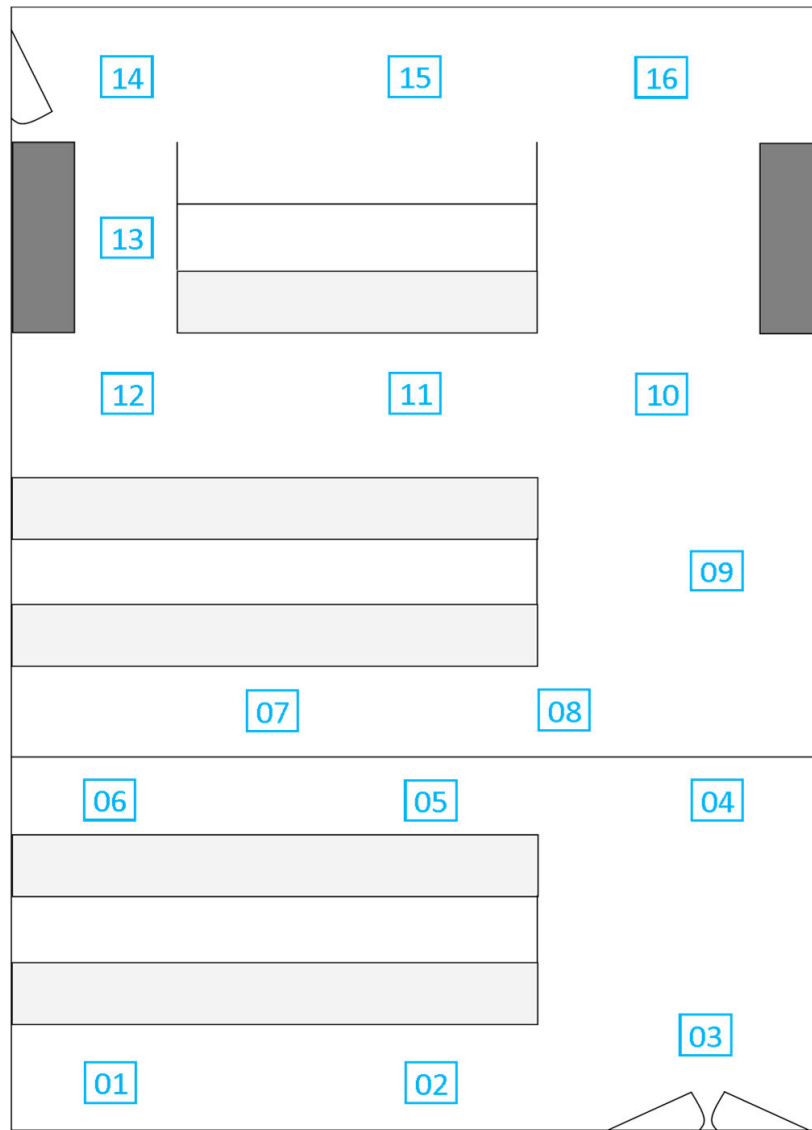




## Data Centre Cleaning Report

|             |              |
|-------------|--------------|
| CLIENT      | Who ever Ltd |
| ADDRESS     | Near London  |
| LOCATION    | Data Room    |
| PREPARED BY | Steve Yates  |
| DATE        | 21-09-11     |

# ROOM REPORT



An air particulate test was carried out before and after the clean. A full deep clean of the room was provided including the floor void. There are a few maintenance issues to mention, there is a tile where the vinyl has delaminated and is a potential trip hazard (near reading 9). The trolley/shelves near reading 2 is very unstable as it is overloaded, one of wheels looks like it is about to fail and it appears the shelves are top heavy. There is also a grill on the air con at location 13 which is loose and flapping about.

## Air testing

The 2 graphs showing the particulates at the beginning and end of the clean show a considerable reduction in all the particulate sizes. Only the 5.0 micron readings are not within Class 7. Therefore the levels achieve



I.T. CLEANING

## CERTIFICATE OF CONFORMITY

Near London  
Data Room

### Specification Achieved ISO 14644 Class 8

|                            |                                   |
|----------------------------|-----------------------------------|
| Specification Required:    | CLASS 8 or better                 |
| Date:                      | 21-09-11                          |
| Time:                      | 1100                              |
| Tester:                    | Steve Yates                       |
| Test Instrument:           | Light house Solair 5100+          |
| Area tested:               | 173 m <sup>2</sup>                |
| Number of tests locations: | 16                                |
| Sample protocol:           | Logical spaces shown on room plan |
| Sample volume:             | 0.02 m <sup>3</sup>               |
| Sample time:               | 42s                               |
| Air flow:                  | Non Directional                   |
| Occupancy state:           | Operational                       |
| Particle sizes tested:     | 0.5µm, 1.0µm, 5.0µm               |

## TEST RESULTS

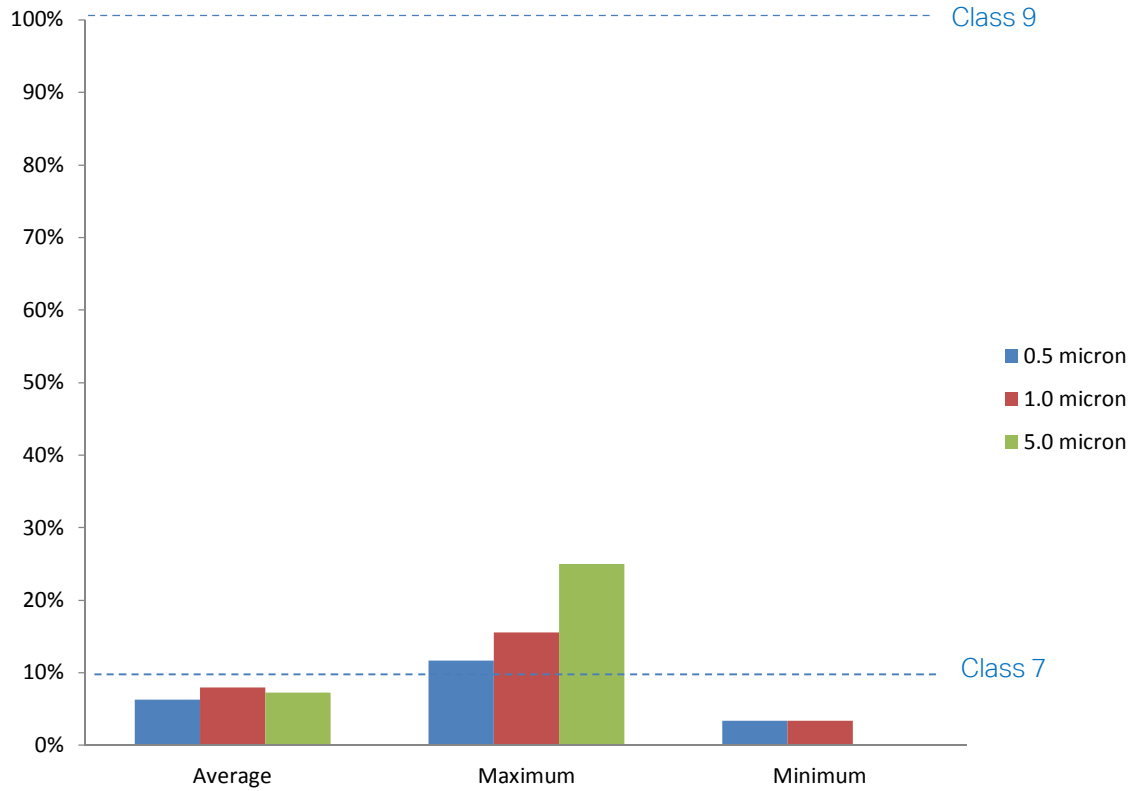
| <u>Particle Size</u> | <u>particles/m<sup>3</sup></u> | <u>CLASS 7</u> | <u>CLASS 8</u> |
|----------------------|--------------------------------|----------------|----------------|
| 0.5 micron           | 70,000                         | PASS 352,000   | PASS 3,520,000 |
| 1.0 micron           | 37,400                         | PASS 83,220    | PASS 832,200   |
| 5.0 micron           | 4,940                          | FAIL 2,930     | PASS 29,300    |





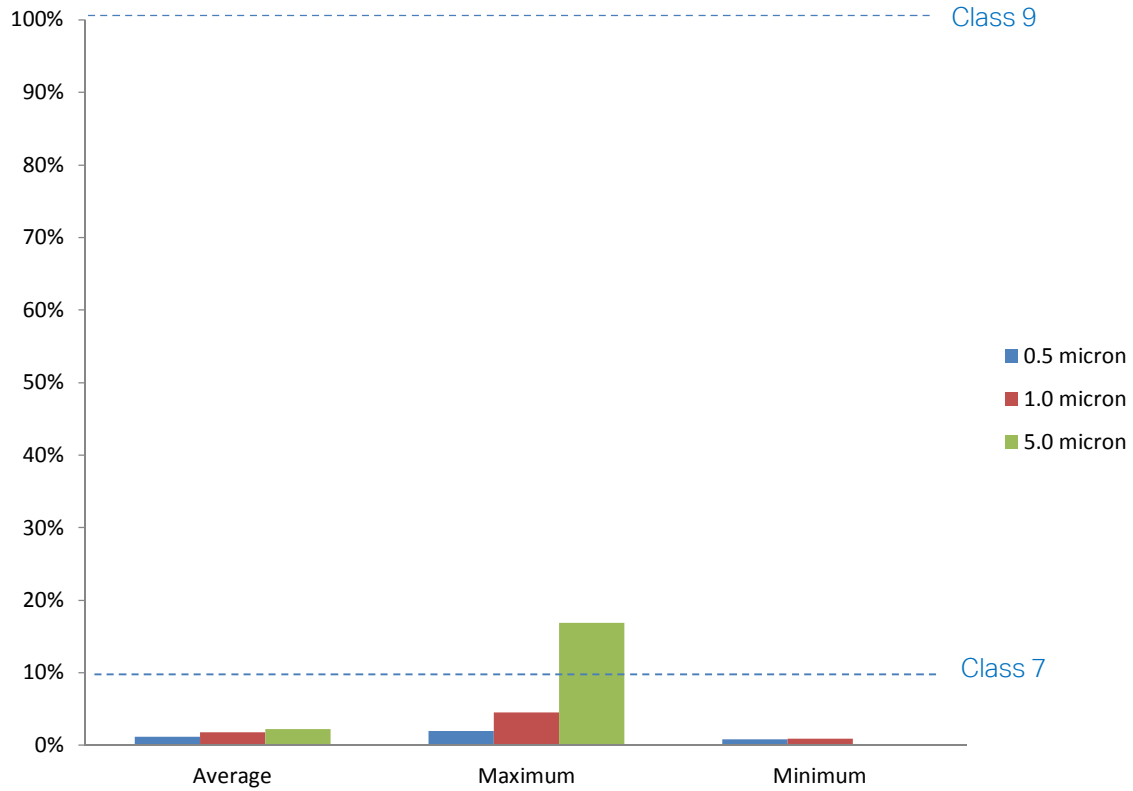
# GRAPHICAL RESULTS - INITIAL

## Percentage of ISO 14644 - Class 8



# GRAPHICAL RESULTS - FINAL

## Percentage of ISO 14644 - Class 8



# International Standards for Cleanrooms and Critical Environments

## Airborne Particulate Cleanliness Classes ISO 14644

| Class | Number of Particles per Cubic Meter by Micrometer Size |         |         |            |           |         |
|-------|--|---------|---------|------------|-----------|---------|
|       | 0.1 um   | 0.2 um  | 0.3 um  | 0.5 um     | 1 um      | 5 um    |
| ISO 1 | 10   | 2       |         |            |           |         |
| ISO 2 | 100  | 24      | 10      | 4          |           |         |
| ISO 3 | 1,000  | 237     | 102     | 35         | 8         |         |
| ISO 4 | 10,000   | 2,370   | 1,020   | 352        | 83        |         |
| ISO 5 | 100,000  | 23,700  | 10,200  | 3,520      | 832       | 29      |
| ISO 6 | 1,000,000  | 237,000 | 102,000 | 35,200     | 8,320     | 293     |
| ISO 7 |  |         |         | 352,000    | 83,200    | 2,930   |
| ISO 8 |  |         |         | 3,520,000  | 832,000   | 29,300  |
| ISO 9 |  |         |         | 35,200,000 | 8,320,000 | 293,000 |

### ISO-14644-1 Classification of Air Cleanliness

Cleanliness class designations and quantity have changed from FS209E (see Table 1). Along with the obvious change to metric measure of air volume, ISO 14644-1 adds three additional classes.

IT Cleaning Ltd Specification for Data Room class 8 clean; Air particulate levels to Class 8 or better plus all accessible surfaces free from dust.

### Strategic Testing: (Table 1) Schedule of Tests to Demonstrate Continuing Compliance.

| Test Parameter          | Class       | Maximum Time Interval | Test Procedure       |
|-------------------------|-------------|-----------------------|----------------------|
| Particle Count Test     | ≤ ISO 5     | 6 Months              | ISO 14644-1 Annex A  |
|                         | > ISO 5     | 12 Months             |                      |
| Air Pressure Difference | All Classes | 12 Months             | ISO 14644-1 Annex B5 |
| Airflow                 | All Classes | 12 Months             | ISO 14644-1 Annex B4 |

### Definitions


|             |                                       |
|-------------|---------------------------------------|
| Operational | Populated room, equipment is live     |
| Occupied    | Populated room, equipment is not live |
| Unoccupied  | Unpopulated room                      |

# CERTIFICATE OF CALIBRATION



CERTIFICATE NO. M10228/NT/01

## CERTIFICATE OF CALIBRATION

| CUSTOMER DETAILS  |               |                    |                    |                                   |         |         |      |      |
|---|---------------|--------------------|--------------------|-----------------------------------|---------|---------|------|------|
| CUSTOMER IT Cleaning Limited  |               |                    |                    |                                   |         |         |      |      |
| ADDRESS 112 Clifton Street, Swindon, SN1 3QA  |               |                    |                    |                                   |         |         |      |      |
| PARTICLE COUNTER DETAILS  |               |                    |                    |                                   |         |         |      |      |
| MODEL Lighthouse Solair 5100+   |               |                    |                    |                                   |         |         |      |      |
| SERIAL NUMBER 080203003   |               |                    |                    | REFERENCE ID None                 |         |         |      |      |
| CALIBRATION TEST INSTRUMENTATION  |               |                    |                    |                                   |         |         |      |      |
| INSTRUMENT  | SERIAL NUMBER | CERTIFICATE NUMBER | CALIBRATION EXPIRY |                                   |         |         |      |      |
| PHA   | uT0002        | M10103/NT/01       | 18 May 2011        |                                   |         |         |      |      |
| DMM   | 1080635654    | 1196148            | 21 Oct 2011        |                                   |         |         |      |      |
| Rotameter   | F138007/2     | 19645              | 23 Oct 2011        |                                   |         |         |      |      |
| PERFORMANCE DETAILS   |               |                    |                    |                                   |         |         |      |      |
| Particle Size (µm)  | Lot Number    | Expiry Date        | Output             |                                   |         |         |      |      |
| 0.498   | 33445         | May 2011           | 217 mV             | Calibration Volt.                 | N/A     |         |      |      |
| 0.707   | 35757         | Sept 2012          | 496 mV             | Flow Rate                         | 1.0 CFM |         |      |      |
| 1.034   | 36608         | Mar 2013           | 573 mV             | Noise                             | 24.7 mV |         |      |      |
| 5.000   | 33533         | May 2011           | 2820 mV            | Signal/Noise                      | 8.9:1   |         |      |      |
| 10.000  | 36031         | Nov 2012           | 3560 mV            | Resolution (%)                    | N/A     |         |      |      |
|   |               |                    |                    | Extra Details: Laser Ref 59 mV    |         |         |      |      |
| COMMENTS  |               |                    |                    |                                   |         |         |      |      |
| INSTRUMENT CHANNEL SETTINGS   |               |                    |                    |                                   |         |         |      |      |
| Size (µm)   | 0.5           | 0.7                | 1.0                | 3.0                               | 5.0     | 10.0    | ---- | ---- |
| Threshold   | 220 mV        | 487 mV             | 565 mV             | 1690 mV                           | 2820 mV | 3560 mV | ---- | ---- |
| THIS IS TO CERTIFY THAT THE INSTRUMENT HAS BEEN CALIBRATED IN ACCORDANCE WITH THE MANUFACTURERS PROCEDURES. |               |                    |                    |                                   |         |         |      |      |
| NAME Nick Todd  |               |                    |                    | CALIBRATION DATE 31 Jan 2011      |         |         |      |      |
| SIGNATURE                |               |                    |                    | NEXT CALIBRATION DUE January 2012 |         |         |      |      |