**Technical Note**

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| **Project Title** | Imperial Hotel | | |
| **Subject** | Overview of Building Services Strategy | **Date** | 18 April 2019 |
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# Introduction

This technical note provides a brief overview of the proposed building services for the refurbishment and extension of the Imperial Hotel

Building services summary

The existing building services at the Imperial Hotel will typically be replaced and upgraded in their entirety. Some central plant is currently shared between the Imperial and the President Hotel and is proposed to be separated between the two buildings. This includes central boiler plant, hot and cold water tanks, and back-up generator supply.

New air cooled chillers are proposed to provide cooling to the building and new gas fired high efficiency boilers will replace the existing. Heating and cooling to the occupied spaces will typically be via local fan coil and air handling units connected to the chilled and heating hot water systems (4-pipe system). Ventilation to all occupied spaced including fresh air and exhaust air will be via heat recovery units in central plant rooms and ceiling spaces. New kitchen exhaust fans are proposed for the kitchen and located in a plant room at the rear of the kitchen.

The existing gravity fed roof mounted cold water tanks in the roof plant room will be replaced with new storage tanks in the sub-basement complete with pumpsets and water softeners. New hot water buffer vessels and high efficiency plate heat exchangers will replace the existing buffer tanks and shell and tube heat exchangers in the sub-basement and be fed from the central boiler plant. New above ground foul drainage shall be installed to replace the existing and rain water drainage installed to suit the new roof.

A new transformer and switch room is proposed to be installed in the basement and new low voltage system installed throughout the building. The existing transformer serves adjacent occupancies and will be retained. The existing back-up generator will be retained for the President Hotel and a new back-up generator installed in a dedicated plant room for the Imperial Hotel. New high efficiency LED lighting and emergency lighting systems shall be installed throughout the building. A new structured cabling system is proposed comprising a server room on ground floor and data cabinets at each floor. A new or upgraded category L1 smoke detection system is proposed for the Hotel.