File Note

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Project title	ISEH (Institute of Sports, Exercise and Health) at 1st & 2nd Floor Levels Macdonald Buchanan House, 163-170 Tottenham Court Road, London, W1T 7HA	Job number	218598-00
cc		File reference	
Prepared by	Hugh Quail	Date	16 July 2014
Subject	Application Ref 2031/1464P – Approval of Details Letter, 14th January 2014, Informative 2 (Condition 8 of Planning Permission dated 04/05/2012 Ref 2012/0962/P). Sustainability Plan to meet the check list criteria contained in Appendix 1 of CPG3 Chapter 4		

1 Draught Proofing

- No additional draught proofing was added to the existing windows and they were not modified during the project. See below for further details on building fabric improvements in 2011.
- Entry into the facility at Level 1 & 2 is from the Lift Lobby internally.

2 Reflective radiator panels

- Reflective radiator panels are not applicable as space heating is provided by the VRF system.

3 Overhauling/upgrading windows

3.1 Specification

- As part of the building fabric improvements in 2011 the glazing was improved to meet minimum Part L standards from a U-value of 3.0 to a U-value of 2.0
- No additional insulation was added to external walls. The Building Control Approved Inspector considered it as an existing building in which work was not completed on the external walls – if the plaster had been removed, for example, then insulation would have had to have been added.

3.2 Evidence

- Refer to Arup Energy Strategy Report for Macdonald Buchanan House, section 4.1, which shows the fabric improvements to the building.

4 New boiler

4.1 Specification

- For Domestic Hot Water: The system is fed by 2No new gas boilers which were installed as part of the renovation works for levels 5 & 6
- For Space Heating: spaces are heated by a 3-pipe VRF (variable refrigerant flow) system, which is categorised as an air source heat pump. This system can also provide simultaneous cooling and heat recovery from adjacent spaces.

4.2 Evidence

- Refer to boiler spec, P01
- For space heating : see Arup Energy Strategy Report for Macdonald Buchanan House, section 4.2, which describes the energy efficient systems installed.
- See schematic of VRF system, drg no M-SC-00-12
- See Plan drawing for the installation of new boilers, drg no P-GA-99-01

5 LED lighting

5.1 Specification

- LED lighting has been used in office and treatment rooms

5.2 Evidence

- Refer to luminaire schedule, appendix B in the Electrical Particular Spec

6 Meters, timers, sensors, controls on heating or lighting

6.1 Specification

- Energy metering is present to VRF and electrical systems, including small power and lighting systems

6.2 Evidence

- Refer to section 6.8 on Energy Metering in the Mechanical Particular Spec
- Refer to section 2.5 on metering in the Electrical Particular Spec

7 Mechanical Ventilation with Heat Recovery

7.1 Specification

- Fresh air is provided to the ISEH by an AHU which is equipped with Plate Heat Exchanger technology for heat recovery.
- The unit was designed to have a low SFP <1.5

7.2 Evidence

- Refer to AHU03 EDS
- Refer to ventilation schematic, drg no. M-SC-00-11
- Refer to System air data sheet

8 Insulation

8.1 Hot water tank & pipes

Specification

- There are no tanks in the demise of the ISEH. However all pipes connected to the central system are insulated to the highest standards in TIMSA HVAC compliance guides and BS 5422.

Evidence

- Refer to section 17 on Thermal Insulation in the Materials and Workmanship Spec

8.2 Roof

Specification

- No roof borders the two levels of the ISEH (i.e. 1st and 2nd floor)
- However as part of the overall building's improvements and to meet minimum part L standards, the roof was resurfaced to achieve a U-value of 0.25 (previously 1.42 W/m²K)

Evidence

- Refer to Arup Energy Strategy Report for Macdonald Buchanan House, section 4.1, which shows the fabric improvements to the building.

8.3 Walls Internal

- The specification of internal walls has not been improved during the ISEH program of works as this had been undertaken in previous years.

8.4 Walls External

- The ISEH project was fit-out only and no façade improvements were undertaken during the project.

8.5 Floor

- Level 1 and Level 2 are sandwiched by the ground floor and the third floor. In reality there is very minimal heat transfer to these different floors as they are all kept at a similar temperature.

9 Renewable energy technology

9.1 Solar PV panels

- Due to the location of other MEP equipment on the roof, there is insufficient space for PV panels.

9.2 Solar thermal (hot water) panels

- Due to the location of other MEP equipment on the roof, there is insufficient space for hot water panels.

9.3 Ground source heat pumps

- The existing building means that it is not feasible to bring boring equipment into the basement and provide new boreholes. There is also not the space for the installation of a slinky coil GSHP system.
- Refer to Arup Energy Strategy Report for Macdonald Buchanan House, which investigates the renewable strategies for 5th and 6th floor and applies in the same way on 1st and 2nd floors (i.e. ISEH).

10 Double glazed windows / Secondary glazing

10.1 Specification

- Existing single glazing was replaced with double glazed windows.

- As part of the building fabric improvements in 2011 the glazing was improved to meet minimum Part L standards from a U-value of 3.0 to a U-value of 2.0

10.2 Evidence

- Refer to Arup Energy Strategy Report for Macdonald Buchanan House, section 4.1, which shows the fabric improvements to the building.

11 Combined heat and power unit

- The ISEH was assessed as not having the right load profile for CHP

12 Green or brown roof

- There is insufficient space on the roof to incorporate either green or brown roofs.

13 Rainwater harvesting

- There is insufficient space in the building roof to incorporate rainwater harvesting.

14 Other measures

14.1 Specification

- Variable speed fans have been installed in the AHUs
- Individual temperature control provided to each room with a thermostat controller
- PIR sensors for WCs and VRFs heating/cooling units to reduce energy consumption when spaces are not occupied.

14.2 Evidence

- Refer to Mechanical Particular Spec, Section 7.2 for information on controls - intelligent unitary controllers for the indoor VRFs and touch pad display panels for use in each control enclosure.
- PIR to control VRF system on occupancy, see section 6.4.3 of Mechanical Particulars Spec.
- PIR to control water valves on all WCs, sinks, urinals etc, see section 3.6.2 of Electrical Particulars Spec.
- See AHU equipment data sheet with regards to variable speed control.

15 Join the Camden Climate Change Alliance (commercial only)

It is believed that this measure is not applicable to the project.

16 Off-setting contribution £3,000

It is believed that this measure is not applicable to the project.

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218598-00 16 July 2014

See attached documents referred to in items 3.2, 4.2, 5.2, 6.2, 7.2, 8.2, 10.2 and 14.2.

DOCUMENT CHECKING (not mandatory for File Note)

	Prepared by	Checked by	Approved by
Name	Hugh Quail	Vasilis Maroulas	
Signature			