

# CUNDALL



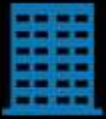
## The WELL Standard



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# Cundall



**21**  
OFFICES GLOBALLY



**750+**  
EMPLOYEES



PROJECTS DELIVERED IN  
**50+**  
COUNTRIES



**45+**  
NATIONALITIES



**1<sup>st</sup>** CONSULTANCY IN THE  
WORLD TO BE FORMALLY  
ENDORSED AS A  
**ONE PLANET COMPANY**



**35+**  
LANGUAGES



ESTABLISHED IN  
**1976**



**400+**  
AWARDS WON



# Cundall services

**CUNDALL**



Building services engineering



Civil engineering



Structural engineering



Sustainable design



Acoustic engineering



Building Information Modelling (BIM)



Building automation



CDM consultancy



Planning



Fire engineering



Geotechnical



Health and wellbeing



IT and audio visual



Lighting design



Planning



Survey solutions



Transportation



Vertical transportation

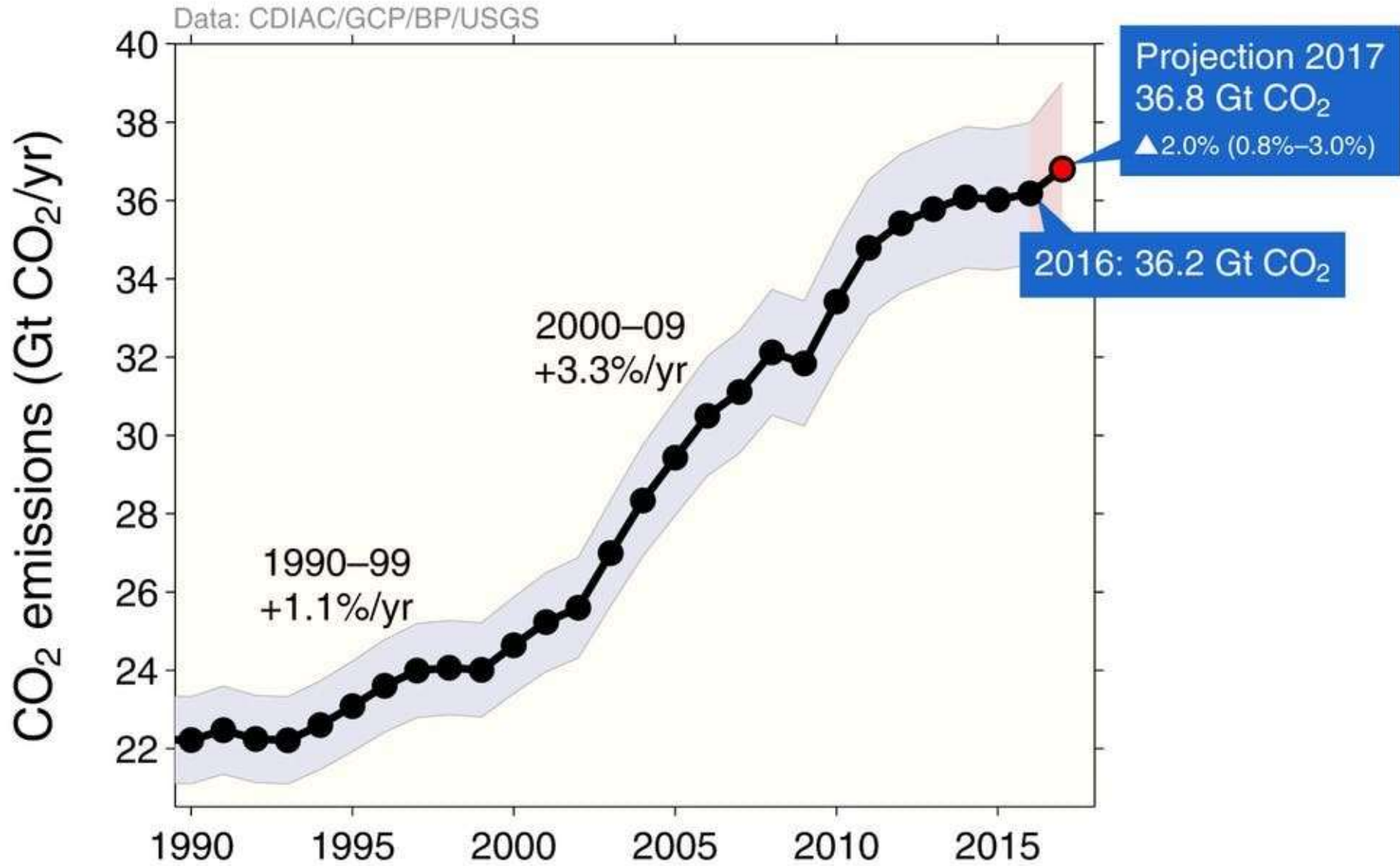
To find out more about our services visit:  
[www.cundall.com](http://www.cundall.com)

## We practise what we preach

- World's first consultancy to be formally endorsed as a One Planet Company by sustainability charity BioRegional
- Applied the 10 One Planet Principles to guide our commitment, actions and services
- Cundall Sustainability Roadmap available on [www.cundall.com](http://www.cundall.com)

<b>Health and happiness</b>	Encouraging active, sociable, meaningful lives to promote good health and well-being								
<b>Equity and local economy</b>	Creating bioregional economies that support equity and diverse local employment and international fair trade								
<b>Culture and community</b>	Respecting and reviving local identity, wisdom and culture; encouraging the involvement of people in shaping their community and creating a new culture of sustainability								
<b>Land use and wildlife</b>	Protecting and restoring biodiversity and creating new natural habitats through good land use and integration into the built environment								
<b>Sustainable water</b>	Using water efficiently in buildings, farming and manufacturing. Designing to avoid local issues such as flooding, drought and water course pollution								
<b>Local and sustainable food</b>	Supporting sustainable and humane farming, promoting access to healthy, low impact, local, seasonal and organic diets and reducing food waste								
<b>Sustainable materials</b>	Using sustainable and healthy products, such as those with low embodied energy, sourced locally, made from renewable or waste resources								
<b>Sustainable transport</b>	Reducing the need to travel, and encouraging low and zero carbon modes of transport to reduce emissions								
<b>Zero waste</b>	Reducing waste, reusing where possible, and ultimately sending zero waste to landfill								
<b>Zero carbon</b>	Making buildings energy efficient and delivering all energy with renewable technologies								





# **Health & Wellbeing 2<sup>nd</sup> Wave of Sustainability**



Healthy  
Buildings

Healthy  
Planet



# 90%

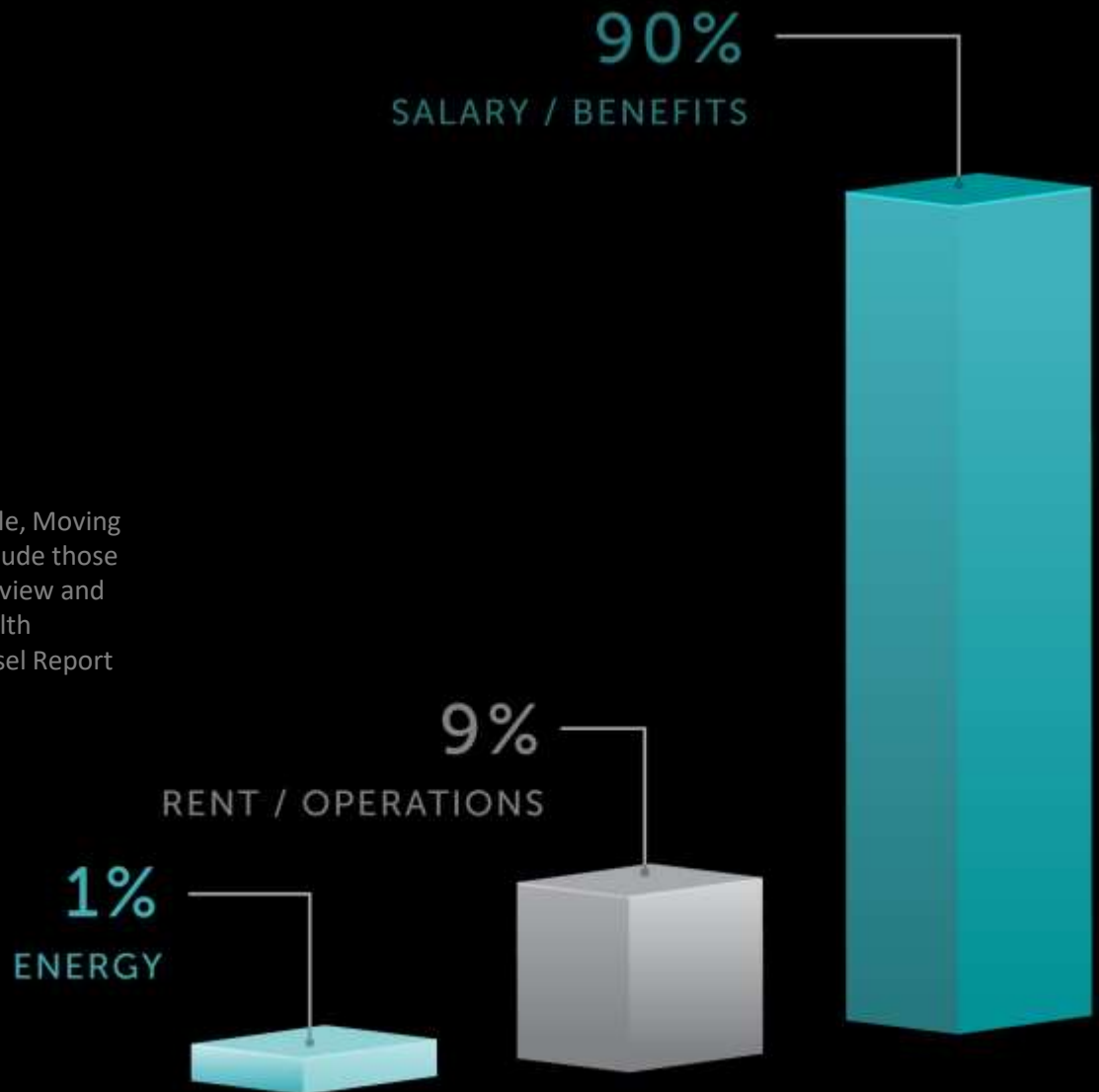
of our lives are spent indoors and it has a lasting impact on our *health*..



Biggest cost is pe

# INVEST IN R FOR RETUR INVESTMENT

Source: Knoll Workplace Research "What's Good for People, Moving from Wellnes to Well Being", Kate Lister 2004. Studies include those conducted by organizations including Harvard Business Review and World Economic Forum and the American Journeal of Health Promotion. Image courtesy of World Green Building Counsel Report "Health, Wellbeing & Productivity in Offices"



# Trends towards healthy buildings...



## Health, Wellbeing & Productivity in Offices

The next chapter for green building

Sponsors



**BETTER PLACES FOR PEOPLE** PUT WELLBEING AT THE HEART OF YOUR BUILDING



## HEALTH, WELLBEING & PRODUCTIVITY IN RETAIL: THE IMPACT OF GREEN BUILDINGS ON PEOPLE AND PROFIT

FEBRUARY 2016

PROJECT LED BY:



CAMPAIGN SPONSORS:



UK PROJECT SPONSORED BY:



## HEALTH AND WELLBEING IN HOMES

JULY 2016



GLOBAL CAMPAIGN SPONSORS:





8%

Improvement in performance.

35%

Reduction in absenteeism.



4%

Reduction in performance at cooler temperatures.

6%

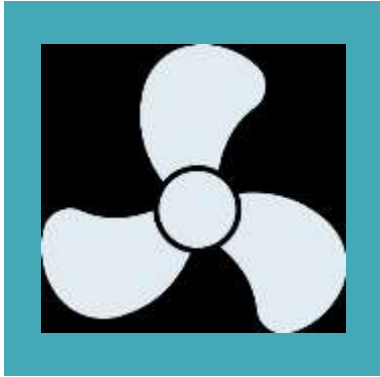
Reduction in performance at warmer temperatures.



46%

More sleep per night on average for office workers with windows.





12 l/s/person to 25 l/s

8% improvement for everyone?

800% more fan  
energy or more  
plant space  
More cooling &  
heating



Air



Water



Nourishment



Light



Fitness



Comfort



Mind



## Digestive

Stress  
Diet  
Allergies  
Microbes  
Pollutants

## Nervous

Stress  
Diet  
Exercise  
Sleep  
Toxins

## Skeletal

Diet  
Exercise  
Equipment  
Activity  
Nourishment

## Reproductive

Diet  
Exercise  
Ergonomic health  
Toxins  
Mind

## Endocrine

Nourishment  
Comfort  
Pollutants  
Stress  
VOCs and Toxins



## Cardiovascular

Stress  
Diet  
Lifestyle  
Smoke  
VOCs

## Immune

Stress  
Diet  
Toxins  
Sleep  
Allergens

## Respiratory

VOCs  
Particulates  
Microbes  
Fitness

## Urinary

Toxins  
Diet  
High Blood Pressure  
Water Quality  
Comfort

## Integumentary

Toxins  
Environment  
Diet  
Microbes

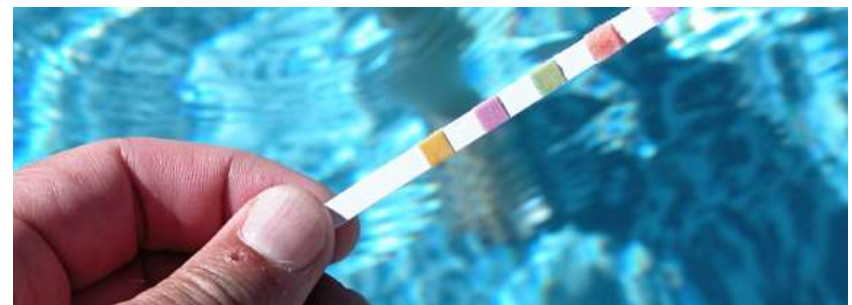
## Muscular

Diet  
Exercise  
Equipment  
Comfort



# Performance Based Standard

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# One Carter Lane - Case Study

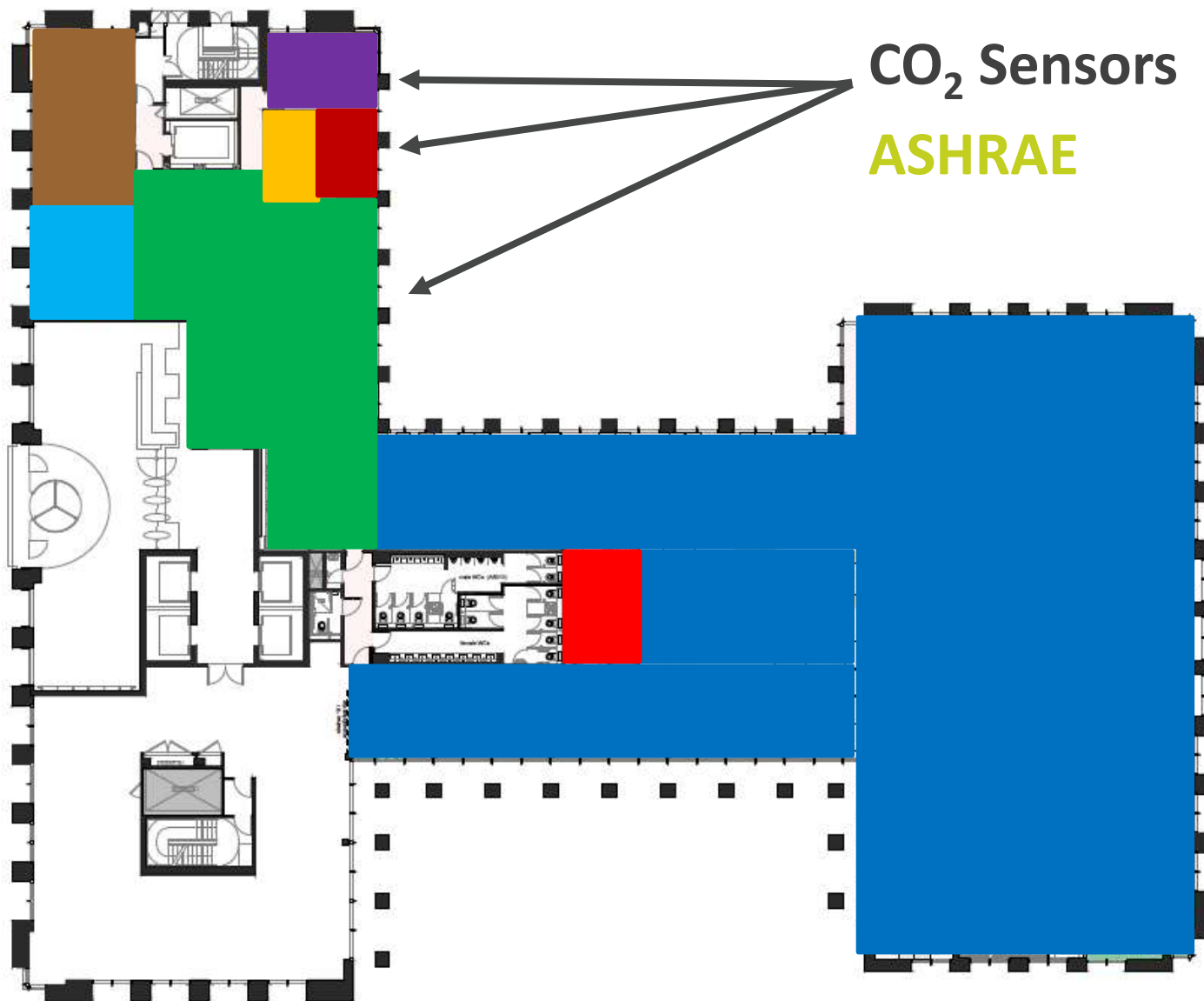
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**breeam**

**Ska**  
rating

**WELL**  
2015







**BOLON**



*“...I understand it now, if I can eat it, I can install it...”*

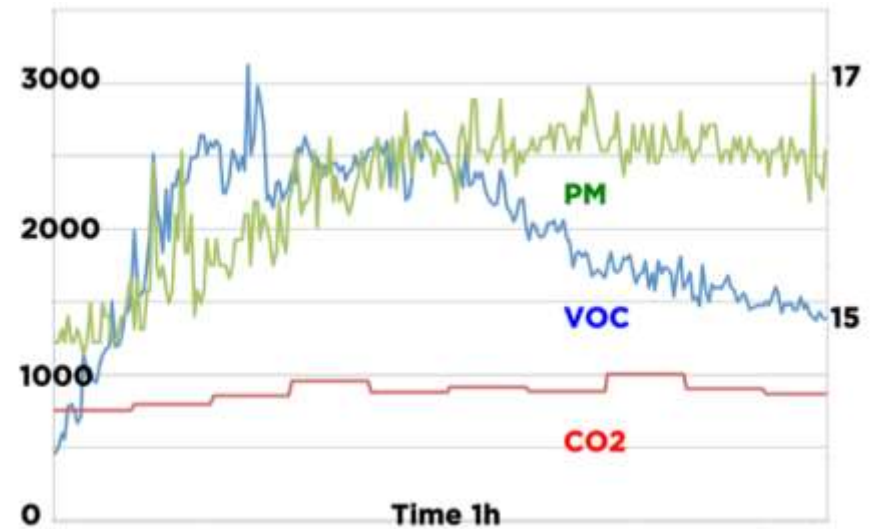
*“...it doesn't have that new car smell...”*

Element	WELL Standard	Cundall
Carbon Monoxide	<9ppm	0.8ppm
Formaldehyde	<27ppb	1.28 ppb
Ozone	<51ppb	5.5 ppb
Nitrogen Dioxide	<53ppb	21ppb
PM2.5	<15 $\mu\text{g}/\text{m}^3$	8 $\mu\text{g}/\text{m}^3$
PM10	<50 $\mu\text{g}/\text{m}^3$	0 $\mu\text{g}/\text{m}^3$
Total VOCs	<500 $\mu\text{g}/\text{m}^3$	<b>1323.2<math>\mu\text{g}/\text{m}^3</math></b>

*“...I can smell the difference...”*

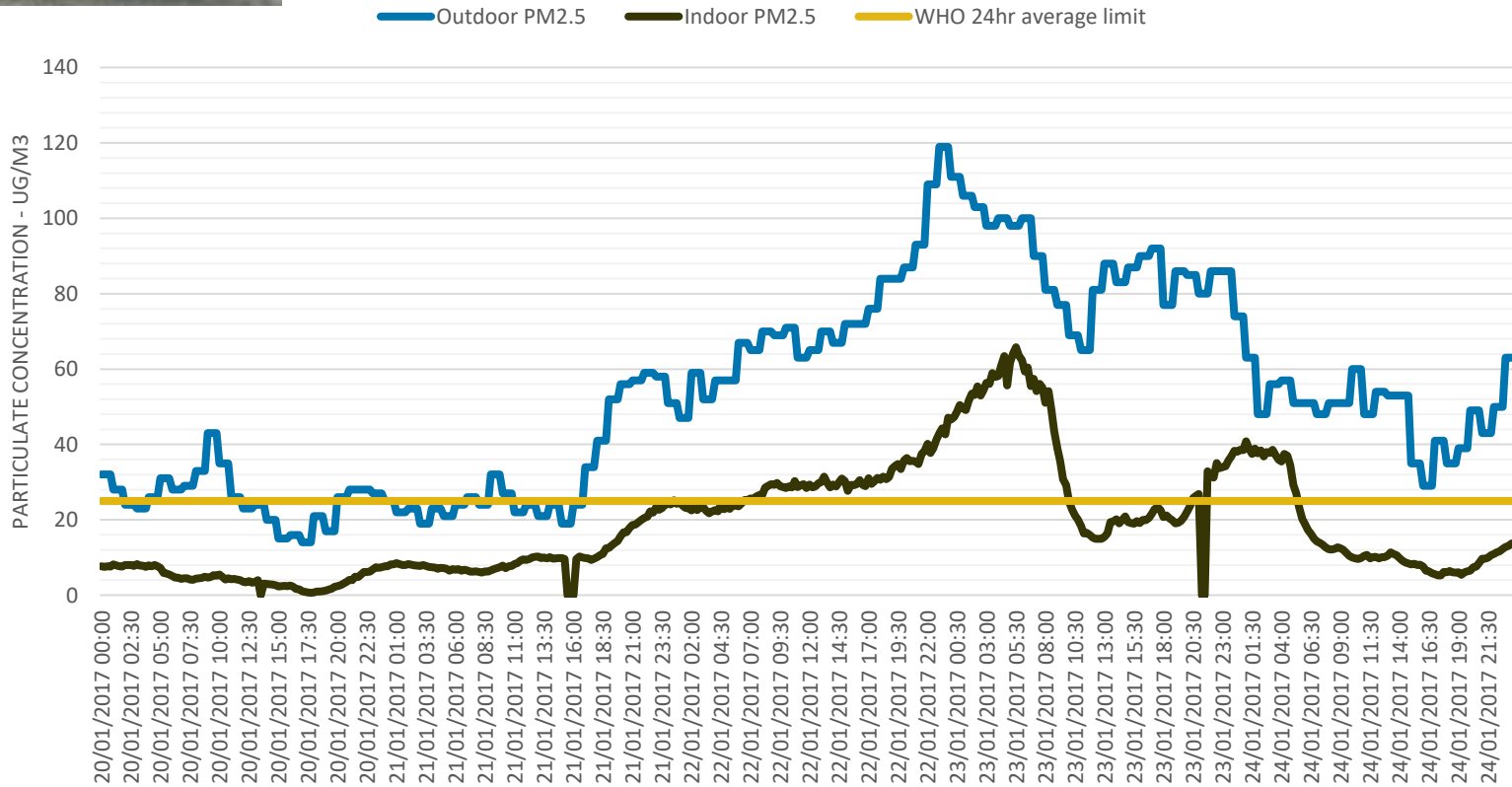
# Air - Monitoring

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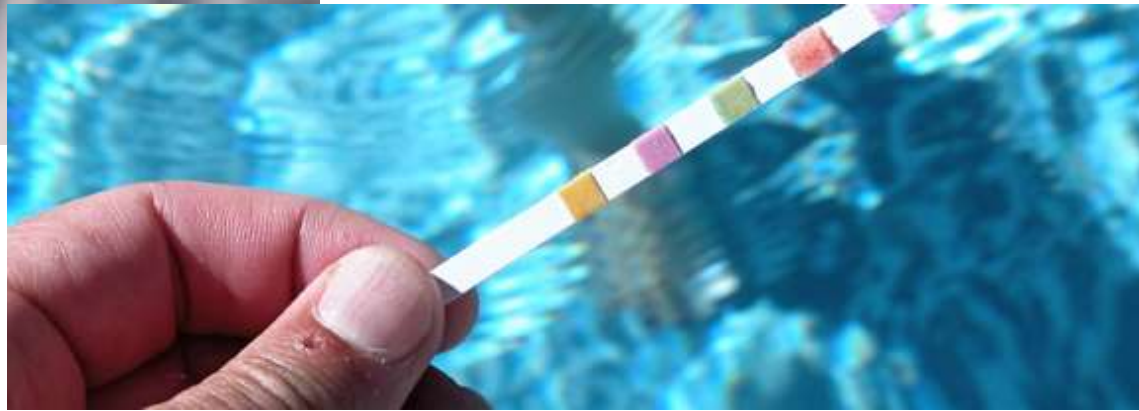




## PM2.5 comparison

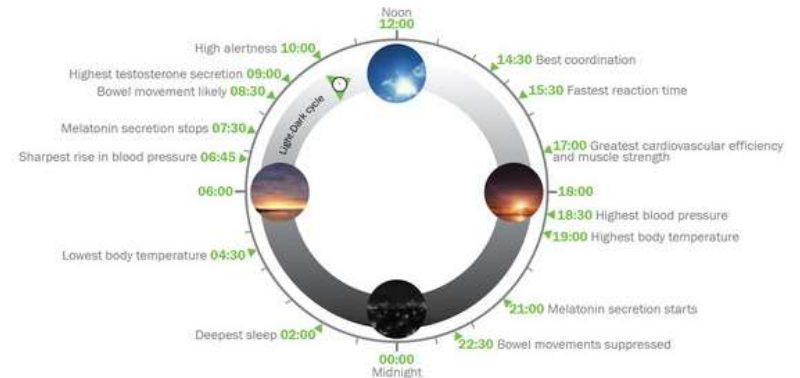
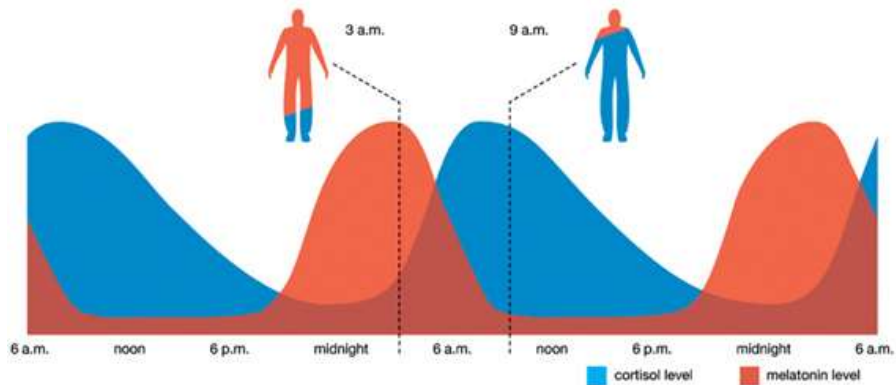








Influence of daylight on the human body

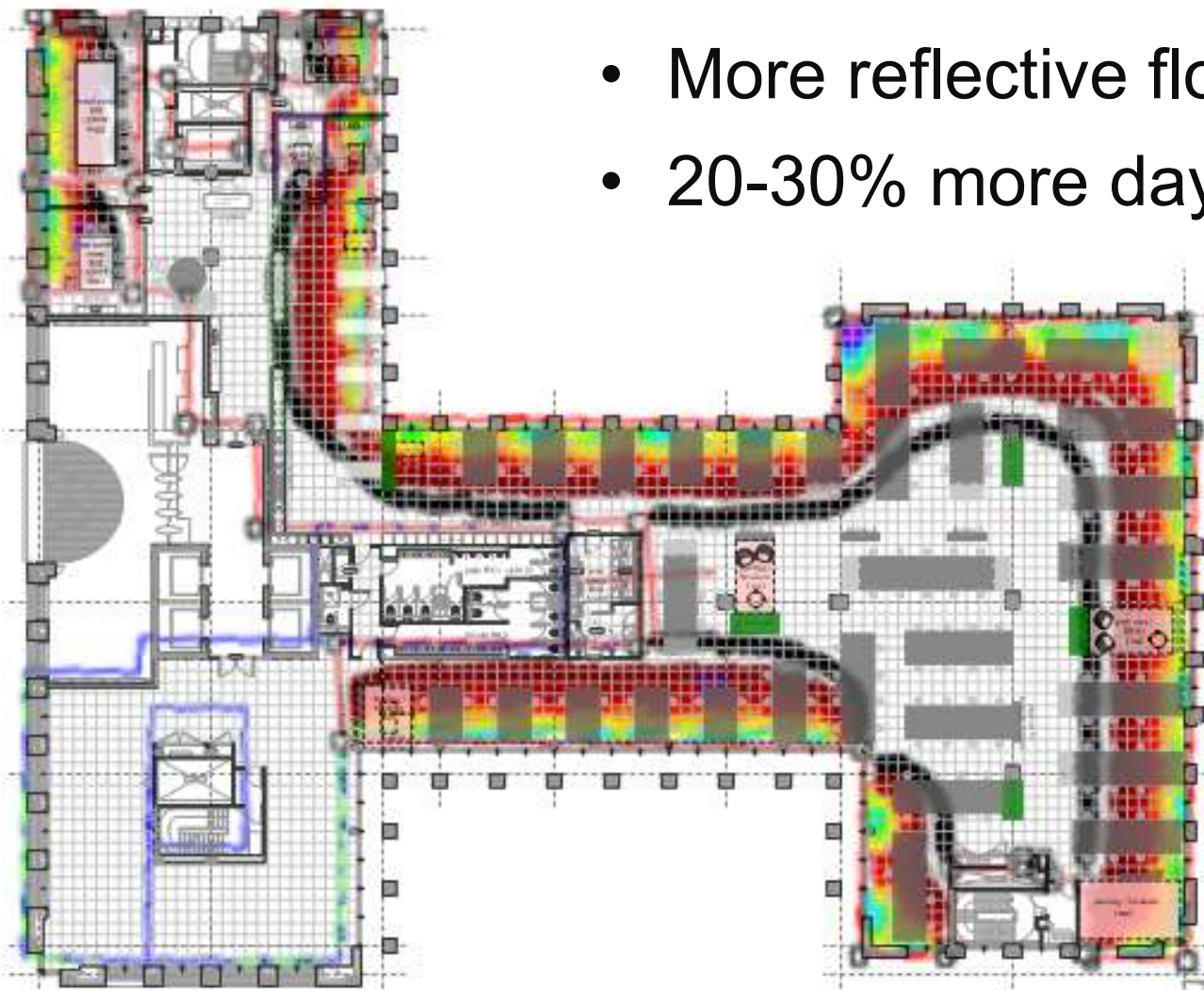


Light

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- More reflective floor
- 20-30% more daylight





Seating for 30% of staff

# Nourishment

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**Cycle to Work**

**Health & Wellbeing**



Welcome to  
**Shape Your Rewards**

Our Flexible Benefits Scheme



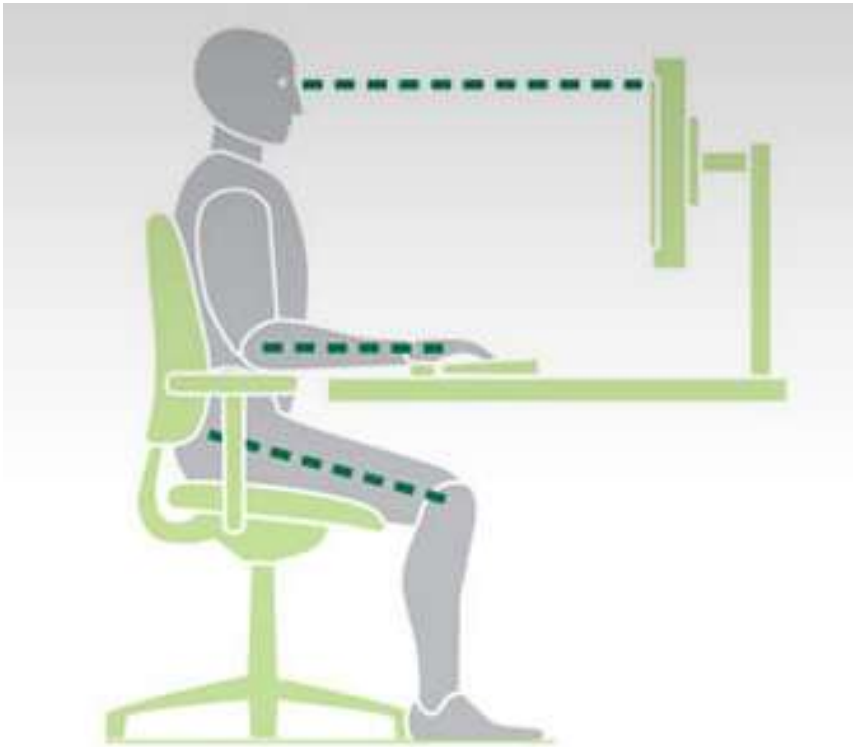




# Comfort

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*Sitting Kills, Moving Heals by Joan Vernikos*



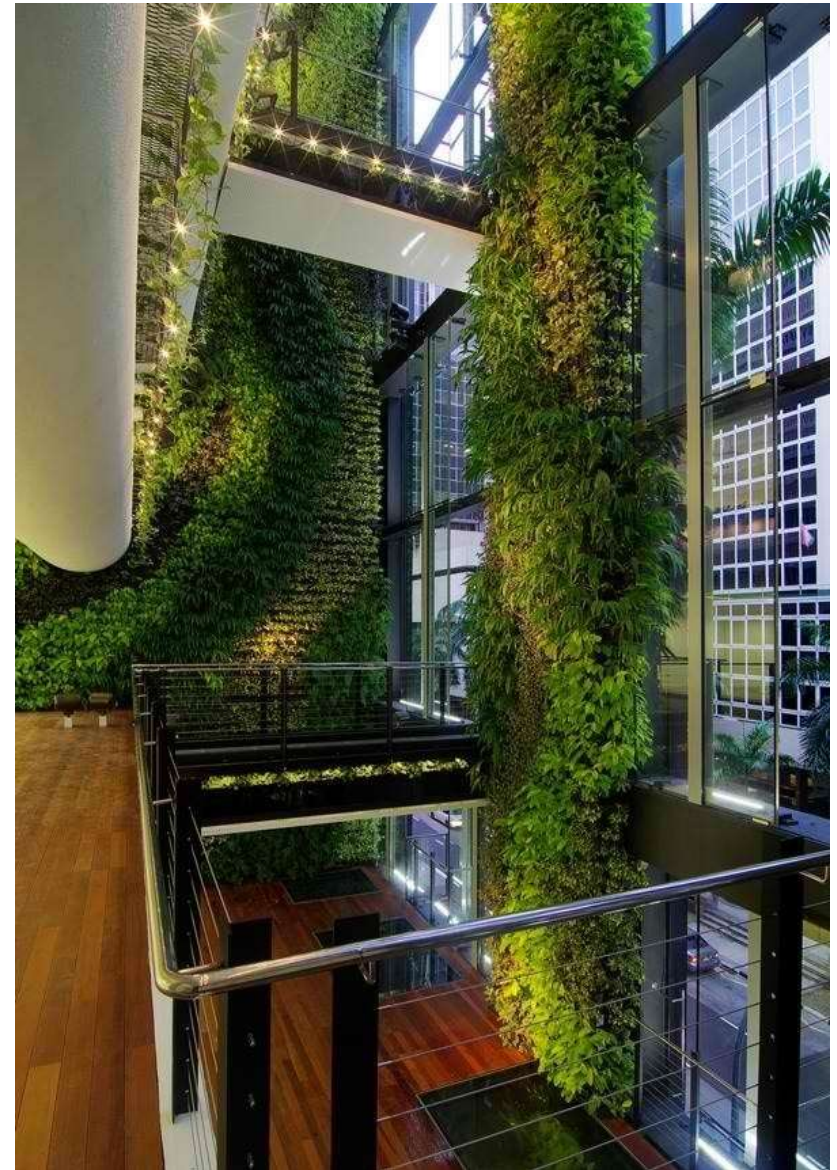
Comfort

CUNDALL



# Mind - Biophilic Design

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**What is the impact on productivity?**

Night Time Oxygen



Toxin Removal



Day Time Oxygen



# Mind: Biophilia

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**Total Cost £850,000**

**1,500m<sup>2</sup> fit-out**

- Joinery materials **£3,000**
- Egger board to joinery units **£1,500**
- Compliant ply to vinyl floor **£60**
- Bolon floor in lieu of carpet **£5,200**
- Compliant paint coats **£7,000**
- Variable air volume to meeting rooms **£5,000**
- Air Water / Testing **£2,000**
- Water Filter **£7,000**

**Total £30,760**

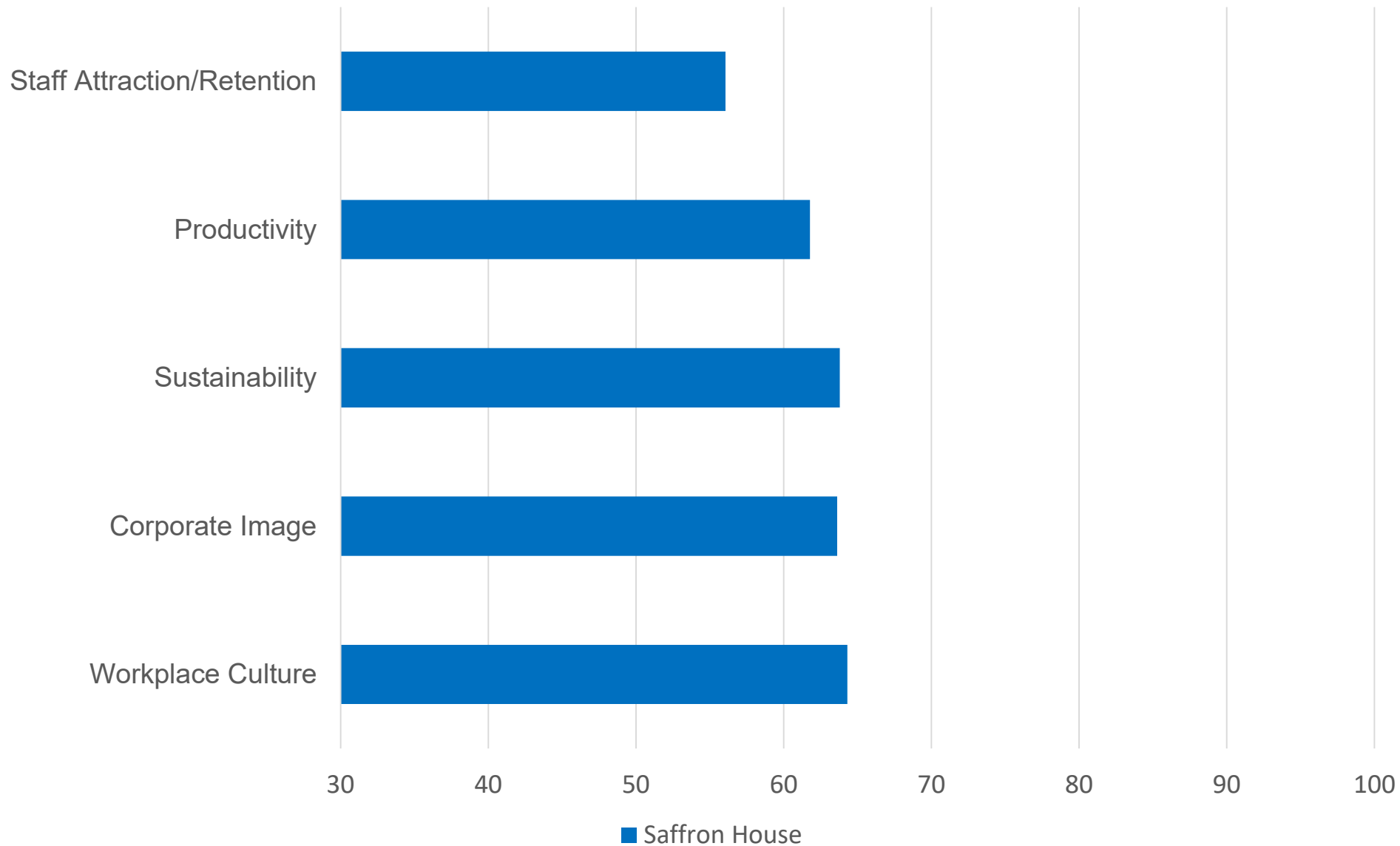
**3.6% uplift or £200 per head**

**WELL Fees - £6,000**

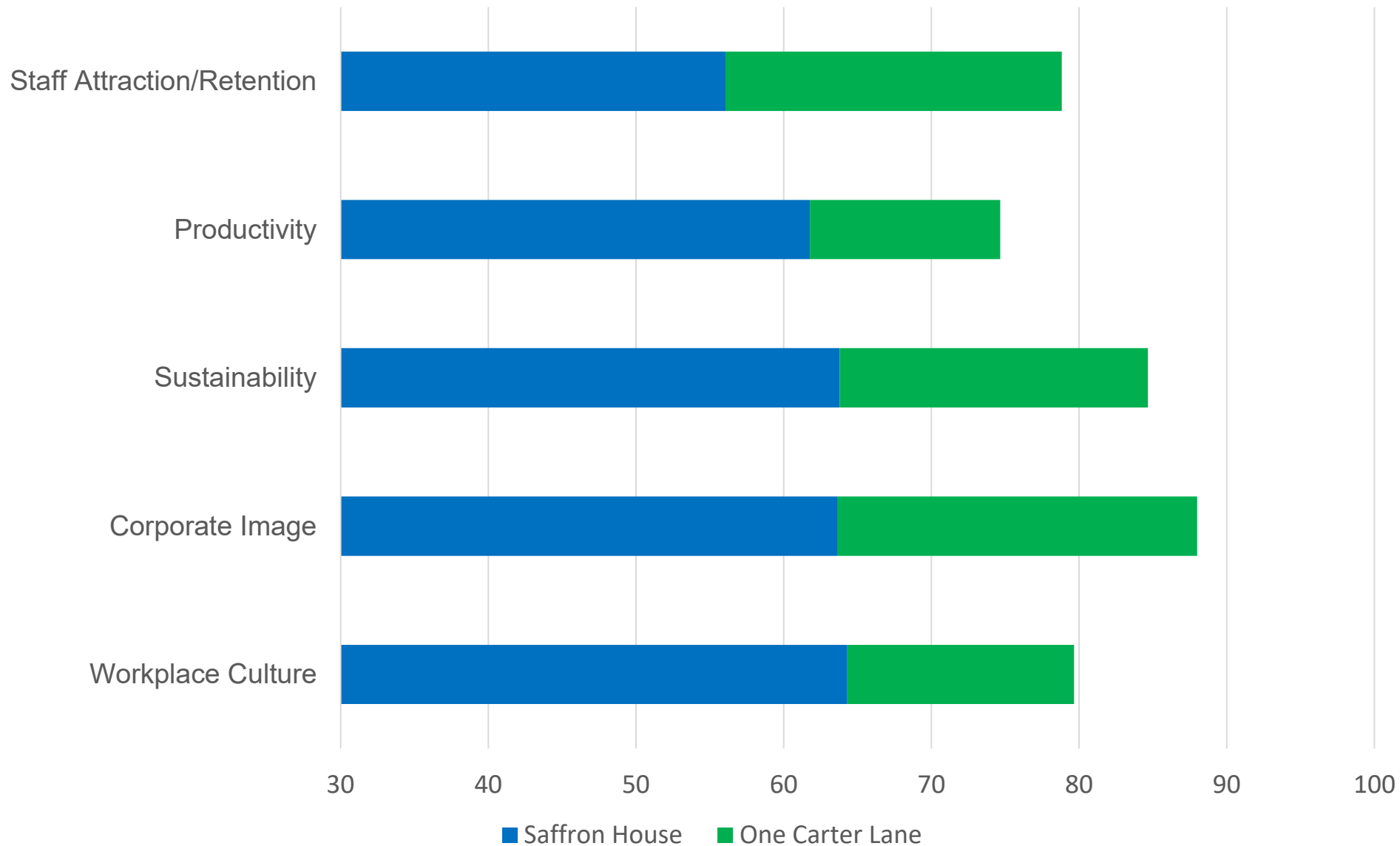
**+ £15-20K Consultancy Fees**



## Workplace impact

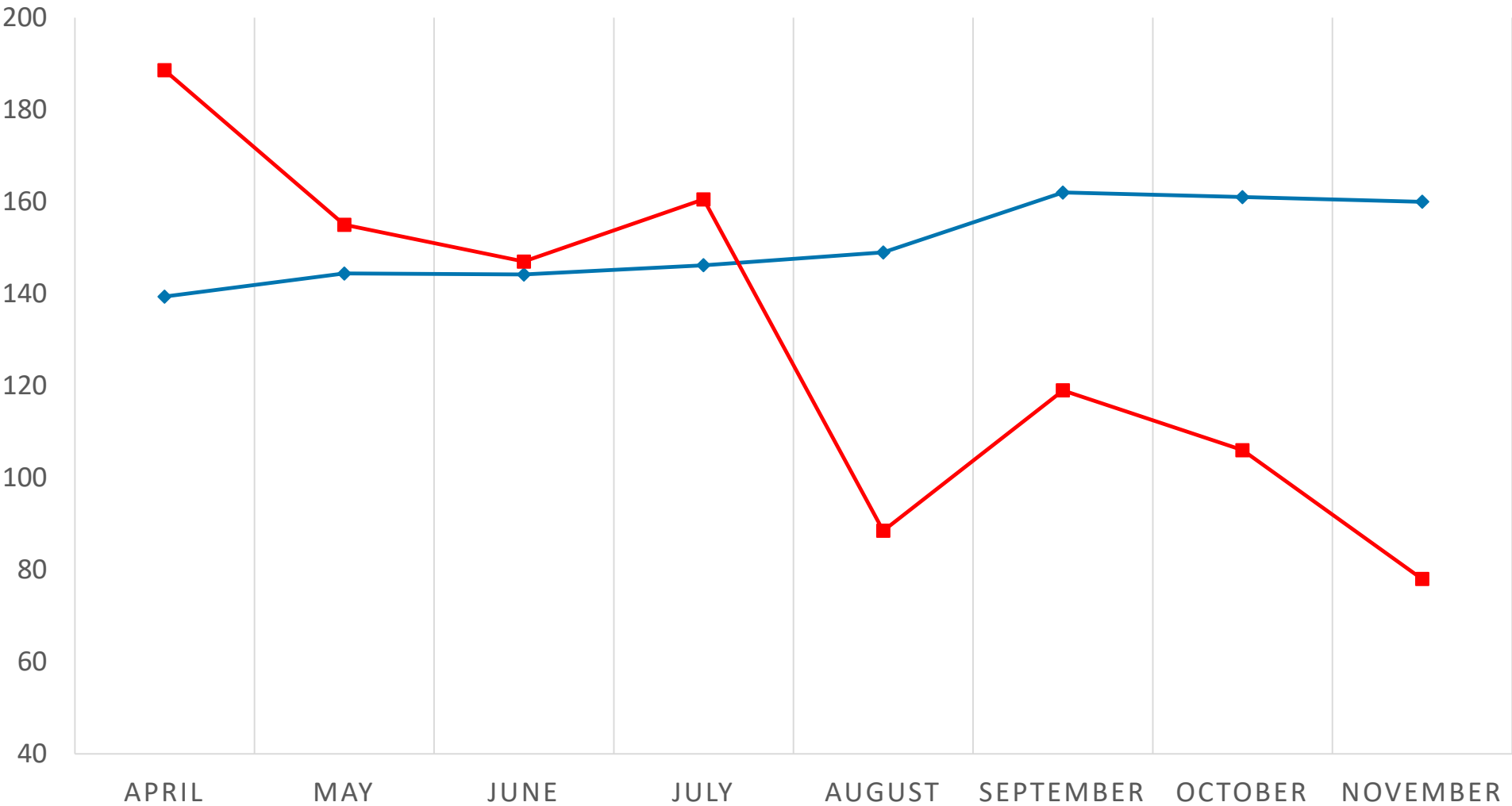


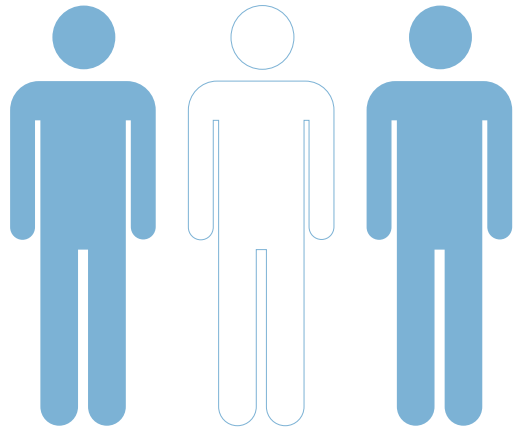
## Workplace impact



## LONDON OFFICE ABSENTEEISM DATA

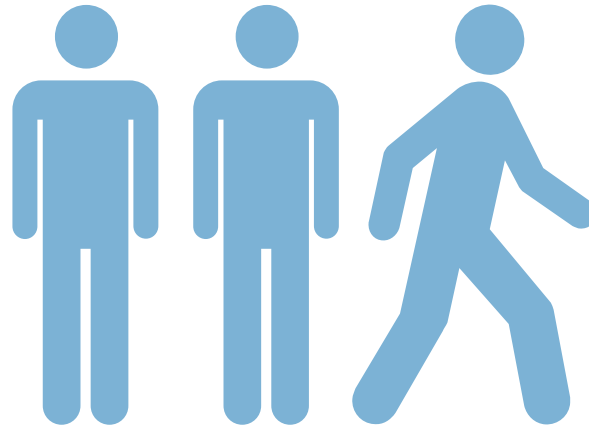
◆ FTE Staff Numbers    ■ Work days lost





**50%**

REDUCTION IN  
ABSENTEEISM  
COMPARED  
WITH 27%



**27%**

REDUCTION IN  
STAFF TURNOVER



**£212k**

SAVING PER ANNUM

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**Questions?**

