



Guildhall School of Music and Drama

Carbon Management Plan

Version 3

To be approved by the Board of Governors of the Guildhall School on 20th September 2021

This policy is of relevance to all users of the School's services

Guildhall School of Music and Drama

Carbon Management Plan 2021 to 2027

Introduction and Background

Guildhall School is a vibrant, international community of [musicians](#), [actors](#) and [production artists](#) in the heart of the City of London. Ranked as the top UK conservatoire in the Guardian [music](#) and [drama](#) league tables and second in the Complete University Guide [arts, drama and music](#) league table, the School delivers world-class professional training in partnership with distinguished artists, companies and ensembles. A global leader in creative and professional practice, the School promotes innovation, experiment and research, and is also one of the UK's leading providers of lifelong learning in the performing arts, offering inspiring training for children, young people, adult learners, and creative and business professionals.

The School first opened its doors on 27 September 1880 to 62 part-time students in a disused warehouse in the City of London. Today, it is situated in the heart of London's Barbican Estate, also home to the Barbican Centre with whom it shares a strategic creative alliance.

The School currently numbers circa 1,000 FTE students (taken from 2019/20 EMR report to the Higher Education Statistics Agency) on its roll call. In any given year, 35% of the students are from outside the UK typically representing over 40 nationalities.

The Guildhall School's Estate

The Guildhall School of Music & Drama currently comprises approximately 33,400 m² gross internal area over four neighbouring buildings which are continually updated and enhanced.

The main building is in Silk Street and attached to the Barbican Centre. It was purpose-built by the City of London and was officially opened by the Lord Mayor of London on 25 October 1977.

Sundial Court, the School's hall of residence, is located in Chiswell Street, just around the corner from the main Silk Street building. Sundial Court has 177 bedrooms in thirty-nine flats, each with either three, four, five or six bedrooms.

John Hosier Annexe, named after the Principal of the School from 1978 to 1988, has 46 teaching/practice rooms and is located at the west end of the Barbican Estate.

Following a major building project Milton Court, based across the road from the current Silk Street building, opened in September 2013, providing the School with state-of-the-art performance and teaching spaces in approximately 11,385 m², including:

- a 608-seat Concert Hall
- a 227-seat Theatre
- a Studio Theatre
- a gymnasium
- three major rehearsal rooms
- TV studio suite

As well as teaching, meeting and administrative spaces, complementing and extending those currently in use in the Silk Street building. Designed to top quality professional standards, the new building will mean that the School's facilities will at long last match the outstanding quality of its training and the success of its graduates.

The School's buildings are very intensively used. Each term is 12 weeks in duration, but in practice there is considerable academic activity in the week before and the week after each term, meaning that the buildings are being used for teaching purposes for 42 weeks per year.

In order to provide sufficient space for individual student practice, the main Silk Street building is open during term time from 7am – 10pm Monday to Friday, 8am – 9pm on Saturday and 9am – 8pm on Sunday.

During the summer vacation the Silk Street building and Sundial Court are used extensively for summer schools, some of which are organised by the School and some by external companies that hire the facilities.

With the exception of the new Milton Court building all of the School's existing estate is grade 2 listed.

The Guildhall School is owned and governed by the City of London Corporation as part of its contribution towards the cultural life of London and the nation. The City is one of the most significant sponsors of the arts in the UK. It provides the Barbican Centre, Europe's largest multi arts and conference venue, and directly funds the London Symphony Orchestra's residency. It is also a major funder of the enormously popular Museum of London and supports a year-round programme of major arts festivals and events in the City and neighbouring areas.

The City is also the port health authority for the whole of the Thames estuary, owns and runs four famous markets: Smithfield, Billingsgate, Spitalfields and Leadenhall, manages a portfolio of property throughout London and maintains and safeguards over 10,000 acres of open space in and around it, including Hampstead Heath, Epping Forest, Burnham Beeches and a string of parks and commons in Kent and Surrey. It also runs the five bridges that cross the Thames into the City, including Tower Bridge, a major tourist attraction and an international symbol for London as a whole.

As part of the City of London Corporation, the Guildhall School is not a legal entity in its own right. As such, the School is subject to all the policies and rules of the City

and in many cases has helped to develop them. This includes policies relating to sustainability and carbon reduction, an area in which the City has been active since 1975.

This document sets out the Guildhall School of Music and Drama's Carbon Management Plan in line with the City of London's newly published [Climate Action Strategy](#) and extends the School's previous [Carbon Reduction Strategy](#) which came to an end in 2020/21.

Classification of Emissions Sources

The Greenhouse Gas (GHG) Protocol defines direct and indirect emissions as follows:

Direct GHG emissions are emissions from sources that are owned or controlled by the reporting entity Indirect GHG emissions are emissions that are a consequence of the activities of the reporting entity, but occur at sources owned or controlled by another entity.

The GHG Protocol further categorizes these direct and indirect emissions into three broad scopes:

- Scope 1: All direct GHG emissions. such as those emitted by fleet or boilers/furnaces.
- Scope 2: Indirect GHG emissions from consumption of purchased electricity, heat or steam.
- Scope 3: Other indirect emissions, such as the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, outsourced activities and waste disposal, etc.

Our Baseline and Targets

Scope 1 & 2

The School's previous Carbon Reduction Strategy set the baseline year as 2005/06 to initially reach a 43% reduction by 2020/21 against the baseline of 2005/06, this for the existing estate excluding Milton Court, we reached this target early in 2017/18 so reset the target to 55% reduction for the existing estate. This was exceeded in 2019/20 with a 70% reduction, some of which can be attributed to reduced energy consumption due to closures related to COVID therefore the more sensible figure for our new baseline as described below is 2018/19.

The Milton Court building became operational in September 2013 adding 11,385m² to the School's estate. Inevitably, the addition of a building of this size to the estate had led to an overall increase in the School's energy consumption and therefore carbon emissions. The original targets for Milton Court were based on design estimates which would have made some assumptions regarding the use of the

building (including utilisation and type of event), however the use has evolved and the assumptions would not have taken into account the increase in diversity and activity.

The School continues to procure 100% renewable electricity. Heating and cooling is supplied through the Citigen district heating network with the exception of John Hosier Annexe which has a ground source heat pump and Sundial Court which has gas for cooking and supplementary gas heating. The School also runs a diesel-fuel transit van.

Electricity consumption data is supplied through half hourly data from STARK, our data collector, with carbon conversion factors supplied through the Department of Business, Energy and Industrial Strategy.

Gas consumption data is supplied through monthly meter readings with carbon conversion factors supplied through the Department of Business, Energy and Industrial Strategy.

District heating data is supplied through monthly meter and supplier readings. Conversion factors are now supplied through Citigen.

Over the years we have made great strides in reducing our Scope 1&2 emissions, having undertaken many successful initiatives from behaviour change interventions to engineering and technical solutions including:

- Installing "Power Perfector" voltage reduction units in Sundial Court and the Silk St building
- Installation of new Building Energy Management System (BEMS) that manages the building heating, cooling and ventilation systems. In 2009 new systems were installed in both the Silk St buildings and in Sundial Court enabling us to monitor/manage all of the systems and optimise them for best energy use
- Review of run hours on heating and ventilation systems in consultation with student union representatives, facilities and other relevant staff, enabling the School to operate systems more precisely at times that suit operational requirements
- Introduction of low energy and LED lamps.
- Installation of Chlorine Dioxide unit to control legionella bacteria. This enables the temperature of the hot water systems to be safely reduced thus saving energy.
- Installation of variable speed drive pumps. This reduces pressure on the pumps and valves as water flows around the systems, by using the BEMS to control them the electricity used to drive the pumps is reduced.
- Introduction of Computer Aided Facilities Management System to ensure planned and preventative maintenance schedules are in place.
- Continued Planned Preventative Maintenance to ensure our equipment has been serviced/repaired and is therefore working as efficiently as possible

In line with the City of London’s Climate Action Strategy we have now re-drawn the baseline to 2018/19 with total Scope 1 & 2 Carbon Emissions showing in the table below

Scope 1 & 2 Emissions		
	2018/19	
	Tonnes CO2e	%age of total
Non Residential Energy	1,317	83%
Residential Energy	225.00	14%
Van	0.5	0%
Refrigerants	48	3%
Total	1,590.50	

Our target, in line with City of London Corporation strategy, is to reach Net Zero on our Scope 1 & 2 emissions by 2027. We have many initiatives planned, as described in our action plan and to ensure we are on track we have set a milestone target of a reduction of our Scope 1 & 2 emissions of a 20% reduction against the 2018/19 baseline by July 2023.

Scope 3

We continue to measure our Scope 3 emissions from waste, water, waste water, commuter travel and business travel and for the first time have calculated our emissions from procurement along with construction and refurbishment.

In line with the City of London Corporation’s Climate Action Strategy our target is to reach net Zero on Scope 3 emissions by 2040.

Waste

We have recycling facilities throughout the School and send Zero to landfill with any waste previously destined for landfill being diverted to energy from waste plant. We also regularly undertake awareness campaigns aimed at staff and students to encourage them to consider the waste hierarchy when disposing of items.

Waste weights are supplied to us by our contractor and carbon conversion factors supplied through the Department of Business, Energy and Industrial Strategy.

We have set the following baseline and targets:

Baseline Year: 2018/19
 Tonnes CO2e: 6
 Milestone Target: 8% reduction by 2025/26
 Target: Net Zero by 2040

Water and Waste Water

Interventions over the years have been varied to reduce water consumption. Activity has included diverting grey water for use in the allotments, rolling out percussion taps which switch off automatically, thus saving water and the installation of water saving shower units in Sundial Court.

Water use is measured through monthly meter readings and carbon conversion factors through the Department of Business, Energy and Industrial Strategy.

We have set the following baseline and targets:

Baseline Year:	2018/09
Tonnes CO2e:	22.05
Milestone Target:	5% reduction by 2025/26
Target:	Net Zero by 2040

Commuter Travel

We have facilities for cyclists including covered cycle racks, showers, changing facilities plus have recently installed a toolkit in order that staff and students can carry out basic maintenance. We also carry out awareness activity which promotes wellbeing as well as environmental sustainability to encourage more to walk and cycle.

Travel surveys are used to measure mileage by different modes and carbon conversion factors are supplied through the Department of Energy and Industrial Strategy.

The figure for commuter travel includes staff and student daily travel plus emissions associated with travel between student's homes and the university at the start and end of term, including international students travel to and from their home country.

We have set the following baseline and targets:

Baseline Year:	22018/19
Tonnes CO2e:	919
Milestone Target:	8% reduction by 2025/26
Target:	Net Zero by 2040

Business Travel

Business travel is measured through information received from our finance teams on expenses claims and category spend with carbon conversion factors supplied through the Department of Business Energy and Industrial Strategy.

It should be noted that the data shown for staff and student business travel include the emissions associated with a limited number of staff flying overseas in order to

conduct auditions for students applying for places at the Guildhall School. If these trips did not take place, a considerably larger number of students would need to fly in the opposite direction to be auditioned in London.

We will continue to work with colleagues from the City of London Corporation to streamline our emissions data and put in place effective reduction plans.

We have set the following baseline and targets:

Baseline Year:	2018/19
Tonnes CO2e:	292
Milestone Target:	5% reduction by 2025/26
Target:	Net Zero by 2040

Procurement

This is the first year that we have measured carbon emissions from procurement. We calculated the baseline using the same tools as those utilised by the City of London Corporation. We are currently working with the City's teams to establish ongoing reporting frameworks and an ongoing reduction trajectory.

We have undertaken many small initiatives such as encouraging paper free working or installing hand dryers to cut down on use of hand towels. However, it is evident that more work needs to be done in this area and we are currently looking at how we can work with our suppliers to enable them to reduce these impacts as well as developing awareness campaigns to equip people with the tools they need to buy better in the first place and share what they have.

We have set the following reduction targets:

Baseline Year:	2018/19
Tonnes CO2e:	2,312
Milestone Target:	10% reduction by 2025/26
Target:	Net Zero by 2040

Construction and Refurbishment

This is the first year that we have measured carbon emissions from construction and refurbishment. We calculated the emissions using methodology used by the City of London Corporation. As we have a very small amount of emissions in the baseline year due to minimal works, it is difficult to set a reduction target. We will carefully monitor emissions from construction and refurbishment over the next period and set targets as appropriate.

Baseline Year:	2018/19
Tonnes CO2e:	5
Target:	Net Zero by 2040

Student and Staff Engagement

Sustainability issues are communicated to staff and students through clear notices and guidance with developments highlighted in articles in the staff and students monthly e-zines. Links to relevant policies will be published on the Guildhall School's website in order that prospective students have access to them before they apply.

We will continue to communicate our green successes with our staff, students, audiences and alumni and other interested parties. Sustainability will feature on our website which will include highlighting awards and other recognition for work achieved.

The Sustainability Steering Group (SSG) comprises of members from the Guildhall School of Music and Drama and the Barbican Centre. Being neighbours within the same iconic listed Grade 2 Barbican estate and sharing a number of integrated services and management responsibilities, the two organisations have developed a joint approach to managing sustainability, this being part of our alliance approach.

The SSG's mission is to ensure that both organisations make ethical and environmentally sound decisions in all facets of the business and encourage others to do the same. The group exists to co-ordinate and communicate various initiatives including this plan and associated action plan.

The group meets six times per year and is made up of members of staff from both organisations and includes representation from the student body and senior management.

From 2019, to supplement the work of the SSG and respond to the growing appetite for students and staff to become more involved in sustainability, we introduced a new informal sustainability group so all staff and students have the opportunity to realise and shape our strategy.

Governance and progress monitoring

Governors

The Committee of University Chairs' 'Guide for Members of Higher Education Governing Bodies in the UK' states that: 'The governing body is responsible for oversight of the strategic management of the institution's land and buildings with the aim of providing an environment that will facilitate high-quality teaching and learning and research.' Carbon management is a key strategic issue, so it is a crucial area for governors who should be informed and involved in decision-making on the institution's approach to reducing its emissions.

Officers

At officer level, the School's Senior Management Team has ultimate responsibility for taking ownership and for communication of this strategy, and for ensuring that its

action plan is implemented and progress monitored accordingly. The Senior Management Team will ensure that a monitoring report is submitted to the Board of Governors annually. Jonathon Poyner (The Director of Operations and Buildings) is the Senior Team member responsible for ensuring review and ongoing implementation of this plan.

At an operational level, the Buildings Operations Board will have a role as the committee into which the SSG reports, particularly in respect of monitoring. It will receive progress reports on monitoring by receipt of the minutes of SSG meetings.

Detailed monitoring of this strategy will be carried out by the SSG at each of its meetings, which are twice termly. It will also be responsible for revising the strategy in the light of progress. or any significant changes.

Implementation Plan

Scopes 1 & 2

In order to achieve the 2027 carbon reduction target for scope 1 & 2 emissions the School, working with our colleagues in the Energy team at the City of London Corporation, have identified a number of initiatives and interventions that will reduce energy consumption. Many of these are behavioural adjustments that attract little, or no, cost to expand on our current engagement work. Others are engineering or technical interventions that reduce the amount of energy needed to operate the School's buildings. Whilst these initiatives have a capital cost attached to them, they will of course generate future savings in energy costs and will provide a good return on investment particularly as energy costs inevitably rise.

The following tables list the initiatives and projects that will be or are already being implemented, or are the subject of detailed evaluation to establish their viability.

Behaviour Change & Staff / Student Engagement

Initiative	Detail	Action by	Timescale/ progress
Switch off electrical equipment	Staff and students are encouraged to turn off all electrical equipment, monitors, lights, printers, copier machines when at meetings, lunch and at the end of the day.	SSG and Facilities department	Ongoing
Energy audit	Out of hours energy audit to ascertain what equipment is being left on overnight. To be used as part of awareness campaign	Facilities	Spring 2022
Screen saver and/or desktop message to turn off monitors	This is a simple and effective reminder that switching off an unattended monitor saves more energy than leaving it on stand-by.	IT department	Ongoing

Initiative	Detail	Action by	Timescale/ progress
Encourage staff and students to turn the heating down or off if not needed, rather than opening windows	This is a particular problem in Sundial Court bedrooms, where windows are often used as the temperature control mechanism, rather than the thermostatically-controlled radiator valves. Awareness raising comprises notices in the Sundial Court handbook, as well as reminders at residential meetings.	Student Affairs and Facilities departments	Ongoing
Investigate Departmental environmental accreditation	This initiative involves the creation of a simple internal accreditation scheme, whereby the School's departments work towards a set of environmental and sustainability standards, thus creating a competitive approach to achieving a more sustainable institution.	SSG	Spring term 2023
Sundial residents' meetings	These regular meetings are used to promote sustainability and environmental awareness and to encourage students to engage with the issues and contribute ideas.	Student Affairs and Facilities departments	Ongoing
Use of foyer screens to show sustainability messages	The School has a number of large display screens in its main foyer, showing a variety of information such as forthcoming events and room bookings and usage for the day. The screens are programmed to show sustainability messages, either at times when their primary use is not necessary or interspersed with their primary use.	SSG and IT department	Ongoing
Environmental Awareness Days	The School organises regular events in the main foyer, usually on a termly basis, at which environmental films are shown, and energy-saving ideas and statistics are promoted, often in conjunction with external initiatives.	SSG	Ongoing
Investigate Incorporating sustainability issues into the recruitment and appraisal process	A commitment to working towards a more sustainable and environmentally friendly institution should be part of the job description of every staff member. Awareness of the initiatives in which the School is engaged should form part of the induction process. For certain management roles, particularly in	HR department	Spring Term 2023

Initiative	Detail	Action by	Timescale/ progress
	Engineering and in Technical Theatre, specific environmental objectives are already being included in the appraisal process.		
Incorporate Sustainability into all student and staff inductions	This will ensure staff and students are aware of our policies, strategies and how they can start reduce their and the School's environmental impact at the earliest opportunity	SSG	Spring Term 2023
News items	Develop framework to ensure regular items feature in staff newsletter and student e-zines	SSG	Spring Term 2022

Engineering and Technical Interventions

Initiative	Detail	Est. Cost £	Timescale/ progress
Insulation Upgrades	Insulation to heating pipework to ameliorate losses.	26,000	Spring Term 2022
Upgrade AHUs	Upgrade works to dampers and valves plus Upgrade Milton Court AHUs to ensure systems are working efficiently plus modifications to Milton Court cooling infrastructure	400,000	Spring Term 2022
Recommission / Upgrade BMS	Recommission and upgrade BEMS to ensure systems are working efficiently.	380,000	Spring Term 2022
LED lighting upgrades to Milton Court, Sundial Court and Silk St	Large scale replacement to build on earlier work in trials and replacing old style lamps with LED equivalent where possible.	1,445,000	Spring Term 2022
Controls Strategy for BEMS	Develop controls strategy for BEMS to ensure consistent service delivery and maximise efficiency following works		Spring Term 2023
Review Management Strategies	Including monitoring and targeting to ensure areas of waste are identified at an early stage.		Spring Term 2022
Improvements to Compartmentation	Part of fire safety project to improve compartmentation will have added insulation benefit	Funded under fire safety projects	Spring Term 2023
Refurbishment of heat exchangers	Investigate refurbishment of heat exchangers, some now 20 years old		Spring Term 2022

Initiative	Detail	Est. Cost £	Timescale/ progress
School Booking System	Investigate alignment of BEMS with School room booking system to ensure better scheduling of heating and ventilation systems		Spring Term 2022
Diesel Van	Investigate replacement of diesel van with fully electric or hybrid		Spring Term 2022
Review of STARK meter overnight loads to reduce energy usage	STARK is the electricity monitoring system used by the distribution company, which produces half-hourly data. A review of these data enables the School to identify what is being left on overnight, and to reduce the static load units that are permanently switched on and make them switchable so they can be turned off when not required.		Ongoing
Removal of constant load transformers in engineering areas	A review of these units in the plant rooms and service risers revealed that they are not all required. Some units have been removed and the others have been put on isolation switches to allow them to be turned off.	1,000	Summer term 2023
Decarbonisation of District Heating and Cooling	CoL are working with Citigen to explore ways to decarbonise the district heating and cooling network.		Summer Term 2027
Review HVAC system for use of “free cooling” to reduce chiller run times	The BEMS allows the School to review inside and outside temperatures, to enable the run times of the chiller and CHP cooling systems to be balanced by using cool air from outside.		Ongoing
Auto-shut down of IT equipment	Ensuring that staff and students switch off IT and other appliances that are their sole responsibility is a behavioural challenge, but equipment that is monitored centrally from the IT network can be automatically shut down when the School closes each night. This ensures that no energy is wasted by appliances being left on unnecessarily.		Ongoing
Investigate increased use of secondary glazing	This is problematic due to the estate’s grade 2 listing, but may be possible in some areas. Project	800,000	Being evaluated

Initiative	Detail	Est. Cost £	Timescale/ progress
	requires detailed evaluation.		
Space planning	Examine utilisation of School buildings to ensure effective space management and ensure energy efficiency		In Progress

Implementation Plan Scope 3

The target for Net-Zero for Scope 3 emissions is 2040. For a number of areas this is the first year that we have measured these emissions particularly in the areas of procurement and construction and Maintenance. We are currently planning our reduction trajectory in consultation with our colleagues at the City of London Corporation and have set milestones to ensure progress.

Initiative	Detail	Action by	Timescale/ progress
Water Benchmarks	Develop benchmarks for water use	Sustainability Manager	Spring Term 2022
Water Metering	Investigate ½ hourly meters for main water incomers	Sustainability Manager	Spring Term 2023
Water Survey	Evaluate possibility of undertaking water efficiency survey	Sustainability Manager	Spring Term 2023
Procurement Analysis	Undertake analysis to measure highest impacts from procurement and implement reduction programmes	Sustainability Manager	Spring Term 2023
Waste Audit	To check the right waste stream is going into the correct bin and that information on recycling is at point of use. Results to be used for awareness raising	Facilities Manager	Spring Term 2022
Waste Campaign	Develop awareness campaign reduce / reuse / recycle	Facilities Manager	Spring Term 2022
Waste Analysis	Undertake analysis to measure highest impact waste materials. Implement reduction programmes and set targets	Facilities Manager	Spring Term 2022
Give and Take Day	End of year give and take day	SU President	Spring Term 2022
Travel Survey	Staff and Students	Sustainability Manager	December 2021
Cycling Facilities	Investigate opportunities for funding for sustainable travel	Sustainability Manager	July 2022

Initiative	Detail	Action by	Timescale/ progress
	projects e.g. changing facilities, additional bike racks/ training		
Procurement	Work With CoL teams to evaluate top emissions sources and develop plans for reduction and ongoing measurement	Sustainability Manager	July 2023
Encourage paper-free working	Work towards greater use of electronic communication	SSG	Ongoing
Reduce paper usage	Print double-sided (all printers default to double-sided), reduce margin sizes, reuse scrap for notepaper, recycle envelopes	SSG	Ongoing
Increase recycling	Increase number of recycling points and consider other materials that can be recycled	SSG and Facilities department	Ongoing
Reduce waste going to skips	Review ways of reducing the amount from theatre sets that are thrown away after each production	Technical Theatre	Ongoing
Encourage cycling	Promote cycle safety and training schemes and increase cycle bays to support staff and students who wish to cycle to the School. Promote the cycle loan scheme	SSG	Ongoing