The design, delivery and management of healthy buildings: a practical guide

Global

1st edition, October 2023

RICS®

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RICS practice information, global

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This document applies globally. If any of the requirements contained in this document conflict with national legal requirements in the country or region in which the regulated member is operating, those national legal requirements take precedence and must be applied.

Acknowledgements

Contents

RICS standards framework

RICS' standards setting is governed and overseen by the Standards and Regulation Board (SRB). The SRB's aims are to operate in the public interest, and to develop the technical and ethical competence of the profession and its ability to deliver ethical practice to high standards globally.

The RICS Rules of Conduct set high-level professional requirements for the global chartered surveying profession. These are supported by more detailed standards and information relating to professional conduct and technical competency.

The SRB focuses on the conduct and competence of RICS members, to set standards that are proportionate, in the public interest and based on risk. Its approach is to foster a supportive atmosphere that encourages a strong, diverse, inclusive, effective and sustainable surveying profession.

As well as developing its own standards, RICS works collaboratively with other bodies at a national and international level to develop documents relevant to professional practice, such as cross-sector guidance, codes and standards. The application of these collaborative documents by RICS members will be defined either within the document itself or in associated RICS-published documents.

Document type	Definition
RICS professional standards	**Set requirements or expectations for RICS members and regulated firms about how they provide services or the outcomes of their actions.** RICS professional standards are principles-based and focused on outcomes and good practice. Any requirements included set a baseline expectation for competent delivery or ethical behaviour. They include practices and behaviours intended to protect clients and other stakeholders, as well as ensuring their reasonable expectations of ethics, integrity, technical competence and diligence are met. Members must comply with an RICS professional standard. They may include: • mandatory requirements, which use the word 'must' and must be complied with, and/or • recommended best practice, which uses the word 'should'. It is recognised that there may be acceptable alternatives to best practice that achieve the same or a better outcome. In regulatory or disciplinary proceedings, RICS will take into account relevant professional standards when deciding whether an RICS member or regulated firm acted appropriately and with reasonable competence. It is also likely that during any legal proceedings a judge, adjudicator or equivalent will take RICS professional standards into account.
RICS practice information	**Information to support the practice, knowledge and performance of RICS members and regulated firms, and the demand for professional services.** Practice information includes definitions, processes, toolkits, checklists, insights, research and technical information or advice. It also includes documents that aim to provide common benchmarks or approaches across a sector to help build efficient and consistent practice. This information is not mandatory and does not set requirements for RICS members or make explicit recommendations.

Foreword

The occupation and use of our buildings has changed radically in recent years. Technology has wrought enormous change; business models and consumer habits have been transformed; environmental concerns have come to the fore; attitudes to health and well-being are rapidly evolving; expectations of all asset types are far more sophisticated; and the role of real estate in our overall economy and society is changing.

More recently, it has become clear that the built environment plays a central role in determining public health outcomes, based on the time that the average individual now spends indoors and the extent to which environmental factors can either mitigate against or drive chronic health issues. As a result, the health and well-being of those who occupy the built environment have become central to research, narratives and emerging real estate strategies.

In light of this, as an organisation that values the quality of real estate and wishes to support members in remaining at the forefront of developments within the sector, RICS has commissioned this practice information. It is written by Ekkist, the UK's first health and well-being consultancy for the built environment, to inform organisations on how to design, deliver and manage buildings that support occupant health and well-being.

This document builds on RICS' International building operation standard (IBOS), which was launched in February 2022 to help organisations measure the operational performance of property assets. Critically, IBOS added another dimension – user experience and well-being – and in doing so reached beyond the more traditional technical aspects of operational performance that have become established over many decades.

Following on from this, the present paper serves as a practical guide that covers not only operational considerations but also the overall design and delivery of healthy buildings of all use classes. The purpose of this paper is to consider this in more detail in order to enable all organisations to consider and embed this as part of their wider real estate strategy.

Our key aim as an organisation is to serve the public and help to improve the quality of buildings across the globe and, as such, also improve public health outcomes.

Paul Bagust, Head of Property Standards at RICS

1 Introduction

Research by the Harvard T.H. Chan School of Public Health ([The impact of healthy buildings](#)) and Brodin et al ([Variation in the human immune system is largely driven by non-heritable influences](#)) shows that our individual health is directly tied to the health of our buildings, and that our environment can have more influence on some aspects of our health than genetics. Addressing health and well-being in the built environment is therefore vital to supporting public health.

Recognising this link, design for well-being has emerged as a distinct new discipline, alongside a range of global certification standards. Separate from the field of sustainability, which seeks to understand how buildings impact the environment, the field of design and management for well-being is centred on the human experience – the profound impact that buildings have on our mental and physical health. It concerns every aspect of master planning and building design and every built environment professional.

Delivering healthy buildings and healthy places is also fundamental to achieving progress in wider global issues, such as the UN Sustainable Development Goals. It is therefore the collective role and responsibility of all built environment professionals to ensure that we are delivering buildings for current and future generations that will ultimately help to create healthy, thriving and resilient communities globally.

In previous decades, much attention has been paid to sustainable buildings, with significantly less focus on how buildings impact people and their health. Alongside the rise of major global certifications, such as Fitwel and the WELL Building Standard, this has now emerged as an important new discipline.

Alongside architects and planners, engineers and asset managers, RICS and its built environment professionals play a fundamental role in delivering a healthy built environment. Surveyors have a unique ability to influence both new development and redevelopment from every perspective: from the early planning and development stages, through to detailed design, delivery and building management. They also play a role in helping clients to develop environmental, social and governance (ESG) strategies that address health and well-being, ensuring that any goals or benchmarks are upheld throughout the process, that budgets are correctly allocated and that the right value-based decisions are made.

The role of understanding and advising on health and well-being is complex, varied and requires collaboration. Working together as a profession to create better places will not only support healthy populations, but also help to grow healthy economies. This can help relieve global healthcare systems of unnecessary strains arising from poor-quality built environments and reduce the global health burden. However, it can only be achieved if the industry:

- acknowledges the importance of this issue
- improves its understanding of key areas
- works collaboratively and takes action to make changes to its internal decision-making and supply chains and
- focuses on long-term outcomes.

This document is designed to provide an overview for surveying professionals of the key aspects and processes that need to be considered. The purpose is to provide an overview rather than to outline detailed interventions, since voluntary standards and frameworks already facilitate this. We hope that it will inspire conversations, increase knowledge and awareness, and help professionals to build compelling cases to put forward to key decision-makers that support genuine actions and industry-wide progress.

**Olga Turner Baker,
Ekkist and RICS East Chair**

'Buildings are at the nexus of global health and sustainable development goals, operating across four pillars of health – Indoor Health, Resource Health, Economic Health, Environmental Health – and under-pinned by Public Health.'

Harvard T.H. Chan School of Public Health, The impact of healthy buildings, 2023

2 Why is this guidance needed?

Health and well-being have become key considerations in built environment development, redevelopment and management for every property professional and discipline.

At the same time, it is becoming increasingly challenging for surveyors and other built environment professionals to navigate choices around healthy building design decisions, certifications, products and operations, with new regulations and voluntary standards emerging that require detailed guidance and expertise.

With well-being also now forming an important part of ESG frameworks, surveyors, funders and developers alike are increasingly keen to understand, enhance and measure the ways in which their buildings and portfolios can better support human health. Benchmarking delivery against targets still remains a key issue, highlighted in the Investment Property Forum's report on benchmarking ESG in real estate investment performance.

Nonetheless, there is clearly now a shift away from 'being the first' to adopt such measures to 'not being the last'. The focus is now firmly on accountability, transparency and, ultimately, developers' and investors' overall responsibility for the health and well-being of the people who occupy their buildings and public spaces.

However, with so many options and so much emphasis on health and ESG, an overarching set of guidance is required to support surveying professionals.

The design, delivery and management of healthy buildings

2.1 Who is this guidance for?

Every RICS professional, including developers, agents, investors and advisers, will be involved in health and well-being decisions at some point in the built environment life cycle. However, five RICS disciplines play a leading role in achieving success in these requirements.

2.1.1 Project managers

Project managers must guide clients and project teams to ensure that health and well-being briefs, certifications and considerations are delivered throughout the development process. It is important to ensure that design teams are fully briefed, engaged and maintain momentum and reporting duties.

2.1.2 Planning and development surveyors

Planning and development surveyors play a key role in ensuring an understanding of what health and well-being considerations need to be taken into account in project briefs, the planning process and how these goals fit in with wider national and local policy goals. They oversee key milestones and decisions in the development process relating to health and well-being.

2.1.3 Quantity surveyors

Quantity surveyors are responsible for ensuring that the right type of value-based decisions are made in regard to health and well-being and that there is an overall understanding of the key financial implications of health and well-being interventions and decisions, as well as aspects of both long- and short-term value.

2.1.4 Facilities and workplace managers

Facilities management surveyors engage with the operational requirements of healthy buildings and need to be aware of these when planning management, such as supporting clients with achieving and maintaining heathy building certifications, building monitoring, and linking reporting to tools such as RICS' IBOS standard.

2.1.5 Valuation surveyors

Valuers play a key role in recognising the value-added aspects of healthy buildings, supporting business cases, lending criteria and key decision-making. It is vital that they consider the return on investment (ROI) of health-led interventions and have knowledge of how these can support both short-term and long-term outcomes and value in projects across all use classes.
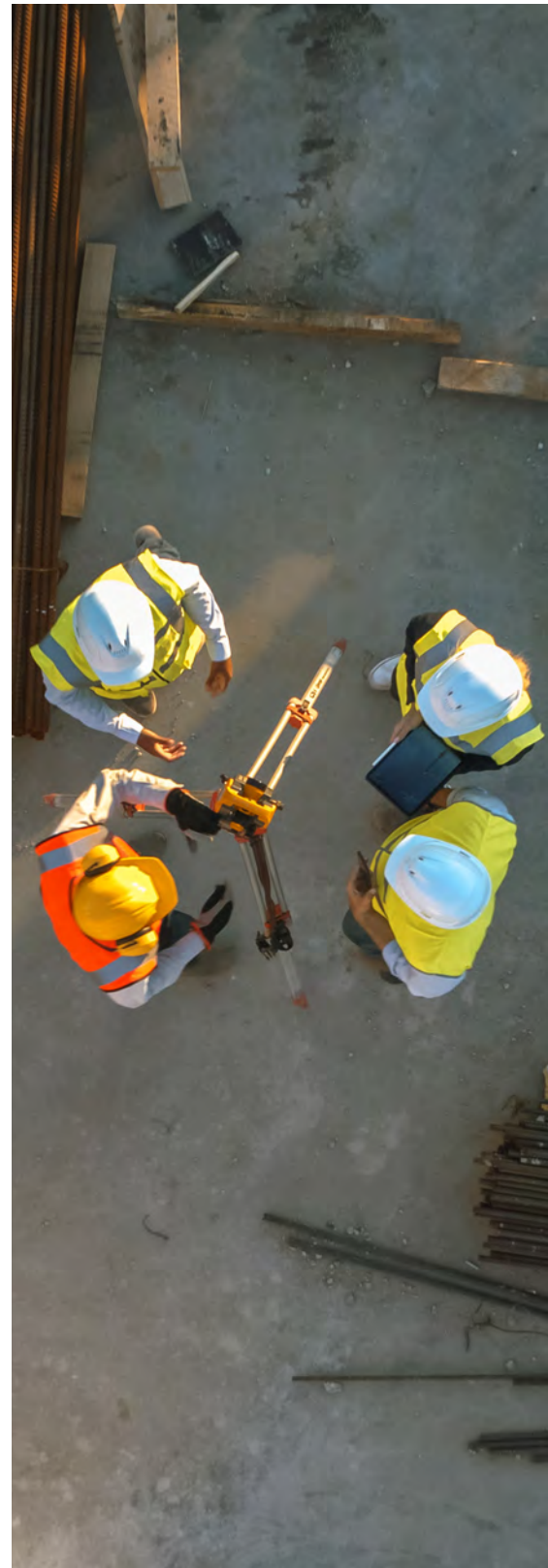
2.2 Use classes covered

This practice information covers all asset classes, since it relates to broad health and well-being considerations and decision-making at each stage. This includes:

- residential
- commercial
- retail
- leisure
- logistics
- industrial
- education
- healthcare and
- urban planning and master planning.

Each of these use classes must consider its broad strategy for creating healthy places, but the general goals remain universal.

2.3 New and existing buildings

This document applies to:

- new and existing buildings and
- buildings under development or redevelopment/ refurbishment.

3 How do buildings impact our health?

The way in which we design our cities and buildings has a profound impact on our health, with the potential to either harm or improve it.

Healthy buildings and master plans aim to increase our opportunities to thrive, to feel well and perform better, supporting our overall mental and physical health.

According to the United States Environmental Protection Agency's Report to Congress on indoor air quality, modern populations can spend as much as 90% of their time indoors, which has an intrinsic impact on health. Decades of academic and empirical research have shown a number of common health outcomes (both positive and negative) directly linked to the way we exist within buildings.

A summary of these impacts, taken from global health standards and international global health research, is outlined in Figure 1; it shows the multitude of ways in which built environments affect our health.

Figure 1: How the built environment affects our health
(Sources: Ben Channon, Ekkist; WELL Building Standard; World Green Building Council)

90 minutes more exercise per week in activity-friendly neighbourhoods

 3.1 Active design

An estimated **23%** of the global adult population are **physically inactive**.[1]

Physical inactivity is attributed to being responsible for **1 in 6 deaths** in the UK.[2]

Being active helps to prevent and manage over **20 chronic diseases and conditions**,[3] including heart disease, type 2 diabetes, depression and cancer.[3]

The way in which we design built environments has a significant impact in either encouraging or deterring physical activity. Active environments not only focus on delivering opportunities for sport and formal exercise, but also seek to encourage physical activity through walking, cycling, sport, exercise, children's play and outdoor leisure.[4] A study across 14 cities and towns around the world found that those living in what it termed 'activity-friendly neighbourhoods' undertook as much as 90 minutes more exercise a week than those who lived elsewhere.[4]

Active design for buildings ultimately seeks to encourage physical activity through having appropriate infrastructure, such as lockers, showers and bike storage on site to enable active commuting, connecting to walking and cycling routes, and features such as visually appealing and easily accessible staircases.

Typical interventions to consider:

- outdoor walking routes and walking maps

- jogging tracks on master plans and housing estates

- inviting, well-decorated and easily visible staircases

- signage to staircases

- high-quality indoor and outdoor play space

- covered outdoor spaces

- climbing walls.

41 studies on nature's attention-restoration potential

3.2 Biophilic design

Benefits of biophilic design for human health have been conclusively **supported by extensive scientific research**.

In hospital settings, **views of nature** have been shown to reduce the perception of pain and **increase recovery** from operations by **as much as 8.5%**.[9]

Biophilic design is the practice of creating a greater connection between people in the built environment and nature. Such elements can be direct (such as the inclusion of plants), indirect (views of nature) or representational (through natural colours and forms, for example).[5]

Benefits include aiding recovery from stressful events,[6] supporting a positive mental state, increased attention capacity and reduced levels of anxiety.[7]

In 2015, a systematic literature review found a total of 41 studies on nature's attention-restoration potential,[8] demonstrating its potential to support cognitive performance.

In classroom settings, students with views of nature performed significantly better than those with barren views,[10] and in office environments, short-term memory improved when workers were exposed to biophilia.[11]

Typical interventions to consider:

- natural building materials and finishes

- indoor planting

- images or videos of nature

- murals

- maximising views of nature or planting

- indoor courtyards or winter gardens

- water features

- living walls.

1 in 5 deaths accounted for globally by poor nutrition

 3.3 Food provision

Healthy diets have the potential to **prevent diet-related diseases**, including cardiovascular disease, high blood pressure and diabetes.[12]

Diets around the world are generally **low in plant-based foods** such as fruits, vegetables, whole grains, nuts and seeds.[12]

Access to healthy food provision at both the neighbourhood and building level can have a significant impact on public health. However, poor nutrition remains a top contributor to the global burden of disease, accounting for more than 1 in 5 deaths globally.[13] Diets around the world are generally low in fruits, vegetables, whole grains, nuts and seeds, and are characterised by increasing intakes of highly processed foods, including refined sugars and refined oils.[12]

Studies have demonstrated links between the accessibility of healthy food and multiple improved health and economic outcomes, whereby new food shops can even have a multiplier effect in economic development, as well as helping to improve dietary habits and overall health.[14] Local food markets integrated into master plan designs at early stages and leasing strategies that focus on healthy food operators can all help to facilitate healthier food choices and better public health.

Typical interventions to consider:

- limiting fast food operators
- food markets on master plans
- nutritionist-approved cafeterias
- community food-growing areas
- healthy food offerings/free fruit
- indoor herb gardens
- cooking workshops.

99% of the global population breathes air that exceeds WHO guideline limits

3.4 Air quality & ventilation

Indoor air pollution is linked to an **increased risk** of **pneumonia, chronic obstructive pulmonary disease and lung cancer**.[16]

Elevated levels of CO_2 can result in an up to **11% reduction in productivity** due to impaired cognitive function, leading to poorer decision-making ability and information usage.[18]

Air pollution is the 'contamination of indoor or outdoor environments by any chemical, physical or biological agent that modifies the natural characteristics of the atmosphere'.[15] World Health Organization (WHO) data show that almost all of the global population (99%) breathe air that exceeds WHO guideline limits.[15]

Indoor air quality also greatly affects our overall health and well-being. According to the British Lung Foundation, those with asthma or any other lung condition are much more likely to be affected by poorer air quality.[16] Short-term exposure to poor indoor air quality has also been shown to cause irritation of the airways, coughing and cardiovascular problems, and long-term exposure can cause heart and lung diseases and cancer.[17]

Air quality can also have an impact on our productivity. The Harvard 'COGfx' study found that cognitive function test scores as much as doubled when participants were in green environments with enhanced ventilation compared to conventional building environments.[19]

Typical interventions to consider:

- high ventilation rates

- air filtration for pollutants

- ultraviolet filtration

- low or zero volatile organic compound (VOC) building materials

- non-recirculated air/direct ventilation.

7,000 annual heat-related deaths predicted in the UK by 2050
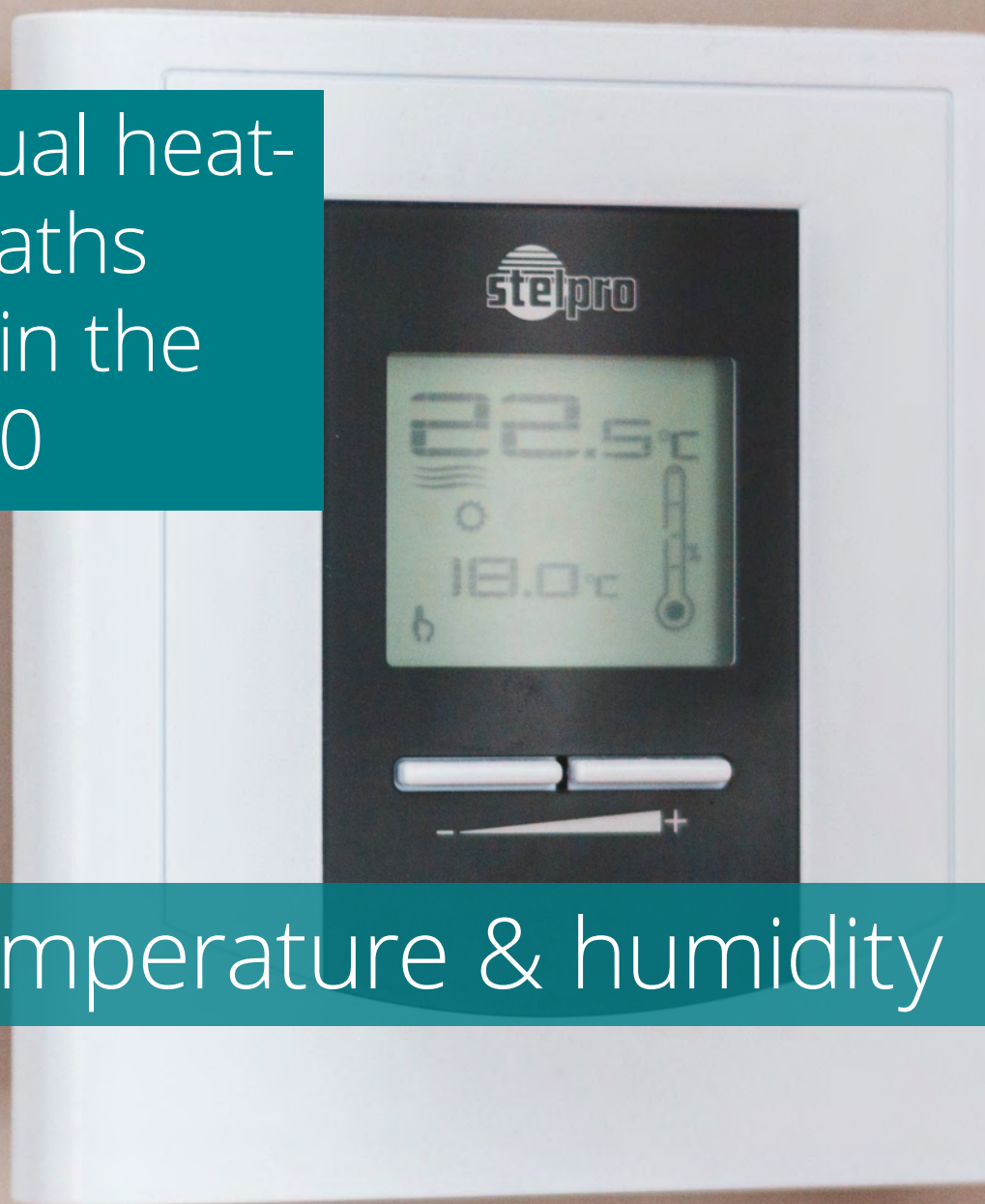
3.5 Temperature & humidity

An estimated **2,000 heat-related deaths** occur **each year** in England and Wales.[20]
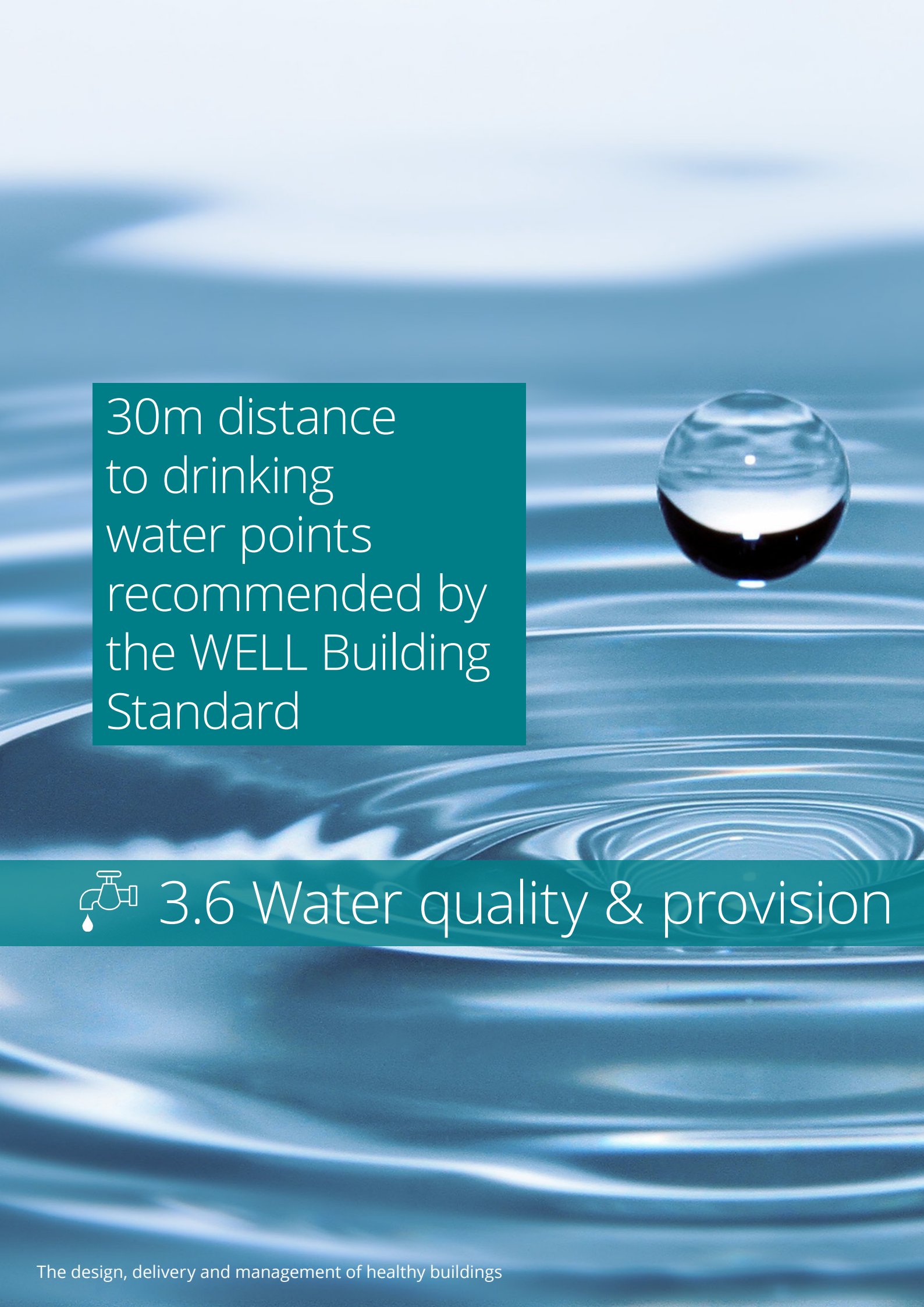
There will be an estimated **75 extra deaths per week for each degree of increase in temperature over 25°C**.[20]

Overheating in buildings has been highlighted as a key risk for the health and productivity of people and businesses globally. Heat-related deaths in England and Wales is expected to more than triple to over 7,000 by the middle of the century.[20]

Overheating in cities can be mitigated if considered in the early stages of design, such as during the master planning process and during concept design. A number of design strategies can also be deployed during these stages. A report by ARUP[21] found that metropolitan hardscapes are the primary cause of the urban heat island effect. Concrete sidewalks, asphalt roadways, steel and glass façades and other solid surfaces radiate rather than absorb heat, contributing to the overall effect. Therefore, creating design guidelines that limit the use of these materials, providing shading where they are absolutely required, and incorporating green walls and façades can be a valuable master plan and building-wide design strategy.

Typical interventions to consider:

- outdoor shading in public spaces

- building shading strategies

- reflective or light exterior materials

- green building envelopes

- humidity control in high humidity areas

- humidification in dry environments.

30m distance
to drinking
water points
recommended by
the WELL Building
Standard

3.6 Water quality & provision

Inadequate fluid intake has been **associated with certain diseases**.[12, 22–24]

Water quality is also a **key concern**.

Ensuring access to high-quality drinking water in all building types and in public spaces has a vital role to play in public health. Adequate hydration levels can decrease the risk of some cancers and conditions such as coronary heart disease.[12, 22–24] The WELL Building Standard, for example, recommends locating drinking water points within 30m of all typically used spaces.[12]

The chemical composition of drinking water and its quality changes from city to city and within buildings due to the highly variable conditions of its sourcing, treatment and distribution.[25] Typical technologies able to capture contaminants include activated carbon filters, ion-exchange resins and reverse osmosis systems.[12]

Typical interventions to consider:

- water filtration

- outdoor drinking fountains

- indoor drinking points and bottle-refilling stations.

7–18% higher test scores for students in classrooms with more daylight

⊞ 3.7 Daylight

Studies have shown strong **links between better views, brighter light and optimised work performance**.[28]

Employees have perceived an **18% improvement in their performance** and performed 12% better in an objective experiment **when moving from a poorly lit to a well-lit office space.**[30]

Humans are extremely sensitive to light: under normal circumstances, increased light exposure late at night or in the early morning will shift our 24-hour body clock (circadian rhythm) forward, whereas exposure in the late afternoon or early night will shift it back.[26] Access to daylight in the built environment therefore has a significant role to play in maintaining a healthy circadian rhythm.

Reduced exposure to daylight has been linked to the onset of depression and impairment of cognitive function.[27] It is therefore pertinent to consider the design of our environments with both the impact of natural and artificial light in mind.

In classrooms, children with access to brighter, daylit rooms can have as much as 7–18% higher test scores across a school district.[29] Similar results were obtained in office environments.[30] Ensuring good access to daylight while also mitigating the potential for overheating remains an important design challenge in the current global climatic context.

Typical interventions to consider:

- increasing daylight with large openings (while balancing with overheating risk)

- skylights/roof lights

- shallow floor plans

- dual-aspect rooms

- light wells and courtyards.

24 hours in the body's natural clock (the circadian rhythm)

💡 3.8 Electric light

Reducing glare improves the **visual experience** of occupants in the space and **reduces the likelihood of associated health issues.**

Specifying **circadian lighting can** help to **support human circadian rhythms**.

Electric lighting, specifically its quality, can affect our circadian rhythm.

'Glare' is defined as excessive brightness, excessive brightness contrasts and excessive quantity of light; it has been associated with health issues ranging from visual discomfort and eye fatigue to headaches and migraines.[12]

'Flicker' has been associated with eye strain, headaches, migraines and epileptic seizures.[12]

Avoiding both issues and specifying high-quality lighting in buildings can help prevent a range of negative health outcomes for building occupants.

Equally, specifying circadian lighting, where appropriate, or dimmable lighting can also help to support human circadian rhythms, sleep health and productivity, and is particularly important in spaces without access to natural light.

Typical interventions to consider:

- reducing risk of flicker and glare

- colour rendering index (CRI) criteria to accurately represent colour

- circadian lighting systems

- balancing contrast and brightness for neurodiversity.

VOCs can have a wide range of negative health effects

 3.9 Building materials

Some **VOCs** (volatile organic chemicals) are **known or suspected carcinogens**.[31]

Newly installed furniture, insulation, flooring, and wet-applied products such as paints, adhesives, sealants and coatings can significantly introduce VOCs into living spaces for **approximately 1 to 2 years**.[32]

The use of building materials has the potential to impact human health in a number of ways. Not only is it important to avoid and remediate well-known toxic materials such as mercury, lead and asbestos in new buildings and refurbishments, but also to be aware of VOCs present in many modern building materials.

VOCs encompass a wide group of volatile substances of both natural and artificial origins, which can have a wide range of health effects from nose, eye and throat irritation, headaches and nausea to liver, kidney and central nervous system damage.[31]

While VOCs are present outside, buildings are a net source due to human activities, cleaning practices and emissions from materials. Avoiding this is paramount to supporting people's health in all building types globally, and a number of global certifications exist for low VOC products.

Typical interventions to consider:

- low or zero VOC paints, glues, sealants and finishes

- formaldehyde-free joinery and timber

- natural building materials.

IBOS is RICS' building management standard

3.10 Building management

Plan for **effective management in the early design stages**.

RICS' IBOS standard provides **a road map for operating assets in a holistic and comprehensive way**.

The importance of managing built assets in a way that supports human health cannot be overlooked.

In practice, this means planning for effective management in the early design stages, establishing good practices and protocols from building completion onwards, creating robust and transparent processes, and carrying out post-occupancy monitoring.

RICS' IBOS standard provides a road map for operating assets in a holistic and comprehensive way, which can also support health and well-being outcomes.

Typical interventions to consider:

- ongoing air quality monitoring

- replacement/maintenance of air and water filters

- regular cleaning of taps and mouthpieces

- visual checks for mould and damp

- post-occupancy surveys.

34% increased risk of heart attack, stroke and heart-related problems with every 5dB increase in noise levels

🔊 3.11 Sound

People living in areas with **high levels of traffic noise** are **25% more likely to develop depression** than those living in quieter areas.[33]

Designing **buildings that mitigate noise transfer** can particularly **support the health of neurodiverse population groups**.

Noise can be one of the most significant stressors on the body. The way in which we design buildings and mitigate exterior and interior noise can therefore have profound consequences on our health and well-being.

After adjusting for other factors that contribute to cardiovascular risk (including air pollution), it was found that every 5dB increase in the average 24-hour noise level was associated with a 34% increased risk of heart attack, stroke and other serious heart-related problems.[33]

Designing buildings that mitigate noise transfer, reverberation and vibration between spaces can reduce overall stress levels, some health risks, and support population health, particularly that of neurodiverse population groups who can be more impacted by noise issues.

Typical interventions to consider:

- reverberation mitigation
- acoustic boards and panels
- noise-absorbing materials
- exterior sound barriers
- sound masking.

45% of adults in England occasionally, sometimes or often feel lonely

👥 3.12 Social connectivity

Loneliness and social isolation have been **associated with an increased risk of high blood pressure**.[35]

In England alone, approximately **25 million people** feel occasionally, sometimes or often lonely.

Buildings and places that encourage social connectivity and a sense of community can significantly support people's mental and physical health.

Extensive research has been done on the health impact of loneliness in particular. Loneliness and social isolation have been associated with an increased risk of developing coronary heart disease and stroke[34] as well as greater risk of cognitive decline and dementia.[36] Surveys show that, in England alone, 45% of adults (approximately 25 million people) feel occasionally, sometimes or often lonely. Similar statistics are evident across many other global populations.

Creating built environments that encourage social interaction and programming them effectively to target vulnerable populations can help to alleviate some of the health issues caused by social isolation and loneliness.

Typical interventions to consider:

- free community spaces
- community events
- libraries of things
- time banking.

4 The role of health and well-being in ESG

A robust health and well-being strategy begins at the ESG level. In order to have a substantial impact, with clear and achievable health and well-being goals, this must be addressed at an organisation's strategic level.

Companies that focus on health and well-being and a robust ESG strategy have been shown to:

- perform better
- retain staff for longer and
- attract more investment.

Although health-led ESG drivers vary between organisations, their goals and outcomes are often similar. Research in 2022 by the International WELL Building Institute (IWBI) highlighted a range of drivers, including regulatory trends, investor demand and shifting consumer preferences (see Figure 2). ESG requirements remain one of the key drivers for organisations adopting healthy building strategies across the globe.

Investor demand (48.6%)

Shifting customer preferences (31.4%)

Employee demand (11.4%)

Regulatory trends (8.6%)
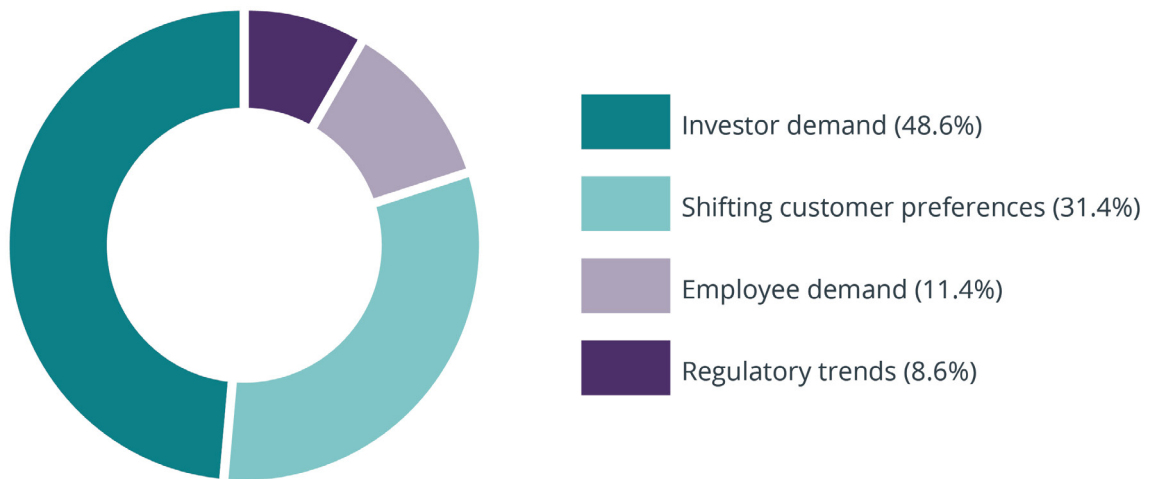
Figure 2: What is driving ESG priorities?
(Source: Based on the trademark of International WELL Building Institute, pbc, used here with permission)

'With a changing social, economic and environmental landscape, and a growing awareness of the ESG agenda, it is important for those with responsibility for property assets at all stages of the property life cycle to adopt a multidimensional and people-centric approach to assessing performance'. (RICS IBOS standard, 2022)

5 When should health and well-being be considered during construction?

There are pivotal moments throughout the design and construction process when health and well-being should be considered in order to generate the most impact and value. Understanding what to consider at each stage can facilitate strategic alignment and significantly better outcomes (see Table 1).

Strategic definition	**E.g. RIBA stage 0** Develop an ESG strategy with a clear health and well-being pillar. Identify a health and well-being project champion and project team member(s) to lead health and well-being initiatives and implementation. Identify project team responsibilities to comply with health and well-being brief guidelines, agreeing key targets and priorities to sit alongside the sustainability brief. Consider contractual requirements or incentives to comply with health and well-being briefs. Review certifications and mandate those required to be achieved or refer to internal health and well-being benchmarking.
Preparation & briefing	**E.g. RIBA stage 1** Review health and well-being brief alongside project brief and develop detailed project priorities and key milestones. Hold initial health and well-being workshops with all key stakeholders. Confirm commitment to relevant certifications or internal frameworks and ensure briefs reflect these.

Concept design	**E.g. RIBA stage 2**
	Develop the concept design in accordance with the agreed health and well-being design parameters (certifications or internal frameworks).
	Specific aspects to consider at this stage in relation to health and well-being include:
	• building orientation
	• spatial requirements
	• monitoring and evaluation systems
	• technical design.
	Develop preliminary project scorecards or trackers to use in the decision-making matrix agreed in initial workshops.
	Highlight and agree further roles and responsibilities for health and well-being and agree deliverables against framework and project plan.
Spatial coordination	**E.g. RIBA stage 3**
	Refine the design elements relating to health and well-being.
	Ensure that all certification or internal framework requirements are assigned correctly to each design team member and that core prerequisites in the brief are being incorporated.
	Input health and well-being ROI metrics into key cost plans and value exercises.
Technical design	**E.g. RIBA stage 4**
	Update project scorecards or internal frameworks with the latest design developments and ensure mandatory and optional requirements are being met for each target (whether internal standard or third-party certification).
	Ensure contractor tenders and requirements have been aligned with and guaranteed for compliance with health targets and won't be subject to value engineering.
	Input critical items into risk register and manage key responsibilities during design process.

Manufacturing & construction	**E.g. RIBA stage 5** Identify and liaise with individuals responsible for quality checks in the contractor team. Update project scorecards and internal trackers with any changes to the design, substitutions and products, where required, checking for compliance to health goals. Ensure contractor and supply chain understanding of health and well-being requirements, commissioning requirements and documentation (if required by third-party verification).
Handover	**E.g. RIBA stage 6** Close out and review the final construction information and documentation relating to health and well-being. Carry out any required performance testing. Ensure the building user is fully briefed or trained in relation to key health and well-being aspects and understands the systems in use. Follow up with any certification procedures or internal reporting evidence. Implement staff policies and management protocols.
In use	**E.g. RIBA stage 7** Ensure the healthy maintenance of the building, and that any technical monitoring and post-occupancy evaluation is diarised. Ensure the building management team are aware of and record any health and well-being related data required. Begin post-occupancy monitoring and reviews in relation to health and well-being.
Evaluation & ongoing management	**E.g. IBOS** Carry out post-occupancy monitoring and reviews in relation to health and well-being. Integrate with RICS' IBOS standard reporting guidelines. Implement changes as required to ensure health and well-being goals are being met.

Table 1: Health and well-being considerations during design and construction

5.1 Independent certifications

Many global health and well-being certifications have emerged in recent years to offer independent third-party verification. These vary from standards entirely focused on health and well-being, whether in a comprehensive framework or in relation to a specific aspect such as air quality or materials, to those that incorporate health as part of wider issues such as sustainability. A summary of the major global certifications is outlined in Figure 3 in relation to the level of health features considered.

"

'There are now an array of certification strategies available that can optimize buildings['] health, safety and wellbeing. This is particularly important given the pivotal role the built environment now plays in regards to the environmental and social health of society ... Ultimately, all of these certifications are helping to make the invisible visible especially when it comes to health, wellbeing, safety and air quality'. (GRESB, How certification standards provide practical pathways to safety, health and well-being in our office buildings, 2021)

"

'Health and well-being has entered the forefront of forward-thinking companies' agendas ... Organisations have realised that designing for health is pivotal to their success. As a result, the adoption of global standards has grown. As one of the first companies founded globally to solely focus on this discipline, [Ekkist has] seen the change first hand ... Certifications provide a common language that is credible and clear, they help mitigate risk and future-proof buildings against occupier trends, support organisations with frameworks for transparency and accountability, and provide results. They create healthier and happier people and places and add tangible social and economic value'. (Olga Turner Baker, Ekkist)

"

'Buildings impact our productivity, the climate, our environment and well-being. They are the backbone of successful local economies and communities. We must take a broader approach to decision-making in the way we use property'. (Paul Bagust, Head of Property Standards, RICS)

Corporate-scale certifications

WELL at scale (portfolio/enterprise)

WELL Equity Rating

B Corp

GRESB

Workplace Wellbeing Charter

Master plan-scale certifications

WELL Community Standard

BREEAM communities

Building-scale certifications

WELL Building Standard v2

Active Design guidelines

Home Quality Mark

Fitwel

LEED v4.1

BREEAM

NABERS

WELL Health-Safety rating

ActiveScore

PassivHaus

Living Building Challenge

Discipline-specific certifications

Product health declarations (e.g. Global Green Tag, Declare Label)

Cradle to Cradle Certification

QuietMark

AirScore

RESET

Standards key:

Predominantly health-focused

Largely health-focused

Some elements consider health

Contains small health reference

Figure 3: Certifications including health and well-being considerations (© *Ekkist, reproduced with permission*)

The design, delivery and management of healthy buildings

5.2 Global adoption of certifications

Figure 4 highlights global adoption of the two leading international health and well-being certifications, WELL and Fitwel. Adoption has risen rapidly over the last seven years and is likely to grow further as the emphasis on ESG grows.

Number of certified buildings

	2000+
	1001–2000
	501–1000
	201–500
	101–200
	51–100
	21–50
	0–20
	No data/none

Canada 1,990
USA 20,760
Mexico 1,232
Brazil 53
France 95
UK 186
Poland 124
Spain 104
UAE 765
India 287
China 1,181
Japan 139
Thailand 53
Australia 250

Figure 4: Global adoption of WELL and Fitwel certifications *(Map created with mapchart.net)*

The design, delivery and management of healthy buildings

6 Next steps for organisations

Creating and maintaining healthy buildings requires a multifaceted approach, with extensive collaboration across all built environment professions. However, organisations can follow a clear road map, outlined in this document and summarised in Figure 5, to create meaningful progress in this vital aspect of ESG.
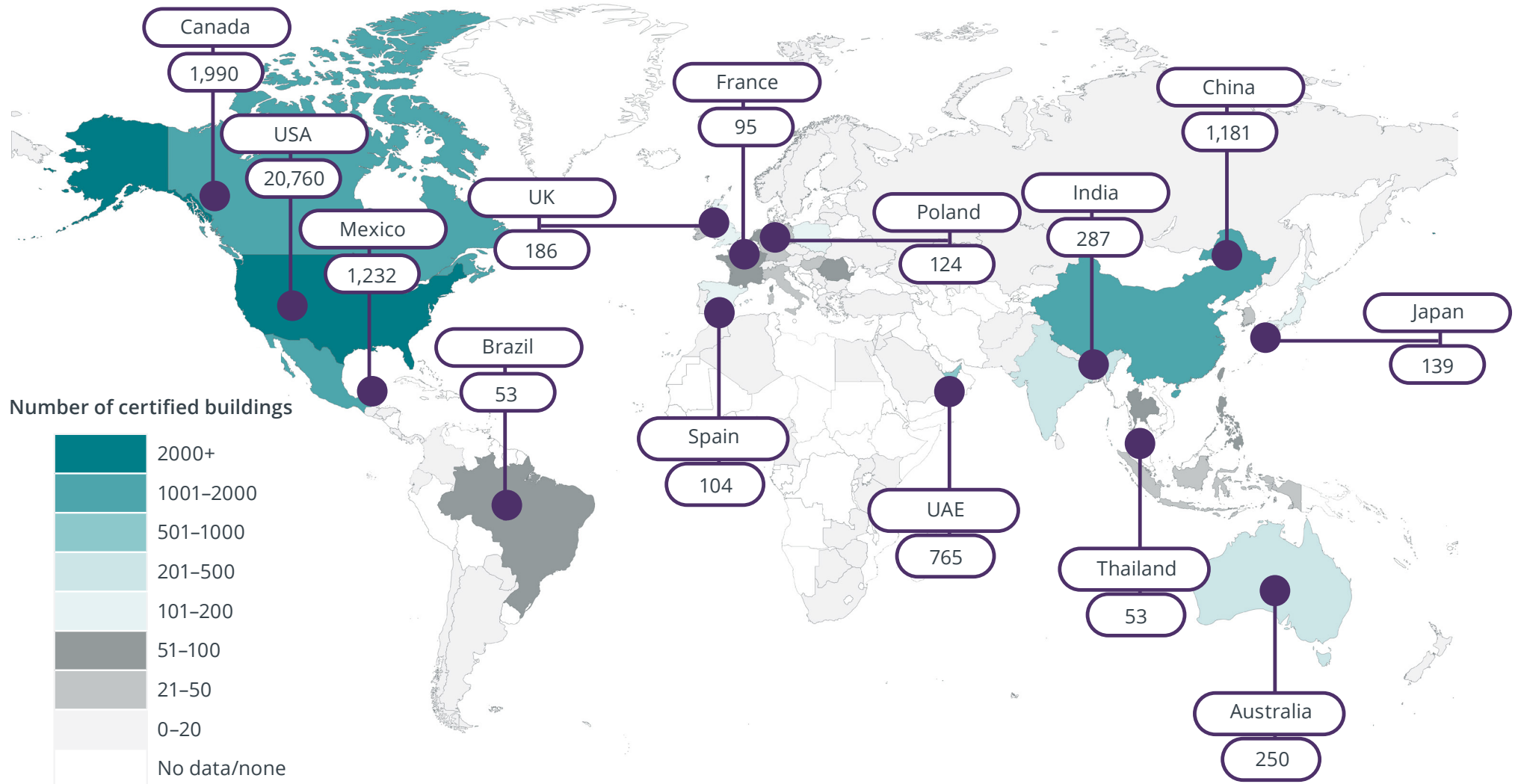
Each organisation's journey will vary and will be influenced by local contexts and individual strategies; however, the critical path remains consistent.

Appoint health and well-being champion internally

Coordinate internal goal-setting workshop or appoint expert third party to lead initiative

Draw up health and well-being pillar or chapters under company-wide ESG strategy

Define health and well-being interventions in development briefs, design guides and operations guidance

Brief design teams and future operations teams on key requirements and how to acheive and record them

Monitor delivery of health and well-being strategy, ensuring all goals are being met

Certify or review schemes against health and well-being targets

Carry out post-occupancy monitoring and reporting, adopting lessons learned

Figure 5: Road map to healthy buildings

6.1 Closing remarks

This is a period of dynamic and unprecedented change.

RICS professionals are key to the ongoing creation, retrofitting and reinvigorating of 'places', delivering confidence to clients, employers and employees alike.

Across the world, millions of people will be relying on the expertise of property professionals to ensure that the buildings they use on a daily basis are healthy environments, while organisations will also be relying on the same people to provide productive environments with well-being at their heart.

Paul Bagust, Head of Property Standards at RICS

7 Resources

7.1 Certifications

- ActiveScore
- AirRated
- BREEAM
- Cradle to Cradle
- Fitwel
- Home Quality Mark
- LEED
- Living Building Challenge
- NABERS
- Passivhaus
- RESET
- WELL Building Standard and Well Community Standard

7.2 Health and well-being frameworks

- Ekkist Design for Well-being Framework
- Lifetime Homes
- NHS, Healthy urban planning checklist
- Quality of Life Framework (Quality of Life Foundation)
- RICS, IBOS standard
- UKGBC, Health, wellbeing & productivity in offices
- UN Sustainable Development Goals
- World Green Building Council Health and Wellbeing Framework

7.3 ESG reporting

- Carbon Disclosure Project (CDP)
- Global Real Estate Sustainability Benchmark (GRESB)
- Global Reporting Initiative (GRI)
- Integrated Reporting (IR)
- Principles for Responsible Investment (PRI)
- Sustainability Accounting Standards Board (SASB).

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We are RICS. Everything we do is designed to effect positive change in the built and natural environments. Through our respected global standards, leading professional progression and our trusted data and insight, we promote and enforce the highest professional standards in the development and management of land, real estate, construction and infrastructure. Our work with others provides a foundation for confident markets, pioneers better places to live and work and is a force for positive social impact.

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