



Palace of Westminster

Project Outline

Contractor	Palace of Westminster Estate
Location	London, United Kingdom
Sector	Central and Local Government
Disciplines Covered	<ul style="list-style-type: none"> ➤ Fire Detection ➤ Aspirating Detection ➤ Head-End Graphics Package ➤ VEPA ➤ Emergency Voice Communication ➤ Accessible Toilet Alarm ➤ Fibre Networks ➤ Sprinkler Systems ➤ Dry Risers ➤ Ansul Systems ➤ Portable Extinguishers, ➤ Hose Reels ➤ High-Pressure Misting Systems
Key Points of Interest	<ul style="list-style-type: none"> ➤ 12,000+ Fire Alarm Devices ➤ 90 Cirrus Hybrids ➤ 20 VEPA Rack Suites

Project Overview

The Palace of Westminster is where the British Government resides. Providing a workplace for over 1000 people housed by multiple buildings built across centuries makes up this historic site. The Palace of Westminster offers an enormous historical and cultural significance to the United Kingdom, lending itself a UNESCO World Heritage Site Status.

The Palace is a constructional and architectural masterpiece constructed from Anston limestone, sitting upon two concrete rafts on the bank of the Thames. The main building boasts a floor plate the size of 16 football pitches and over 1,100 rooms, all connected with 100 staircases and three miles of passageways.

Home to the iconic Elizabeth Tower, more commonly known as Big Ben (due to the bell that the Elizabeth tower houses), it is one of the most photographed buildings in the world. Many buildings date back to as early as the 11th century, with the majority being reconstructed or replaced centuries later due to serious historical events such as fire and war.

The Challenge

The unique project that the Palace of Westminster brings several extraordinary challenges. The site spreads over multiple buildings, and the life safety systems need to be integrated between each of the buildings. It is no easy task with an area of this size, where a correct and proper approach must be implemented to ensure a site-wide, fully integrated system.

The Palace of Westminster includes the house of commons and house of lords; these areas are where the British Government set the rules of the land and implement them. The site is active most of the time, so any proposed work needs to consider working time constraints.

The Palace of Westminster state is an amalgamation of Government buildings from different era's. It means several of the estate buildings are either grade 1 or grade 2 listed, meaning any services must be installed without affecting the room's or building's visual appearance. For this reason, standard detection or protection methods will not be suitable in some areas, so other solutions must be considered.

The Solution

Since we were appointed the nominated supplier of fire alarm and voice alarm systems across the Palace of Westminster estate, we have worked tirelessly with strategic estates and their supply chain partners to upgrade and improve their fire safety systems.

Across the Palace of Westminster, the fire alarm and voice alarm system-upgrade works are now complete within the basement, Upper Floor, Victoria Tower, and Westminster Hall, with works due to be finished within Elizabeth Tower in the Summer of 2022. Upon completion of Elizabeth Tower, the Palace will boast more than 8,000 fire alarm devices across more than 40 fire alarm panels. To minimise structural and visual impact within the many architectural, historical, and sensitive areas of the Palace, more than 90 Cirrus hybrid aspirating fire detection units are installed, together with several hundred

6500 Series wireless devices. Voice alarm is provided across the Palace through a distributed network of more than 20 voice alarm racks.

As part of the Parliamentary Estate's MIP (Mobility Impaired Persons) evacuation strategy, we are installing a building-wide EVC (Emergency Voice Communication System). The project is due to complete in the Summer of 2022.

Elsewhere across the Westminster estate, since our appointment, fire alarm, voice alarm and Emergency Voice Communication systems have already been updated with Protec systems within 1 and 2 Millbank, 5 Great College Street, Norman Shaw North, Canon Row, Derby Gate and 21 Dartmouth Street. The systems in Norman Shaw South are currently being upgraded and are due for completion this year. Across these buildings are a further 6500+ fire alarm devices and 20 fire alarm panels with similar quantities of voice alarm speakers and racks. Each system is networked across the estate via several Secure Single-Mode Fibre networks ensuring all events can be viewed within the Estate Control Room.

Owing to many projects across the Westminster estate at any time, from major construction projects to small remedial works, our appointment varies from supply and commissioning only to complete turnkey design, supply, installation, and commission contracts. The varied level of appointment is possible because we have a dedicated in-house design team working closely with a dynamic on-site management team based on the estate full-time. It enables us to meet with our numerous clients regularly, understanding their requirements and providing the very best level of service.

The Aftercare

From May 2018, Protec took over the responsibility for planned preventative and reactive maintenance for fire alarm and voice alarm systems across the Westminster estate. Through our success in delivering these services, our PPM package has increased to include EVC systems, sprinkler systems, dry risers, Ansul systems, portable extinguishers, and High-Pressure Misting Systems.