

UHI SHETLAND GREENHOUSE GAS EMISSIONS REDUCTION PLAN 2023-2028 (draft v2.)

1. INTRODUCTION

UHI Shetland was formed on the commitment of becoming, “an environmentally and socially responsible organization” (Shetland UHI Strategic Plan: 2021-25). What this means in the context of sustainability and climate change is clear - we must act quickly to reduce our Greenhouse Gas (GHG) emissions.

The Intergovernmental Panel on Climate Change¹ warns that immediate, deep reductions in GHG emissions must happen this decade if the most dangerous consequences of climate change are to be avoided.² In pledging to achieve net zero by 2045, the Scottish Government set an ambitious agenda for climate action and agreed to legally binding legislation to reduce emissions. A clear directive issued to University and College Chairs and Principals in 2022 obliges sector leadership on the climate emergency and requires educational institutions to develop carbon reduction targets and plans for which spending and resources are aligned.

This plan sets out an ambitious but achievable pathway for Shetland UHI to reduce the direct and indirect GHG emissions that result from the activities and operations of its Lerwick and Scalloway campuses. The targets outlined in this plan, which include reducing direct emission by 80% by 2030 and achieving net zero direct emissions by 2040 or earlier, meet and exceed the targets set by the Scottish Government for the public sector and demonstrate the leadership and accountability of UHI Shetland in committing to do its fair share in global action for climate change. The emission reduction targets and the activities we will undertake to achieve them are evidence based and require a whole organization approach; it is the responsibility of all our staff and students to deliver substantial reductions in our GHG emissions.

In describing clear and actionable pathways on climate action, this plan responds directly to the risks of failing to act appropriately and timeously to reduce emissions, as described in the *UHI Shetland Risk Register*. It was prepared under the guidance of the *UHI Sustainability Strategy to 2030 (draft v4)* and the *UHI Strategic Plan 2030 (draft May 25, 2023)* and will be reviewed against both these documents when they are finalized.

The Greenhouse Gas Emissions Reduction Plan is a standalone section of the UHI Shetland Climate Action and Sustainability Plan, which, when completed in its entirety (2024), will include plans for climate adaptation, biodiversity and the integration of the UN’s Sustainable Development Goals in the UHI Shetland curriculum and throughout its operations.

The scope of this plan is five years. A full revision will happen in 2028 or earlier.

¹ The [Intergovernmental Panel on Climate Change](#) (IPCC) is the United Nations body for assessing the science related to climate change.

² The [Paris Agreement](#) is a legally binding international treaty on climate change with the goal of limiting the increase in the global average temperature to avoid the most dangerous consequences of climate change. Climate science (IPCC) indicates a global temperature increase above 1.5°C of pre-industrial levels will lead to severe climate change impacts, including more frequent and severe droughts, heatwaves and rainfall. To limit global warming to 1.5°C, GHG emissions must peak before 2025 at the latest and decline 43% by 2030.

Vision Statement

The UHI Shetland vision for climate action and sustainability sets out our commitment to be an environmentally and socially responsible organization.

As an inspirational hub of innovation and learning we recognise our leadership role in environmental stewardship and global sustainability.

We will minimise the environmental impact of our activities by reducing our direct greenhouse gas emissions by 80% by 2030 and achieve net zero by 2040.

We will become climate resilient by managing our vulnerabilities to weather and climate, and by looking forward to emerging opportunities.

We will create a learning environment for sustainability by incorporating the UN Sustainable Development Goals in our curriculum and throughout our operations.

We will grow the capacity of UHI Shetland, to provide green skills training and in climate change research, as our contribution to a sustainable and collaborative environment in Shetland where the economy and community can prosper.

2. GOVERNANCE

Activities of the GHG Emissions Reduction Plan, including implementation, monitoring and reporting, are embedded across existing governance structures, committees and procedures of UHI Shetland.

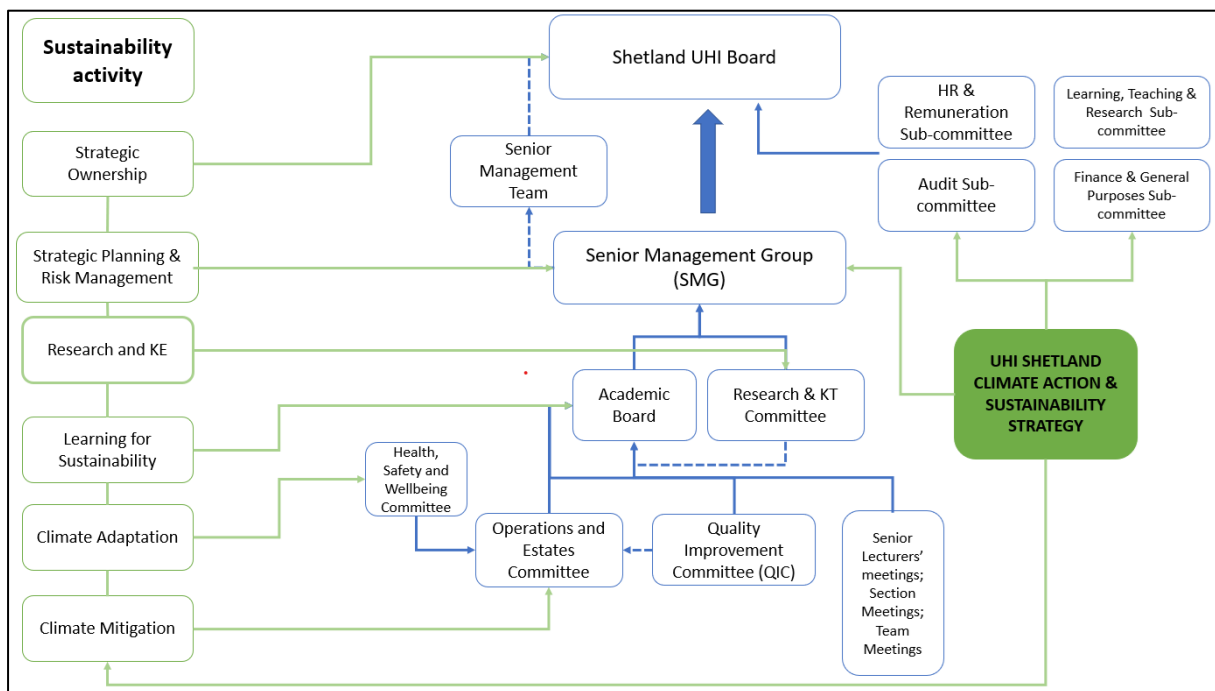


Figure 1: Sustainability embedded across Shetland UHI governance structures

Overall responsibility for achieving the statutory requirements for emission reductions lies with the Shetland UHI Board of Management. The Principal and Senior Management Team are accountable for delivering progress on plan implementation and key performance indicators. The Senior Management Group is responsible for annual operational plans, which prioritise activities and inform the workplans of relevant staff. The annual carbon audit is the responsibility of the Head of Facilities, with support of the Finance Manager.

Key Performance Indicators (KPIs)

Targets	Key Performance Indicator
Direct Emissions	
Target: We will achieve zero direct emissions from heat by 2030	Quantity of heating oil used at the Scalloway campus
	Quantity of propane used at the Lerwick campus
Target: We will achieve zero direct emissions from transportation by 2035	Quantity of petrol and diesel used in fleet vehicles
	Number of kilometres driven by fleet vehicles
Indirect Emissions	
Target: We will achieve Building Energy Performance ratings of C or higher for all campus buildings	Building Energy Performance ratings for all campus buildings
	Renewable energy generation capacity
Target: We will improve the energy efficiency of campus operations to reduce energy consumption	Number of inefficient appliances and equipment replaced with high efficiency alternatives
	Number of initiatives/communications delivered to staff and students to encourage energy efficient behaviour
	Number of students engaged in energy efficiency actions and messaging
Target: We will apply the principles of a circular economy to reduce waste and send no biodegradable waste to landfill by 2025 and send zero waste to landfill by 2030	Number of skips delivered to the landfill
	Number of skips delivered to recycling
	Number of food items purchased from local suppliers
	Amount of paper used
Target: By 2030, achieve a 20% reduction in Scope 3 transportation emissions from 2021 levels	Number of kilometres driven by staff to and from work in single occupancy vehicles
	Number of commuting trips using public or active transportation, or zero emission vehicles
	Number of kilometres claimed by staff use of own vehicles

2. CLIMATE MITIGATION - Reducing our Greenhouse Gas Emissions

SWOT Analysis

STRENGTHS	WEAKNESSES
<p>We have only a few direct emissions sources.</p> <p>We have a motivated management team and clear direction from the IPCC and Scottish Government of what is required of us.</p> <p>We can build on the success of campus wide recycling.</p> <p>We have strong, collaborative partners with UHI & Shetland Islands Council.</p>	<p>We are a young organisation (2yrs) still working to understand where efficiencies can be gained in our assets and operations.</p> <p>Indirect emissions associated with transportation, for which we have limited control under challenging conditions, are a large contribution to our total emissions profile</p> <p>We are located on a remote island with a challenging environment, small population, limited services and high energy costs.</p>
OPPORTUNITIES	THREATS
<p>The single largest source of direct emissions is the heating system at the Scalloway campus, which is reaching the end of its operational life.</p> <p>Repairs are required to the building fabric and roof of the Lerwick campus.</p> <p>Campus redevelopment under the Islands Growth Deal is an opportunity to utilize more sustainable methods and technology.</p>	<p>Existing budget constraints and staffing capacity mean it will be challenging to action the additional workload.</p> <p>We do not know how we will secure adequate financial resources to complete the work required on campus buildings.</p> <p>It is unclear who is financially responsible for efficiency upgrades to our leased buildings.</p>

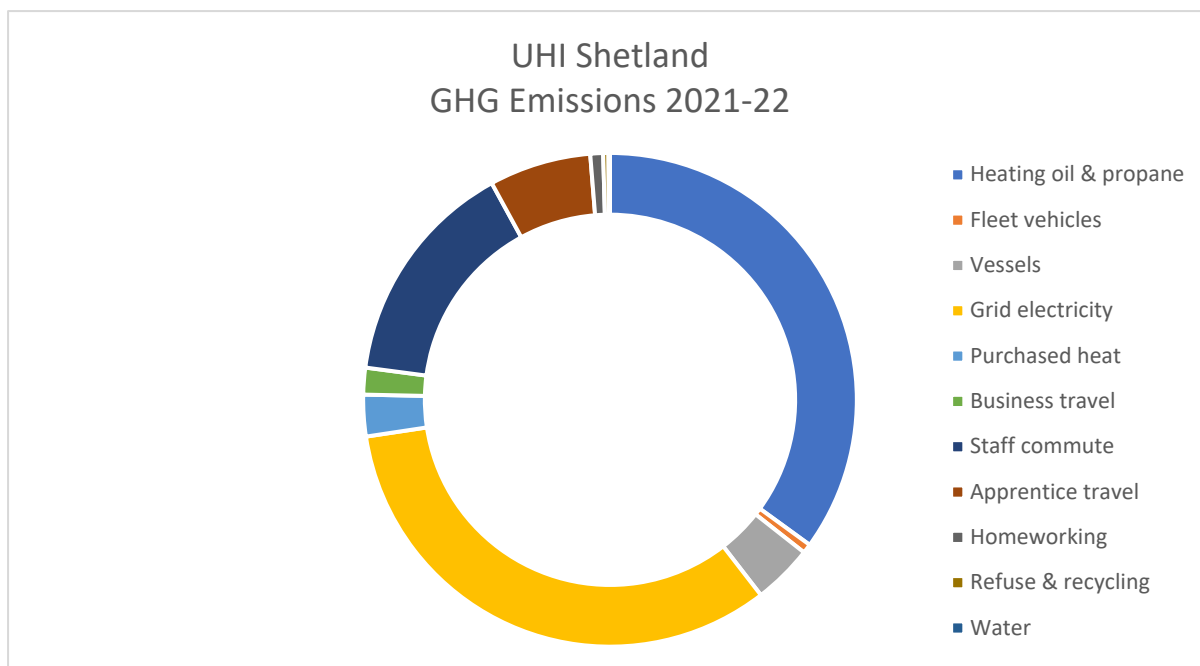
GHG Emissions Profile

UHI Shetland's GHG emissions are largely attributable to the operation of buildings at its two campuses, Lerwick and Scalloway, and the use of marine vessels. Indirect emissions, are primarily associated with travel, including the daily staff commute to campus and apprentice travel to off-island locations for formal study. The single most important action UHI Shetland can take to reduce its direct GHG emissions is to replace the oil boiler at the Scalloway campus with a low emission heat source.

Emission Factors

Emissions are calculated following the emission factors set out under the Scottish Government Public Bodies Climate Change Duties³ reporting methodology.

³ All public bodies listed in Schedule 1 of the 'Climate Change (Duties of Public Bodies; Reporting Requirements) (Scotland) Order 2015' as amended by the Climate Change (Duties of Public Bodies: Reporting Requirements) (Scotland) Amendment Order 2020, are required to report annually on compliance with climate change duties established under S44 of the Climate Change (Scotland) Act 2009 and in accordance with Schedule 2 of the 2015 Order.



Data Sources

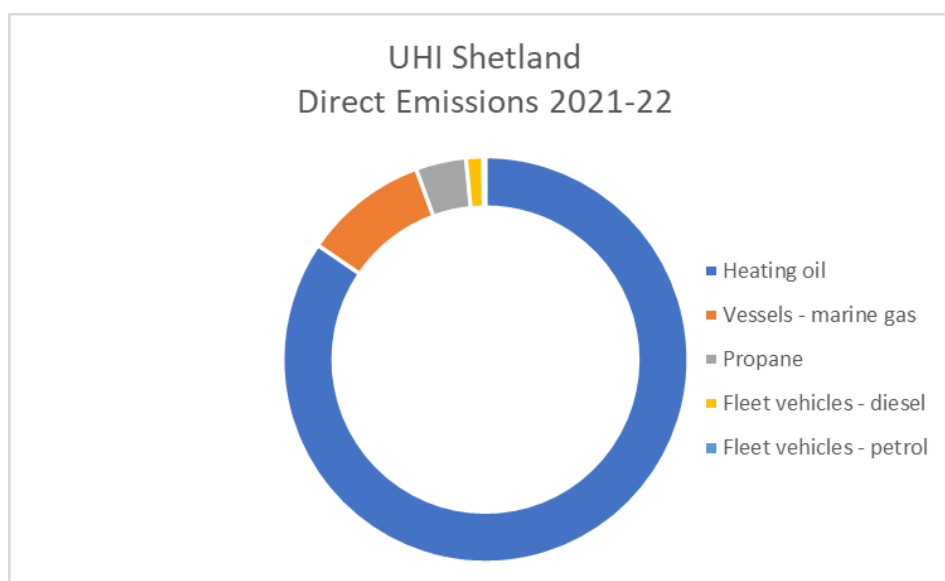
Emission Source		Data Source	Confidence
Scope 1 Emissions			
Heat (oil and propane)		Purchased fuel	high
Transportation (fleet and vessels)		Purchased fuel	high
F Gases	Lerwick campus	A baseline was established in 2022 for the Lerwick campus and Fgas data with high confidence should be available annually. There is no data for the Scalloway campus.	
	Scalloway campus		
Scope 2 Emissions			
Purchased electricity		Meter readings	high
Scope 3 Emissions			
Water		Meter readings	high
Waste & recycling		Estimated from number of bin collections	low
Business travel		Travel bookings used to estimate distance	medium
Apprentice travel		Travel bookings used to estimate distance	medium
Staff commute to campus		Voluntary annual travel survey used to estimate distance and frequency	low
Homeworking			

Organizational & Operational Boundaries

Scope	Included	Excluded
Scope 1 Direct Emissions	Fuel consumption Fleet vehicles F Gases	Marine vessels
Scope 2 Indirect Emissions	Purchased electricity	
Scope 3 Indirect Emissions	Purchased electricity – line losses Water, waste and recycling Business travel Apprentice travel outwith Shetland Staff commute to campus Homeworking	Student commute to campus Satellite learning centres – North Isles, North Mainland, Whalsay and Islesburgh

GHG Emissions Reduction Targets

Targets	Actions
Net Zero: We will achieve net zero direct emissions by 2040	
Direct Emissions	
Target: We will achieve zero direct emissions from heat by 2030	Eliminate the use of heating oil at the Scalloway campus by 2030
	Eliminate the use of propane at the Lerwick campus by 2030
Target: We will achieve zero direct emissions from transportation by 2035	Eliminate the use of petrol and diesel road vehicles by 2035 or sooner
	Reduce the distance driven by fleet vehicles by 20% by 2030



Indirect Emissions	
Target: We will achieve Building Energy Performance ratings of C or higher for all campus buildings	Conduct energy audits of campus buildings, including heating, hot water and lighting systems, insulation, windows, building fabric, ventilation etc.
	Initiate collaboration with Shetland Islands Council, the landlord of campus buildings, to determine responsibilities and opportunities for efficiency upgrades.
	Evaluate the technical and financial feasibility of reducing emissions by: <ul style="list-style-type: none"> • connecting to the Lerwick District Heat Scheme • installing renewable energy generation capacity • purchasing renewable energy via private wire
Target: We will improve the energy efficiency of campus operations to reduce energy consumption	Conduct energy audit of campus operations, including behaviours and occupancy, ICT, use of appliances and other equipment.
	Optimise space utilization to maximise efficiency
Target: We will apply the principles of a circular economy to reduce waste and send no biodegradable waste to landfill by 2025 and send zero waste to landfill by 2030	Improve recycling rates
	Decrease waste generation by eliminating the use of single use plastics, reducing food waste and paper usage, and by facilitating reuse & repair
	Reduce food miles by purchasing from local suppliers
	Work with UHI to develop a sustainable procurement framework
Target: By 2030, achieve a 20% reduction in scope 3 transportation emissions from 2021 levels	Improve campus facilities to encourage the use of bikes, electric bikes and electric vehicles.
	Decrease the number of staff commuting to work in single occupancy vehicles by increasing the number of staff trips using active and public transportation, car sharing and or zero emission vehicles for their daily commute
	Reduce travel between campuses in single occupancy vehicles

