processes.

Andrea Kelman
Acting University Secretary

University of Waterloo
Board of Governors
BUILDING & PROPERTIES COMMITTEE

Proposed amendment:

~~Strikethrough~~ = deleted
working.

1. MEMBERSHIP

This committee shall consist of a maximum of nine members. Of those, at least five members shall be members of the board appointed to the board by the Lieutenant Governor in Council or elected by the board from the community-at-large, and one shall be a faculty member of the board.

One undergraduate student member of the board and one graduate student member of the board shall be members of the committee. If the presidents of the Waterloo Undergraduate Student Association and the Graduate Student Association – UW are members of the board, then they shall serve respectively as the undergraduate and graduate student members of the committee. Should the president of the Waterloo Undergraduate Student Association or the Graduate Student Association – UW be unwilling to serve on the committee or not be a member of the board, then the respective seat on the committee shall be filled by appointment from among student governors made by the president of the respective student association.

It is expected that at least two members of the committee will have experience with capital construction and/or property development.

2. MEETINGS

The committee will meet at the call of the chair of the committee, but not less than four times annually.

The quorum for the transaction of business at any meeting of the committee shall be a majority of the members of the committee, present either in person, by teleconference or by videoconference, ~~provided that not less than a majority of those constituting the quorum shall be members appointed to the board by the Lieutenant Governor in Council or elected by the board from the community at large.~~

3. TERMS OF REFERENCE

The committee is established for the following purposes:

To oversee campus planning and development activity in the context of the Campus Master Plan and prudent environmental sustainability practices, and not less than annually to perform a review of the Campus Master Plan in the context of the university strategic plan.

To make recommendations to the Board of Governors on campus planning and development initiatives, with due consideration to the impact on multi-campus sites, including (without limitation) the acquisition or disposal of land or buildings, the use of land, buildings and facilities, the siting of buildings and roads, and the review of all agreements to which the university is a party (including donor agreements and academic agreements) having impact on the acquisition, use and/or development of real property.

To approve on behalf of the board, construction projects between \$5,000,000 and \$10,000,000 and to make recommendations to the Board of Governors regarding construction projects exceeding \$10,000,000, including (without limitation) the appointment of architects and design consultants, the business plan and budget, the design, and the award of construction contracts.

To ensure that the university has in place appropriate procedures for cost estimating, competitive tendering of bids, awarding of contracts, contract administration, cost control and payment to contractors for all site work, new construction, alternations and major repair.

To ensure that the university complies with all building codes, fire codes, safety regulations and statutory and regulatory provisions, as appropriate, in its building and properties program, and to review compliance annually.

To ensure that the university has appropriate maintenance programs in place for buildings and properties.

To review annually the status of capital construction projects, including status of accumulated debt and compliance with approved debt policy.

To report on its activities to the Board of Governors at least annually.

To assess annually the adequacy of the committee's terms of reference and to propose any needed amendments to the Governance Committee.

Approved by the Board of Governors, 6 June 2006

Amended by the Board of Governors, 1 April 2008

Amended by the Board of Governors, 27 October 2009

Amended by the Board of Governors, 2 April 2013

Amended by the Board of Governors, 1 April 2014

Amended by the Board of Governors, 4 February 2020

University of Waterloo
Board of Governors
BUILDING & PROPERTIES COMMITTEE
Work Plan Execution

Task	Frequency	<i>canceled</i>					<i>canceled</i>					<i>no quorum</i>			
		02/10/2019	15/01/2020	03/04/2020 and 5/13/2020	30/09/2020	13/01/2021	10/03/2021	12/05/2021	29/09/2021	12/01/2022	09/03/2022	18/05/2022	5/10/2022	18/01/2023	03/08/2023
Campus Master Plan (as needed)	annual		•			•									
Capital financing commitments and construction status	each meeting	•	•		•	•	•	•	•	•		•	•	•	•
Committee self-assessment survey results	annual	•			•		•		•				•		•
Environmental sustainability practices	annual							•					•		•
Maintenance program and energy conservation efforts	annual	•						•				•	•		•
Orientation/tour of campus	as required							•				•			
Development projects five-year plan															
Committee terms of reference	annual	•			•				•				•		•
Statutory compliance	annual		•									•			
University of Waterloo real estate holdings	annual		•							•				•	
Committee work plan/special topics; orientation/briefing requirements	annual		•		•					•			•	•	