

# What is a Healthy Product?

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***STBA/SPAB conference 13<sup>th</sup> June, 2017***



# What is a Healthy Product?

- “ Simple question – complex, multi-faceted, non-binary answer
- “ Long personal journey for me...
- “ 1999 natural finishes specialist at Construction Resources – all sorts of complaints including hospitalisation
- “ Good for you; Good for the Planet

# Introducing ASBP

- “ Not for profit, membership organisation
- “ SDF programme, launched in 2012, now stand alone
- “ Product sustainability through the life-cycle = low impact, healthy, durable, reusable, disposal
- “ Original research on carbon sequestration.
- “ Applied research on the Circular Economy
- “ Workstreams – NFIG, RUBN
- “ Health and Wellbeing – 3 x ASBP Briefing Papers

# Introducing Indoor Air Quality

- “ The relation between health and iaq is described as a paradigm
- “ Paucity of data – especially in the UK
- “ 900 chemicals harmful to health – VOCs, N02, NOx, PM 2.5, 5 and 10
- “ Molds, pollen, biological contaminants
- “ Risks to human health range from discomfort to cancer



Most Vulnerable? young and the elderly; chemically sensitive.

Karen Johnson had an allergic reaction from paint sold by B&Q that contains the chemical Methylisothiazolinone



- “ Allergy UK receive 800 calls a month to their help desk
- “ Informal reporting; one call a week about new carpets and health effects
- “ I am co-authoring a paper with Allergy UK

# What is a healthy product?

- “ At the very least, it should **Minimise the Risks to People**
- “ Occupants and folk all through the supply chain
- “ 'Focus on the user and all else will follow' – Google Mantra
- “ Precautionary Principle – if in doubt, don't
- “ Effective Source Control; reducing the risk of exposure to VOCs
- “ Hand in hand with effective ventilation
- “ Good detailing and quality installation is crucial



# Royal College of Physicians and UKIEG

- “ **Every Breath We Take:** Royal College of Physicians 2016
- “ **Better Homes, Better Air, Better Health:** April 2017
- “ UKIEG Report **Healthy Indoor Environments: Challenges for Policymakers** - Launch 21st June Portcullis House

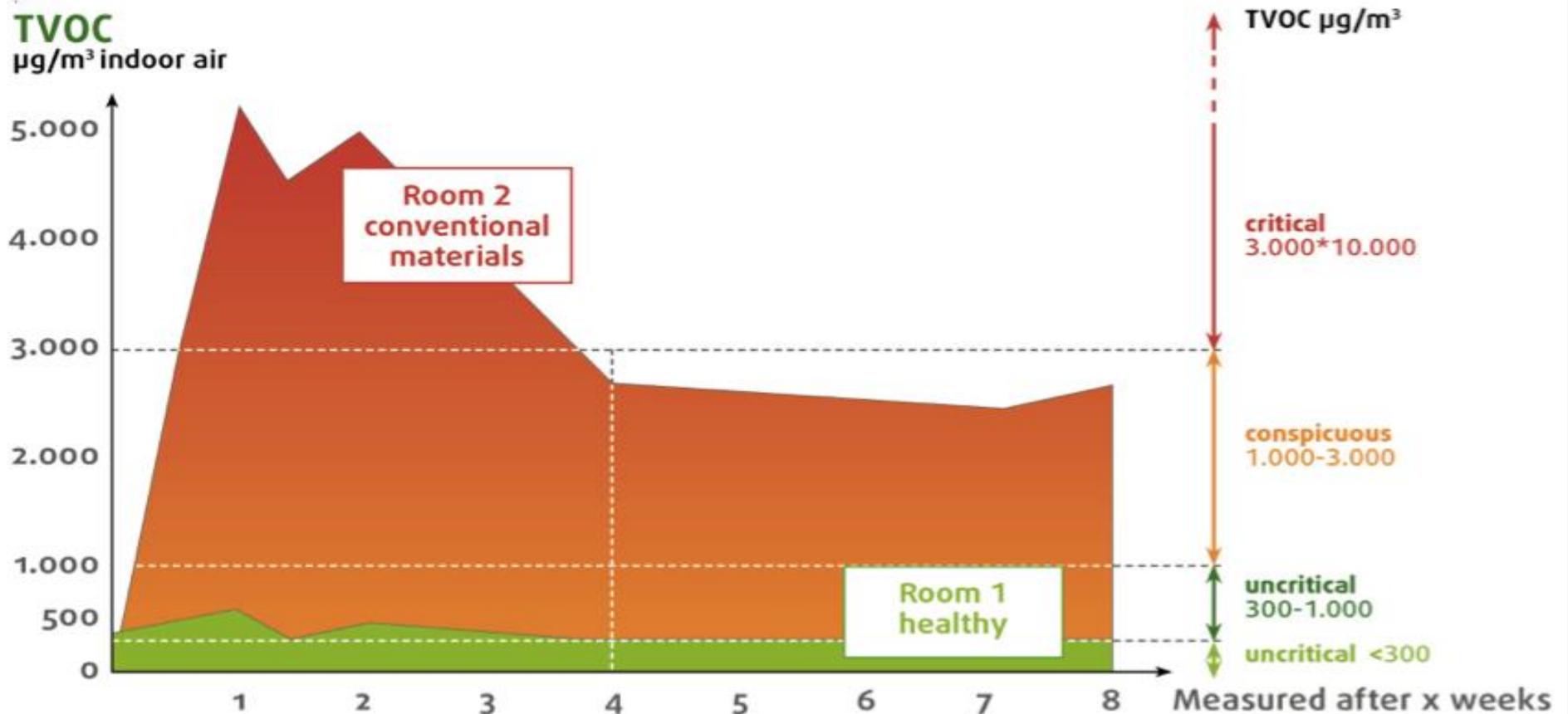


# VOCs, Products and Health

- “ VOCs are numerous, varied, and ubiquitous.
- “ They are contained within wood products - solid wood, engineered products (OSB, MDF, ply, etc.)
- “ Flooring products
- “ Coatings (paints, finishes, sealants, waxes)
- “ Adhesives, mastics,
- “ Cements, roofing materials, furniture,
- “ Insulation
- “ Cleaning products.

The cumulative effect of emissions from all the different sources should be taken into account, when considering IAQ.

# Sentinel Haus – 2 x classrooms



\* Quelle: Sentinel Haus Institut, Durchführung der Messung: eco-Institut

# What is a healthy product?

- “ Should offer functional performance benefits;
- “ Prevent overheating, VOC scavenging, moisture control, aiding cognitive abilities; boosting productivity,
- “ Plus wider benefits - low embodied carbon, sequestered carbon, social value.
- “ Do we fully understand the risks from chemicals in products? No
- “ Can we rely on REACH?
- “ Can the construction industry deal with complex chemistry???
- “ What guidance do we need? What tools exist?



# Can we rely on REACH?

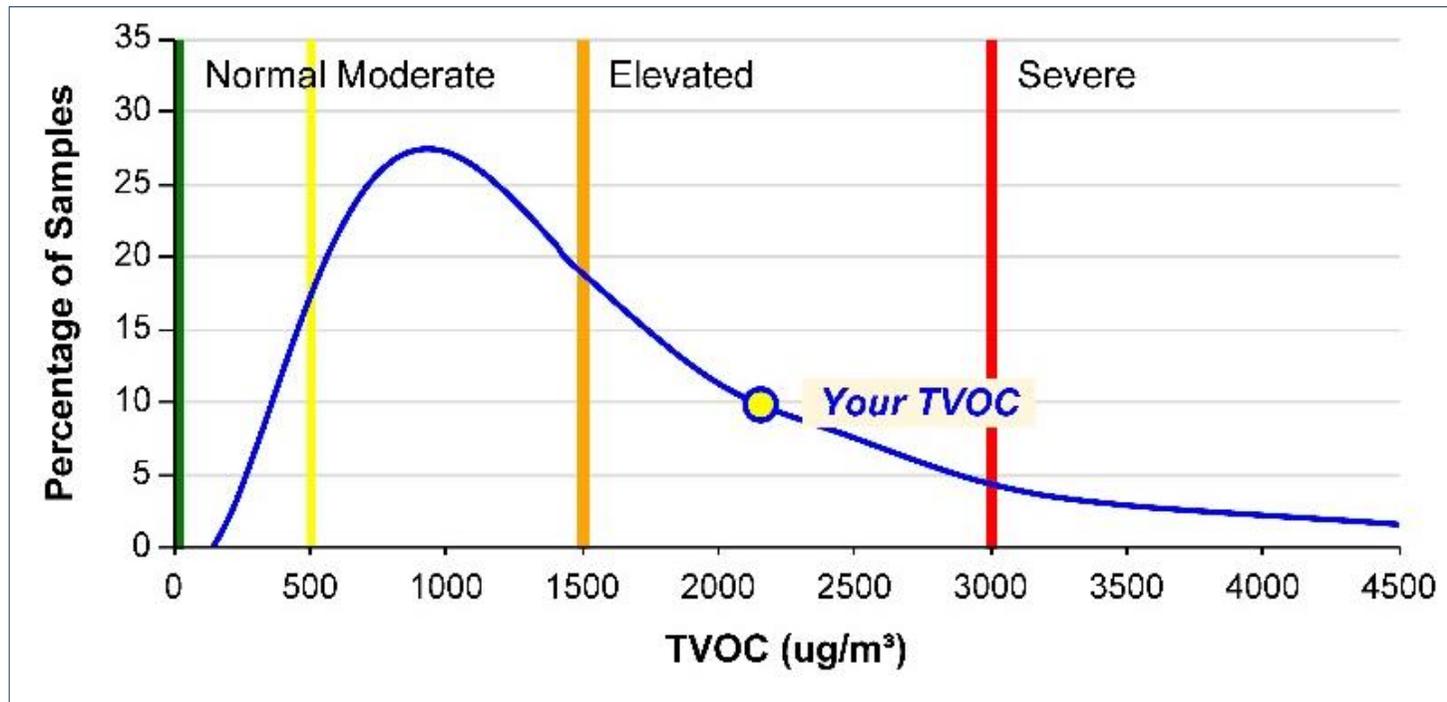
- “ 173 substances of very high concern on candidate list for authorisation
- “ Progress is slow
- “ Chemsec have developed the SIN List - substitute it now
- “ [www.chemsec.org](http://www.chemsec.org)



# Monitoring - My key takeaway

- “ The chemistry is highly complex
- “ Monitoring of iaq is cheap, simple and effective (£140 from Waverton Analytics)
- “ EFA Call to include monitoring in the Energy Performance of Buildings Directive
- “ UK Building Regs; Part F does contain guidance relating to VOCs post construction, pre-occupation; 300 µg/m<sup>3</sup>
- “ EPA challenge the toxilological justification

# 8,000 domestic iaq tests by Waverton Analytics



- Data collected from >8,000 samples
- Mean is 1,900  $\mu\text{g}/\text{m}^3$ , mode is approx. 1,000  $\mu\text{g}/\text{m}^3$



# Formaldehyde

- “ A school in the N/W monitored in 2016:
- “ Formaldehyde levels 10 X WHO guidelines, 12 months after occupation
- “ Provider admitted he knew very little about formaldehyde
- “ ASBP/BWF Industry Briefing Note on Formaldehyde published May 2017



# Reducing risks with natural fibre insulation

- “ Thermal comfort; Natural fibres contain chemically bound water – absorbing heat energy, helping to prevent summer overheating
- “ Breathability = the dry transport of moisture; absorbing and releasing moisture whilst remaining dry so regulating humidity
- “ Source control – low or no VOCs

# Is PVC a Healthy Product?

- “ Healthy Buildings Network 2015 report *What’s new and what’s not with PVC*
- “ Perkins+Will includes PVC on the Precautionary List
- “ 8.06 million tonnes of chlorine was used to manufacture PVC in Europe in 2015,
- “ Majority of UK chlorine made in Runcorn – site uses more energy than Liverpool
- “ EU derogation in place allowing for cadmium levels of 0.1% in rigid PVC products containing recovered PVC, which is due to be reviewed at the end of 2017.



# Tools



- “ ANSES; in France every product has an iaq rating
- “ Baubook, Austria – database and procurement tool. ASBP is looking for partners to create a UK Platform
- “ Natureplus ecolabel
- “ UK? – no central source of trusted information

# Next Steps

- “ ASBP Briefing note on breathability
- “ NICE guidelines on Indoor Air Pollution
- “ SDF Building Performance Network
- “ APPG Healthy Buildings
- “ ASBP Healthy Product guide in the autumn
- “ <http://woodfibreinsulation.co.uk/>.



# Enjoy the day

3 x Briefing notes: copies available today and from our website

1.Improving iaq - the benefits of natural fibre insulation

2.Healthy Buildings – the role of products

3.Formaldehyde

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