

Environmental Impact of a Low- Intensity Ward

St Joseph's Healthcare
Hamilton



AstraZeneca 



**Sustainable
Healthcare
Coalition**

August 2026

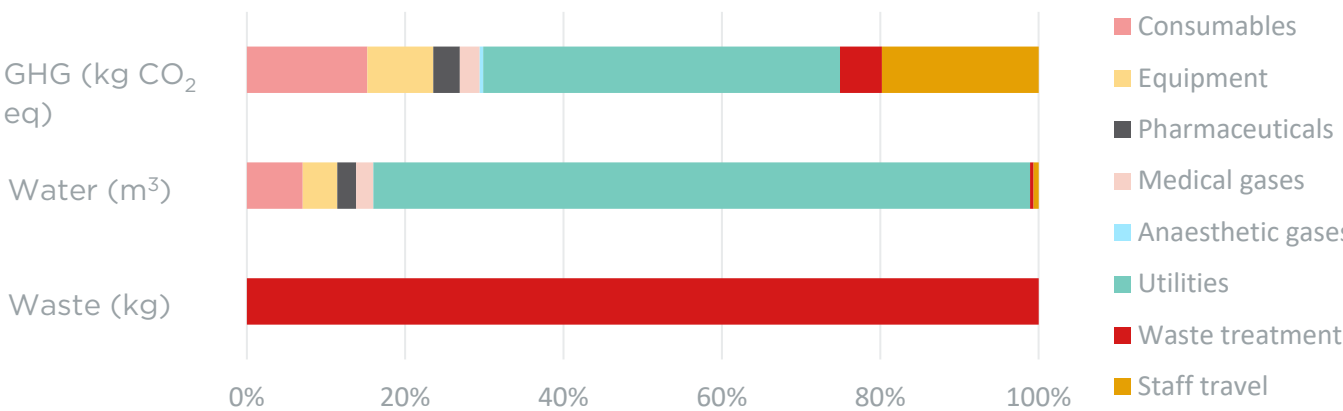
Title	Low-intensity ward at St. Joseph's Healthcare Hamilton
Organisation and role	AstraZeneca UK Limited initiated and funded this work, but it was not involved in collecting and analysing the hospital data. AstraZeneca UK Limited saw only the final output.
Company website	www.astrazeneca.com/
Contact details	Ekaterina Maslova (ekaterina.maslova@astrazeneca.com)
Completion date	June 2026
Assurance	Internal assurance
Supporting information	Operational data from St. Joseph's Healthcare Hamilton, Canada
Data gathering and analysis contact	Michael Collins, Partner, ERM (michael.collins@erm.com)
Hospital contact	Donna Johnson (djohnson@stjoes.ca)
Conformance with Care Pathways: Appraising Sustainability Method ¹	Adheres to the method
Care pathway description	Average bed day at the low-intensity ward
Environmental issues appraised	Global warming potential (IPCC AR6, CO ₂ eq, 100-year), water use, waste

This resource is supplementary material for the study ‘Appraisal of Environmental Impact of St. Joseph’s Healthcare Hamilton.’² Refer to that document for a description of the assessment procedures.

Findings

This study appraised the environmental impact of an average low-intensity ward bed day. The study found a greenhouse gas (GHG) emission impact of 53.6 kg CO₂ eq, water use of 440 m³ and waste of 4.0 kg per bed day.

Climate change impacts were driven primarily by utilities (45%), followed by staff travel (20%) and consumables (15%). Utilities impacts were dominated by the hospital’s use of



¹ Sustainable Healthcare Coalition (2026). Sustainable Care Pathways Method. Available at: <https://shcoalition.org/sustainable-care-pathways-guidance>.

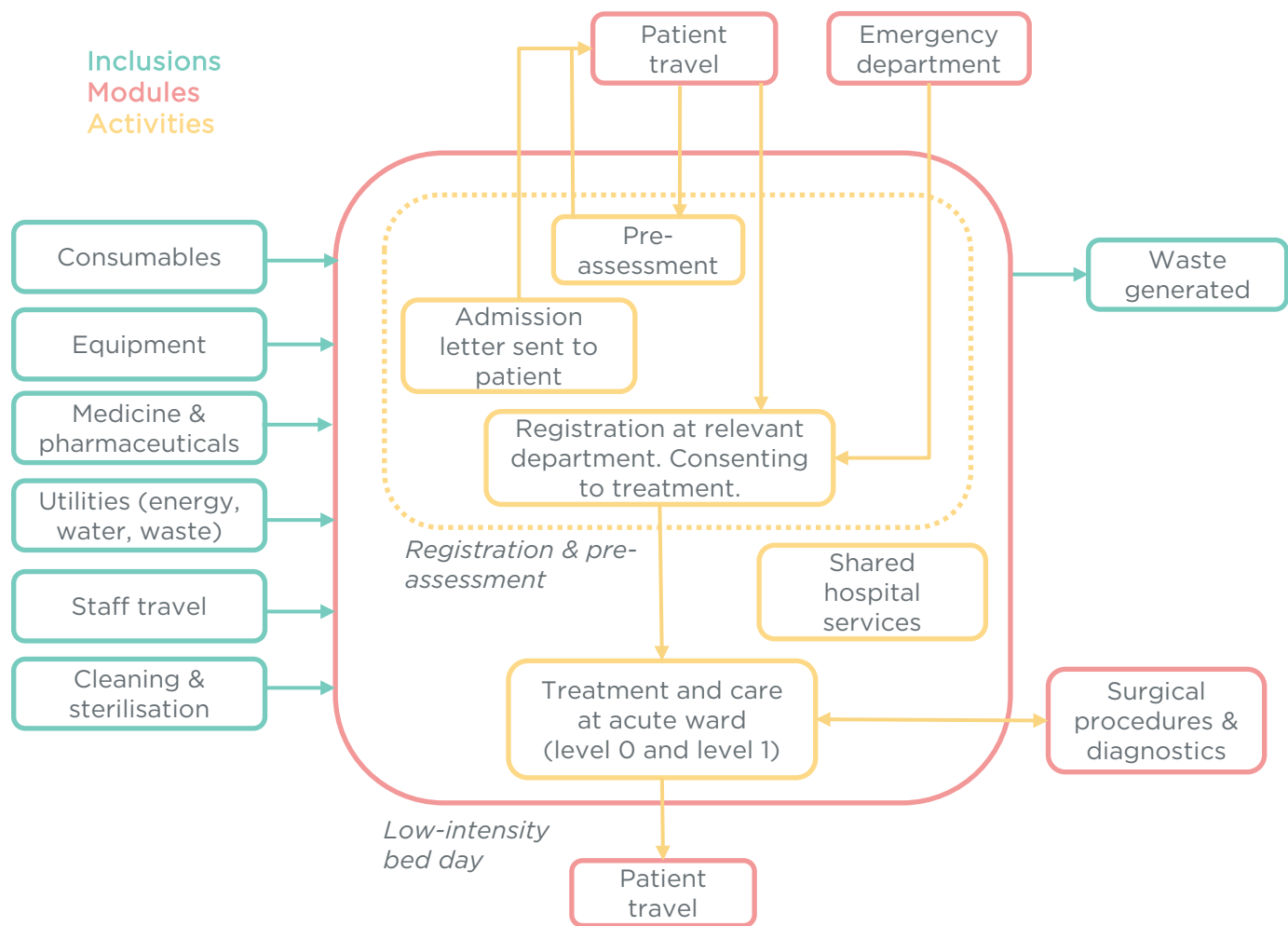
² ERM (2026) Appraisal of Environmental Impact of St. Joseph’s Healthcare Hamilton. Available at: https://shcoalition.org/wp-content/uploads/2026/09/Hospital_StJosephs.pdf

natural gas, while staff travel impacts were mainly associated with internal combustion engine-powered car travel.

Consumables impacts were driven largely by infection prevention and control products, particularly hydrogen-peroxide-based disinfectant wipes and refills, with additional contributions from single-use hygiene and patient-care items, waste management consumables, and wound-care materials.

Scope

- This assessment appraises the environmental impact of an average low-intensity ward bed day at the Charlton Campus Hospital.
- The functional unit of the system studied is a low-intensity ward bed day in FY25.
- The scope includes patient registration, triage and patient treatment. The scope does not include referral to another service or discharge.



Data

Primary data for the low-intensity ward were collected for FY25 for consumables, equipment, pharmaceutical products, staffing and patient throughput. Primary data for the hospital were collected for FY25 and allocated to the low-intensity ward activities on a floor space basis for utilities, waste management, patient nutrition, medical gases and nitrous oxide (an anaesthetic gas). The impacts of shared non-clinical hospital services were allocated to the low-intensity ward activities on a floor space basis. The environmental impact of the low-intensity ward for FY25 was modelled and then divided by the total number of FY25 patient bed days.

Results

Results are presented as the environmental impact per low-intensity ward patient bed day at the Charlton Campus Hospital.

Module	GHG kg CO ₂ eq	Water m ³		Waste kg
		Direct	Indirect	
Consumables	8.16	-	31.0	-
Equipment	4.47	-	19.3	-
Pharmaceuticals	1.78	-	10.4	-
Medical gases	1.35	-	9.64	-
Anaesthetic gases	0.237	-	0.012	-
Utilities	24.2	0.514	364	-
Waste treatment	2.83	-	1.88	3.99
Staff travel	10.6	-	2.84	-
Total	53.6	0.514	440	3.99



Acknowledgements

This document has been developed collaboratively with St. Joseph’s Healthcare Hamilton and the Sustainable Healthcare Coalition. The Coalition comprises a range of organisations within the healthcare sector, including pharmaceutical and medical device companies, trade bodies, procurement, government organisations and other stakeholders. The Sustainable Healthcare Coalition operates with the aim of facilitating the journey towards good health and wellbeing on a finite planet, through open-minded collaboration across public and private healthcare.