



Is your University ready for the Wellness Revolution?

Bringing ideas

TEFMA 2017 Conference Melbourne 20th September 2017 Jeff Robinson Global Sustainability Leader Jeffrey.robinson@aurecongroup.com



Students and Academics are selecting University's that share their commitment to Sustainability









People & Planet's University League is the only comprehensive and independent league table of UK universities ranked by environmental and ethical performance. It is compiled annually by the UK's largest student campaigning network, People & Planet.

FIRST CLASS UNIVERSITIES

1 Nottingham Trent University 2 University of Brighton 3 Manchester Metropolitan University 4 Cardiff Metropolitan University 5 University of Worcester 6 Aston University 7 City, University of London 8= University of Gloucestershire 8= Newcastle University 10 Swansea University 11 University of Bedfordshire 12 Plymouth University 13 De Montfort University 14 London School of Economics And Pol. 15 Keele University 16= University of Exeter 16= Royal Agricultural University 18 University of Greenwich 19 University of Bradford 20 Bournemouth University 21 Coventry University 22 Edinburgh Napier University 23 University of Leeds 24 University of Bristol 25 SOAS, University of London 26 University of The West of England, Bri. 27 University of Wales Trinity Saint David 28 Glasgow Caledonian University 29 University College London

30 University of Leicester



Green Gown Awards Australasia



ABOUT THE AWARDS

The Green Gown Awards Australasia is the first and only Award Scheme dedicated to recognising excellence in sustainability within the tertiary education sector in Australasia. Now in their seventh year, the Awards are quickly being established as the most prestigious recognition of sustainability best practice within the tertiary education sector. As sustainability continues to move up the global agenda, the Green Gown Awards Australasia are providing the opportunity to recognise institutions, large and small and reward their custainability actions and initiatives



Students and Academics are selecting University's that share their Values





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University Sustainability Programs

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Greenstar rated Education Buildings

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Green Star Rated







Two Major Trends impacting Green Buildings In Australia

Performance

Health & Wellness









Health, Wellbeing & Productivity in Offices The next chapter for green building









Many of us are living unhealthy lives

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Our environment is changing how we live.



Physical inactivity is the 4th leading risk factor for mortality.

World Health Organization. Global Strategy on Diet, Physical Activity and Health. World Health Organization International . [Online] [Cited: January 27, 2015.] http://apps.who.int/iris/bitstream/10665/44399/1/9789241599979_eng.pdf.

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People are increasingly seeking healthier life styles

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We spend 90% of our time *indoors*.

anto 2015 by International WEL





THE BUILDINGS WHERE WE LIVE, WORK, LEARN AND RELAX PROFOUNDLY IMPACT OUR HEALTH, WELL-BEING AND PRODUCTIVITY.

University Wellness Programs Support the Mental and Physical Health of their Staff and Students

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Student Wellness

Be good to yourself. Follow Student Wellness on Facebook to learn about the programs and events around campus related to stress, sleep, sexual health, and more



Promoting wellness of mind and body May 14/135





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Health, Wellbeing & Productivity in Offices The next chapter for green building









WORLD GREEN BUILDING COUNCIL

> Health, Well-being and Productivity is the Next Chapter in Green buildings



Architecture's next big thing:

buildings that make us feel better



ARCHITECTURE'S NEXT FRONTIER: YOU

Forget style, functionality and aesthetics: architecture's hot topic is how to design buildings that improve our health, both mental and physical. Cue indoor gardens, emotionally pleasing colour palettes, stairs in place of lifts ... even animal enclosures.

av Luke Slattery

HE EMBLEM of the next big thing in a green building-accredited associate at globs cobal architecture is a flight of stairs. architecture and design firm Gensler, puts it, Rising from the lobby of Frasers "In the past five years or so, 'green' ha Property's headquarters in Rhodes, moved from a planet-focused point of view t cheek-to-suburban-cheek with Sydney's one that embraces the impact that the built Olympic Park, this broad stairwell of palatial environment and human activity have on both sions is softened by a suite of Mondrian- the planet and the people who live on it," she coloured couches - bold red, cream and yellow says. "Expect this shift to continue and accel caseading down its centre. Visitors and staff erate exporross paths in this stepped atrium. They hang interdependency strengthens." out on the groovy couches. There's really no Green architecture has grown up. Its guis choice, thanks to a slightly bossy design feametaphor is no longer the plant; it's the person ture: the lifts are only for the disabled. For The same design phile everyone else, the stairs are compulsory; the the new Bjarke Ingels Group (BIG) design fi ing, as a result, is one big step machine. Google's canonied Charleston East cammus in The offices are designed on the principle that, as Mountain View, California, now approved for neral manager Reini Otter explains, "the built construction. It will include a public nark and vironment can directly affect your health". plaza, walking trails, shops and "outdoo Frasers' \$9.8 million fit-out by Australian rooms". The building's canooy - a bit like architects BVN, replete with 30 per cent sit-to- squashed bug bearing a sneaker imprint - is tand desks, daily fruit and vegetable deliver- designed to regulate indoor climste, air quality es, indoor plants and three-metre-high trees, and sound. On its website, BIG proclaims its al gym, noise dampening and "eco-certified" fur- legiance to "a happy and facused Googler who niture, is a shrine to the emerging school of can perform optimally while at work". The lity design". Livable buildings are the firm's spiel continues: "We think this starts with vot from "now to next", as Carolinn Kuebler, health and environmental quality: by allowing



Liveable buildings are the pivot from "now to next"

"In the past five years or so, 'green' has moved from a planet-focused point of view to one that embraces **the impact that the built environment** and human activity have **on both the planet and the people who live on it,".**

"Expect this shift to continue and accelerate exponentially as global awareness of this interdependency strengthens."

Carolinn Kuebler, a green building-accredited associate at Gensler

Green architecture has grown up. Its guiding metaphor is no longer the plant; it's the person.



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Australia



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Global > Australia > About Us > Media Centre > Media Archives

PRESS RELEASE

Wellness the new focus for Australian office landlords

Overview

Media Centre

Our Offices

± Case Studies

Bull or Bear

Achievements Client Tools

E Corporate Information Executive Committee Senior Leadership Board Local Office Leadership

a decade ago. This was one of the messages from today's for the office, retail, industrial and residentia

In the breakfast panel presentation, CBRE § adapting to a changing business environme focus on wellness.

Sydney, 23 July 2015 - Wellness is the nev

CBRE's global headquarters in Los Angele factors such as access to daylight, circadiar

Macquarie is pursuing similar WELL ratings Amanda Steele, said was part of a broader location, location" to having one on "amenit

"Clever landlords are scrambling to get read

Ms Cranston agreed and said wellness was

"It's changed the discussion from bricks & m

"IT and finance, which are the growth sector Tina Perinotto | 8 May 2015 workplaces have to be the platform for a cor

Fellow panelist, Emil Joubert, CBRE's Natio regard to accommodating wellness, was the

"There are massive opportunities ahead for Joubert said.



Sections Jobs Business Property Sectors Politics Design & Tech Habitat eBooks

Who will be first with a WELL Building certificate in Oz?

not yet registered) are Medibank at its 720 Bourke Street building i Tina Perinotto | 4 February 2016

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Healthy buildings includes nutrition advice, healthy food and vegie gardens

it.

UPDATED 8 MAY 2015: According to CBRE associate director Tor sweeping the commercial property world is wellness for employees nutrition advice, lessons in healthy cooking, a thriving veggie garde

> In Australia there's a race to be the first to be accredited with a cer Building Institute. Vying to create similar healthy workplaces with ve

⊠ Share 0 in ⊻Tweet G+1 0 ⊨



480 Queen Street in Brisbane will be pursuing a WELL rating

Melbourne, and another owner in Brisbane looking seriously at the The WELL Building Standard looks set to shake up the top end of the property industry as much as Green Star did when it burst onto the scene in 2002.

WELL building standard set to storm the property world

What is the WELL Building Standard?

- The WELL Building Standard is an evidence-based system for measuring, certifying and monitoring the performance of building features to impart a positive impact on human health.
- WELL is the product of over seven years of research and development in conjunction with the Mayo Clinic, the Cleveland Clinic and leading architects, scientists and wellness thought leaders.

IWBI

ERNATIONAL

The WELL Building Standard is administered by the International WELL Building Institute[™] (IWBI[™]), a public benefit corporation whose mission is to improve human health and well-being through the built environment.





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WELL is like a NUTRITION LABEL for your building, providing transparency on the quality of our built environment.









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WELL Building Standard

- Key Facts about WELL
 - System for measuring, certifying and monitoring health and wellbeing impacts of buildings based on scientific research
 - Designed to complement other rating systems such as Green Star & LEED
 - Has 105 performance metrics, design strategies and procedures
 - Requires on-site assessment & independent testing
 - **o** Ongoing recertification





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WELL Certification Process



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Typologies for Offices

Ratings





New and Existing Buildings New and Existing Interiors



Core and Shell

Pilots

- Retail
- Multi Family Residential
- Education
- Restaurants
- Commercial Kitchen
- Communities







A COMPREHENSIVE APPROACH TO WELL-BEING

The WELL Building standard is made up of features that address seven concepts:



What Really Matters – The Building Occupants





Urinary System

6,0

Skeletal System







Body Systems Applied to **WELL Features**

This provides a simple way to express the built environment's complex impact on the Human body



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What happens to your body when you sit for a prolonged period of time?

Calorie burning drops to less than 1 per minute.¹

Cardiovascular, endocrine, digestive, reproductive, respiratory, muscular, skeletal and nervous systems are negatively affected.²

Prolonged sitting disturbs mood, energy levels and productivity.³

¹Standing based of ce ork sho s encouraging signs of attenuating ost randial glycaemic e cursion. Buckley, J, et al. 2, s.l.: Occupational and Environmental Medicine, February 2014, Vol. 71, pp. 109-11. http://www.ncbi. nlm.nih.gov/pubmed/24297826. 10.1136/ oemed-2013-101823.

³ Reducing Occupational Sitting Time and Improving Worker Health: The Take-a-Stand Project, 2011. Pronk, N, et al. s.l.: Preventing Chronic Disease, 2012, Vol. 9. http://www.cdc.gov/pcd/issues/2012/11_0323.htm. 110323.



² IWBI Fitness Wellography, Elements of Fitness: Physical Inactivity

Air

PRE-CONDITIONS

• AIR QUALITY STANDARDS

(i.e. formaldehydes, VOCs, particulate matter, inorganic gases and radon)

- SMOKING BAN
- **o** VENTILATION EFFECTIVENESS

(i.e. ASHRAE 62.1, demand controlled ventilation & system balancing

• VOC REDUCTION

(i.e. paints, sealants, flooring, insulation, furniture and furnishings)

• AIR FILTRATION

(i.e. future carbon filters, filter efficiency MERV 13+ & filter maintenance)

• MICROBE AND MOLD CONTROL

(i.e. UV lamps on coils & mould inspections)

CONSTRUCTION POLLUTION MANAGEMENT

(i.e. duct protection, filter replacement & VOC absorption management)

• HEALTHY ENTRANCE

(i.e. permanent entry walk off features and air seals)

• FUNDAMENTAL MATERIAL SAFETY

(i.e. asbestos, lead, PCBs and mercury)







Low







Cognitive performance scores averaged 101 percent higher in green buildings

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highway

Material

S afety

Data

S heets



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• AIR FLUSH

O AIR INFILTRATION MANAGEMENT

• INCREASED VENTILATION

(i.e. increased outdoor air supply)

• DIRECT SOURCE VENTILATION

(i.e. isolation and exhaust of photocopying, kitchen and vehicle pollutants)

• AIR QUALITY MONITORING AND FEEDBACK

(i.e. air monitoring and display of environmental information)

• OPERABLE WINDOWS

(i.e. occupant control and outdoor air

measurement

& triggers)

- **OISPLACEMENT VENTILATION**
- **TOXIC MATERIAL REDUCTION**

(i.e. limiting perfluorinated compounds, flame retardant, phthalate (plasticizers), urea-formaldehyde)

• ENHANCED MATERIAL SAFETY







Water

PRE-CONDITIONS

• WATER QUALITY sediment microorganisms inorganic contaminants organic contaminants agricultural contaminants additives

OPTIMISATIONS

• PERIODIC WATER QUALITY TESTING

(i.e. quarterly testing for contaminants)

• WATER TREATMENT

organic chemicals

sediments

microbes

legionella

O DRINKING WATER PROMOTION

(i.e. access to drinking water and water taste)







Clean water every time







Nourishment PRE-CONDITIONS

• FRUITS AND VEGETABLES

(i.e. supply, variety and promotion of fruits & vegies)

• PROCESSED FOODS

(i.e. refined ingredient restrictions & trans fat ban)

• FOOD LABELLING

(i.e. allergies, artificial ingredients, total calories, macro / micro nutrient content & total sugar content)

• CONTAMINATION

(i.e. cold storage, hand washing)

• FOOD ADVERTISING

(i.e. encourage whole and natural foods and discourage sugar & fat)



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OPTIMISATIONS

• SAFE FOOD PREPARATION MATERIALS (i.e. cutting surfaces and storage capacity)

SERVING SIZES
 (i.e. meal sizes and dinnerware sizes)

• **SPECIAL DIETS** (i.e. food alternatives)

• FOOD PRODUCTION

(i.e. sustainable & humane agriculture, gardening space

• MINDFUL EATING

(i.e. eating areas to accommodate 20% of employees)



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Light

PRE-CONDITIONS

• VISUAL LIGHTING DESIGN

(i.e. lighting levels, zoned lighting systems and brightness contrasts between task surfaces and the surrounding area)

• CIRCADIAN LIGHTING DESIGN

(i.e. melanopic light intensity)

• ELECTRIC LIGHT GLARE CONTROL

(i.e. shielding bare lamps and minimising glareSOLAR GLARE CONTROL

(i.e. minimising glare through internal and external shading)

morning

afternoon

evening





46 minutes more sleep on average for office workers with windows



Fitness PRE-CONDITIONS







Valk Score 92 2 Locomotive Street Walker's Paradise ? Sydney









INTERIOR FITNESS CIRCULATION

(i.e. stair accessibility, stairs promotion & facilitative aesthetics)

ACTIVITY INCENTIVE PROGRAMS

(i.e. subsidised gym membership)

OPTIMISATIONS

• STRUCTURED FITNESS OPPORTUNITIES

(i.e. providing fitness classes)

• EXTERIOR ACTIVE DESIGN

(i.e. pedestrian amenities, pedestrian promotion & Walk Score)

• PHYSICAL ACTIVITY SPACES

(i.e. external exercise spaces)

o ACTIVE TRANSPORTATION SUPPORT

(i.e. end of trip facilities)

• FITNESS EQUIPMENT

(i.e. cardio & strength exercise equipment)

• ACTIVE FURNISHINGS

(i.e. sit-stand desks, treadmill desks)



• ACCESSIBLE DESIGN STANDARDS

(i.e. DDA compliance)

• ERGONOMICS

(i.e. screen, desk & seat flexibility)

O EXTERIOR NOISE INTRUSION

(i.e. noise intrusion)

O INTERNALLY GENERATED NOISE

(i.e. acoustic planning and mechanical equipment sound levels)

• THERMAL COMFORT

(ASHRAE comfort standards)



UNIVERSAL DESIGN:

Making Design Accessible To Everyone In Society.

Adaptive Controlt Standard (After de Dear and Brager, 2001)





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PRE-CONDITIONS

O HEALTH AND WELLNESS **AWARENESS**

(i.e. building guides and wellness library)

O INTEGRATIVE DESIGN

(i.e. collaborative design process)

O POST-OCCUPANCY SURVEYS o BEAUTY AND DESIGN

(i.e. human delight, celebration & public art)

O BIOPHILIA

(i.e. nature & pattern incorporation and nature interaction)



to lite

Indoor Environmental Quality **Building Name**



Mind

OPTIMISATIONS

ADAPTABLE SPACES HEALTHY SLEEP POLICY BUSINESS TRAVEL

(i.e. restriction on red-eye flights)BUILDING HEALTH POLICY

(i.e. health benefits)

O WORKPLACE FAMILY SUPPORT

(i.e. parental leave and child care)

• SELF-MONITORING

(i.e. sensors and wearables)

• STRESS AND ADDICTION TREATMENT

• ALTRUISM

(i.e. charitable activities and contributions)

- MATERIAL TRANSPARENCY
- **ORGANIZATIONAL TRANSPARENCY**



Bupa





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Declare.

Product Name Manufacturer Name

City, State/Province, Country Life Expectancy: 000 YEARS End of Life Options: Recyclable (42%), Landfill

Ingredients:

35:19

135 *

Ingredient One (Location, ST), The Second Item (Location, ST), NextIngredient (Location ST), Living Building Challenge Red List, Different Part of the Product Another Component, More Stuff, US EPA Comincal of Concern, Yet Another Item Non-toxic Element, Pieceofthewhole: Component of Concern, Yet Another Item Non-toxic Element, Pieceofthewhole: Component of Concern, Yet Another Item ECHA REACH Substance of Very High Concern, Las Ingredient

XXX-0000 EXP 12/2010 20NE 0 00 00 00

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WELL Commissioning

• Timing

All design documents submitted for review Minimum 50% occupancy At least 1 month after OC issued

• Accredited WELL Assessor (AWA)

• Performance Testing

Air Quality (i.e. organic & inorganic gases and particulates) Water Quality (i.e. dissolved chemicals and suspended solids) Light Attributes (i.e. colour temperature, intensity and spectral power distribution)

Thermal Considerations (i.e. ambient / radiant temperature, air speed and humidity)

Acoustic Elements (i.e. decibel levels and reverberation)



MAGE 2011UX-STON

ideas



SAMBA Monitoring Station By IEQ Analytics Prof. Richard de Dear & Thomas Parkinson THERMAL COMFORT ACOUSTIC LIGHTING



CBRE

CBRE Headquarters Los Angeles, CA | USA

Value -

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Mirvac's New Offices at 200 George Street Achieves Australia's First Gold Rating



50 Martin Place applied for a WELL Rating



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- Largest Heritage
 6 Green Star Rating
- New glass dome
- Flexible spaces for informal meetings, training, and events
- Low sugar food served in the café
- Yoga classes, music rooms, fitness facilities, mindfulness training programmes, a choir
- A roof top garden with chickens, beehives, and vegetables







Beekeepers Doug Purdie, right, and Vicky Brown from The Urban Beehive with hives they manage on the roof of Macquarie Group's 19 Elizabeth St building. Ben Rushton





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Lend Lease's New Workspace in International Tower 3 Barangaroo South



5 star NABERS + 6 Star Green Star + Targeting WELL



At Lendlease's International Tower Three at Barangaroo South in Sydney, a focus on wellness for occupants and employees:

- 🕖 Nutritious food served in the café
- 1,000 bike racks
- 40% of work stations are stand-up desks



6m high green wall with more than 5,000 plants





Fraiser's Property HQ at Rhodes Corporate Park Targeting a WELL rating



5 star NABERS + 5 Star Green Star + Targeting WELL







5 King Street Aurecon Fortitude Valley, QLD, Australia

in the second second



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About 30% of Initiatives between Green Star and WELL are common

The GBCA and IWBI are partnering to deliver Green, Healthy Buildings in Australia

Green Star & WELL Building Standard[™]

Approaches to buildings or fitouts seeking a dual rating







Air

Outdoor Air Supply, VOC Reduction, Construction Pollution Management, Hazardous Materials, Building Airtightness Testing

Light

Electric Light Glare Minimisation, Solar Glare Control, Views, Daylighting

Fitness

Walkscore, End of Trip Facilities

Comfort

Acoustics, Thermal Comfort



A WELL Rating = Green Star + a bit

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Achieving as WELL Gold in an Education facility is not that much more than a 5-6 Star GS rating. Assuming all preconditions are dealt with



Feature		Typology	Targeted in Proposed		
			Building?		Responsible Discipline
	✓ Name	👻 Educati 🏋	BC BC BC BC Difficulty f	Compliance Strategy, Comments	· ·
Air			Difficulty		
1	Air quality standards	Р	TBC		ALL
2	Smoking ban	P	1		Project Owner
3	Ventilation effectiveness	P	1 A A A A A A A A A A A A A A A A A A A		Mechanical
4	VOC reduction	P	1 A A A A A A A A A A A A A A A A A A A		ALL
5	Air filtration	P	TBC		Mechanical
6	Microbe and mould control	P	TBC		Facility Management
7	Construction pollution management	P	1		Head Contractor
8	Healthy entrance	P	1		Architect
9	Cleaning protocol	P	TBC		Facility Management
10		P	TBC		Facility Management
11	Fundamental material safety	P			Head Contractor
12	Moisture management	P	1 A A A A A A A A A A A A A A A A A A A		ALL
13	Airflush	Ö	×		Head Contractor
14	Air infiltration management	o	x		Head Contractor
16	Humidity control	ō	x		Mechanical
17	Direct source ventilation	ō	1 A A A A A A A A A A A A A A A A A A A		Mechanical
18	Air quality monitoring and feedback	ō	x		Facility Management
19	Operable windows	ō	x		Architect & Mechanical
20	Outdoor air systems	ō	x		Mechanical
21	Displacement ventilation	0	x		Mechanical
22	Pest control	Р	TBC		Facility Management
23	Advanced air purification	Ö	x		Mechanical
24	Combustion minimization	ō	x		Head Contractor & Mechanical
25	Toxic material reduction	ō	x		ALL
26	Enhanced material safety	0	x		Architect
27	Antimicrobial surfaces	0	x		Architect
28	Cleanable environment	ō	x		Facility Management
29	Cleaning equipment	ō	x		Facility Management
	TOTAL OPTIMISATIONS	15	1		7% f Category Optimisations achieved
₩ater			-		,
30	Fundamental water quality	P	TBC		Hydraulics
31	Inorganic contaminants	P	TBC		Hydraulics
32	Organic contaminants	P	TBC		Hydraulics
33	Agricultural contaminants	P	TBC		Hydraulics
34	Public water additives	P	TBC		Hydraulics
35	Periodic water guality testing	0	x		Facility Management
36	Water treatment	0	x		Hydraulics
37	Drinking water promotion	0	x		Hydraulics
	TOTAL OPTIMISATIONS	3	0		0% f Category Optimisations achieved
lourishme	nt				
38	Fruits and vegetables	Р	×		Project Owner
39	Processed foods	P	×		Project Owner
40	Food allergies	P	×		Project Owner
41	Hand washing	0	*		Architect & Hydraulics
43	Artificial incredients	P	*		Project Owner



WELL Education Projects

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Sonoma Academy Grange Studios Targeting LEED Platinum, Living Building Challenge and WELL Building Certification



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Conclusions

- Universities are embracing sustainable buildings and Campuses as Core business
- They are also promoting Wellness for Staff and Students
- Health, Well Being and Productivity is the Next Chapter in Green Buildings
- The WELL Building Standard is creating great interest because of its focus on creating healthy and productive workplaces for building occupants
- Designed to complement other rating systems such as Green Star
- The on-site assessment & independent testing ensures that workplaces remain healthy
- We need to adapt our buildings to provide conditions that are closer to our natural Habitat
- In a WELL certified building Going to Work/ Study can make you healthier

Is your University ready for the Wellness Revolution?





Thank you For further information contact

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