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Insurers, Restorers, Builders, and private customers have been using the BioSweep technology for 9 years in the UK.

When is BioSweep Useful?

~ When reducing costs and shortening the claim cycle is important ~

- When you have an odour issue following a fire or escape of water,
- When you have a bacterium concern,
- When you have fungal proliferation taking place,
- When sampling for organic or chemical contaminants is required.

What are the savings?

- Less strip out required.
- Deodorisation of furniture and soft furnishings = saving like for like replacement costs and less material to landfill.
- Reduced alternative accommodation costs.
- Less pack out. Deodorisation of dwelling and contents at the same time in situ.
- We have a track record of very good results, and significant cost savings.

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What customers have to say

“Staff explanation of the effects and procedures were clear and concise, very professional Team.”
P. Olliffe, Builder

“Great job and the smell after, is fantastic. Thanks for all your help.”
C. Tanner, Business Owner

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High Performance Air and Surface Decontamination

What does it do?

Effective at eradicating;

- Odours
- Bacteria
- Viruses
- Pathogens
- VOCs
- Suppressing mould spores

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What does it do?

Odour eradication:

- For smoke odour following remediation
- 100% effective in removing odour after fire including:
  - ✓ Protein fires
  - ✓ Pyrolization fires
- Contaminates/source have to be removed first
- Help reduce tear out and rebuild costs
- Can assist saving contents that would have to be Disposed off
- Reduces new for old costs on contents
- Reduces ALE costs
- Soot and char removed- we can treat dwelling and Contents at the same time




High net worth property with contents done on site

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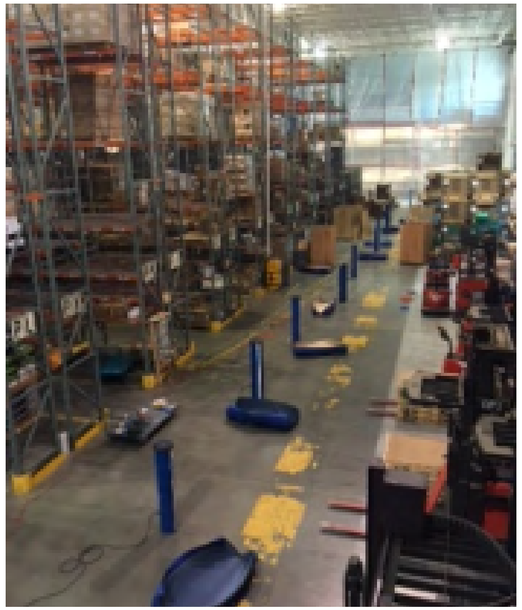
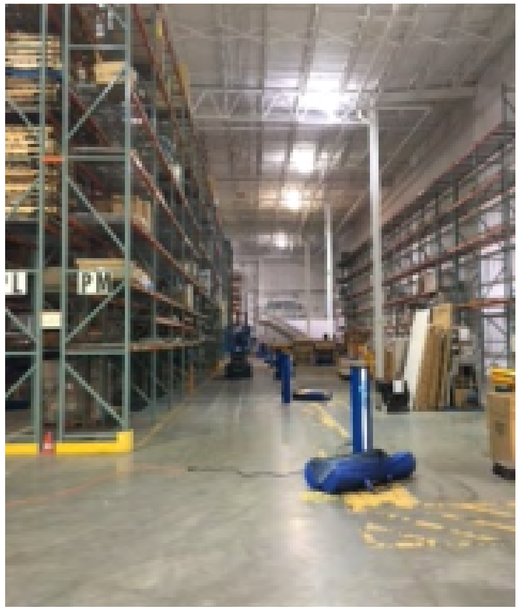
What does it do?

Odour eradication:





4 million cubic feet warehouse after fire

1.9 million cubic feet manufacturing facility, done
Without interrupting the day to day business

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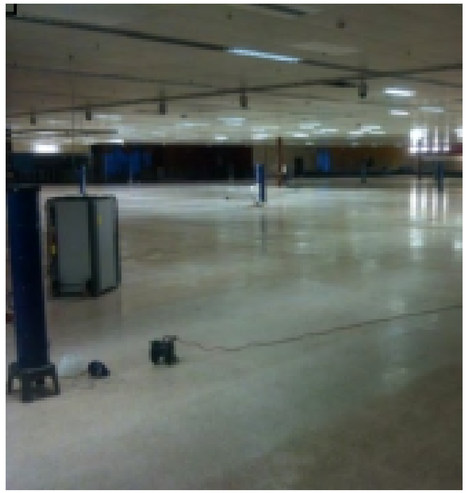
What does it do?

Odour eradication:

- Log7 reduction against MRSA, a log6 reduction is considered hospital surgical theater sterile
- Bacteria and virus eradication and suppression after Flooding and sewage
- Mould spore suppression after flooding and sewage.



36,000 cubic meter supermarket after flooding to Reduce risk or bacteria, viruses and mould spores

High net worth apartments with significant mould spore counts. The table shows the reductions seen throughout the process. Before cleaning, after cleaning and after BioSweep.

Lower Ground floor		Base results 14/07/2016			Post Cleaning 18/08/2016			Post BioSweep 22/09/2016			% Overall reduction
Test Type	Test location	Bacteria count	Fungi count	Risk factor for fungi	Bacteria count	Fungi count	Risk factor for fungi	Bacteria count	Fungi count	Risk factor for fungi	
Air sample	A	-	12,300	High	-	1,730	Low	-	520	Low	95.8%
	B	-	29,300	High	-	-	-	-	453	Low	98.5%
	C	-	11,300	High	-	2,210	Low	-	400	Low	96.5%
Horizontal surface	A	<40	5,040	High	28,000,000	60,000	High	10	0	Low	100.0%
	B	-	-	-	4,300,000	14,000	High	30	10	Low	99.9%
	C	176,000	150,000	High	1,700,000	2,000	High	50	170	Low	99.9%
Vertical surface	A	4,680	5,440	High	120,000	0	Low	0	0	Low	100.0%
	B	-	-	-	-	-	-	0	0	Low	-
	C	7,600,000	380,000	High	440,000	900	High	1,170	0	Low	100.0%

What does it do?

VOC eradication:

- For organic based chemical spills such as Oil, petroleum, heating oil, paints, Chemical odours,

Mould spore suppression:

- Spores are ubiquitous in nature,
- Spore reductions from 88% up to 99.9984 have been achieved,
- Use of HEPA filtration in BS900 Reactors

When to use BioSweep?

- BioSweep's high performance air and surface decontamination is effective in eradicating odours, bacteria, viruses, VOCs and suppressing mould spores.

- The below gives a guide on what situations BioSweep can help reduce strip out, rebuild costs and time as well as savings with contents recovery.

Fire & Smoke Damage

- Significant odour from smoke damage
- Protein/food fire – smoke caused from burnt food
- Pyrolisation fire – smoke caused by chemical treatments vaporising, usually an acrid odour, very difficult to eradicate
- Porous materials – open wood, contents, furniture, plaster
- High temperature with smoke damage causing odour to permeate into materials within property

Flood & Sewage

- Concerns about contamination from harmful bacteria and viruses, i.e. kitchens, grocery stores, hospitals, schools
- Mould growth has occurred, concerns about mould spores after removal (Note: BioSweep offers mould remediation services)

Trauma

- Any trauma case to decontaminate and ensure eradication of harmful bacteria and viruses

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Other Services

- Mould remediation
- Air sampling and lab microscopy
- ATP swab testing

Head Office

- Opening hours: 0800 – 1700
- Tel: 01243 697359
- Out of hours: 07544 800936
- info@biosweep.co.uk
- Unit 6C The Wren Centre
- Westbourne Road
  Emsworth PO10 7SU

General Information

- BS900 air and surface decontamination uses Photocatalytic oxidation
- Property must be free from people, pets, plants and air fresheners during treatment
- Initial contact with PH within 24 hours
- Site visit within 72 hours if required
- With property dimensions and details of type of claim a quote can be generated
- Emergency response 24/7

Problems or Questions

Roark McMaster
07544 800936
roark@biosweep.co.uk

Kim Cooper
01243 697359
kim@biosweep.co.uk

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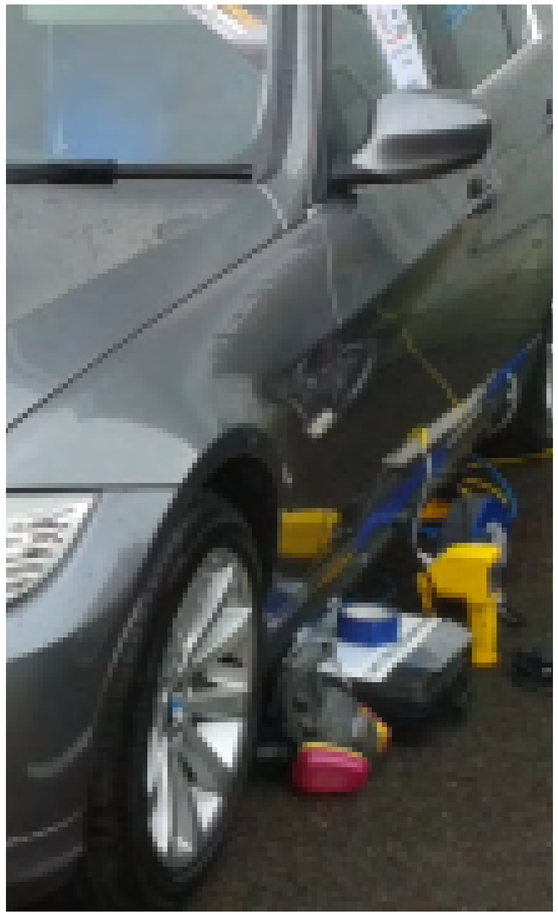
Site Safety is Job 1



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Protect your premises against harmful micro-organisms
Protect people from sickness and absence
Protect your livelihood with a healthy, safe environment

Whether you run a healthcare facility, educational establishment, office complex or any other premises where people work or live, taking preventative measures against harmful bacteria or visruses is important.

BioSweep® Surface Defense® Treatment provides up to 12 months' prevention against viruses and micro-organisms, eliminating them through a combined chemical and electrical process that is highly effective, non-toxic and long-lasting.

The result? A far safer environment in which there is minimum risk of colds and flu, influenza, E coli, MRSA, C Difficile, Staph - and other harmful outbreaks. That means healthier people, better personnel attendance, plus preservation of your reputation and good name. Best of all, you'll be providing surroundings that encourage good health, well-being and enhanced productivity.

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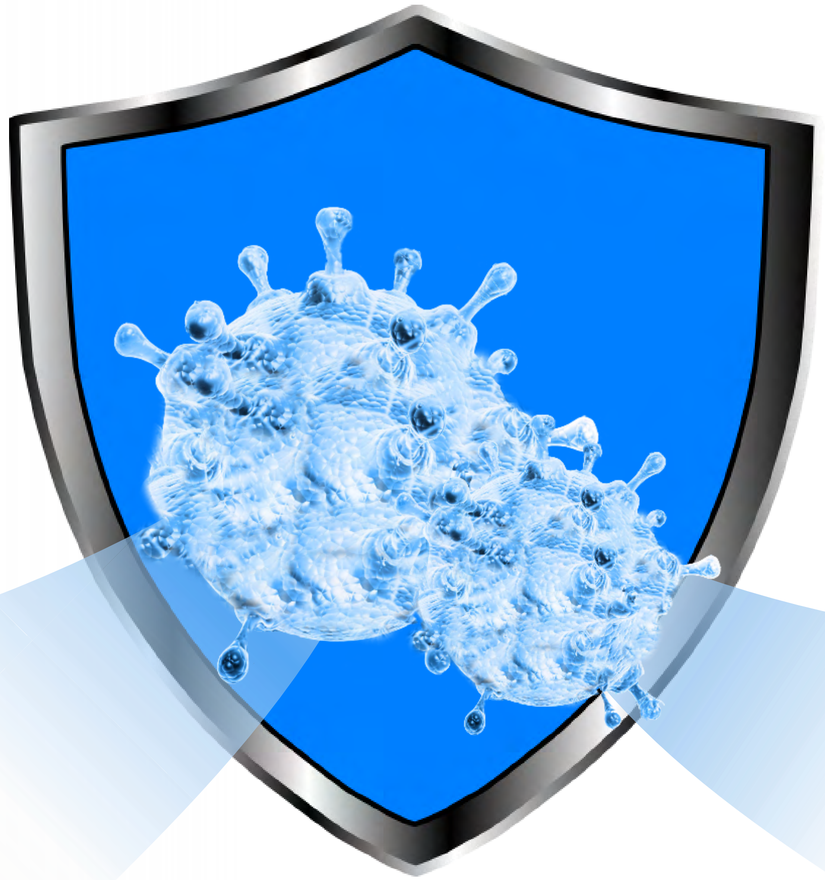
A Whole Year's Renewable Protection

BioSweep® Surface Defense® Treatment offers unparalleled broad-spectrum antimicrobial protection for all surfaces against harmful viruses and bacteria.

The BioSweep® Surface Defense® Treatment antimicrobial barrier can be certified for up to one year when applied by a certified and approved BioSweep® service provider. Thereafter, applications can be made regularly to ensure continued protection.



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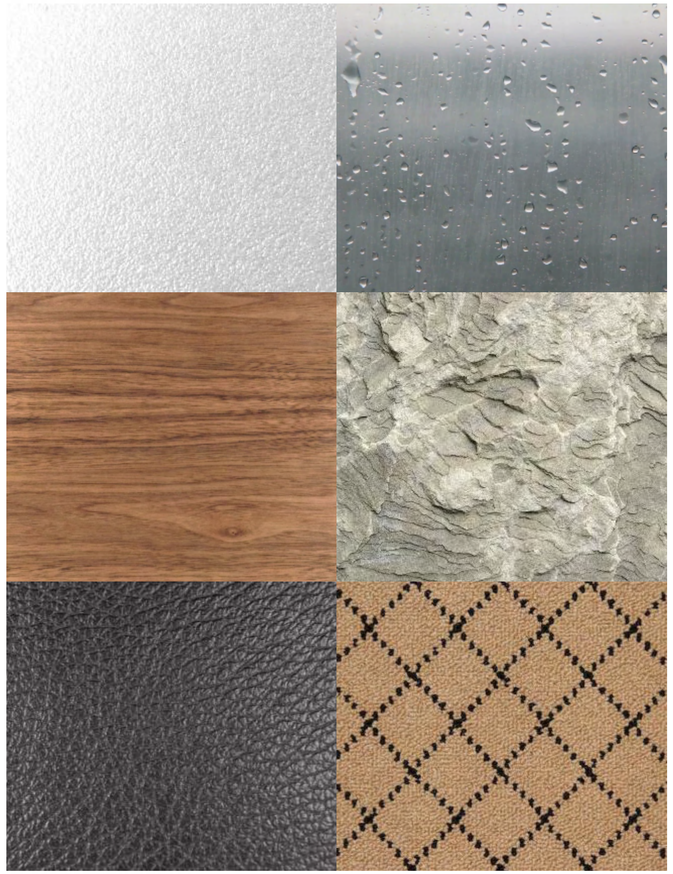
Protects Against Stains, Odours And Harmful Micro-organisms

BioSweep® Surface Defense® Treatment provides durable, long-lasting 24-7 surface protection that inhibits the growth of microbes that can cause stains, odours or product deterioration. Moreover, it destroys or prevents the growth of a range of micro-organisms that can affect human health.

Safe On Virtually All Surfaces

BioSweep® Surface Defense® Treatment is non-toxic, non-leaching and safe for use on all surfaces, including:

- Plastic and fibreglass
- Metal and glass
- Wood and natural materials
- Stone, ceramics and composites
- Carpets and underlay
- Natural and synthetic fabric (woven and non-woven)
- Linens and leather
- Upholstery



User-Friendly Product Features

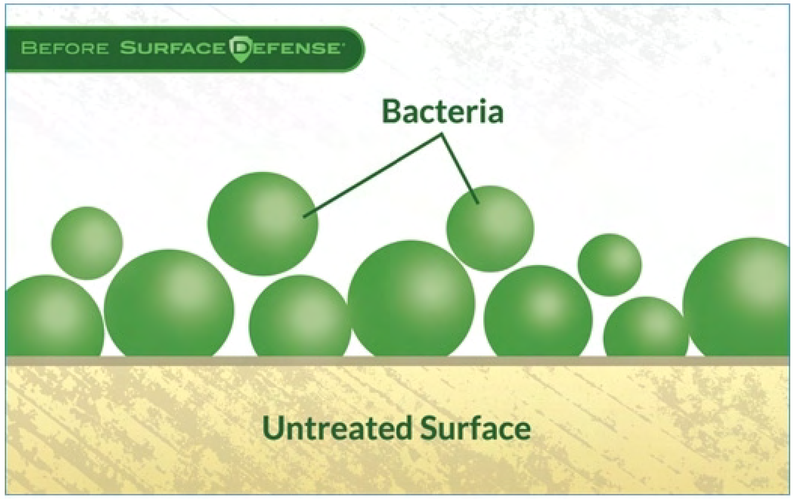
BioSweep® Surface Defense® Treatment is user-friendly and safe:

- Resistant to all organic solvents
- Resistant to strong acids and bases
- Does not leach in water, salt or sweat
- Thermally stable to 257°F / 125°C
- Colourless and odourless

Almost Limitless Applications

BioSweep® Surface Defense® Treatment can be applied to all of the following, plus it has many further applications:

- Lavatories and bathrooms, counter-tops, cabinets and fixtures
- Flooring, carpets and furniture
- Mattresses and bedding, curtains and linen
- Locker rooms and training equipment, athletic gear and apparel, wrestling and gym mats
- Vehicle interiors



Before Surface Defense™

After Surface Defense™

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Methicillian Resistant Staphylococcus aureus (MRSA)

	Initial Concentration	Final Concentration	Percent Reduction
Untreated Sample	2.52×10^5 /ml	1.6×10^5 /ml	0%
Treated Sample	1.52×10^5 /ml	$<1.0 \times 10^1$/ml	>99.99%

(Test Method: ASTM E2149-01)

Escherichia coli (E.coli)

	Initial Concentration	Final Concentration	Test Results (cfu/ml)
Untreated Sample	100,000,000 cfu/ml ($1x10^8$)	1000 cfu/ml ($1x10^3$)	2270
Treated Sample	100,000,000 cfu/ml ($1x10^8$)	1000 cfu/ml ($1x10^3$)	<1

(Test Method: ASTM-D 4783-98a USP 51 & 61 Guidelines)

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Other services

Provided by BioSweep

Mould removal

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Air Sampling and Organic

Air sampling with the results showed as the document opposite, to identify the following:

- ***Overall mould/fungal spore count***
- ***Skin cells***
- ***Other organic material***
- ***Inorganic particles***
- ***Pollen***
- ***Plant fibres***
- ***Textile fibres***

The spore counts are useful in identifying air quality and can Be used for clearance as the data can be compared to EU Guidelines and control samples.

The other aspects of the sample help identify the general air Quality in an environment.

University of Hertfordshire UH

BIOSWEEP/15/2154
Issue no.1

University of Hertfordshire
Hatfield Herts
AL10 9AB

Biodet
Laboratory 01707 284522
Email Biodet@herts.ac.uk

Roark McMaster
Biosweep UK Ltd
Unit 6C
The Wren Centre
Westbourne Rd, Emsworth
PO107SU

MICROSCOPIC EXAMINATION REPORT

Ref: **BIOSWEEP/15/2154**
Date: 11th November 2015
Log: 2154

The following Air-O-Cell® cartridges were received on 03-Nov-2015

The cartridges were opened and the slides examined under light microscopy at X100, X250 and X400 magnification as outlined in ASTM "Standard Test Method for Categorization and Quantification of Airborne Fungal Structures in an Inertial Impaction Sample by Optical Microscopy"

In addition to the number of fungal spores & hyphae, the number of various other airborne particles was determined. Results are expressed as N° per m³. *(Assuming that in each case, the Biopump® was used at 15 litres per minute for a period of 5 minutes per sample (1)).*

Site Ref : [redacted] **Sampled 29-Oct-2015**

	S1 : Centre of Lounge (Post – BS900 treatment)	
Particle Type	per cartridge (75 litres)	**per cubic metre**
Fungal Spores	21	**280**
Skin Cells	646	**8600**
Other Organic particles**	527	**7000**
Inorganic particles	306	**4070**
Pollen	0	**0**
Fungal fragments	2	**27**
Textile (Artificial) Fibres	17	**227**
Carbonaceous particles	4	**53**
LOAD * :	**LIGHT / MODERATE**	

Comments:

The Load (*) of the samples is an observation of the total amount of particulate material entrapped in each capsule. The organic particles observed (**) had no defined shape or structure and probably represent degraded organic materials such as skin cells etc.

11th November 2015

I MOSS
TECHNICAL MANAGER

Page 1 of 1

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Air Sampling and Organic Microscopy

Sampling to identify the following:

- Viable mould spore count
- Yeasts
- Genus identification
- Bacteria count
- Bacteria count of specific types of bacteria, e.g. For sewage E. Coli, feacle coliforms, enterococci.

University of Hertfordshire UH

BIODET
(part of UH Ventures Ltd)
01707 284522
biodet@herts.ac.uk

REF : BIOS WEEP /16/1329
DATE 28 July 2016
LOG 1329
SITE : [redacted]
SAMPLED 14 July 2016

Table 2 : Swab Microbiology

			Viable Bacteria				Viable Yeasts	Viable Moulds				
Lab Sample Number	Label	Physical appearance (LOAD)	**Total Bacteria**	Faecal Coliforms	*E.coli*	Faecal Enterococci	**Total Yeast** (*Saccharomyces*)	**Total Fungi**	*Penicillium*	*Cladosporium*	*Mucor*	*Alternaria*	**RISK FACTOR ♦**
			cfu per sq dm	cfu per sq dm			cfu per sq dm	cfu per sq dm	cfu per sq dm				
1	SU-LG-A-V	Light	120	0	0	0	160	1,040	1,040	-	-	-	Extreme Anomaly
2	SU-LG-A-H	Heavy	1,900,000	0	0	0	12,000	250,000	250,000	120	-	-	Extreme Anomaly
3	SU-LG-C-V	Light	2,720	0	0	0	1,160	7,600	1,520	6,080	-	-	Extreme Anomaly
4	SU-LG-C-H	Heavy	5,320,000	0	0	0	72,000	100,000	98,000	1,600	-	-	Extreme Anomaly
5	1-G-1-VS	Light	13,360	0	0	0	11,000	1,400	1,400	-	-	-	Extreme Anomaly
6	1-G-1-HS	Light	520	0	0	0	200	640	560	80	-	-	Extreme Anomaly
7	1-G-2-VS	Light	400	0	0	0	40	80	80	-	-	-	Strong
8	1-G-2-HS	Light	760	0	0	0	2,560	880	800	80	-	-	Extreme Anomaly
9	1-LG-A-V	Heavy	<40	0	0	0	<40	5,040	4,540	500	-	-	Extreme Anomaly
10	1-LG-A-H	Heavy	176,000	0	0	0	<40	150,000	140,000	8,000	180	-	Extreme Anomaly
11	1-LG-C-V	Light	4,680	0	0	0	<40	5,440	2,700	2,700	-	-	Extreme Anomaly
12	1-LG-C-H	Light	7,600,000	0	0	0	<40	380,000	370,000	8,000	32,000	-	Extreme Anomaly
13	2-G-1-VS	Light	240	0	0	0	<40	560	560	-	-	-	Extreme Anomaly
14	2-G-1-HS	Light	360	0	0	0	240	11,690	11,000	400	80	-	Extreme Anomaly
15	2-G-2-VS	Light	80	0	0	0	80	200	200	-	-	-	Extreme Anomaly
16	2-G-2-HS	Light	43,840	0	0	0	320,000	400	320	80	-	-	Extreme Anomaly
17	2-LG-A-V	Heavy	280	0	0	0	<40	3,280	3,200	80	-	-	Extreme Anomaly
18	2-LG-A-H	Heavy	2,040	0	0	0	<40	460,000	48,000	410,000	-	-	Extreme Anomaly
19	2-LG-C-V	Heavy	720	0	0	0	<40	3,640	3,640	-	-	-	Extreme Anomaly
20	2-LG-C-H	Light	760	0	0	0	2,240	3,400	2,250	1,150	-	-	Extreme Anomaly
1382-3	3-G-A-V	Light	280	0	0	0	3,320	80	40	40	-	-	Strong
1382-4	3-G-A-H	Light	3,080	0	0	0	<40	320	-	320	-	-	Extreme Anomaly
1382-5	3-G-B-V	Light	5,520	0	0	0	<40	80	-	80	-	-	Strong
1382-6	3-G-B-H	Light	80	0	0	0	3,200	440	160	280	-	-	Extreme Anomaly
21	5-G-1-VS	Light	200	0	0	0	240	480	400	-	80	-	Extreme Anomaly
22	5-G-1-HS	Light	60,000	0	0	0	45,000	5,560	5,560	-	-	-	Extreme Anomaly
23	5-G-2-VS	Light	1,400	0	0	0	1,920	1,320	1,320	-	-	-	Extreme Anomaly
24	5-G-2-HS	Light	1,480	0	0	0	1,160	3,080	3,080	-	-	-	Extreme Anomaly
25	5-LG-A-V	Heavy	6,000	0	0	0	480	28,000	28,000	80	-	-	Extreme Anomaly
26	5-LG-A-H	Heavy	2,480	0	0	0	<40	180,000	180,000	1,200	-	1,200	Extreme Anomaly
27	5-LG-C-V	Light	1,900,000	0	0	0	<40	1,400,000	1,400,000	-	-	-	Extreme Anomaly
28	5-LG-C-H	Heavy	190,000	0	0	0	750,000	330,000	300,000	30,000	-	-	Extreme Anomaly
29	6-G-1-VS	Light	600	0	0	0	80	200	200	-	-	-	Extreme Anomaly

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EH40 Contaminates air and surface sampling

Sampling for any specific chemicals or Contaminants that may be of concern, i.e.

Specific chemical spill

Air sample test to advise the level of Contaminates compared to EH40 standards

With certificate of air purity (Opposite). Can Be pertinent to understand air quality after a fire.

CASE CHEMICALS

Certificate No: BSW00120

Case Chemical Consultancy Ltd
Unit 5 Lea Green Farm
Christchurch Road
Downton
Lymington
Hampshire, SO41 0LA
Tel: 01590 641031
Email: info@casechemicals.co.uk

Test Certificate
Breathing Air Purity

Client Name: Biosweep
Location: MB12

Sample ID No.: 2
Client Ref: Post Cowes

Standard: EH40/2005 – 2nd Edition
Date Taken: 05/02/16
Date Tested: 09/02/16
Technician: Sam Wray

The following analysis of the air from the source detailed, taken by the individual indicated, relates only to the sample tested.

Analyte	Method	Result (PPM)	Long-term Exposure Limit (8hr TWA – PPM)	Short-term Expose Limit (15 Mins TWA - PPM)
Carbon Dioxide CO2	FTIR	491.84	5000	15000
Carbon Monoxide CO	FTIR	0.32	30	200
Nitrous oxide	FTIR	0.3	100	-
Sulphur Dioxide	FTIR	<0.1	-	-
Ammonia	FTIR	<0.1	25	35
Hydrogen Chloride	FTIR	<0.1	1	5
Hydrogen Fluoride	FTIR	<0.1	1.8	3
Methane	FTIR	2.0	-	-
Ethane	FTIR	<0.1	20	40
Ethylene	FTIR	0.5	5	-
Propane	FTIR	<0.1	150	-
Hexane	FTIR	0.2	20	-
Formaldehyde	FTIR	0.1	2	2
Hydrogen cyanide	FTIR	<0.1	-	10
Freon 22	FTIR	<0.1	1000	0
Tetrahydrofuran	FTIR	<0.1	50	100
Benzene	FTIR	0.5	1	-
Methanol	FTIR	0.5	200	250
Freon 134a	FTIR	0.1	1000	-
Freon 12	FTIR	<0.1	-	-
Acetylene	FTIR	0.1	-	-
Trichloroethylene	FTIR	<0.1	100	150
Hydrocarbons	FTIR	2.49	-	-

COSHH Statement: This sample has been analysed in accordance with the legal requirements of the COSHH regulations for contaminants as listed in EH40.

Comments: **All results within parameters**

Authorised by: **Sam Wray**
B.Sc. (Hons)

This test was conducted using the specified method and may contain undetected items which are beyond the scope of this analysis.

(S King)

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Thank-you for choosing BioSweep.
We are honoured to be of service.

www.biosweep.co.uk

01243 697 359