

# ENVIRONMENTAL SUSTAINABILITY STRATEGY

November 2021



## PURPOSE

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The primary role of the School is to prepare boys with diverse backgrounds and abilities for a life of learning, leadership, service and personal fulfilment. Our Environmental Sustainability (ES) Strategy seeks to support this purpose by delivering a more cost-efficient institution that meets its environmental responsibilities and demonstrates control of its ethical and social impact.

## AIM

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The aim is to shape an organisation that will be recognised for environmental and sustainability excellence.

## GENERAL

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An environmentally sustainable future Harrow School is one where our biggest impacts are addressed, and our greatest opportunities are maximised. Learning opportunities – in formal and other settings – can maximise the sustainability literacy of our students and staff. The School's activities result in a carbon footprint that needs to be addressed through a carbon management programme. The School is guided by its existing Environmental Sustainability Policy (2019), which promotes green practice in the management of its estate.

## STRATEGIC AIMS

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Our three strategic aims cover:

- the environmental impact of the estate;
- carbon reduction; and
- teaching and learning.

From these aims, tangible and achievable objectives and targets have been set to be delivered over the coming five to ten years. The Director of Operations will lead on Aim 1 (Environmental Impact) and Aim 2 (Carbon Reduction) and work directing the Estates Department on this Environmental Sustainability Strategy. Operational objectives for each of the work themes are now explained in greater detail.

## THE ENVIRONMENTAL IMPACT OF THE ESTATE

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### AIM 1

To measure the environmental impact of a range of the School's estates-based activities in order to establish baselines against which targets for improvement can be set.

To achieve this aim we will strive to achieve operational objectives under the following work themes:

- carbon and energy management;
- waste management;
- sustainable travel management;
- water management;
- biodiversity management;

- sustainable procurement;
- green design, construction, renovation and maintenance;
- corporate social responsibility; and
- communication.

## **BACKGROUND**

The objectives relate to the work of the Director of Operations and the Estates Department and have been divided between the nine work themes. Further environmental objectives and targets will be set once baseline reviews (establishing the starting point for work themes) produce a picture of the status quo in each area of work. As work is at an early stage within some themes, objectives here relate to reviewing the baseline and establishing systems rather than achieving specific environmental objectives.

## **CARBON AND ENERGY MANAGEMENT**

The aim is to reduce the amount of energy consumed by the School and therefore lower its carbon footprint. The largest portion of carbon emissions comes from the natural gas consumed in non-residential buildings; it will be the least efficient of these that will provide the immediate focus of energy work. Automated meters installed in the School properties allow the School to review more detailed consumption data and to work to reduce carbon emissions in this area.

Our objectives and targets are to:

- reduce our overall carbon footprint to 40% by 2030;
- write an Energy Strategy in line with Display Energy Certificate (DEC) production – the first energy strategy was produced in 2017/18;
- consider the feasibility of CHP and new technologies e.g. ground and air source heat pumps in every strategic energy reviewing period and for all major development projects;
- review specific installations and products that can help in reducing the School's use of carbon;
- produce virtual DECs for all School buildings by 2022;
- install automated metering in all buildings by 2022;
- utilise streamlined energy carbon reporting (SECR) data to manage carbon reduction year on year; and
- introduce a behavioural change programme to reduce energy waste with lighting and heating left on unnecessarily.

## **WASTE MANAGEMENT**

The primary role of the waste management team is to ensure the legal disposal of waste while attempting to reduce overall waste by reusing and recycling materials where possible. Furthermore, we need to explore where adding value could be made by examining greater recycling on site. This will be done by increasing the volumes and types of waste recycled or reused and implementing schemes such as packaging 'take-back'. Current recycling rates across the estate are around 99%. This is the contractor's figure based on their recycling of our waste. The picture of recycling at the boarding Houses is less clear and, as a consequence, a waste review of boarding Houses is a work objective for the team this year.

Our objectives and targets on waste are to:

- aim for a 1% decrease in waste figures per capita from 2019/20; and
- complete a full review of waste and recycling in boarding Houses (in 2021/22) with a view to setting targets for waste reduction and examine recycling and separation of waste by the School.

## **SUSTAINABLE TRAVEL MANAGEMENT**

Sustainable travel management aims to provide as many alternatives to single occupancy vehicle (SOV) use as possible through improvements to infrastructures for cycling, walking, car sharing and the use of public transport. Additional aims include relieving pressure on existing car parking spaces.

Strategic objectives for this area are to:

- capture commuter and business travel data for carbon footprinting purposes and SECR; and
- set targets for the following once a baseline is established by the travel plan:
  - increase in cycle commuting and for work business by staff;

- increase in public transport commuting and for work business and study purposes;
- per capita increase of lockable cycle storage at School sites;
- increase in walking to work;
- allow for new working practices and working from home, where roles permit;
- decrease in commuter- and business travel-related carbon emissions;
- adoption of lower carbon fuels in School vehicles with future vehicles to be hybrid or electric, provided suitable models exist for the role requirements; and
- adoption of electric vehicle (EV) charging points.

## **WATER MANAGEMENT**

At just under £100,000 spend per annum, the environmental impact of the School's water use is significant. Savings are achievable if water-saving devices (waterless urinals, push taps, water-efficient shower heads, leak detection etc.) are in place throughout the School. Review work on water management began in 2015. Our key objectives are to:

- review water management of the entire School estate (2021/22) to produce water- and money-saving projects and better utilise the School's borehole; and
- set targets for reduction over a fixed time period once review data are available.

## **BIODIVERSITY MANAGEMENT**

Roll out the Biodiversity Action Plan (BAP) to form an in-perpetuity commitment to manage, protect and enhance natural habitats across the Harrow School Estate, aligned to the Harrow Council BAP.

Key objectives for the BAP are to:

- develop an inventory for the site, to include all species and habitats;
- identify key areas for improvement and development;
- assess required resources and implement viable actions via the management plan; and
- form partnerships with local organisations and schools.

## **SUSTAINABLE PROCUREMENT**

The School annually commits significant expenditure to a host of products, processes and services. Our aim is to ensure that the School commits money in as environmentally and socially responsible a manner as possible, while also supporting ethical investment and ethical programmes. Objectives for this area are to:

- Continue the baseline review of procurement procedures and processes begun in 2019/2020;
- establish a sustainable procurement policy and processes (following on from the baseline review findings); and
- embed sustainability in our pre-qualification procurement processes and, where applicable, support local suppliers and contractors to minimise travel time for both people and products.

## **GREEN DESIGN, CONSTRUCTION, RENOVATION AND MAINTENANCE**

While much can be done with new-build activity, the main estate will require renovation and maintenance, for which there is the potential to access government financial support and grants.

We will investigate funding and grants potentially available from government, national bodies and other organisations to support energy efficiency measures during refurbishment of existing building (e.g. SALIX energy efficiency).

The Estates Directorate has adopted the principle of achieving a minimum BREEAM 'excellent' standard for all its new-build projects over £1 million and strives to achieve this at both design and use phases. For extensions and refurbishment projects over £1 million, we will aim to achieve a minimum of BREEAM 'very good'. Further developments over time will see green practices being applied to progressively smaller projects to eventually incorporate green standards in all construction and renovation projects. Our objectives are to:

- aspire to achieve BREEAM 'excellent' standards for every new-build project and a minimum of BREEAM 'very good' for our refurbishment projects over £1 million;
- help colleagues to make environmentally sound choices in design, renovation and construction through advice, training and CPD opportunities; and
- develop codes for buildings, standard specification for low-energy technologies etc.

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE

The School's responsibilities stretch beyond dealing with its environmental impact to include social and ethical considerations. The School is expected to be socially responsible in ways that are beyond its core remit of education. We will seek to explore with Shaftesbury Enterprise and the Young Harrow Foundation ways to enhance our social responsibility.

## COMMUNICATION

The aim of the communication element of the strategy is to ensure a regular flow of information and to engage and inspire the School audience to 'do their bit'. Good communication also relies upon externally recognised annual environmental reporting. We should also seek to:

- create, maintain and enhance an environmental webpage to improve its use as a communications tool;
- develop a communications strategy to plan regular events as well as produce constant 'drip-fed' information to School stakeholders; and
- continue to submit streamlined energy carbon reporting (SECR) in the Corporation's financial accounts year on year.

## TEACHING AND LEARNING

### AIM 2

To promote and raise awareness of teaching and learning that provides boys and staff with relevant sustainability literacy we will:

- review the current levels of environmental and sustainability teaching and learning (in 2021/22);
- provide flexible opportunities for Harrow School students and staff to engage in learning about sustainable development;
- explore options for including sustainability factors in the validation process in relation to teaching content and impact;
- promote expansion of sustainability literacy in programmes and courses.
- integrate international student experiences in learning opportunities to broaden global sustainability understanding; and
- educate staff to act to reduce their impact on the environment, which includes the basics of turning off lights and closing windows during the heating season.

### HOW WILL WE DO THIS?

The appointment of an Academic Head of Sustainability has begun the process of ensuring ES is embedded in the education programme.

The Sustainability Action Group (SAG) help to promote sustainability. This will assist in the integration of teaching and learning about sustainable development across the School. Delivering and owning the carbon management plan, sustainability programme and targets will require the boys to engage with the process.

It is recommended that boy 'sustainability champions' are created in the School and the boarding Houses to own and promote sustainability activities. They should provide information/feedback on performance against targets.

## CARBON REDUCTION

### AIM 3

To align ourselves with the UK Paris Agreement undertakings to achieve an absolute reduction of 40% of the carbon emissions of the School by 2030 (based upon our 2015 ESOS carbon footprint baseline). To achieve this aim we will:

- communicate with staff, students and other stakeholders about the importance and value of carbon and energy savings in achieving the School's strategic aim. This is key as approximately 40% of the School's energy consumption comes from the boarding Houses;
- produce a business case for increased energy efficiency and management (in spend-to-save schemes) following our work to achieve ESOS Phase 2 Compliance, a Government-mandated energy audit of the School estate (completed in Sep 2019), and Streamlined Energy Carbon Reporting data (2019/20) financial accounts)
- prepare for ESOS 3 (submission date to be confirmed, but likely to be late 2023);

- develop and refurbish the School's estate to minimise additional carbon costs, with a priority order of
  - boarding Houses
  - academic buildings
  - SCH;
- continue to reduce the carbon footprint associated with the School's production and handling of waste, with a waste audit conducted to determine our significant waste streams; and
- commence a baseline review of the carbon impacts of School procurement by using financial data from our procurement to undertake a hotspot analysis of the most significant emissions sources.

## HOW WILL WE DO THIS?

In the short term, the School should develop a carbon management plan (CMP) as recommended in the Energy Audit of 2013 to capture this area of work. It should commit itself to achieving a further 10% reduction in carbon emissions by 2022.

A key objective of Plan 450 is to deliver an exceptional example of sustainable building that fits into the School grounds and surroundings.

The energy strategy follows the Mayor of London's 'energy hierarchy' as follows:

- 'Be Lean' – reduce the demand for energy through passive design and energy efficiency measures such as good levels of insulation and efficient windows.
- 'Be Clean' – generate useful energy by using the most efficient technologies such as combined heat and power (CHP), which produces electricity in tandem with useful heat.
- 'Be Green' – use on-site renewable energy technologies to reduce the demands on the national grid and further reduce CO<sub>2</sub> emissions, where feasible.

The project is required to achieve a 35% improvement over a Part L 2013 Target Emissions Rating in line with the stringent London Plan targets. In addition, the project is anticipated to achieve BREEAM 'Excellent'.

Approximately 600m<sup>2</sup> of solar PV panels will be provided to meet the residual carbon dioxide (CO<sub>2</sub>) reductions required by the various energy targets.

An Energy Centre will be located in the new science building to service both the science and sports facilities. This space will also allow energy to be distributed to other buildings on site in the future. A gas combined heat and power (CHP) engine will provide a low-carbon source of heating to both buildings, while simultaneously generating electricity.

Building Management Systems (BMS) will be installed in all new facilities and existing controls will be updated and linked to a new 'head end' to allow for greater control of M&E installations.

The School has a borehole abstraction licence in place with the Environment Agency. The borehole water is currently used to supply the swimming pool and irrigation for the School's playing fields and uses less water than the licence allows. It is the intention that borehole water will be used to provide free cooling to spaces that require cooling (e.g. the fitness suite, auditorium and ICT rooms).

Indoor air quality is an important factor in influencing pupil learning and health. The buildings will use natural ventilation chimneys (supplemented by a fresh air supply system) to allow a passive and comfortable way of ensuring a high quality air supply.

## CONCLUSION

This strategy is ambitious and seeks to place Harrow at the forefront of environmental sustainability activity in the independent education sector. For the strategy to succeed, it will need clear support from Senior Leadership. Finally, it will require plans that are both practical and deliverable.

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Director of Operations

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