

Technical Service Design (Ardington House 32 Boundary Road, Newbury, Berkshire, RG14 5RR)

MEP Services Design Specification – Issue 01 – 27-06-23

Extract from section 4.4.3 Exhaust / Extract Air

The Kitchen area will be fitted with a specialist recirculation ventilation system due to there being no high-level external discharge facility and to avoid requirement for additional external louver terminal areas for exhaust and associated make up. Where commercial Kitchen ventilation systems do not discharge exhaust air to atmosphere but recirculate the treated air back into the space there are detailed performance criteria as well as fixed parameters that need to be adhered to, as detailed within the Industry Standard and Statutory guideline reference document BESA Kitchen Ventilation Systems Specification DW172. The Maya Restaurant Kitchen has been specifically designed as an 'all – electric' equipment operation to utilise Industry recognised and approved extraction recirculation system (Halton Food Service Reco-air RAH 2.0 DSI) to avoid an external discharge and to overcome the lack of high-level exhaust facility. RAH units' highly efficient filter technology removes particulates and odours as part of a Fat, Oils and Grease (FOG) abatement strategy, together with airborne odour and particulates removal to achieve a certifiably clean state of return air to the Kitchen space, with multistage filtration comprising:

F1: G4 Panel Filter

F2: M6 Eco-Pleat Panel Filter

F3: F9 Opakil Hepa ES Filter

F4: Activated Carbon Canister Filters

The processed air is independently certified as clean to be re-introduced as supply air. This type of system can also significantly reduce fire risk associated with long duct runs to atmosphere and simplifies approval procedures together with providing opportunities to install kitchen operations within previously unfeasible locations. Temperature control of return air introduction utilises ancillary heat pump conditioning coil in accordance DW172 guidelines.

The kitchen cookline will be fitted with a wall mounted overhead extract canopy (Halton Ventilation canopy model: K VX - Recirc option) installed to meet the specific Kitchen Cookline equipment requirements in accordance with HVCA Specification DW172 that provides required overhang distances to encapsulate cooking discharge and first line filtration by Halton Model high efficiency intercepting KSA baffle Filters. Canopy will also incorporate temperature rated sealed overhead LED lighting.

The Kitchen extract ventilation system shall be installed in accordance with DW144 and TR19 with cleaning access fitted at all changes in direction / junctions / fittings / intervals where achievable with structure and coordination with other services. The Extract ductwork is connected to two canopy spigot connections, at the rear of the canopy, due to limited soffit heights and routed to Recirculation unit located in plant space below at lower ground floor level. The extract ductwork is assumed to be fire rated where exiting kitchen space, subject to an approved building fire strategy design. Return / filtered make up supply air ductwork, connected from the recirculation unit located in lower ground floor plantroom, incorporates a DX tempering air conditioning coil and split branch ductwork rising to

serve kitchen space above by perimeter bulkhead plenum diffusers. The make-up air volumes are distributed to maintain a 10-15% negative pressurisation to Kitchen to prevent egress of vitiated air and odours, with branch duct to diffuser in adjacent lobby area to achieve an overall air balance.

Plant power supplies and controls are fed from the Mechanical Services Control Panel located within the lower ground plant room, with respective field controls devices locally positioned. Ventilation Recirculation system operation interlocked with Kitchen cookline operation in accordance DW172 guidelines.