

METROPOLITAN POLICE SERVICE



The Mayor's Office for Policing and Crime's (MOPAC's) estate supports the operations of approximately 50,000 officers and staff within the Metropolitan Police

Service (MPS), currently operating from approximately 400 buildings. As a large public body, the Metropolitan Police Service (MPS) recognises its duty to act responsibly, optimise our use of resources and minimise impacts on the environment. In doing so, we will improve our public and communities' confidence in our policing service as well as deliver value for money.

GREENING THE MPS ESTATE

To deliver the changes needed to achieve the 20:20:20 challenge of cutting crime, boosting public confidence and cutting costs, the MPS's Estate Transformation programme is aimed at delivering a more modern, more efficient and accessible estate that improves conditions for staff, is less costly to run and re-focuses resources on frontline policing by using our assets more efficiently and effectively.

The MPS has an array of legal obligations to meet related to the environmental performance of its real estate operations. We have implemented a design-to-decommission approach for managing the sustainability of buildings. This ensures that efficiencies are fully considered within construction, major refurbishment and minor upgrade projects; as well as putting in place contracts to manage our building operations sustainably through the supply chain.

Reducing the environmental impacts of the buildings within our estate is a key sustainability driver and as a GLA Group organisation, and through MOPAC, the MPS is committed to supporting the Mayor of London's Climate Change Mitigation and Energy Strategy. The MPS is committed to reducing carbon emissions with a long term target reduction of 60% by 2025 and a shorter term target of 20% by 2015 from the 2005/06 baseline.

Various measures have been implemented to achieve a 'greener' office environment across the estate. This includes retrofitting buildings with energy efficient and renewable technologies, rolling out internal awareness campaigns to encourage behavioural change, implementing a sustainable facilities management contract which includes the provision of robust waste management procedures and releasing inefficient buildings from our portfolio.

In addition to energy efficient upgrades installed as part of routine replacement cycles, the MPS to date has invested in renewable technologies to support carbon reduction and efficiency improvements at 23 buildings within our estate. This includes 20 sites with solar photovoltaic arrays, 4 with Combined Heat and Power, and 2 with Solar Thermal Water units. In addition, one

of our newly refurbished Custody Centres is powered by a Ground Source Heat Pump. During 2013/14 solar photovoltaic panels were installed at 4 sites including Alperton Police Base.

SUSTAINABLE PROPERTY CONSTRUCTION AND FACILITIES MANAGEMENT

To reduce the impacts of our construction projects on the environment, we have developed the MPS Sustainable Design Guide and Checklist. This document forms part of the briefing pack for consultants and is aimed at managing and reducing design and construction-related impacts. We are committed to giving sustainability considerations equal priority to cost, value, and fitness for purpose in project decision making wherever practicable. Alperton Police Base was one of the first projects to pilot the use of our improved Sustainable Design Guide and Checklist.

To reduce the environmental impacts of managing our buildings, the MPS put in place an innovative Facilities Management contract which follows an Integrator model. The model entails MOPAC/MPS contracting with an agent to procure and manage a second tier supply chain on our behalf, as well as manage a contact centre and management information system interfaced with our own corporate systems.

This approach has enabled a supply chain to be procured which has an environmental capability relating to service delivery aligned to MPS sustainability programmes. Sustainability was given a high level of prominence within the procurement of services, and sustainability questions were tailored to the contracted service.

The Integrator has developed a robust set of contractual provisions to ensure sustainability is embedded within the contract. The Integrator together with the supply chain have developed environmental plans which set out how they will meet MPS sustainability standards and environmental compliance, and where applicable, industry best practice. Environmental performance is measured through a set of KPIs focusing on waste management, energy and responsible procurement elements.

GREENING THE OFFICE ENVIRONMENT IN PRACTICE: ALPERTON POLICE BASE

In July 2014, the Alperton Police Base in Brent Borough was officially opened by the Metropolitan Police Commissioner Sir Bernard Hogan-Howe and London's Deputy Mayor for Policing and Crime, Stephen Greenhalgh. The building was occupied in February 2014 and provides deployment facilities for pan-London operational policing in the form of efficient, flexible open plan office accommodation.

As part of the MOPAC / Met Estate

Strategy 2013 -2016, the development works on site meant that two neighbouring sites could be sold allowing the MPS to make better use of the estate and reinvest the financial savings back into policing operations. The design resulted in the building achieving Building Research Establishment Environmental Assessment Methodology (BREEAM) 'Excellent'.

An energy feasibility report was developed to assess the potential for installation of energy efficient and renewable energy technologies and to achieve the target to exceed Part L by 25%. The design incorporated an installation of 78 rooftop solar PV panels with a capacity of 19.5kW. The installation at Alperton is forecast to save over 17,000 kW of electricity a year which will save the MPS around £2,000 through avoided electricity costs and generate an annual income of approximately £2,000 in Feed in Tariff payments. Since 2011/12 the MPS has generated an income of over £169,000 from Feed in Tariff payments.

Alperton includes a number of innovative sustainability features to reduce its impact on the environment. For example, the building is naturally ventilated through the use of openable windows and where mechanical ventilation is required in locker rooms and toilets, the associated mechanical duct work is well insulated. Direct cooling requirements have been kept to a minimum and heating is provided through a Low Temperature Hot Water system powered by two gas-fired boilers which are more than 90% efficient. Heat is distributed by radiators which are all controlled using tamper proof thermostatic radiator valves.

The building maximises the use of daylight through the use of roof-lights. Horizontal brise soleil is located on windows on the south side which provide effective solar shading to glazed areas. Sustainable building materials were considered, specifically those with low emissions in line with BREEAM requirements. In addition, Forest Stewardship Council (FSC) timber has been used on the project. External lights are in accordance with the Chartered Institution of Building Services Engineers (CIBSE) lighting guide in order to reduce light pollution and T5 fittings have been specified throughout the building

A rain water recycling system was installed to minimise the impact of rainwater run-off from the site and greywater is re-used within the on-site car washing facility. Internally push taps were installed in washrooms to avoid wasting water from taps being left on.

Electric vehicle charging points have been installed to future proof the estate as the MPS is currently trialling the use of electric vehicles within the vehicle fleet. In addition bicycle racks have been installed in a covered secure area whilst shower and

locker facilities are included within the office block.

Robust waste management procedures were implemented on site with metal and timber sent for recycling by the contractor. This resulted in an 87% recovery rate for construction waste. Post-occupation, the office waste recovery rate is currently at 88% which exceeds the MPS target of 80%. General waste and mixed recycling is segregated on site. All recycling goes on to a Materials Recovery Facility (MRF) in South London where it is sorted and processed prior to being sent to manufacturers to be re-processed into new products.

All general waste from site goes to a Mechanical Biological Treatment (MBT) plant where there is a combination of mechanical and biological processes to sort the waste. The biological element removes moisture from the waste before breaking down the organic, biodegradable components by way of a composting-like process to create fuel for energy recovery at a Combined Heat and Power Facility.

Building information and the sustainability elements of the design have been communicated to building users and the wider MPS through an intranet article and brochure. To support this, the MPS environmental awareness campaign 'Think Green' is promoted across the organisation to encourage employees to use resources wisely and reduce their individual impacts on the environment.

In line with MPS procedures, a bespoke Post Occupancy Evaluation (POE) will be carried out within 12 months of occupation, and is scheduled for February 2015. The POE is made up of two parts 1) Technical - focusing on evaluating the efficiency of the building specifically checking against its energy demand forecast. This also includes monitoring the sustainability of service provision on site and 2) Functional - to review user's perspective of the building. The POE 'closes the loop' in regard to monitoring and reviewing the design and implementation. The results will be included within a report which will provide recommendations that may inform the development of future standards and design criteria.