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24 INTERNATIONAL BUILT SECTOR STANDARDS

24.1 GENERAL

24.1.1 Scope

- 1 The purpose of this part is to provide further recommended details on the definitions and use of international built sector standards within the Contract.
- 2 Compliance with this Part would be as specified in the Contract or as instructed by the Engineer.
- 3 Related Sections and Parts are as follows:

This Section
Part 01 Introduction

24.1.2 References

- 1 The following standards are referred to in this part and further details on both the international standards and the Coalition are contained on the websites shown below:
- 2 International Construction Measurement Standard (ICMS) - www.icms-coalition.org/

ICMS User Guide – www.rics.org/icmsexplained

International Property Measurement Standards (IPMS) - www.ipmsc.org/

International Ethical Standards (IESC) - <https://ies-coalition.org/>

24.1.3 Definitions

- 1 For the purpose of this Part, some of the key definitions in relations to the international built sector standards are shown below and further details are obtained in the standards, which can be accessed via the above websites.
- 2 **ICMS Definitions:** ICMS aims to provide a global consistency in classifying, defining, analysing and reporting construction costs on a project, regional, national and international level and apply to buildings, infrastructure and built assets.

Further ICMS definitions are contained on the ICMS website <https://icms-coalition.org/>

ICMS User Guide is available for download: <http://www.rics.org/us/knowledge/professional-guidance/international-standards/icms-international-construction-measurement-standards/>

- (a) **Associated Capital Costs:** The costs associated with project realisation, from inception to putting the Project into use, and which are not part of the Capital Construction Costs.

- (b) **Capital Construction Costs:** Expenditure on labour, materials, plant, equipment, site and head office overheads and profit, including taxes and levies, incurred as a direct result of the construction intervention. It is the total price payable for work normally included in contracts to construct a building or civil engineering works, including any supplies by the Client for the Constructor to fix. It also includes all temporary works required to undertake the construction works.
- (c) **Client:** The entity that procures or provides site, commissions and pays Service Providers and Constructors to design and construct a Project on the site including, in some cases, funding, operating and maintaining the Project, and pays all other Associated Capital Costs.
- (d) **Constructor:** Organisation commissioned and paid by a Client to construct or implement the construction of a Project or part thereof including, in some cases, providing funding, design, management, maintenance and operation services.
- (e) **Cost Category:** A division of Project or Sub-Project costs into Capital Construction Costs and Associated Capital Costs currently, with further divisions for costs-in-use in the future editions of the Standard.
- (f) **Cost Group:** A division of costs under a Cost Category into a small number of broad groups to enable easy estimation or extraction of cost data for quick high-level comparison by design discipline or common purpose.
- (g) **Cost Sub-Group:** A division of costs under a Cost Group according to their functions or common purposes irrespective of their design, specification, materials or construction to enable the costs of alternatives serving the same function or common purpose to be compared, evaluated and selected.
- (h) **Project:** A Constructed Asset or group of Constructed Assets with a single purpose or common purposes commissioned by a Client, or group of Clients, with a defined start and end date. A Project may comprise a number of Sub-Projects.
- (i) **Project Attributes:** The principal characteristics of a Project or Sub-Project relating to time, cost, scope of works, design, quality, quantity, procurement, location and other contextual features that might impact its cost.
- (j) **Project Quantities:** The physical quantities (numbers, lengths, areas, volumes and weights), functional quantities (capacities, inputs, outputs) and degree of repetition required to be captured in the Project Attributes and Project Values such that the costs of different projects or design schemes can be converted to a unit cost per the desired Project Quantity for evaluation and comparison. Both are required for each Project or Sub-Project.
- (k) **Project Values:** A standard set of descriptions and/or measurements for each of the Project Attributes.
- (l) **Service Provider:** Any organisation or individual providing construction advice, or a service, to a Client including, but not limited to, project managers, architects, engineers, technical architects or engineers, surveyors, Cost Management Professionals, constructors, facilities managers, planners, valuers, property managers, asset managers, agents and brokers.
- (m) **Sub-Project:** A sub-division of a Project that can be described by a single set of attributes and values.
- (n) **Total Capital Cost:** The total of Capital Construction Costs and Associated Capital Costs for a Project or Sub-Project.

- 3 **IPMS Definitions:** Further IPMS definitions are contained on the within the IPMS. www.ipmsc.org/
- (a) **Building:** An independent Structure forming part of a Property.
 - (b) **Coalition:** The Trustees of IPMS, comprising not-for-profit organisations, each with a public interest mandate.
 - (c) **Component:** One of the main elements into which the Floor Area of a Building can be divided.
 - (d) **Component Area:** The total Floor Area attributed to one of the Components.
 - (e) **Covered Area:** The extent of the area of a Building covered by one or more roofs and the perimeter of which is sometimes referred to as the drip line, being the outermost permanent structural extension, exclusive of ornamental overhangs.
 - (f) **External Wall:** The enclosing element of a Building, including windows and walls that separates the exterior area from the interior area.
 - (g) **Finished Surface:** The wall surface directly above the horizontal wall-floor junction, ignoring skirting boards, cable trunking, heating and cooling units, and pipework.
 - (h) **Floor Area:** The area of a normally horizontal, permanent, load-bearing structure for each level of a Building.
 - (i) **IDF (Internal Dominant Face) Wall Section:** The extent of each section of an External Wall where the inside surface area of each part of a window, wall or other external construction features varies from the inside surface area of the adjoining window, wall or external construction feature, ignoring the existence of any columns.
 - (j) **Internal Dominant Face (IDF):** The inside surface area comprising more than 50% of the floor to ceiling height for each IDF Wall Section. If such does not occur, then the Finished Surface is deemed to be the IDF.
 - (k) **Temporary Structure:** A physical element within a Building installed on an interim or permanent basis, the removal of which would not damage the physical integrity of the Building.
- 4 **IESC Definitions:** Further IESC definitions are contained on the within the IPMS. www.ipmsc.org/
- (a) **Client:** A person or group using the services of a practitioner working under the professional requirements of organisations within the IESC.
 - (b) **Practitioner:** A person qualified and practising under the auspices of one or more of the IESC professional organisations.
 - (c) **Stakeholder:** A person or group indirectly affected by a service performed by a practitioner for a client.
 - (d) **Third Party:** An involved person or group directly affected by a service performed by a practitioner for a client.

24.2 USE OF INTERNATIONAL STANDARDS

24.2.1 International Construction Measurement Standard (ICMS) - (an over-arching cost classification standard)

- 1 ICMS was formed by a Coalition of not for profit organisations with the purpose of providing global consistency in classifying, defining, analysing and presenting construction costs at a project, regional, state, national or international level.
- 2 ICMS is used to analyse and compare historic, present and future costs of new build and Major Refurbishment programmes and projects for both Buildings and Infrastructure.
- 3 Applications include, but are not limited to:
 - (a) global investment decisions
 - (b) international, national, regional or state cost comparisons
 - (c) feasibility studies and development appraisals
 - (d) project work including cost planning and control, cost analysis, cost modelling and the procurement and analysis of tenders
 - (e) dispute resolution work
 - (f) reinstatement costs for the purpose of insurance; and
 - (g) valuation of assets and liabilities.
- 4 ICMS offers a framework against which costs can be classified, measured, recorded, analysed and presented. The hierarchical framework has four levels:
 - (a) Level 1: Project or Sub-Project
 - (b) Level 2: Cost Category
 - (c) Level 3: Cost Group
 - (d) Level 4: Cost Sub-Group
- 5 The composition of Levels 2 and 3 is the same for all Projects and Sub-Projects, although discretion is allowed in the contents of Level 4.
- 6 ICMS provides definitions, scope, attributes and values, units of measurement and explanatory notes for each type of Project. It provides guidance on:
 - (a) how the Standard is to be used
 - (b) the level of detail to be included
 - (c) the method of dealing with Projects comprising different Sub-Projects; and
 - (d) the approach to be taken to ensure that like is compared with like, especially taking into account different currencies and time frames.

24.2.2 International Property Measurement Standards (IPMS)

- 1 The International Property Measurement Standards (IPMS), has been formed by a Coalition of not for profit organisations with the purpose of providing global consistency in the measurement and classification of building floor areas.

- 2 IPMS defines what is to be measured in a building and the measurement parameters. IPMS does not dictate how measurements are to be obtained. The appropriate IPMS building class (such as office, residential, industrial, retail) to be used should be chosen according to the current or proposed designed function of the Building or part of a Building being measured. IPMS can be used for any purpose agreed between Users, Service Providers and Third Parties. IPMS can interface with existing measurement standards by providing a common measurement language.
- 3 IPMS comprises the following three main measurement standards, though IPMS 3 is subject to some variation between Building Classes (Office, Residential, Industrial and Retail);
 - (a) IPMS 1
 - (b) IPMS 2
 - (c) IPMS 3
- 4 The Engineer would recommend practitioners to use either IPMS 1 or 2. Further details in relation to the use and definition of these standards are shown below and more detailed information on measurement practice and other matters can be obtained by accessing IPMS website www.ipmsc.org.
 - (a) **IPMS 1:** used for measuring the area of a Building including External Walls. These measurements can be used for numerous purposes including planning purposes and calculating or the summary costing of development proposals and construction.

Definition: IPMS 1: The total of the areas of each floor level of a Buildings measured to the outer perimeter of External Walls, Sheltered Areas and Balconies. The definition for IPMS 1 is the same for all classes of Building and in many markets, but not universally, this is known as Gross External Area (GEA). However, users should note that, depending on the market and the definition used, there may be some variation between GEA and IPMS 1.
 - (b) **IPMS 2:** used for measuring the interior boundary area of a Building. These measurements can be used for numerous purposes including providing data on the use of space, for benchmarking, marketing and calculating or the summary costing of development proposals and construction.

Definition: : IPMS 2: The total of the areas of each floor level of an Industrial Building measured to the Internal Dominant Face (IDF) of External Walls and Balconies and to the Finished Surface of other walls. In many markets, but not universally, this is similar to Gross Internal Area. However, users should note that, depending on the market and the definition used, there may be some variation between GIA and IPMS 2.

24.2.3 International Ethical Standards (IES)

- 1 The International Ethical Standards has been formed by a Coalition of not for profit organisations with the purpose of creating a universal set of ethics principles for real estate and built environment professions.
- 2 The ethical principles below are listed in alphabetical order and are considered to be of equal importance. If two or more principles come into conflict during an assignment, the practitioner should give precedence to the principle that best serves the public interest in the context of the particular circumstances. The public interest embraces but is not limited to:

- (a) the maintenance of reliable services for clients,
- (b) sustaining proper standards of conduct and behaviour, and
- (c) upholding the reputation of the profession.

3 Ethical Principles

- (a) **Accountability:** Practitioners shall take full responsibility for the services they provide; shall recognise and respect client, third party and stakeholder rights and interests; and shall give due attention to social and environmental considerations throughout.
- (b) **Confidentiality:** Practitioners shall not disclose any confidential or proprietary information without prior permission, unless such disclosure is required by applicable laws or regulations.
- (c) **Conflict of interest:** Practitioners shall make any and all appropriate disclosures in a timely manner before and during the performance of a service. If, after disclosure, a conflict cannot be removed or mitigated, the practitioner shall withdraw from the matter unless the parties affected mutually agree that the practitioner should properly continue.
- (d) **Financial Responsibility:** Practitioners shall be truthful, transparent and trustworthy in all their financial dealings.
- (e) **Integrity:** Practitioners shall act with honesty and fairness and shall base their professional advice on relevant, valid and objective evidence.
- (f) **Lawfulness:** Practitioners shall observe the legal requirements applicable to their discipline for the jurisdictions in which they practise, together with any applicable international laws.
- (g) **Reflection:** Practitioners shall regularly reflect on the standards for their discipline, and shall continually evaluate the services they provide to ensure that their practice is consistent with evolving ethical principles and professional standards.
- (h) **Standard of Service:** Practitioners shall only provide services for which they are competent and qualified; shall ensure that any employees or associates assisting in the provision of services have the necessary competence to do so; and shall provide reliable professional leadership for their colleagues or teams.
- (i) **Transparency:** Practitioners shall be open and accessible; shall not mislead or attempt to mislead; shall not misinform or withhold information as regards products or terms of service; and shall present relevant documentary or other material in plain and intelligible language.
- (j) **Trust:** Practitioners shall uphold their responsibility to promote the reputation of their profession and shall recognise that their practice and conduct bears upon the maintenance of public trust and confidence in the IESC professional organisations and the professions they represent.

END OF PART