continuously to provide for the make-up air extracted by the hood and to give nominally a minimum of one air change per hour.

9.3.6 Toilet rooms may be ventilated by either natural ventilation with fully operable exterior windows with an area not less than 0.279 m^2 each and with part at least 1.75 m above floor or by mechanical extraction capable of providing 12 air changes/hour. Such mechanical extraction shall be communicated to the outside with point of discharge at least 3 m away from any fresh air opening.

9.3.7 Ventilating a habitable room through an adjoining space:

Two habitable rooms may be considered a single room for ventilating purposes if there is a permanent opening between which is equal to at least 1/20 of the combined floor area.

A habitable room may be ventilated through an adjoining space if:

a. the adjoining space is a conservatory or a similar space and;

b. there is an operable opening between the room and the space, with an area not less than 1/20 of the combined floor areas and;

c. there is a ventilation opening(s) in the room and the space together, or in the space alone, equal to at least 1/20 of the combined floor areas and with a part of the ventilation opening area at least 1.75 m above the floor level; and for background ventilation there are openings to the space and between the space and room each having not less than 0.46m² area.

9.3.8 Alternative approaches

The movement of air may be activated by such means as the operation of the door of the compartment, the operation of the lighting or by independent manual control. However, there should be an overrun of at least 15 minutes after the use of the compartment.

A recommended alternative approach to meeting the performance requirements is contained in BS 5720:1979 Code of Practice for mechanical ventilation and air conditioning in buildings and BS 5250:1989 Code of Practice: the control of condensation in buildings (Clauses 9.8 and 9.9).

9.3.9 The ventilation of industrial buildings shall be in accordance with ASHRAE HVAC Application Handbook – latest Edition and ASHRAE Standard 62-2001.

9.3.10 No air conditioning or ventilation equipment shall be visible from outside.

9.3.11 Developer shall comply with Dubai Government's regulations for Green Buildings and provide adequate energy management system through Building Management System and Lighting Control System.

9.3.12 Any building which utilizes HVAC Control System and Lighting Control System in stand alone mode or centralized mode (Building Management System) may choose to connect to the DWC City Integrated Intelligent Building Solution (I²BS) System to avail the 365/7/24 monitoring services by the I²BS Central Control Centre and receive alarm/fault notifications through email/SMS. The consultant shall refer to the DWC City I²BS specifications available with DWC-DUSERVE for technical details.

9.4 ELV Systems

Any building which requires a centralized monitoring of the ELV systems installed in the building shall avail the services of 365/7/24 monitoring of the systems by the DWC-DuServe City I²BS Central Control Centre and receive of alarm/fault notifications by email/SMS. The consultant shall refer to the DWC City I²BS specifications available with DWC-DUSERVE for technical details. Any intelligent system which provides a communication port (RS232, RS485, Ethernet, Lon, etc...) and a communication protocol (standards such as LonWorks, BacNet, ModBus, TCP/IP, or any well defined API) shall be connected to I2BS system.

9.5 District Cooling Services

9.5.1 Objective: To Provide world class, energy efficient, economical and environmental friendly DCS to the DWC customers.

9.5.2 Overview of Various types of Customers: Mainly Master Developers and Building Owners. Master Developers (MD) are two types: 1) Exclusivity and 2) Reseller Building Owner (BO) are two types: 1) BO with Master Development and 2) Individual Customer (Building Tenant)