

GLOSSARY | Engineering Building Services

ABCB	Australian Building Codes Board - is a joint initiative of all levels of Australian Government including State/Territory Ministers and representatives from the building industry, responsible for building regulatory matters. ABCB
ABGR	Australian Building Greenhouse Rating - ABGR is now known as NABERS. See “ NABERS ”.
Air Tightness Testing	See “ Building Air Leakage Test ”
AIRAH	Australian Institute of Refrigeration, Air Conditioning and Heating - an organisation aiming to minimise the environmental footprint of their sector through communication, education and encouraging better practice. AIRAH
As-built	As-built, ‘as-installed’ or ‘work as executed’ refers to the properties of a project as actually constructed, defined by final drawings, specifications, manuals and operating instructions after completion.
ASHRAE	American Society of Heating, Refrigeration & Air-Conditioning - an American based international organisation, its mission is to advance heating, ventilation, air conditioning and refrigeration to serve humanity and promote a sustainable world through research, standards writing, publishing and continuing education. ASHRAE
ATTMA	Air Tightness Testing and Measurement Association - a professional association dedicated to promoting technical excellence and commercial effectiveness in all air tightness testing and air leakage measurement applications. ATTMA is a part of the BINDT (British Institute of Non-destructive Testing). BINDT
BCA	Building Code of Australia - a national performance based building code, produced and maintained by the Australian Building Codes Board (ABCB) on behalf of the Australian Government and State and Territory Governments. ABCB
Blackwater	Sewage; wastewater from toilets.



BMC	Building Management Committee - a group established by and representing the building owner and tenant(s), which meets quarterly. The committee measures and monitors building utilities performance, and takes all reasonable measures to achieve or exceed energy and water use targets and other building operational benchmarks.
BMCS	Building Monitoring and Control System - a Building Management System. See “BMS”
BMS	Building Management System - A BMS can be set to automatically control, monitor and optimise multiple building services systems to pre-determined load requirements, providing safe and efficient operation of equipment.
BSRIA	Building Services Research and Information Association - a UK consultancy, test, instruments and research organisation who provide specialist services for construction, building services and facilities management. BSRIA
Building Air Leakage Test	A Building Air Leakage Test (or BELT; Building <i>Envelope</i> Leakage Test) checks the air tightness of a building. Finding and correcting air “leaks” assists with a building’s energy efficiency, cost effectiveness and comfort.
Building Services	The range of electrical , mechanical/HVAC , hydraulic , fire and control systems and equipment that perform particular functions to service a building and its occupants.
C-Bus	An automated control system suitable for lighting and power control, which is capable of integrating with a Building Management System (BMS) to provide security, door access, lift control and HVAC control.
Carbon Footprint	The total set of greenhouse gas (GHG) emissions caused by an organization, event or product. It is often expressed in terms of the amount of carbon dioxide (CO ₂), or its equivalent of other GHGs, emitted.
CIBSE	Chartered Institution of Building Services Engineers - an international professional body for the building services profession, based in the UK. CIBSE
Commissioning	Commissioning is the quality assurance process that ensures a building has been built to its design intent and (that together with its services) operates in the correct, safest and most energy efficient way possible. Commissioning should take place from the design stage to a minimum of one year after construction has been completed.
Commissioning Agent	A commissioning agent is the entity specifically engaged to manage the commissioning of building services . Preferably, this agent should be an independent party appointed during the design stages of the project and retained on behalf of the building owner at the point of handover.
Commissioning Plan	The commissioning plan is a document prepared for each project that describes all aspects of the commissioning process, including schedules, responsibilities, documentation requirements, and functional performance test requirements. The level of detail depends on the scope of commissioning specified.



Commissioning & Interface Meeting	Commissioning & Interface Meetings serve to bring contractors and consultants together, allowing a forum for clarity of expectations and allocation of accountability during the commissioning period.
Control System	A Building Management System - See " BMS "
Cx	Commissioning (USA abbreviation)
DALI	Digital Addressable Lighting Interface - A network-based system which employs digital technology to control lighting in buildings. Via a single interface, DALI covers all light sources and lighting controllers.
DLP	Defects Liability Period - the specified period in which contractors must rectify faults, omissions and any items that do not perform to the design intent. This period is stated in the contract and immediately follows the date of practical completion (building handover).
Defects List	A list of building flaws or design mistakes that may reduce the value of a property, absorb extra maintenance or causes a dangerous condition. Some defects may be obvious (such as water seepage), but many are less obvious and do not become apparent until years after a building was constructed. (Phoenix can provide this under service as part of Witness Testing)
Electrical Services	Building Services covering incoming power from the street to its distribution throughout a building. These services may include; sub-stations, transformers, generators, lighting, special lighting, general power, UPS (Uninterruptible Power Supply) systems, emergency lighting and exit signs, data, security, switchboards, communications, electrical controls (such as BMS , C-Bus and DALI) and reticulation systems.
ESD	Environmentally or Ecologically Sustainable Development - Developments which use, conserve and enhance the community's resources so that ecological processes are maintained, and the total quality of life can be increased for today and future generations.
Final Commissioning Report	The document prepared during the handover phase of the commissioning process, after all functional performance tests have been completed. It includes but is not limited to a summary, building description, the completed commissioning plan and documentation generated during commissioning such as witness tests .
Fire Services	Building Services intended to protect people and property in the event of a fire. Fire services can be automated or manual including; fire hose reels, smoke and fire zones and compartmentation of building(s).
Gap Management	Outlining and managing Consultants/Client/Contractor Expectations. (Phoenix offer this under service as part of Risk Analysis)
GBCA	Green Building Council of Australia - a national, not-for-profit organisation that seeks a sustainable property industry for Australia, by encouraging the adoption of green building practices. GBCA



Green Building	A building which incorporates design, construction and operational practices that significantly reduce or eliminate its negative impact on its occupants and the environment.
Green Star	A national, voluntary environmental rating system that evaluates the environmental design and/or construction of buildings. The system is set and run by the Green Building Council of Australia . GBCA See also  “The Difference between Green Star and NABERS”
Green Star Tool	A scheme outlining criteria and related credits to achieve Green Star ratings. Green Star ratings are available in a number of categories (office, retail, healthcare, education, multi-unit residential, industrial and office interiors) and a Green Star Tool exists for each of these categories. A Green Star Technical Manual supports each Tool, detailing information necessary to submit, evaluate and achieve Green Star ratings. GBCA
Greywater	Wastewater from bathing, hand washing or cleaning that may be recycled for use elsewhere. Greywater may be directly diverted for outdoor use such as irrigation, or filtered in varying stages for cleaning or flushing toilets.
HVAC	Heating, Ventilation & Air Conditioning - the mechanical systems within a building which produce and control thermal comfort and air quality.
Hydraulic Services	Building Services concerned with the flow and conveyance of fluids, particularly water, including; sanitary fixtures and plumbing, hot and cold water, gas, thermostatic mixing valves, water treatment (rainwater, filtration, greywater), sewer (blackwater), hose reels and hydrants.
ICA	Independent Commissioning Agent - an independent, unbiased party who oversees and checks the commissioning (witness testing) of building services including electrical, mechanical/HVAC, hydraulic, fire and control systems.
Intelligent Control System	An application for (or extension of) a Building Management System (BMS) that has the capacity to learn the behaviour of its benefactors, project their requirements and control building services accordingly.
Mechanical Services	Building Services which are driven by mechanisms, including; heating, ventilation, air conditioning, fans, pumps, plant rooms and automated control systems (such as a BMS).
Metering System	A system designed to measure the supply rate of one or more utilities such as water, gas and electricity.



NABERS	<p>National Australian Built Environment Rating System - a national performance-based rating system for existing buildings managed by the NSW Department of Environment, Climate Change and Water. NABERS rates a building on the basis of its measured operational impacts on the environment (in areas such as energy, water, waste and indoor environment), and provides a simple benchmark against peers and neighbours. <i>Note: NABERS was once referred to as “ABGR”.</i> NABERS</p> <p>See also  “The Difference between Green Star and NABERS”</p>
O&M Manual	<p>Operations & Maintenance Manual - a technical set of documents that clearly outline how to best operate and maintain each building service within a particular property. Content is provided for each service by the contractor and includes as-built drawings and day-to-day activities necessary for systems and equipment to perform their intended function.</p>
PCA	<p>Property Council Australia - a body representing the property community, those who use land or invest in the built environment to generate economic returns. The PCA presents Australia's nine governments (and 600+ local councils) with plans for ongoing reform. PCA</p>
PFC	<p>Power Factor Correction - a technique of counteracting the undesirable effects of electric loads, helping businesses maximise energy use by reducing waste. PFC is a measure between 0 and 1, where 1 means a business or building is making the most effective use of its power.</p>
PUE	<p>Power Usage Effectiveness - a measure of just how power-efficient a computer data centre is. Developed by the Uptime Institute, the PUE concept measures 1.0 watt being delivered out to IT equipment against the energy (PUE) going in to the data centre. For example a PUE of 2.8 means that where 1.0 watt is being delivered out to IT equipment, 2.8 watts must be fed in to the data centre. (Phoenix offer this service)</p>
Refurbishment	<p>The remodelling and renovation of an existing building, usually including the recommissioning or upgrade of building services. (Phoenix offer a Recommissioning Management service)</p>
Renewable Energy	<p>Energy obtained from sources that are indefinitely sustainable. These sources include wind, sunlight, water, geothermal heat and biomass (living organisms derived from wood, waste, gas and alcohol).</p>
SDC	<p>Services During Construction - services performed during a projects construction phase such as Inspections, Building Services Engineering Management, Fire Tests and Operations and Maintenance Manuals. (Phoenix offer a range of these services)</p>
Sick Building Syndrome	<p>A range of symptoms attributed to a poorly designed and/or maintained building and building services, such as headache, lethargy, nausea, dizziness, lack of concentration, irritability and skin/eye/nose irritations.</p>
Solar heat load	<p>Heat produced by the sun, which enters a building and creates pressure on thermal comfort within that building.</p>



SWMS	Safe Work Method Statement - a step by step procedure for actioning a high risk task, which states risks for each job step and what is required to manage each risk safely. National Safety Council of Australia
Vertical Transportation	A type of Building Service that transports people within a building, such as; lifts, escalators, travelators and dumbwaiters.
VOC	Volatile Organic Compound - organic chemical compounds with significant vapour pressures that can affect the environment and human health.
Witness Testing	Witness Testing is the process of witnessing (checking with one's own eyes) that a contractor can undoubtedly prove their installed service operates correctly to all specifications of the design intent. (Phoenix offer this service)

Acknowledgements:

This glossary serves to allow a basic understanding of some standard terms often used in our industry, and has been compiled with information gained via the following organisations:

Phoenix would like to thank; the Property Council of Australia (PCA) glossary (www.yourbuilding.org).

Phoenix also thank providers of sites to which we have included links in our glossary; Australian Building Codes Board (ABCB), American Society of Heating, Refrigeration & Air-Conditioning (ASHRAE), British Institute of Non-destructive Testing (BINDT), Building Services Research and Information Association (BSRIA), Chartered Institution of Building Services Engineers (CIBSE), Green Building Council of Australia (GBCA), National Australian Built Environment Rating System (NABERS) and National Safety Council of Australia (NSCA).

Should you wish for terms to be added or clarified, please let us know via info@phoenixengineering.net.au.