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Planning Application for the Aylesbury Estate Regeneration

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## Plot 18 Reserved Matters Application

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# Ventilation Statement

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 Notting Hill  
Housing

 Southwark  
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DUGGAN MORRIS ARCHITECTS

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**Aylesbury Regeneration:  
Plot 18 Reserved Matters Application**

Ventilation Statement

April 2016

Document Number 60341461 / Ventilation Statement



DUGGAN MORRIS ARCHITECTS



AECOM





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# 1 Introduction

## 1.1 Background

This Ventilation Statement has been prepared by AECOM to support the application for the approval of Reserved Matters in relation to Development Parcel 18 (Plot 18).

Plot 18 is part of the wider Aylesbury Estate Regeneration Scheme which covers an area of 22.1 ha, and for which there is Outline Planning Permission (LPA ref: 13/AP/3844) granted on 5<sup>th</sup> August 2015.

## 1.2 Plot 18 Proposed Development

The Plot 18 site itself is 1.02 ha and consists of Subplot 18a (North Block) and Subplot 18b

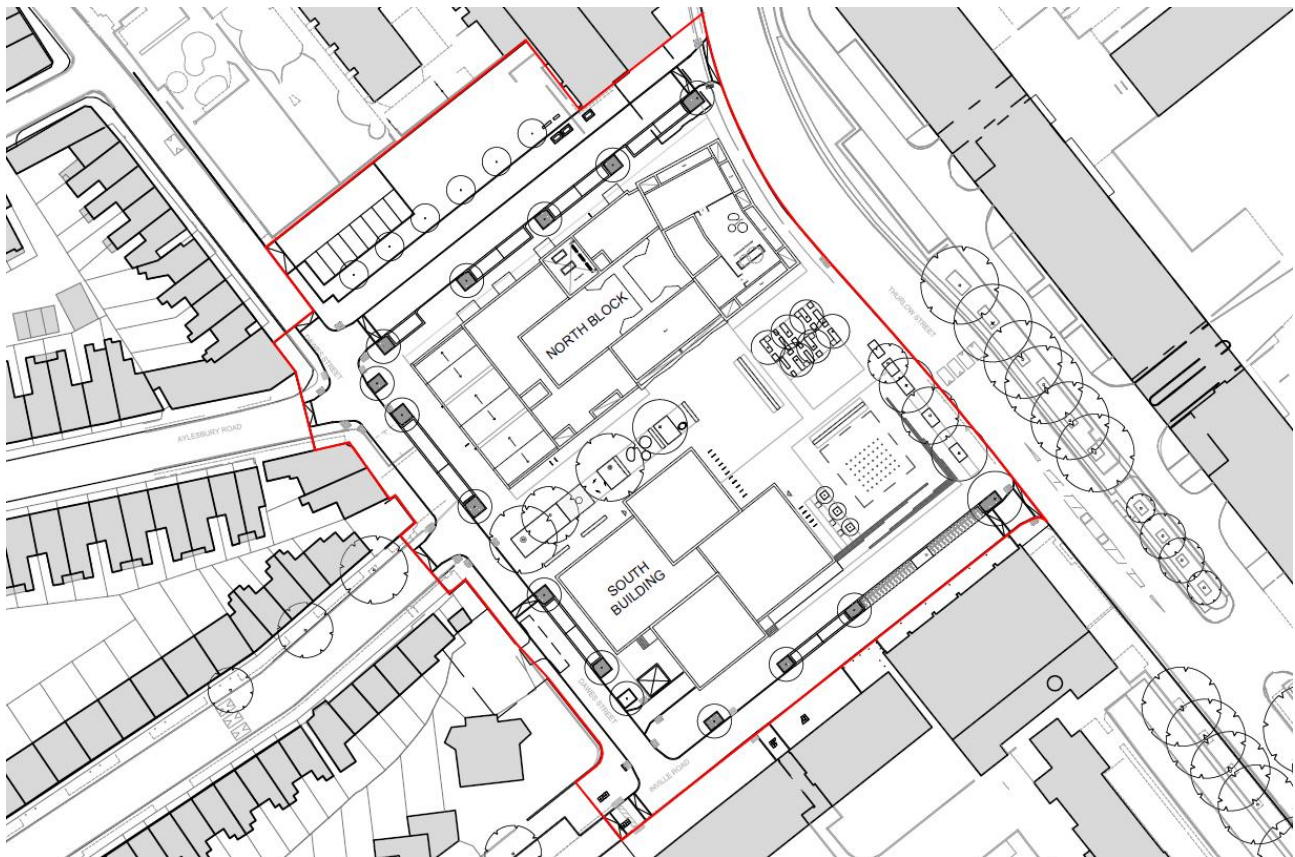
(South Block). The North Block comprises the following uses:

- Residential Use (122 units)
- Community Facility (Library, Afterhours Facility, Stay and Play, Meeting Rooms, Creation Trust Office)
- Commercial Use

The South Block comprises the following uses:

- Health Centre
- Early Years Facility
- Basement BOH and car park

Figure 1: Plot 18 site in context



## 2 North Block Ventilation

### 2.1 Residential Dwellings [C3]

All dwellings will be ventilated in accordance with Part F of Building Regulations.

Each apartment will be provided with 'whole house' heat recovery ventilation (MVHR) to extract air from the kitchen, bathroom(s) and utility room and to provide fresh air to the living areas and bedrooms.

Ventilation extract boost will be operated by a switch located in the kitchen. The MVHR will also incorporate summer bypass.

Extract grilles shall come with integrated removable filters to comply with the latest NHBC standards.

All ductwork will be rigid plastic ductwork. There will be no use of flexible ductwork. Intake and exhaust ductwork will be insulated to prevent condensation.

A double air brick on the façade shall be required for connecting the MVHR ventilation ductwork intake and discharge points to outside.

Purge ventilation to each room will be provided through the use of an openable window.

Cookers will be provided with recirculation hoods, as specified by the Architect.

### 2.2 Community Facility [D1]

The Community Facility shall be provided with mechanical supply and extract ventilation based on 10l/s/person and in compliance with Building Regulations Part F. Ventilation shall be supplied from two central air handling units (AHU) as follows:

#### Library AHU

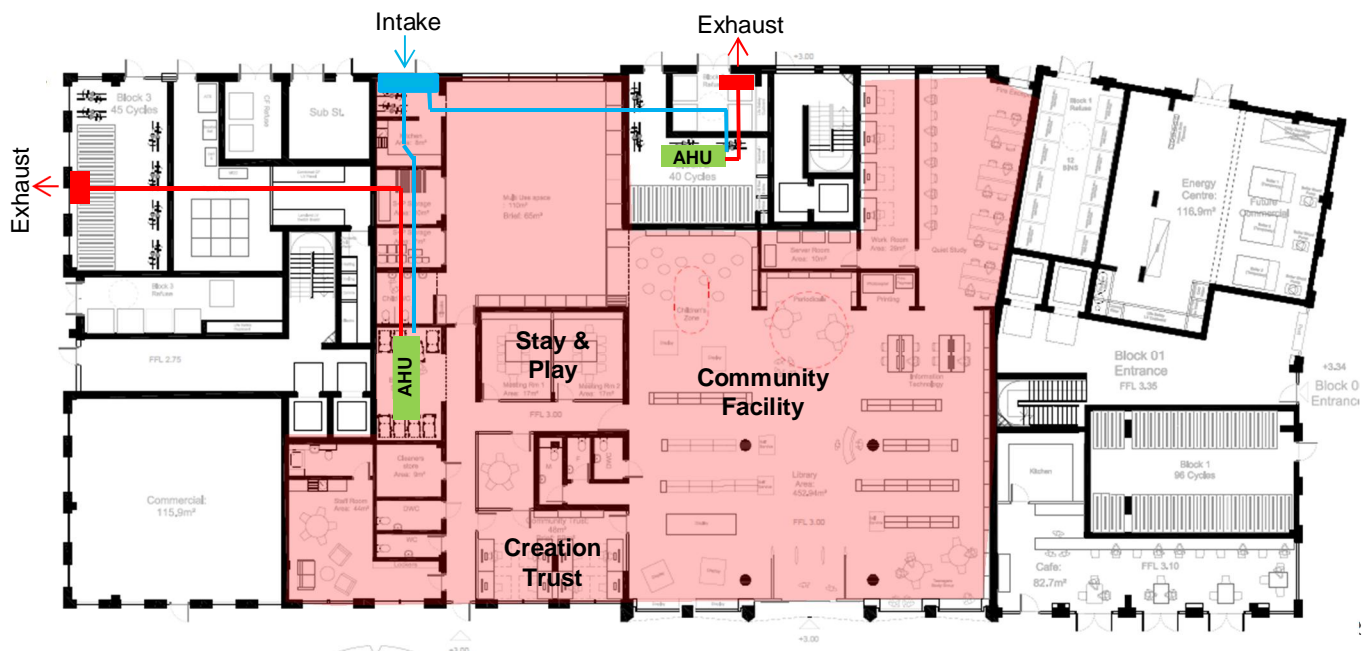
This AHU is located at high level in Block 2 cycle store (making use of the high floor to under soffit dimensions). The AHU will comprise of filters, heating and cooling coils and a thermal wheel. Air intake and exhaust shall be via high level louvres on the façade at ground floor level (see Figure 2).

#### Stay & Play and Community Trust AHU

This AHU is located at high level within the Buggy Store ceiling void. The AHU will comprise of filters, heating and cooling coils and a plate heat exchanger. Air intake and exhaust shall be via high level louvres on the façade at ground floor level (see Figure 2).

Refer to Appendix A for detailed ventilation drawing of the North block ground floor.

Figure 2: Community Facility ventilation strategy



### 2.3 Commercial unit [A1]

The commercial unit is being designed as a shell and core for fit out by tenant. As part of the shell and core provision, high level louvres will be provided at ground floor level on each façade for the ventilation units to discharge exhaust air and bring in fresh air (see Figure 3).

Final ventilation shall be designed and provided by the Fit-out contractor to suit the use of the space.

Refer to Appendix A for detailed ventilation drawing of the North block ground floor.

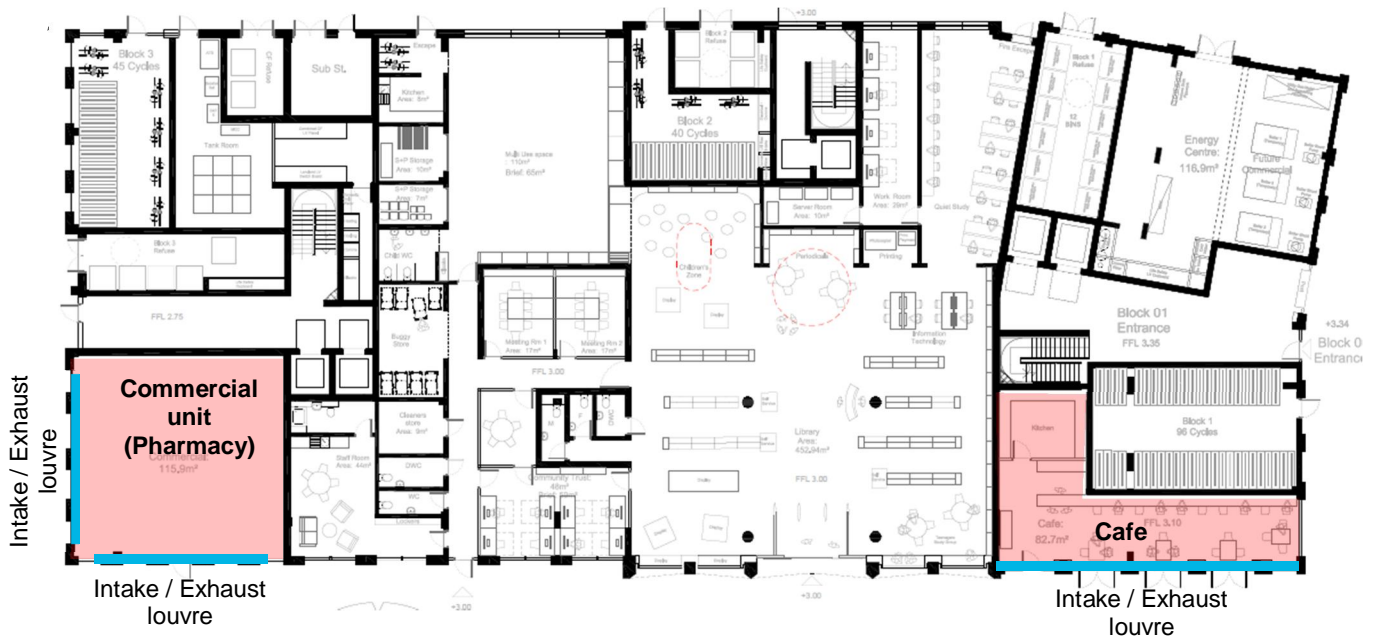
### 2.4 Cafe [A1 / A3 ]

The cafe is being designed as a shell and core for fit out by tennant. As part of the shell and core provision, high level louvres will be provided at ground floor at the front façade for the ventilation units to discharge exhaust air and bring in fresh air (see Figure 3).

Final ventilation shall be designed and provided by the Fit-out contractor to suit the use of the space.

Refer to Appendix A for detailed ventilation drawing of the North block ground floor.

Figure 3: Commercial unit and Café shell and core ventilation strategy



## 3 South Block Ventilation

### 3.1 Health Centre [D1]

The Health Centre shall be provided with mechanical supply and extract ventilation in accordance with Health Technical Memorandum (HTM) 03-01. Ventilation shall be supplied from a central air handling units (AHU) at roof level.

The AHU will comprise of filters, heating and cooling coils and a thermal wheel. Air intake and exhaust shall be at roof level and separated by a distance of circa 10m and on different facades of the roof plant enclosure. Two smoke extract fans will also provide smoke clearance to the stair lobbies at each floor (see Figure 4).

Refer also to Appendix B for a detailed roof level drawing of the South Block.

### 3.2 Early Years [D1]

The Early Years nursery shall be provided with mechanical ventilation in accordance with Part F of Building Regulations.

Ventilation shall be supplied from two central air handling units

#### Early Years Facility and General AHU

This AHU is located at roof level and will comprise of filters, heating and cooling coils and a plate heat exchanger. Air intake and exhaust shall also be at roof level and separated by a distance of circa 10m and on different facades of the roof plant enclosure (see Figure 4).

#### Early Years Facility Kitchen AHU and extract fan

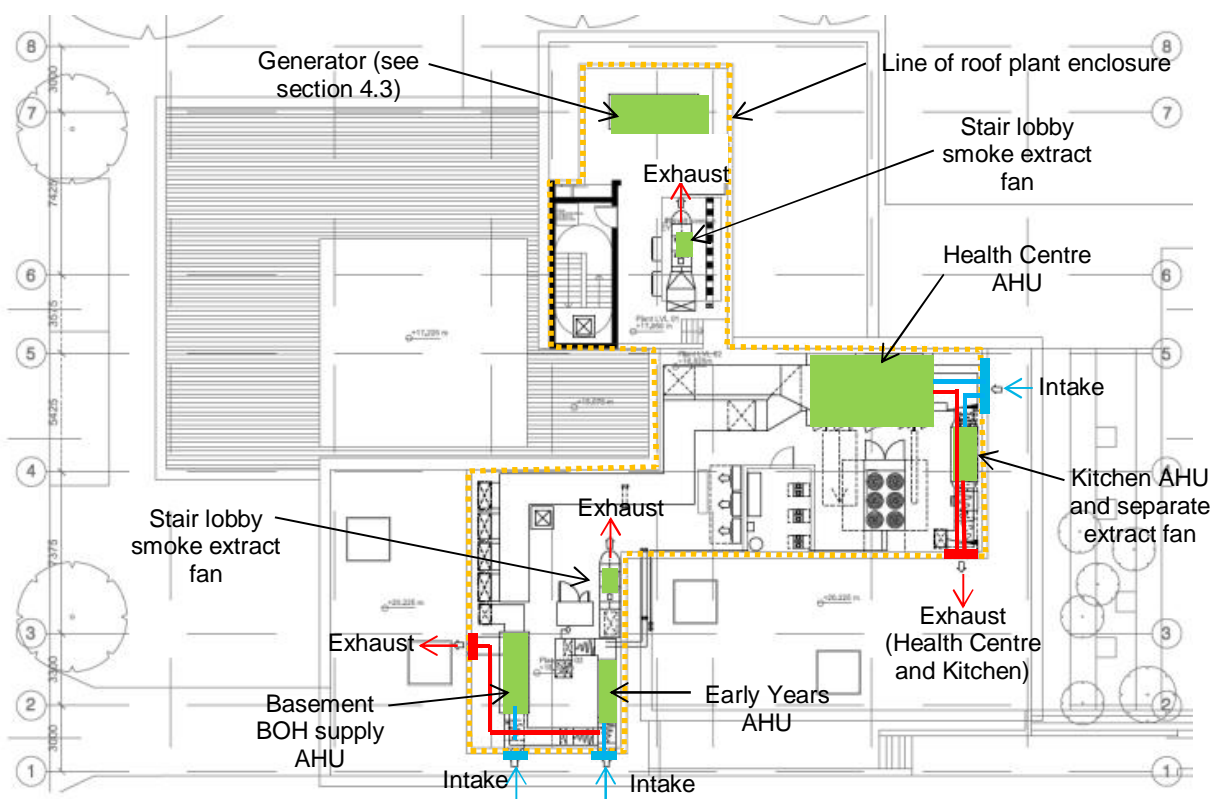
The kitchen extract system shall meet the standard required by DEFRA Guidance on 'The control of odour and noise from commercial kitchen exhaust systems' (2011).

A kitchen extract fan shall be provided at roof level with the exhaust also at roof level. Make-up supply air will be provided by a dedicated supply only AHU at roof level. The AHU will comprise of filters and heating coils.

The air intake will be at roof level and separated from the exhaust by a distance of circa 10m and on different facades of the roof plant enclosure (see Figure 4).

Refer also to Appendix B for a detailed roof level drawing of the South Block.

Figure 4: South Block roof layout with ventilation units





### 3.3 South Block Basement BOH [D1]

The Basement Back of House (BOH) areas shall be provided with mechanical ventilation in accordance with Part F of Building Regulations.

Supply air ventilation shall be supplied from a roof mounted AHU and will comprise of filters, heating coils and a run-around heat recover coil linked to the extract unit located in the basement. Air intake is at roof level and is ducted through the building to the basement level to supply fresh air (see figure 4 above).

The BOH areas of the basement shall have air extracted via an extract fan at basement level. The extracted air will be exhausted to outside at ground floor via louvres integrated into landscape feature (see Figure 5).

This system will also run to provide smoke extract (albeit with dedicated smoke extract fans) in line with the Fire strategy.

### 3.4 South Block Basement Car Park [D1]

The basement car park will be mechanically ventilated in accordance with Building Regulations Approved Document Part F and Part B and will achieve the standards set out in BS 7346-7: 2013.

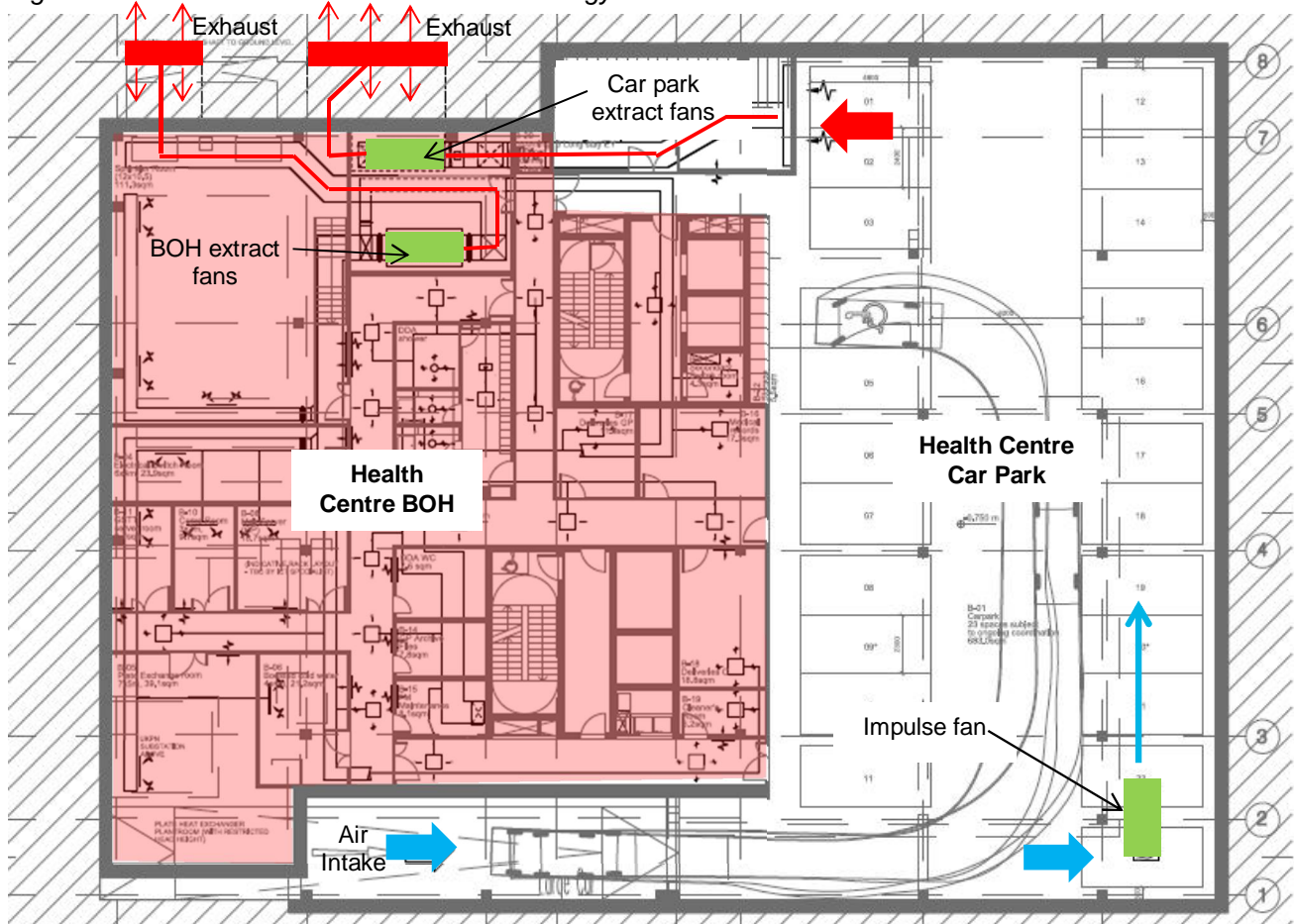
Dedicated duty / standby car park extract fans will extract air from one end of the car park and exhausting the air to outside at ground floor. In normal mode it will extract 6 ac/hr. In fire mode it will extract 10ac/hr.

Make-up air will be drawn in naturally via the car park ramp entrance.

In order to achieve good distribution of air flow, the mechanical ventilation will be supported with an impulse fan (see Figure 5).

Refer also to Appendix C for a detailed basement drawing of the South Block ventilation.

Figure 5: South Block basement ventilation strategy



## 4 Other Plant Flues and Exhausts

### 4.1 Temporary gas fire boilers

A purpose-built flue riser will accommodate the temporary boiler flues in the North Block heating plantroom.

An individual flue will be provided for each boiler, running horizontally to the flue riser in Block 1 and will then rise vertically to discharge to atmosphere at the highest point of level 15 roof level to comply with the requirements of the Clean Air Act (see Figure 6)

The condensing boilers shall be low NO<sub>x</sub> type achieving 35mg/kWh NO<sub>x</sub> emissions.

Refer also to Appendix D for a detailed drawing of the North block roof with MEP services.

### 4.2 North Block Life safety generator

A life safety generator will be provided for back up electricity on failure of mains electricity to life safety systems in the North Block.

The generator will be located at roof level with the flue discharging above the generator to meet the Clean Air Acts requirement (see Figure 6).

As the generator is proposed for emergency only, it will only be running during scheduled tests or in the event of a power cut.

Refer also to Appendix D for a detailed drawing of the North block roof with MEP services.

### 4.3 South Block Life safety generator

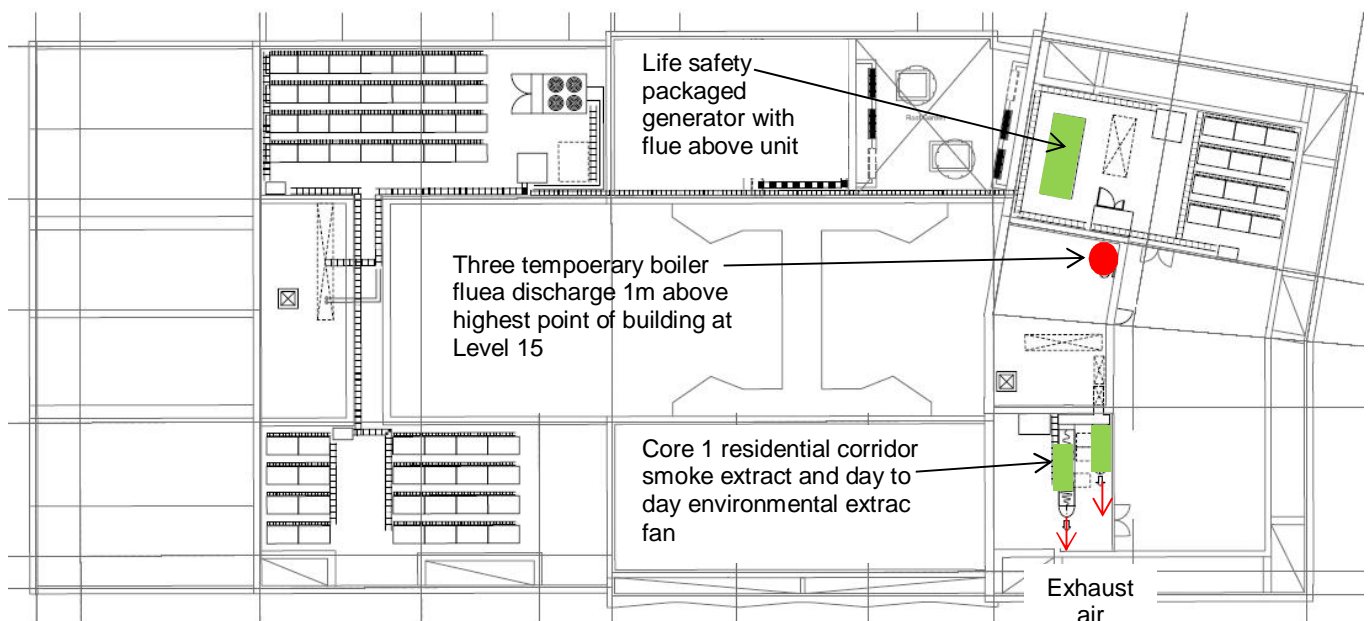
A life safety generator will be provided for back up electricity on failure of mains electricity to life safety systems in the South Block.

The generator will be located at roof level with the flue discharging above the generator to meet the Clean Air Acts requirement (see Figure 4 on page 4).

As the generator is proposed for emergency only, it will only be running during scheduled tests or in the event of a power cut.

Refer also to Appendix B for a detailed roof level drawing of the South Block.

Figure 6: North Block Flue discharge point



## 5 Appendices

- Appendix A: North block ground floor ventilation drawing no. NHH-P18-NB-M-0100
- Appendix B: South block roof level MEP drawing no. NHH-P18-SB-MEP-0001
- Appendix C: South block basement ventilation drawing no. NHH-P18-SB- MEP-0002
- Appendix D: North block roof level MEP drawing no. NHH-P18-NB-MEP-0001





LEGEND

4-PIPE CIRCULAR ACTIVE CHILLED BEAM

CIRCULAR CEILING SUPPLY DIFFUSER (TO MATCH APPEARANCE OF CIRCULAR CHILLED BEAM)

CIRCULAR CEILING EXTRACT GRILLE (TO MATCH APPEARANCE OF CIRCULAR CHILLED BEAM)

SQUARE LOUVREED FACE CEILING SUPPLY DIFFUSER

SQUARE LOUVREED FACE CEILING EXTRACT GRILLE

LINEAR EXTRACT GRILLE

LINEAR SUPPLY DIFFUSER

TRANSFER GRILLE

DUCT MOUNTED LTHW RE-HEAT BATTERY

PROJECT

NHH AYLESBURY  
PLOT 18  
NORTH BUILDING

CLIENT

NOTTING HILL  
HOUSING  
ASSOCIATION

CONSULTANT

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NOTES

1. WORK TO FIGURED DIMENSIONS ONLY
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT, MEP AND STRUCTURAL ENGINEERING DRAWINGS, REPORTS, SPECIFICATIONS AND SCHEDULES
3. GROUND FLOOR DUCTWORK FROM SHALL BE CONSTRUCTED FROM GALVANISED SHEET STEEL IN ACCORDANCE WITH DW144 TO THE STANDARD DETAILED IN THE SPECIFICATION UNLESS STATED OTHERWISE
4. FIRE DAMPERS SHALL BE PROVIDED IN ALL DUCTWORK TO AT LEAST THE SAME RATING AS THE WALL THROUGH WHICH IT PENETRATES. IN 1 HOUR OR 2 HOUR COMPARTMENT WALLS, SMOKE DAMPERS WILL BE PROVIDED WHICH WILL BE ACTUATED BY AN ADDRESSIBLE SMOKE DAMPER PANEL.
5. DUCT ACCESS DOORS ARE TO BE INSTALLED FOR CLEANING PURPOSES AND FOR ACCESS TO DUCT MOUNTED EQUIPMENT IN ACCORDANCE WITH DW142. ACCESS DOORS MUST BE INDICATED ON CONTRACTOR WORKING DRAWINGS.
6. VOLUME CONTROL DAMPERS ARE TO BE INSTALLED AS REQUIRED FOR COMMISSIONING PURPOSES INCLUDING A VCD ON EACH MAJOR BRANCH AND EACH FINAL BRANCH TO GRILLE / CHILLED BEAM (NOTE - NOT SHOWN ON STAGE D DRAWINGS)
7. A MINIMUM OF 10mm DEPTH OF VENTILATION AREA IS TO BE PROVIDED VIA THE DOOR UNDERCUT (WITH ALLOWANCE MADE FOR FLOOR FINISH) TO ALL WCs, SHOWERS, DIRTY UTILITIES AND ANY OTHER ROOM WITHOUT A BALANCED AIR SUPPLY.

ISSUE/REVISION

ISSUE/REVISION		
B	23/04/2016	STAGE D ISSUE
A	18/04/2016	PRELIMINARY ISSUE
I/R	DATE	DESCRIPTION

KEY PLAN

PROJECT NUMBER

60341461

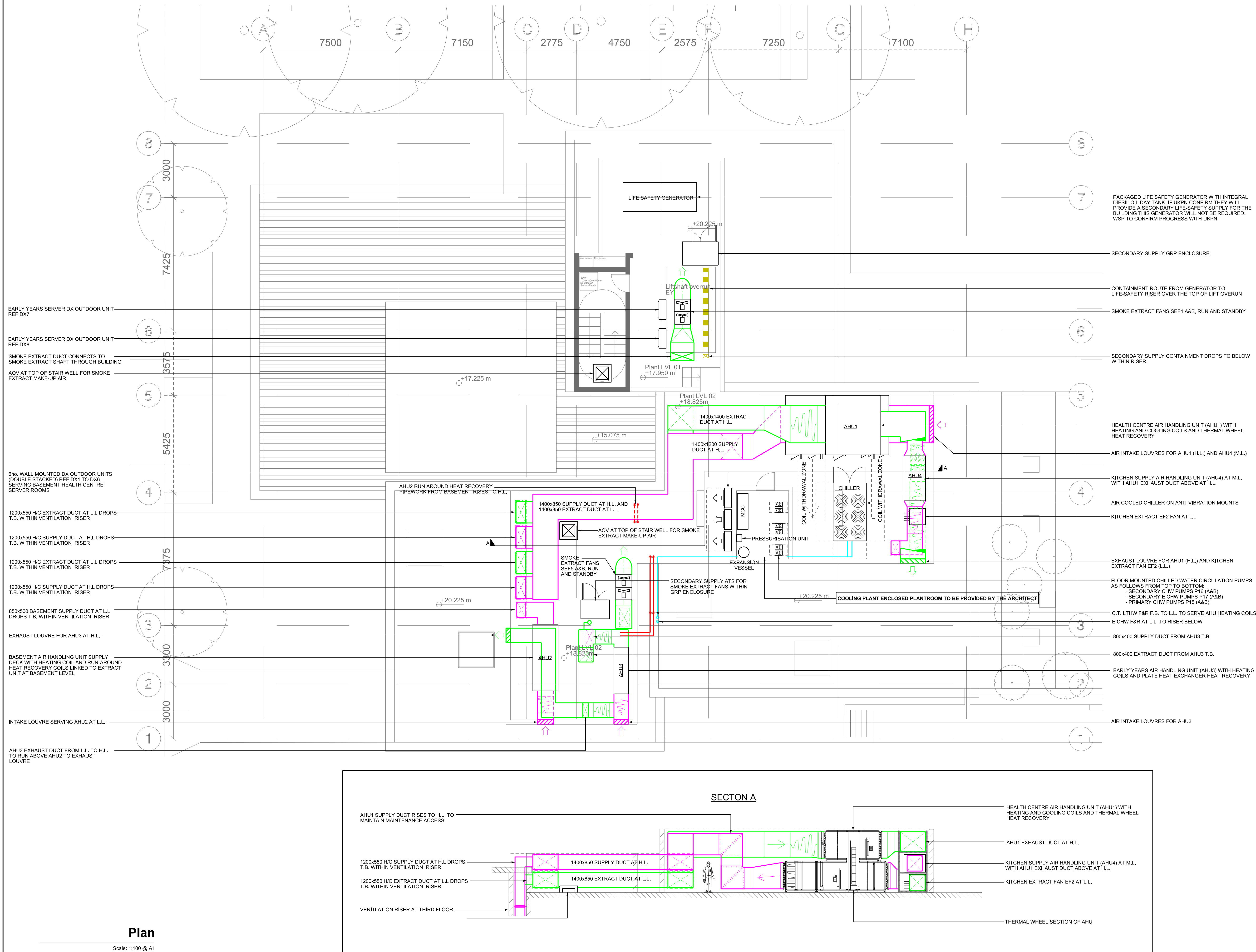
SHEET TITLE

NORTH BUILDING  
GROUND FLOOR  
VENTILATION SERVICES LAYOUT

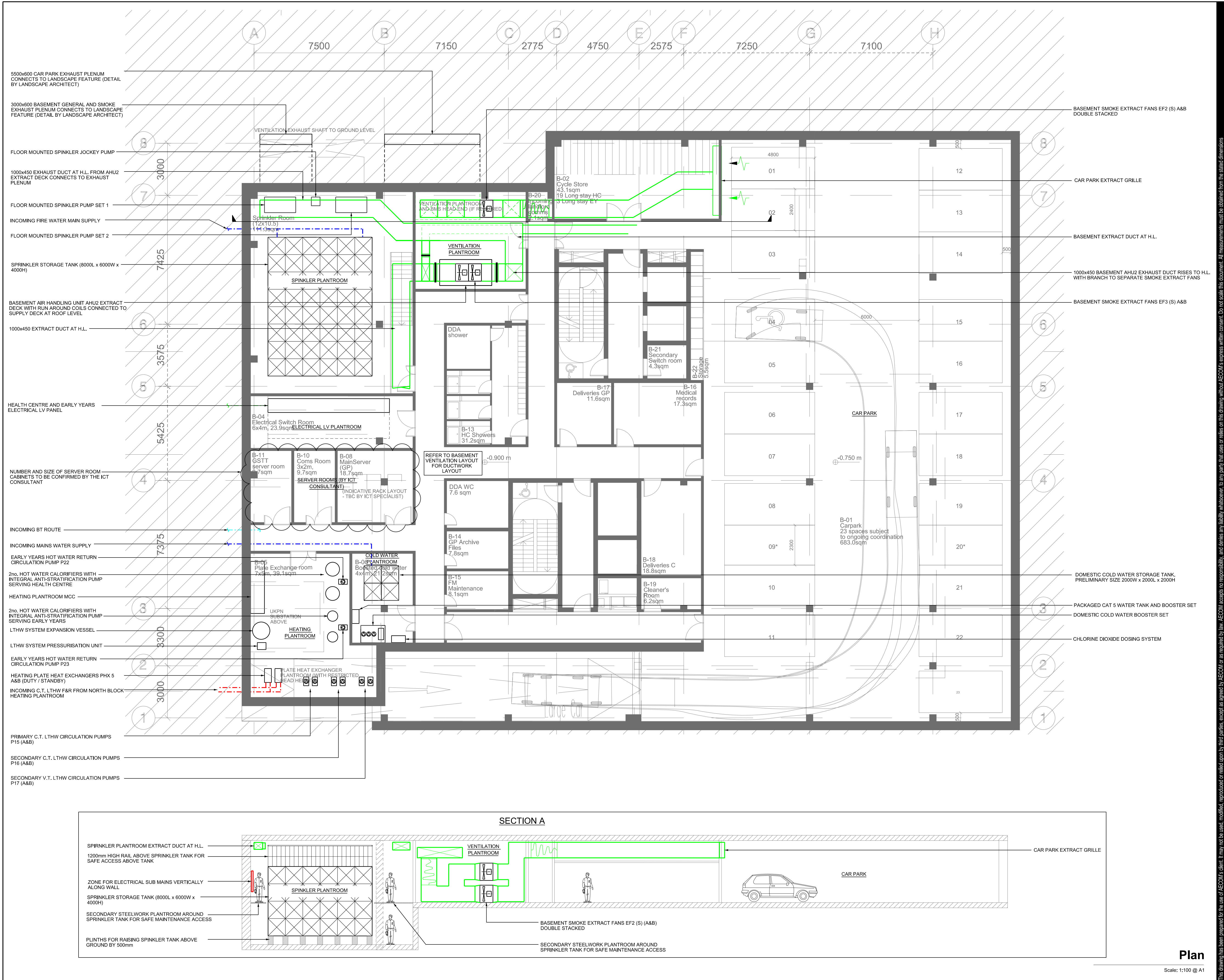
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3. PLANT EQUIPMENT TO BE INSTALLED WITH ADEQUATE MAINTENANCE ACCESS
4. ALL EXTERNAL PIPEWORK TO BE TRACE HEATED
5. ALL EXTERNAL PIPEWORK AND DUCTWORK TO BE PROVIDED WITH WEATHERPROOF INSULATION AS DETAILED IN THE SPECIFICATION.

B	26/04/2016	STAGE D ISSUE
A	06/04/2016	PRELIMINARY ISSUE
I/R	DATE	DESCRIPTION



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5. ALL EXTERNAL PIPEWORK AND DUCTWORK TO BE PROVIDED WITH WEATHERPROOF INSULATION AS DETAILED IN THE SPECIFICATION.

## ISSUE/REVISION

I/R	DATE	DESCRIPTION
C	23/04/2016	STAGE D ISSUE
B	18/04/2016	PRELIMINARY ISSUE
A	12/04/2016	PRELIMINARY ISSUE
I/R	DATE	DESCRIPTION

## KEY PLAN

## PROJECT NUMBER

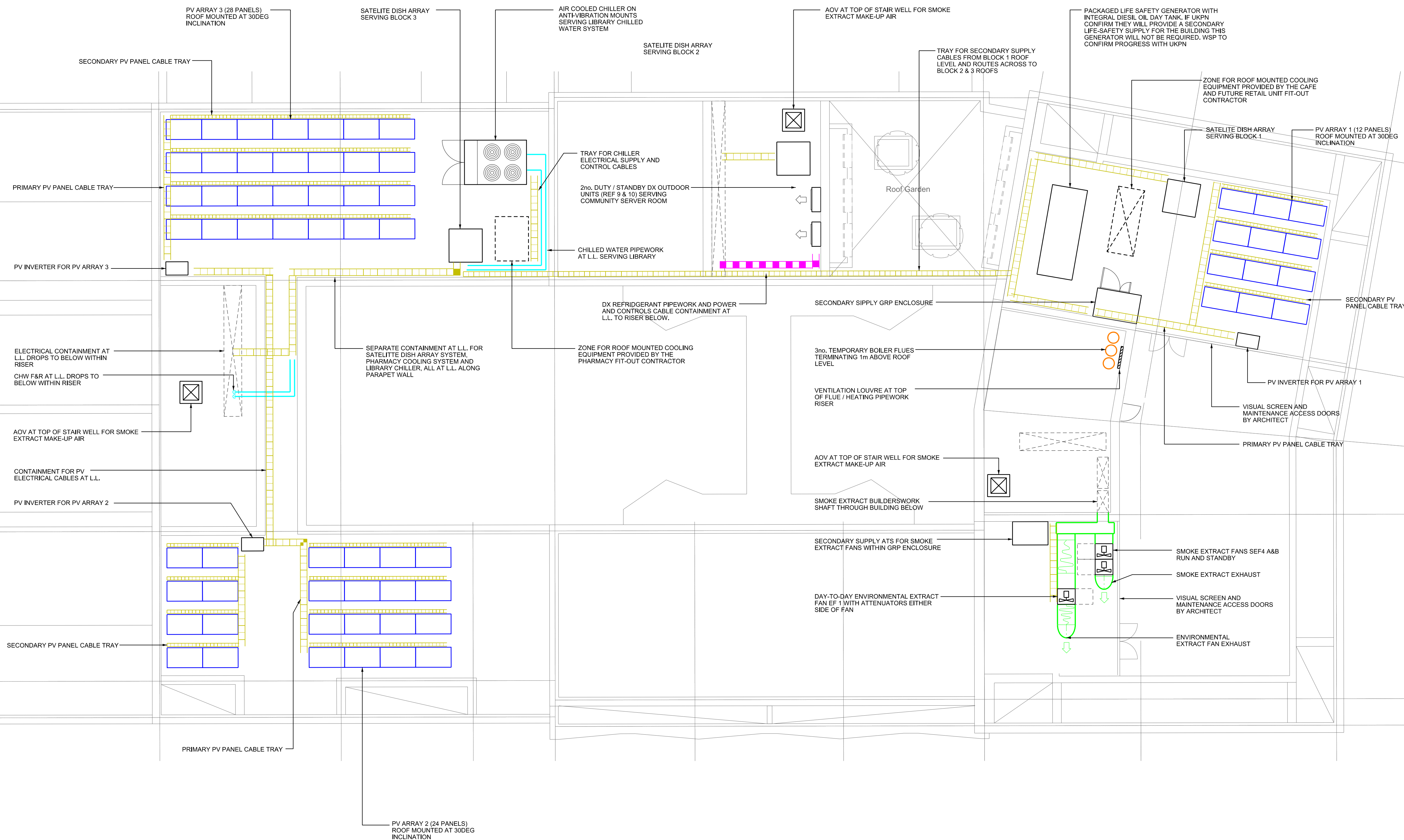
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## SHEET TITLE

NORTH BUILDING  
ROOF LEVEL  
COMBINED SERVICES LAYOUT

## SHEET NUMBER

NHH-P18-ACM-NB-MEP-0001

A1 | PLAN  
Scale 1:100

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