



Schedule.

Heat recovery ventilation units

| PROJECT NAME                            |
|-----------------------------------------|
| ITS & Computer Science - Eddie Newcombe |
| HL PROJECT NUMBER                       |
| 04/06325                                |
| DOCUMENT IDENTIFICATION                 |
| 0406325-HLE-EN-XX-SH-M-606002 - HRU     |
| SYSTEM                                  |
| Lower Ground Floor Ventilation          |
| CLASSIFICATION                          |
| Pr_60_65_03                             |

| REVISION HISTORY |        |          |             |             |               |              |
|------------------|--------|----------|-------------|-------------|---------------|--------------|
| Revision         | Status | Date     | Prepared by | Reviewed by | Authorised by | Comments     |
| P01              | S4     | 22/08/25 | JH          | EJG         | EJG           | Tender Issue |
|                  |        |          |             |             |               |              |
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INFORMATION REQUIRED

For every equipment entry in the schedule, confirm that each of the design parameters has been met by the final selection. In addition, provide details of the following parameters for each piece of equipment:

|                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Coils</b><br>Frost coil capacity (kW)<br>Cooling coil capacity (kW)<br>Heating coil capacity (kW)                                                                                                                 | <b>Acoustics</b><br>Casing breakout L <sub>w</sub> at capability duty (dB) at:<br>63Hz, 125Hz, 250Hz, 500Hz, 1kHz, 2kHz, 4kHz, 8kHz<br>Supply duct L <sub>w</sub> at capability duty (dB) at:<br>63Hz, 125Hz, 250Hz, 500Hz, 1kHz, 2kHz, 4kHz, 8kHz<br>Discharge L <sub>w</sub> measured in duct or radiated?<br>Intake duct L <sub>w</sub> at capability duty (dB) at:<br>63Hz, 125Hz, 250Hz, 500Hz, 1kHz, 2kHz, 4kHz, 8kHz<br>Discharge L <sub>w</sub> measured in duct or radiated?<br>Extract duct L <sub>w</sub> at capability duty (dB) at:<br>63Hz, 125Hz, 250Hz, 500Hz, 1kHz, 2kHz, 4kHz, 8kHz<br>Discharge L <sub>w</sub> measured in duct or radiated?<br>Exhaust duct L <sub>w</sub> at capability duty (dB) at:<br>63Hz, 125Hz, 250Hz, 500Hz, 1kHz, 2kHz, 4kHz, 8kHz<br>Discharge L <sub>w</sub> measured in duct or radiated? | <b>Electrical</b><br>SAP 2012 specific fan power (W/l/s)<br>Supply & extract motor speeds (rpm)<br>Motor starting method<br>Starting current (A)<br>Starting current duration (S)<br>Running power (kW)<br>Running current (A)<br>Supply & extract motor sizes (kW)<br>Motor efficiency class<br>Supply & extract motor efficiencies at duty points (%)<br>Full load current (A)<br>Absorbed power / shaft power (kW) |
| <b>Dimensions</b><br>Condensation connection size (mm)<br>Spigot width (mm)<br>Spigot height (mm)<br>Spigot diameter (mm)<br>Overall height (mm)<br>Overall width (mm)<br>Overall length (mm)<br>Operating mass (kg) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Construction</b><br>Casing insulation material<br>Insulation thickness (mm)                                                                                                                                       | <b>Heat exchanger</b><br>Heat exchanger air temperature off in heating mode (°C)<br>Heat exchanger air temperature off in cooling mode (°C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                       |

NOTES

- 1. The HRU are to comply with specification section *General space ventilation systems* (Ss\_65\_40\_33).
- 2. Refer to specification *General space ventilation systems* (Ss\_65\_40\_33)/ *Building monitoring and management systems* (Ss\_75\_70\_54\_10) for the HRU control strategy.
- 3. The final selection system pressure drop is to be calculated by the installer, according to the actual layout and components used, prior to ordering the unit. The values entered in this schedule are for tender value purposes only.
- 4. The HRU must be selected to meet the capability duty but with peak efficiency at the whole house design duty.
- 5. The capability duty is applied to account for minor variations between the designed system and the final installation, covering differences in leakage, commissioned duty and extra fittings.
- 6. The noise levels stated are for outline guidance only. Refer to specification section *General space ventilation systems* (Ss\_65\_40\_33) for details of the full acoustic environment. The installer must provide calculations to demonstrate that combination of HRU and acoustic measures selected meet the acoustic design requirements.
- 7. Erp compliant heat exchanger efficiency to be achieved

|                                         |                                |
|-----------------------------------------|--------------------------------|
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| ITS & Computer Science - Eddie Newcombe | Lower Ground Floor Ventilation |
| <b>HL PROJECT NUMBER</b>                | <b>CLASSIFICATION</b>          |
| 04/06325                                | Pr_60_65_03                    |

|                   |              |            |
|-------------------|--------------|------------|
| <b>GENERAL</b>    | <b>Units</b> |            |
| Type reference    |              | B.011 HRU  |
| Quantity of units |              | 1          |
| Orientation       |              | Horizontal |

|                                      |              |                      |
|--------------------------------------|--------------|----------------------|
| <b>SUPPLY SIDE COMPONENTS</b>        |              |                      |
| <b>Primary filters</b>               | <b>Units</b> |                      |
| Primary filter group                 |              | ISO Coarse           |
| Primary filter class                 | %            | TBC by Manufacturer  |
| Primary filter minimum energy rating |              | TBC by Manufacturer  |
| Filter access position               |              | Left                 |
| <b>Heat exchanger</b>                | <b>Units</b> |                      |
| Heat exchanger type                  |              | Plate heat exchanger |
| Heat exchanger bypass                |              | Yes - full bypass    |
| <b>Fans</b>                          |              |                      |
| Supply and extract fans type         |              | Centrifugal          |

|                                |              |                     |
|--------------------------------|--------------|---------------------|
| <b>EXTRACT SIDE COMPONENTS</b> |              |                     |
| <b>Filters</b>                 | <b>Units</b> |                     |
| Filter group                   |              | ISO Coarse          |
| Filter class                   | %            | TBC by Manufacturer |
| Filter minimum energy rating   |              | TBC by Manufacturer |

|                                                |              |    |
|------------------------------------------------|--------------|----|
| <b>ACOUSTICS</b> (Note 6)                      | <b>Units</b> |    |
| Target Total NR for building services noise    | NR           | 45 |
| Target NR for building services noise from HRU | NR           | 40 |

|                                                |  |                     |
|------------------------------------------------|--|---------------------|
| <b>CONTROLS</b>                                |  |                     |
| Fault notification                             |  | Yes                 |
| 'Clean filters' notification                   |  | Yes                 |
| User selectable flow rates                     |  | Yes                 |
| Number of user selectable flow rates           |  | TBC by Manufacturer |
| Light switch/boost switch controlled flow rate |  | No                  |
| Temperature controlled flow rate               |  | Yes                 |
| Timer controlled flow rate                     |  | Yes                 |
| PIR controlled flow rate                       |  | No                  |
| CO <sub>2</sub> controlled flow rate           |  | No                  |
| Heat exchanger frost protection                |  | Yes                 |
| Variable temperature heat exchanger bypass     |  | Yes                 |
| Integral graphical display panel               |  | No                  |
| Remote display panel/controller                |  | No                  |
| App user control                               |  | No                  |
| BMS link full open protocol                    |  | Yes                 |

|                            |  |                     |
|----------------------------|--|---------------------|
| <b>CONSTRUCTION</b>        |  |                     |
| Panel material             |  | Stainless steel     |
| External finish            |  | Galvanized          |
| Casing insulation material |  | TBC by Manufacturer |

|                   |              |                     |
|-------------------|--------------|---------------------|
| <b>DIMENSIONS</b> |              |                     |
| <b>Spigots</b>    | <b>Units</b> |                     |
| Width             | mm           | TBC by Manufacturer |
| Height            | mm           | TBC by Manufacturer |
| Diameter          | mm           | TBC by Manufacturer |
| <b>Overall</b>    | <b>Units</b> |                     |
| Height            | mm           | 624                 |
| Width             | mm           | 1973                |
| Length            | mm           | 1570                |

|                                             |  |        |
|---------------------------------------------|--|--------|
| <b>ACCESSORIES</b>                          |  |        |
| Clean original filters at completion?       |  | Yes    |
| Electric heating coil                       |  | No     |
| Provide spare set of filters at completion? |  | Yes    |
| AV mounting type                            |  | Spring |

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| GENERAL   |                  |                   |                                                                    |                                                                 |                                                                 | DUTY                                                      |                             |                                      |                                       |                                        |                                                 |                                                  | ELECTRICAL                                |
|-----------|------------------|-------------------|--------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------|-----------------------------|--------------------------------------|---------------------------------------|----------------------------------------|-------------------------------------------------|--------------------------------------------------|-------------------------------------------|
|           |                  |                   | Space conditions                                                   |                                                                 |                                                                 |                                                           |                             |                                      |                                       |                                        |                                                 |                                                  | SAP 2012<br>specific fan<br>power (W/l/s) |
| Unit ref. | Location         | Type<br>reference | Extreme external design<br>air temperature in heating<br>mode (°C) | Heat exchanger donor air<br>temperature in heating<br>mode (°C) | Heat exchanger donor air<br>temperature in cooling<br>mode (°C) | Off-HRU heating coil air<br>temp. in heating mode<br>(°C) | Flow rate design duty (l/s) | Supply air system<br>resistance (Pa) | Extract air system<br>resistance (Pa) | HRU flow rate capability<br>duty (l/s) | HRU supply air pressure<br>capability duty (Pa) | HRU extract air pressure<br>capability duty (Pa) |                                           |
| B.011-HRU | B.011 Plant Room | HRU               | -5                                                                 | 20                                                              | N/A                                                             | N/A                                                       | 561                         | 200                                  | 200                                   | 617                                    | 240                                             | 240                                              | 1.5                                       |
|           |                  |                   |                                                                    |                                                                 |                                                                 |                                                           |                             |                                      |                                       |                                        |                                                 |                                                  |                                           |