

# Briefing Note: 182-184 High Holborn Air Quality Report

## 1. Introduction

The proposed refurbishment of 182-184 High Holborn includes for new retail units both A3 and A1 and new air conditioned offices all provided with mechanical ventilation. The air-conditioning is by means of variable refrigerant volume air-conditioning and mechanical ventilation by floor by floor air handling units.

This document details how the fresh air is to be introduced into the building and exhausted to maintain the air quality for the inhabitants.

## 2. Existing Condition

The project is located on the corner of High Holborn and Smart's Place in central London, which are main roads in the Holborn area. They have high levels of vehicular movement including buses and have high levels of carbon monoxide which requires high grade filtration to deal with.

## 3. Office Ventilation Strategy

The ventilation strategy for 182-184 High Holborn draws fresh air in through louvres on the roof of the building, to supply the air handling units on each office floor (see appendix B for schematic). Air will be supplied at a rate of 12l/s/person based on an occupancy density of 1 person per 8m<sup>2</sup> floor plate.

The extract air is drawn through the air handling unit on each floors, and exhausts through a louvre in the facade of the building on the same floor (see appendix A for typical floor plan).

Due to retaining /refurbishing the existing construction of the building, the existing limited slab to slab heights mean it is not possible to distribute air through the ceiling voids and vertically up the building. Limited riser space is available on the perimeter and limited height and plant area at roof level so floor by floor air handling plant was identified as the most viable solution.

The air will be tempered by DX coils located in the supply air duct after the air handling unit.

CO<sub>2</sub> sensors are located within the office spaces to control minimum fresh air ventilation rates, and so ensure a high air quality

## 4. Retail ventilation

The High Holborn retail unit will have air supplied and exhausted from the Smarts Place elevation.

The rear retail unit ventilation is provided through louvres at the rear of the building, through use of dedicated air handling units.

For the A3 retail unit, the occupier will install carbon filters for the kitchen exhaust air.

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## 5. Construction phase

A construction phase health and safety plan has been provided within the planning documents, which includes measures for mitigating dust and pollution are provided. Please refer to this document for clarification.

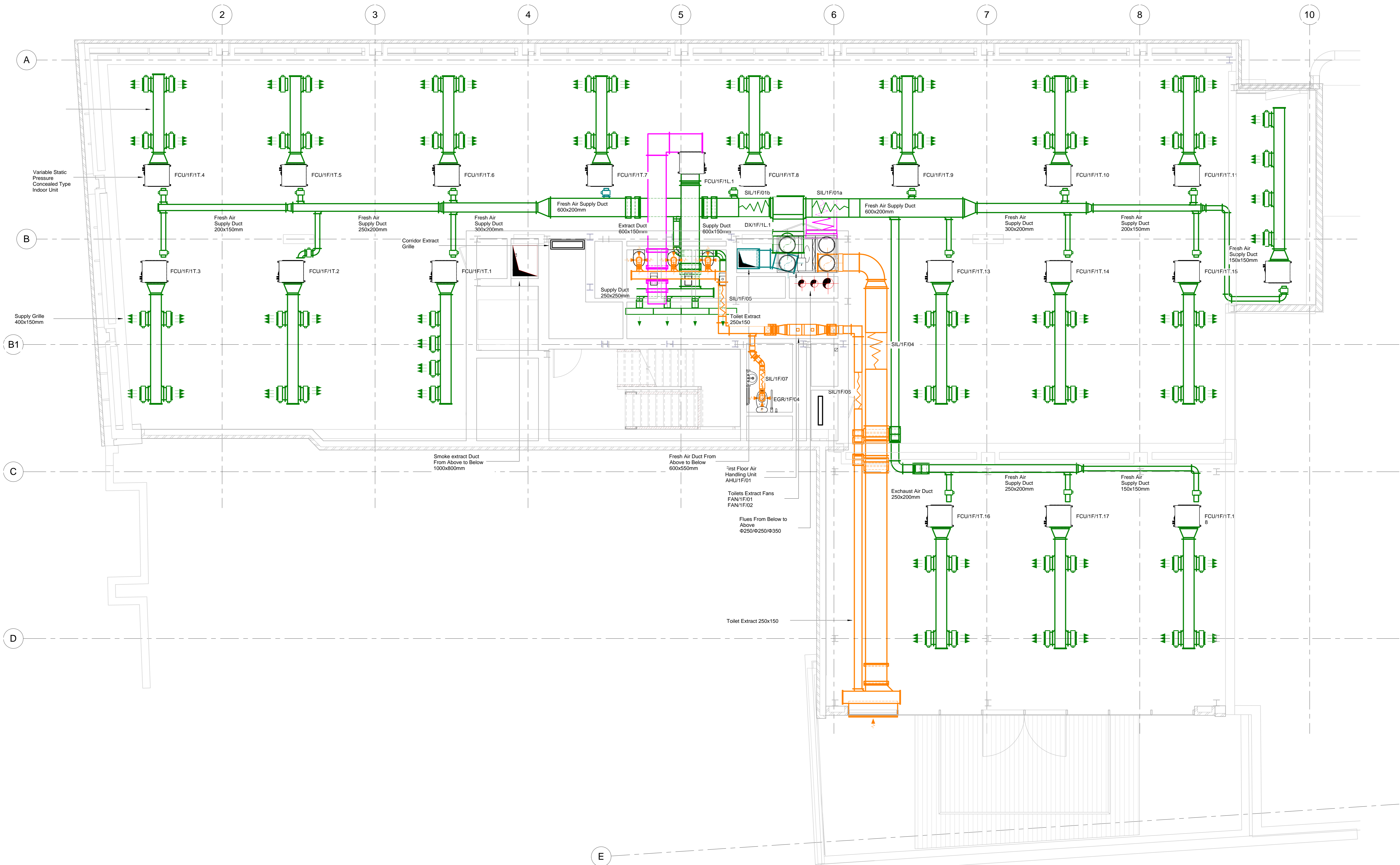
## 6. Conclusion

In conclusion the air quality to the offices will be maintained to building.

# Appendices

## Appendix A - Typical Floor

117366/KLA/161115



00	OCT'16	STAGE 3 TENDER ISSUE	NK	EV	EV
Rev	Date	Description	By	Chkd	Appd

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**COVENT GARDEN INVESTMENT S.A.R.L**

ARCHITECT  
**SPPARC**

PROJECT  
**182-184 HIGH HOLBORN  
LONDON**

TITLE  
**FIRST FLOOR LEVEL  
VENTILATION LAYOUT**

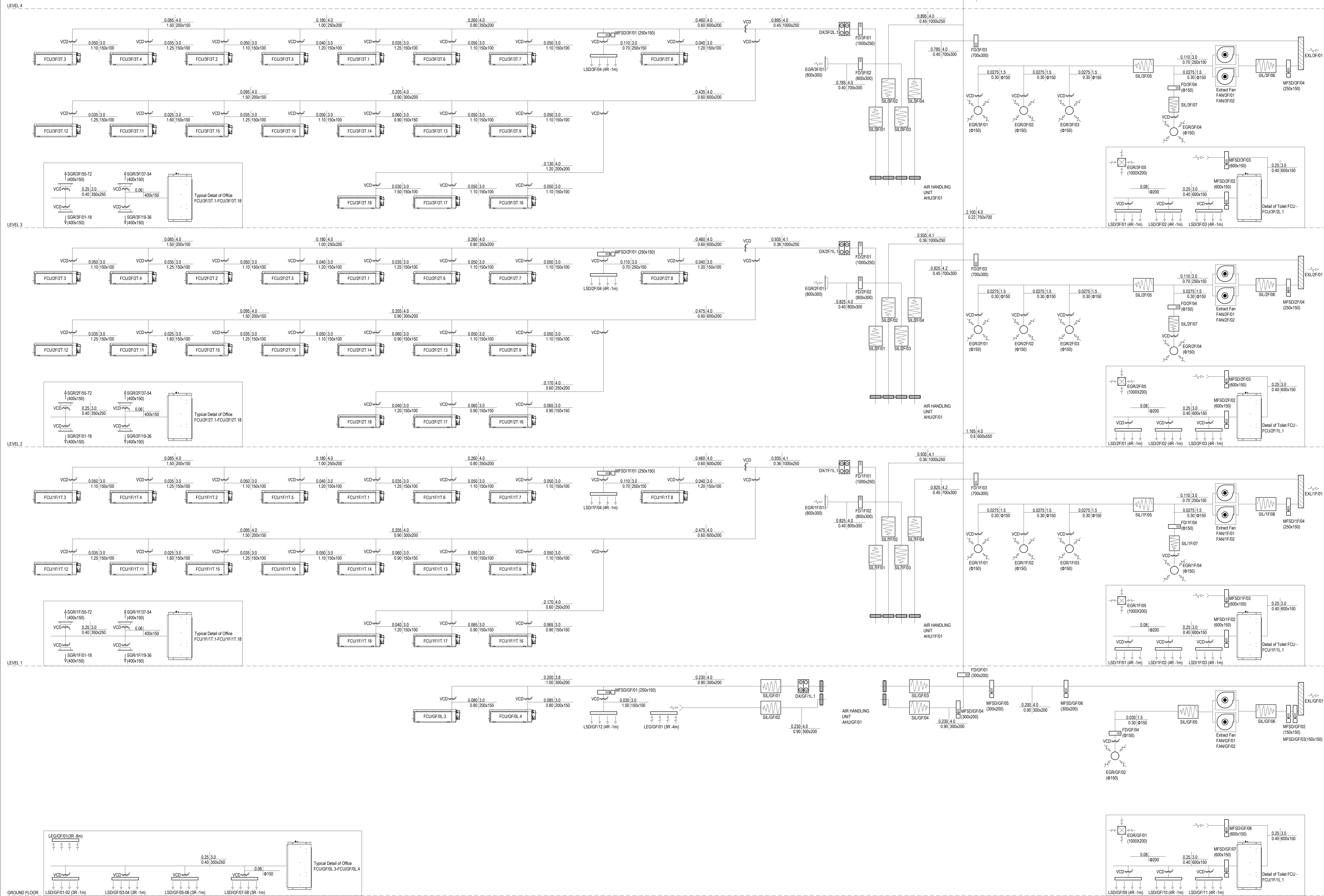
PROJECT No.		DISCIPLINE	
<b>117366</b>		MECHANICAL	
SCALE		SHEET SIZE	
1 : 50		A0	
ORIGINATED	DRAWN	CHECKED	APPROVED
NK	NK	EV	EV
DATE	DATE	DATE	DATE
OCT'16	OCT'16	OCT'16	OCT'16
DRAWING No.			REV
117366/M/1101			00

Level 01\_Ventilation Layout

# Appendices

## Appendix B - Air Schematic

117366/KLA/161115



FOR CONTINUATION SEE  
DRAWING 117366/M1005

- NOTES
- THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.
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  - CAT A BRANCHES INCORPORATE A TWO PORT SHUT OFF VALVE WITHIN PRESSURE INDEPENDENT CONTROL VALVE ARRANGEMENTS THAT CLOSE WHEN A FLOOR ZONE IS UNOCCUPIED.
  - FLOW RATES SIZES AGAINST THERMAL WHEEL FAILURE.

(m/s) (m/s)  
(Pa) (mm x mm)

01	OCT '16 - STAGE 2 TENDER ISSUE	NK	EV	EV
00	JUN '16 - STAGE 2 ISSUE	NK	EV	EV
REV	DATE/DESCRIPTION	BY	CHK	APP

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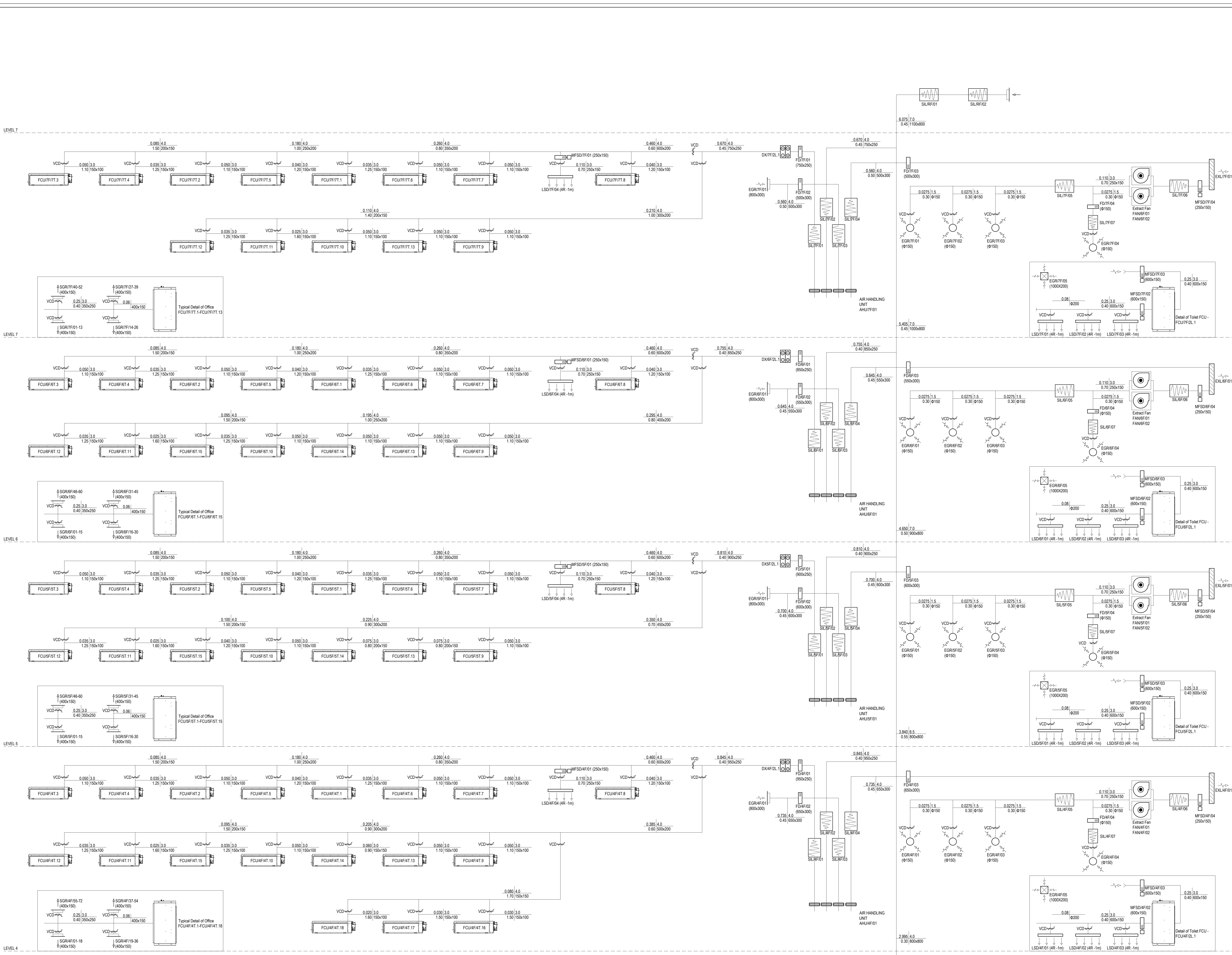
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ARCHITECT  
SPPARC

PROJECT  
182 HIGH HOLBORN

TITLE  
OFFICE FRESH AIR SCHEMATIC  
(GROUND FLOOR TO 3rd FLOOR)

ELEMENT	DISCIPLINE	MECHANICAL
PROJECT NO.	117366	SCALE NTS
ORIGINATED	NK	CHECKED
DATE	JUN'16	DATE
DRAWING No.	117366/M1004	REV
		01



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01	OCT '16 - STAGE 3 TENDER ISSUE	NK	EV	EV
00	JUN '16 - STAGE 2 ISSUE	NK	EV	EV
REV	DATE/DESCRIPTION	BY	CHK	APP

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ARCHITECT  
**SPPARC**

PROJECT  
**182 HIGH HOLBORN**

TITLE  
**OFFICE FRESH AIR SCHEMATIC (4th FLOOR to 8th FLOOR)**

ELEMENT	DISCIPLINE	MECHANICAL
PROJECT No.	117366	SCALE NTS SHEET SIZE A0
ORIGINATED NK	DRAWN NK	CHECKED EV APPROVED EV
DATE JUN'16	DATE JUN'16	DATE JUN'16
DRAWING No.	117366/M/1005	REV 01

FOR CONTINUATION SEE DRAWING 117366/M/1004