Understanding WELL Performance Testing and Verification

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Summary

- Performance-based verification confirms that buildings support real occupant health and well-being, not just design intent.
- WELL Certification focuses on measurable indoor environmental quality across air, water, lighting, acoustics and thermal comfort.
- Independent on-site testing is a core requirement of WELL Certification and recertification processes.
- Third-party verification helps identify operational gaps early and provides credible evidence for certification and ongoing building performance.
- Accurate testing and verification improve transparency, occupant confidence and long-term building resilience.

Global attention on healthy, resilient and human-centric buildings is accelerating, and building owners are increasingly required to demonstrate, with data, that indoor environments genuinely support occupant health and well-being. Performance-based standards like the WELL Building Standard respond to this shift by coupling design intent with rigorous, third-party on-site testing of real operating conditions. For organisations in Hong Kong and the region, WELL has become a key benchmark for health-focused buildings, reshaping expectations around indoor environmental performance, transparency and independent verification.

WELL is useful because it translates broad health goals into measurable building conditions. Rather than relying only on design documents, it checks whether the occupied space actually performs as intended for air, water, light, sound and thermal comfort.

WELL Standard introduction

The WELL Building Standard, now most commonly implemented as WELL v2, is a global, performance-based framework for designing, operating and certifying buildings that support human health and well-being. It is administered by the International WELL Building Institute (IWBI) and certified through Green Business Certification Inc. (GBCI), with requirements organised around measurable outcomes rather than purely prescriptive design rules. WELL v2 builds on the earlier WELL v1 approach and expands the certification structure into concepts such as Air, Water, Light, Thermal Comfort, Sound, Materials, Mind, Community and Movement.

A defining feature of WELL is performance verification. After design and construction, a trained WELL Performance Testing Agent performs on-site testing and visual inspections to confirm that measured indoor conditions meet WELL's health-based criteria. The WELL Performance Verification Guidebook standardises test methods, sampling strategies, measurement equipment requirements and reporting expectations, so results are comparable across markets and project types.

When performance testing is required

For WELL v2 certification, performance testing is required wherever a feature uses a performance-test verification pathway. In other words, projects cannot substitute self-collected measurements for these features unless the specific feature explicitly allows another method such as sensor data or documentation-based evidence. This is why performance testing is a core part of WELL certification, not an optional add-on.

For WELL Ratings and recertification, on-site testing is also required for features that specify performance testing, and results must be submitted during the relevant review cycle. Some WELL Ratings features allow sensor data instead of performance testing, but that exception applies only where the standard explicitly permits it. In practical terms, any project pursuing WELL through the performance-test route needs to plan early for an approved Performance

Testing Provider, especially when the project seeks certification, renewal or portfolio-wide consistency.

Why verification matters

WELL performance testing is important because it checks real environmental conditions, not just design intent. Buildings can look compliant on paper while still failing in operation due to poor maintenance, user behaviour, system drift or unanticipated site conditions. Third-party testing reduces this gap by giving project teams and reviewers objective evidence that the building is performing as expected.

A robust verification process delivers several benefits. It provides proof that health-focused strategies, such as filtration, water treatment, lighting controls or acoustic treatments, are functioning properly under normal use. It also identifies performance gaps early, allowing targeted corrective action before certification or renewal decisions are made. Just as important, it creates a repeatable evidence base that can support portfolio benchmarking and ongoing building operations.

Technical focus areas

Air quality

Indoor air quality is one of the most scrutinised WELL areas because it has a direct link to respiratory health, comfort and cognitive performance. WELL performance testing may include formaldehyde, volatile organic compounds, PM2.5, PM10 and ozone, depending on the feature requirements and project conditions. Testing is usually conducted at representative locations under normal operating conditions so the results reflect actual occupant exposure.

Technical accuracy matters here because pollutant levels can be influenced by ventilation rates, filtration, outdoor air infiltration and indoor source control. A good testing programme therefore does more than take a reading; it confirms that the building’s air delivery and control strategy work in practice.

Water quality

Water quality verification typically involves point-of-use sampling and laboratory analysis for microbiological and chemical indicators. Common parameters include coliforms, turbidity and disinfectant-related factors, depending on the WELL feature being pursued. Sampling must be handled carefully, because improper collection or transport can affect results and create uncertainty.

This part of WELL is especially relevant in buildings with central treatment systems, long pipe runs or variable local supply conditions. Testing confirms that the water actually available to occupants meets the expected quality threshold and that the building’s treatment or distribution systems are working properly.

Thermal comfort

Thermal comfort verification checks whether occupants are likely to experience stable, acceptable conditions in normal use. Measurements commonly include dry-bulb temperature, mean radiant temperature and relative humidity, with results interpreted against comfort models such as PMV and related indices. These variables help show whether HVAC systems are balanced and operating as intended across occupied zones.

This is a practical area because thermal complaints often come from localised issues rather than a single building-wide fault. WELL testing can reveal uneven temperature distribution, control instability or settings that are technically acceptable but uncomfortable in use.

Acoustics

Acoustic performance is central to concentration, privacy and stress reduction in workplaces and public buildings. WELL verification commonly covers background noise, reverberation time and sound insulation, depending on the feature and space type. The aim is not only to reduce excessive noise but also to make spaces usable for speech, focus and rest.

Acoustic testing needs proper equipment, calibrated procedures and careful site interpretation because results can vary significantly between rooms and occupancy states. In open-plan offices or mixed-use buildings, this kind of testing helps identify whether the acoustic design is actually performing as intended.

Lighting

Lighting performance in WELL extends beyond simple brightness. It may include visual lighting checks, circadian-related metrics and other measurements that confirm the space supports both task performance and occupant well-being. The key idea is that light should be measured in the occupied environment, not assumed from design specifications alone.

This makes lighting verification especially relevant for buildings that use daylighting strategies, automated controls or layered lighting systems. WELL testing helps confirm that the system delivers useful light levels while supporting visual comfort and, where relevant, circadian intent.

Role in certification

Within the WELL certification process, performance testing sits between documentation review and final verification. The project team first submits design and policy documentation, then the on-site performance tests confirm whether the building meets the operational criteria required for certification. If measurements fail to meet the threshold, the project may need corrective action and retesting before certification can proceed.

The Performance Testing Provider is therefore the independent technical party that turns WELL from a document-based system into an evidence-based one. It coordinates sampling, executes tests, maintains quality control and submits results through the correct WELL

workflow. This role is critical because WELL certification depends not only on what was designed, but on what the building actually delivers in use.

CMA Testing's role

CMA Testing is officially accredited as a WELL Performance Testing Provider through IWBI and GBCI. This means CMA Testing is authorised to conduct the on-site performance verification required for projects pursuing WELL Certification, supported by a team that includes WELL APs and WELL Performance Testing Agents. As a result, CMA Testing can help projects complete the technical verification stage in a way that is aligned with WELL's quality and independence requirements.

In practice, CMA Testing's role is to provide the technical testing backbone of the certification process. That includes air, water, thermal comfort, acoustics and lighting measurements, along with the documentation and quality controls needed for GBCI review. Its contribution is best understood as independent assurance: helping project teams demonstrate, with credible evidence, that the building's health-focused design is working in real life.