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in the earlier editions of the contract which confines such claims only to situations where "artificial obstructions" are encountered.

adverse possession *n.* The occupation of land by a person who has no lawful title to it and which occupation has not been challenged by the person who has legal title to do so. When this state of occupation continues for a certain period, the title of the true owner is extinguished by operation of law. Adverse possession has now been eliminated from registered land in Singapore under the Land Titles Act (Cap 157).

adverse weather conditions *n.* Describes weather conditions which are unfavourable to the carrying out of construction work. It is arguable that adverse weather conditions constitute part of the risks which are within the reasonable contemplation of a contractor and that in terms of risk allocation, a contractor should only be entitled to relief in the event that the adverse weather conditions are of an exceptional magnitude. Thus, Clause 25.4.2 of the Joint Contracts Tribunal Standard Form of Building Contract provides for time to be extended only in respect of "*exceptionally* adverse weather conditions". In Singapore it is common to encounter provisions in the Specification or other contract document which regulates claims for extension of time on account of adverse weather conditions by referencing the events encountered to rainfall averages maintained on the island's meteorological stations and to consider whether the occurrence of the subject adverse conditions both seasonal and annual could have been reasonably expected over the contract period. In some of the earlier standard forms,[88] the amount of time extension granted is further limited to the net effect overall of any exceptionally beneficial conditions as well as the immediate effect of individual instances of exceptionally adverse conditions.

A/E *n.* Abbreviation for Architect/Engineer, usually in relation to the role of these professionals in the administration of a construction contract.

affidavit *n.* A sworn written statement made by a person which is tendered in a court or before an arbitrator as evidence of the facts stated therein. For the purpose of court proceedings, the person making the affidavit is required to swear or affirm before a commissioner for oaths that the contents of the affidavit are true to the best of his knowledge. In arbitrations, an arbitrator may allow an affidavit to be affirmed before the tribunal.

88 See, for example, Clause 23 of the 1st and 2nd editions of the Singapore Institute of Architects Standard Form of Building Contract but these strictures have been dropped in subsequent editions of the standard form.

affirm *v.* **1.** As an alternative to an oath, a solemn pronouncement to tell the truth when making an affidavit or giving evidence in court or arbitration. Unlike an oath, there is no divine appeal to witness the truth of the statement. Affirmation has the same legal effect as the taking of an oath.

2. To confirm a legal ruling or decision, usually by an appellate court in respect of a judgment of a lower court or other tribunal.

affirmation of contract *n.* An election to abide by the terms of a contract when the subject contract could have been rescinded for misrepresentation or other cause (i.e. in the case of a voidable contract) or when the contract could have been discharged by reason of repudiation or breach of contract. Affirmation is only effective when the party who affirms did so with full knowledge of the facts. In the case of a breach of contract, the innocent party may be taken to have affirmed the contract if he takes no action to assert his right to rescind after a sufficient lapse of time.

a fortiori [Latin expression] All the more or a stronger case.

agency *n.* The relationship between a person who is appointed ("the agent") to act for another ("the principal"). An agent may be authorised, for example, to accept payment on behalf of the principal or to execute a contract on behalf of the principal. Thus, an architect may sign a letter on behalf of the building owner to award a building contract to a builder. In the latter situation, the architect by virtue of his position as an agent is not the party to the contract and consequently he is not liable under the contract or entitled to the benefit of the contract. "The contract is the contract of the principal, not that of the agent, and *prima facie* at common law the only person who can sue is the principal and the only person who can be sued is the principal."[89] Thus, an agent is generally expected to disclose that he is acting as agent and this may be effected simply by stating that the act is being done on behalf of the principal. If an agent deals with a party without disclosing the principal, the agent runs the risk that he may be personally liable on the contract.[90] The principal may not be entitled to the benefit of or be liable under the subject contract if it is shown that the other party intends to contract with the agent personally. A principal is bound by the acts of the agent to the extent that the acts of the agent were authorised and were transacted on behalf of the principal.

89 *Montgomerie v United Kingdom Steamship Association* [1891] 1 QB 370 at 372, *per* Wright J. See also *Chiah Huat Foodstuffs & Packaging (suing as a firm) v Ng Bin Hua (formerly Tjun Fong Enterprise)* [1993] 1 SLR 626.

90 *N & J Vlassopulos Ltd v Ney Shipping Ltd, the Santa Carina* [1977] 1 Lloyd's Rep 478.

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agent *n.* A person who is authorised to act on behalf of another called the principal. See AGENCY.

aggravated damages *n.* A species of damages intended as additional compensation where the injury caused to a plaintiff has been exacerbated by the conduct of the defendant. Aggravated damages were first recognised as a separate category of damages in *Rookes v Barnard* (1964)[91] where Lord Devlin considered that these damages may be awarded where the manner in which the wrong was inflicted was such as to injure the plaintiff's dignity, or resulted in his humiliation, distress, insult or pain.[92] Similarly, in *Broome v Cassell* (1972),[93] the House of Lords considered that the award of these damages may properly take into account the degree of mental distress, injury to feelings, insult, indignity, humiliation caused on the plaintiff.[94] These authorities suggest two basic conditions for an award of aggravated damages:

(a) the existence of exceptional conduct on the part of the defendant in committing the wrong and following the commission of the wrong; and

(b) the infliction of mental distress on the plaintiff.[95] See DAMAGES.

aggravation *n.* Conduct or circumstances which are considered to contribute to the seriousness of a wrong or breach.

aggregate *n.* **1.** Inert materials, usually sand, stone and gravel, which are bound together into a matrix with cement to form concrete, mortar or plaster.

2. Crushed rock or gravel screened to size and applied to form a base layer for road construction and prepared to receive a wearing course of concrete or bituminous material.

agreed award *n.* An arbitration award which is in substance a settlement between the parties of their dispute but issued in the form of an award by the tribunal to which the dispute had been earlier submitted. See ARBITRATION AWARD.

agreed damages *n.* A predetermined amount stipulated in a contract to be payable to an aggrieved party by a defaulting party in the event of a specified breach. See LIQUIDATED DAMAGES.

91 [1964] AC 1129.
92 [1964] AC 1129 at paras 1221,1233 and 1226.
93 [1972] AC 1027.
94 [1972] AC 1027 at 1085, 1089, 1121 and 1124.
95 See *Appleton v Garrett* [1996] PIQR 1, 4 (Dyson J) and *Ministry of Defence v Meredith* [1995] IRLR 539.

all inclusive price principle *n.* Principle enshrined in Article 5 of the Singapore Institute of Architects (SIA) Standard Form (9th Ed, 2010) providing that the contract price or contract sum is deemed to include for all ancillary and other works and expenditure whether separately or specifically mentioned in the contract documents or not so long as these are either:

(a) indispensably necessary to carry out and bring to completion the works; or

(b) may contingently become necessary to overcome difficulties before completion. The principle was introduced by I N Duncan Wallace QC when he drafted the original the SIA Standard Form to address the incidence of "standard method of measurement" claims exemplified by the English decisions in *Bryant & Sons Ltd v Birmingham Hospital Saturday Fund* (1938)[96] and *AE Farr Ltd v Ministry of Transport* (1965).[97] Although Wallace intended that the principle applies to both lump sum and measurement versions of the SIA Standard Form, it is clear that the scope for the operation of the principle is probably more limited in the case of the measurement version of the contract. In the latter version, the view taken by Wallace is that the prices in the bills should be taken to be "genuinely inclusive of all work, whether described or not in the Bills, necessary to complete the work shown in the Drawings and described in the Specification".[98]

all risks insurance *n.* See CONTRACTOR'S ALL RISKS POLICY.

alliance contracting *n.* Refers to a contracting arrangement requiring parties to work together in good faith and integrity and where decisions are made in primarily the interest of the project. The arrangement envisaged is a project managed jointly by the parties through a project team staffed by personnel from both parties. This arrangement is used principally for large, complex and high-risk projects where the risks cannot be specifically defined and the cost of transferring such risks is prohibitive. One of the advantages is that it enables the project owner to pool its skills and expertise with those of the contractor from which to provide a more informed basis for the design process and the selection of the construction method for the project.

alluvium *n.* Sand, clay, silt or other soil material deposited by river or flood.

96 [1938] 1 All ER 503.
97 [1965] House of Lords (unreported).
98 Comments on clause 13, *Guidance Notes to the SIA Contract*.

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alteration *n.* A change made to a legal document such as a contract which may affect its validity. See AMENDMENT.

alteration works *n.* Works undertaken to modify the appearance, layout or structure of a building. May be undertaken as part of an adaptation programme. See ADAPTATION.

alternative design *n.* Term used in the construction procurement process to describe a design prepared and offered by the contractor as an alternative to the design of the project which has been prepared by the owner's consultants and forms the basis of the original tender invitation. Usually, an alternative design is developed to take into account the advantages afforded by the tendering contractor's resources and expertise, and concerns principally the structural or engineering aspects of a building or facility (rather than the architectural form), and this, in turn, translates into a more attractive tender price.

alternative dispute resolution *n.* The Glossary of the English Civil Procedure Rules defines this term as a "collective description of methods of resolving disputes otherwise than through the normal trial process". Although it might be thought that the expression is sufficiently broad to embrace arbitration, mediation, neutral evaluation and mini-trials, in practice it is sometimes understood to refer only to some form of mediation by a third party: *Halsey v The Milton Keynes General NHS Trust* (2004).[99]

ambiguity *n.* Uncertainty in meaning or intention, usually in relation to provisions in a contract document or a statute. A *latent ambiguity* is an ambiguity which is not evident on the face of the document but becomes apparent when the particular provision is applied or when this is construed in relation to some other document. A *patent ambiguity* is an ambiguity which is readily evident on the face of the document. The courts will attempt to resolve ambiguities by applying the various rules of construction or interpretation. See CONSTRUCTION; CONTRA-PROFERENTEM; INTERPRETATION OF CONTRACTS.

ambush *n.* Term used where a construction claim is launched unexpectedly in circumstances which are designed to make it difficult for the other party to mount an effective response or challenge. In the context of statutory adjudication, the term refers to the exploitation by a claimant of the fast track features of the adjudication process prescribed under the Building and Construction Industry Security of Payment Act ("SOP Act")[100] to

99 [2004] EWCA Civ 576.
100 (Cap 30B, 2006 Rev Ed).

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surprise the respondent with an unmanageable volume of claim material and particulars in the payment claim. While the claimant can afford to spend a considerable amount of time to plan, prepare and time the making of the claim, the respondent is disadvantaged by the fact that under the SOP Act, he has at most 21 days to issue a payment response. In *CIB Properties Ltd v Birse Construction* (2004),[101] the claimant had been secretly preparing for adjudication while giving the false impression that they were prepared to negotiate a settlement. At the relevant time, they served a claim set out in 53 files and then filed a further 55 files during the course of adjudication. The court held that such conduct on the part of the claimant did not necessarily render the resulting adjudication unfair.[102]

amendment *n.* A formal revision to a statute, pleading, order, statement or document. In the case of an amendment to a pleading, this will either require the consent of all the other parties or the leave of the tribunal. Amendments may be necessary where there have been further developments since the pleading or statement was first filed or they may be necessary to rectify errors.

amendment plan *n.* Plan which is submitted to the Commissioner of Building Control showing any deviation from, or any amendment or addition to, any plan of building works previously approved by the Commissioner of Building Control under section 6(2) of the Building Control Act.[103]

amenity, loss of *n.* part of an award in damages for injury or illness to compensate for the loss of comfort, convenience and quality of life and usually determined from a consideration of the age of the injured, the nature and extent of his injuries and his personal circumstances.

amiable compositeur *n.* Term used in alternative dispute resolution to refer to a tribunal appointed with wide discretionary powers to decide disputes in accordance with any system of law or principles of equity and good conscience.[104] On one view, an *amiable compositeur* may adjust the effects of a contract or fill in any gaps or disregard express terms in order to arrive at a just and equitable result which would not be possible on a strict application of the law.[105] The term

101 [2004] EWHC 2365, TCC.
102 See also *London and Amsterdam Properties Ltd v Waterman Partnership Ltd* [2004] BLR 179.
103 (Cap 29, 1999 Ed).
104 *Halsbury's Laws of Singapore* Vol 2 (2003 Reissue), para 20.115.
105 See *Societe Intrafor Cpolor et Subtec Middle East Coc / MM J-C Gagnant, S Guilbert, G Lay, A L'homme* (Cour d'Appel de Paris, I re Ch suppl) (1985) 2 J Int Arb 105 cited in *Halsbury's Laws of Singapore* Vol 2 (2003 Reissue), para 20.115.

amiable composition is also associated with the expression *ex aequo et bono*.

ANFO *n.* Abbreviation for ammonium nitrate in fuel oil, an explosive used for the blasting of rock during the course of excavation. ANFO is considered generally to be more economical and easier to handle than dynamite and is preferred over plain ammonium nitrate because it is a liquid and may be easily poured into a blast hole.

animus differendi [Latin expression] An intention to obtain a delay.

animus quo [Latin expression] The motive (in relation to an act).

***Anns* principle** *n.* The principle arising from the House of Lords decision in *Anns v Merton London Borough Council* (1978)[106] which together with a trilogy of earlier cases previously decided by the House of Lords[107] laid down the basis for the recovery of economic loss in tort under a two stage test: "First, one has to ask whether, as between the alleged wrongdoer and the person who has suffered damage there is a sufficient relationship of proximity or neighbourhood such that, in the reasonable contemplation of the former, carelessness on his part may be likely to cause damage to the latter in which case a *prima facie* duty of care arises. Secondly, if the first question is answered affirmatively, it is necessary to consider whether there are any considerations which ought to negative, or to reduce or limit the scope of the duty or the class of person to whom it is owed or the damages to which a breach of it may give rise…"[108] The two-stage test propounded by Lord Wilberforce was followed subsequently by the House of Lords in *Junior Books Ltd v Veitchi Co Ltd* (1983).[109]

The *Anns* principle and the ensuing line of decisions which followed it were applied largely to claims arising from defective premises. The premise for recovery depends on whether it could be shown, in a particular situation, that there exists between the parties a sufficient degree of proximity of relationship giving rise to the requisite duty of care. Despite the wide terms used in the formulation of the principle by Lord Wilberforce, it was always thought that the scope of liability is not unlimited. In May 1990 the *Anns* decision was overruled by a specially convened House of Lords of seven judges in *Murphy v Brentwood District Council* (1990).[110] However, this did not prevent the *Anns* principle from being followed by

106 [1978] AC 728.
107 These were *Donoghue v Stevenson* [1932] AC 562; *Hedley Byrne & Co. Ltd v Heller & Partners Ltd* [1964] AC 465; *Home Office v Dorset Yacht Co. Ltd* [1970] AC 104.
108 [1978] AC 728 at 751–752.
109 [1983] AC 520; [1982] 3 WLR 477; [1982] 3 All ER 201, HL.
110 [1990] 2 All ER 908; [1990] 3 WLR 414, HL.

the High Court in Australia in *Bryan v Maloney* (1995)[111] and by the courts in Singapore in *RSP Architects, Planners & Engineers v Ocean Front Pte Ltd* (1996)[112] ("*Ocean Front*") and *RSP Architects, Planners & Engineers v MCST Plan No. 1075* (1999)[113] ("*Eastern Lagoon*"). In *Ocean Front*, the Singapore Court of Appeal held that there was a sufficient degree of proximity between the developers and the management corporation of a residential condominium which gives rise to a duty on the part of the developers to take care to avoid causing to the management corporation the kind of damage sustained by them.

There is some uncertainty as to whether the application of *Anns* to claims for economic loss in respect of building defects are confined to the special circumstances surrounding residential buildings. In *Man B&W Diesel S E Asia Pte and Another v PT Bumi International Tankers and Another Appeal* (2004),[114] the Court of Appeal declined from making an explicit ruling on this issue, made it clear that the premise of liability from the *Ocean Front* and *Eastern Lagoon* line of cases should be narrowly interpreted. However, in *MCST Plan No. 2757 v Lee Mow Woo (p/u the firm of Engineering Partnership)* (2011),[115] the High Court appeared to extend liability for economic loss arising from negligence to defects in an industrial development.

anodising *n.* The process of applying a natural oxide layer on metal surfaces. Anodising increases a component's resistance to corrosion and improves the adhesion of the surface for the application of paint primers. It is, therefore, used extensively for the application of decorative coatings on metal.

anticipatory breach of contract *n.* A breach of contract which suggests that the defaulting party does not intend to fulfil its obligations under a contract. It has been suggested that the term is "a little misleading" since, at first sight, it seems illogical to admit that a contract can be capable of breach before the time for its performance has arrived.[116] The premise is that a promisee has "an inchoate right to the performance of the bargain, which becomes complete when the time for performance has arrived. In the meantime, he has a right to have the contract kept open as a subsisting and effective contract": *per* Cockburn CJ in *Frost v Knight* (1872).[117] Thus, the promisee, while awaiting performance, is entitled to assume that

111 (1995) 128 ALR 163.
112 [1996] 1 SLR 113; 1 CLC 460, CA.
113 [1999] 2 SLR 449.
114 [2004] SGCA 8.
115 [2011] SGHC 112.
116 Andrew Phang, *Cheshire, Fifoot and Furmston's Law of Contract*, 2nd Singapore & Malaysia Ed (Butterworths Asia, 1998), p 892.
117 (1872) LR 7 Ex 111 at 114.

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contract under seal may be distinguished from a simple contract which is not required to be in any particular form so long as it is shown to have arisen from the agreement of the parties and is supported by consideration. See CONSIDERATION; DEED.

contractor *n.* **1.** The party who is responsible for executing any construction work pursuant to a construction contract entered with another party.

2. A generic term referring to a general contractor or main contractor as opposed to a sub-contractor or specialist contractor. A general contractor is responsible for planning the works, engaging sub-contractors, purchasing components and materials, hiring labour and the management of all the activities necessary for the completion of the works. See EXPERIENCED CONTRACTOR.

contractor-owned, contractor-operated (COCO) *n.* One of the variants of a Public Private Partnership (PPP) procurement model under which the ownership of the land and facility resides with the private sector contractor for the duration of the PPP contract. This version of PPP is particularly suitable where:

(a) the facility to be constructed is not dedicated to serving the government or public sector agency but is intended to also serve other constituencies, e.g. the private sector; or

(b) the government or public sector agency intends to only use the asset for a portion of its life. See PUBLIC PRIVATE PARTNERSHIP.

contractor's all risks policy *n.* Frequently abbreviated as a "CAR policy", this is a category of insurance policies characterised by an extensive coverage of the parties involved in a construction project as well as the risks associated with property and the carrying out of the works. However, there is no agreed standard form in the industry for these policies. "Policies all bearing the title 'Contractors' All Risks Insurance' vary considerably in their terms", *per* Sir Godfray Le Quesne QC in *Cementation Piling Foundations Ltd v Aegon Ltd* (1993).[156] In some cases, the cover of these policies may extend to the owner's architects, engineers and other consultants. In *Petrofina v Magnaload* (1984),[157] a CAR policy, issued in favour of the owner, contractor and sub-contractors, purported to cover not only the works but also "temporary works or constructional plant belonging to the insured or for which they are responsible". The court held that the policy was sufficiently wide to apply to an accident involving a sub-sub-contractor whose plant had collapsed and caused considerable damage to other work and plant.

156 [1993] 1 Lloyd's Rep 526.
157 [1984] QB 127.

Contractor's Proposals *n.* A term used in design and build contracts to refer to the documents prepared by the Contractor in response to the project requirements as specified by the Employer. In the Real Estate Developers Association of Singapore (REDAS) Design and Build Form, the list of documents forming the Contractor's Proposals are required to be listed in Appendix 3 annexed to the Form.[158] It is intended to be read with the document entitled "Employer's Requirements" and may include:

(a) qualifications or amendments of any of the terms of the Contract or matters stated in the Employer's Requirements;

(b) assumptions on which the Contract Sum is calculated;

(c) premise on which the Contract Period is scheduled;

(d) statement of the method and sequence of construction and systems of temporary works; and

(e) alternative specifications for certain items of the Works.

The Contractor's Proposals form part of the contract between the Employer and the Contractor. See EMPLOYER'S REQUIREMENTS.

contribution *n.* The amount paid by each of the parties in respect of loss or damage for which the parties are found to be jointly liable. Thus, if a plaintiff recovers damages from one defendant, the defendant may require a contribution from each of the other co-defendants.

contributory negligence *n.* In an action in negligence, this is a defence which alleges that the plaintiff's carelessness had contributed to the aggravation of the damage or loss suffered. Section 3(1) of the Contributory Negligence and Personal Injuries Act[159] provides that where any person suffers damage as the result partly of his own fault and partly of the fault of any other person, a claim in respect of that damage is not to be defeated by reason of the fault of the person suffering the damage, but the damages recoverable in respect thereof are to be reduced to such extent as the court thinks just and equitable having regard to the claimant's share in the responsibility for the damage. To sustain this defence, the defendant has to show that the plaintiff's negligence was a cause of the harm suffered regardless as to whether the plaintiff had the last opportunity of avoiding the mischief: *Froom v Butcher* (1976).[160]

control joints *n.* Joints provided in a structure to accommodate dimensional changes of the structure arising from temperature or moisture variations or other causes in order to avoid the build-up of stresses. To prevent water penetration, these joints are normally

158 Clause 1.1.13 of the REDAS Design and Build Form (3rd Ed, 2010).
159 (Cap 54, 1989 Ed).
160 [1976] QB 286, CA; *Owens v Brimmell* [1977] QB 859.

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provided with rubber or PVC waterstops and treated with appropriate sealants.

convenience clause *n.* A provision in a contract which entitles one or both parties to terminate the contract without offering any reason or proof of breach. The terms under which such a clause may be exercised varies but usually the party invoking the clause is obliged to compensate the other party for any loss or damage suffered thereby. Such a provision may bee invoked where commercial circumstances under which the original contract was executed have changed or where the working relationship between parties in that particular contract has deteriorated. An example is Clause 32(1) of the Singapore Institute of Architects Standard Form of Building Contract (9th Ed, 2010) which provides for the employer to terminate the employment of the building contractor and for the contractor to be compensated for all loss and damage suffered thereby, including loss of profit.

conversion *n.* **1.** Term used to denote a notional change in the legal character of one class of property (e.g. land) into another (e.g. money). Thus, where real property is sold, the interest of those entitled to the property converts from an interest in the real property to an interest in the money received and their interest is said to convert from that of realty into personalty.

2. A tort which involves the wrongful dealing with a person's goods in a manner which seeks to usurp his rights as owner.[161] This includes the unlawful taking of possession of another's goods or the wrongful disposal of such goods[162] or their destruction. Thus, theft is a form of conversion. It is no defence that the person dealing with the goods unlawfully did so innocently. In *Erect Scaffolding Pte Ltd v Hor Kew Pte Ltd* (2007),[163] a case of conversion involving metal scaffolding, it was held that the measure of damages for the tort would be a "reasonable sum for hire during the period of detention", calculated on the basis of "the rate that the plaintiff could have fetched in a situation where he is renting out a similar quantity of scaffolding in similar circumstances."

conveyance *n.* An instrument or deed which transfers land or any interest in land from one person to another, and includes a mortgage, charge and lease.

corroboration *n.* The adducing of evidence intended to support or confirm the accuracy of evidence of a material particular. "The

161 *Bromley v Coxwell* (1801) 2 Bos & P 438; *Ashby v Tolhurst* (1937) 2 KB 242.
162 In such a situation, both the seller and the buyer are liable to be sued: *Mulliner v Florence* (1878) 3 QBD 484, CA; *Moorgate Mercantile Co Ltd v Twitchings* [1977] AC 890.
163 [2007] SGHC 160.

purpose of corroboration is not to give validity or credence to evidence which is deficient or suspect or incredible but only to confirm and support that which as evidence is sufficient and satisfactory and credible and corroborative evidence will only fill its role if it is itself completely credible", *per* Lord Morris of Borth-y-Gest in *Director of Public Prosecutions v Hester* (1973).[164] However, the courts have also considered that "the accumulation of pieces of evidence, each of which by itself is not admissible as corroborative evidence, can amount in whole to corroboration."[165]

cost *n.* In construction contracts, synonym for expenditure as in the sum of money expended for the execution of work or the supply of goods and services. Where the term is used in relation to construction work, it is usually understood to include sums expended on labour, materials, plant and site overheads. In contrast to "price", the term "cost" should not include an element for profit.

cost engineer *n.* A professional encountered in the construction industry in the United States whose main function is to prepare estimates and tenders for a construction project. A cost engineer is an approximate equivalent of the quantity surveyor in the United Kingdom and Singapore. An important difference is that the quantity surveyor carries out a wider spectrum of contract administration duties such as the evaluation of claims and the preparation of final accounts. The cost engineer in the United States is, in most cases, the employee of the general contractor and is likely to have a background in civil engineering or architecture. See QUANTITY SURVEYOR.

cost of capital *n.* Term encountered in corporate finance to refer to the weighted rate of return expected by various parties financing a company. This is determined from: (a) the return expected by a bondholder which is the market interest rate on the debt; and (b) the return expected by a shareholder consisting of the dividends and capital gains of the stock, adjusted for risk. The weights used to combine these rates of return are the proportions that each of these sources of capital contributes to the financing of the company. The cost of capital is used as a hurdle rate which investments, for example, a building project, must yield in order to be permitted to proceed.

cost of repair *n.* A basis for assessing the quantum of damages arising from building defects. The general rule is that a defendant in a building defects case is prima facie liable on a cost of repair basis: *Radford v De Froberville* (1977);[166] *William Cory Ltd v Wingate*

164 [1973] AC 296 at 315.
165 *Thames v Jones* [1921] 1 KB 22 at 48, *per* Atkin LJ.
166 [1977] 1 WLR 1262.

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Investments Ltd (1978).[167] However, where it appears that the cost of putting the defect right is out of all proportion to the advantage which the repair would confer on the plaintiff or where the rebuilding of the defective part would confer little or no economic benefit on the plaintiff, the courts may assess damages on the basis of the diminution in value to the building arising from the defective work: *Jacobs & Youngs v Kent* (1921);[168] *Calabar Properties Ltd v Stitcher* (1984);[169] *G W Atkins v Scott* (1996).[170] See also DIMINUTION IN VALUE.

cost of termination certificate *n.* A certificate issued jointly by the architect and the quantity surveyor under Clause 32(8)(e) and (f) of the Singapore Institute of Architects Standard Form of Building Contract (9th Ed, 2010) (SIA Standard Form) stating the amount incurred by the employer in completing the works following the termination of the contractor's employment. This certificate is issued after arrangements have been made by the employer for the completion of the works and the architect or quantity surveyor is able to "make a reasonably accurate assessment of the ultimate cost" to the employer of completing the works. The certificate is required to state separately:

(a) the final contract sum, after allowing for variations or other matters which would under the terms of the contract require an adjustment of the original contract sum (except damages for delay);

(b) the sums previously paid by the employer to the contractor;

(c) sums paid by the employer to any sub-contractor or supplier in the exercise of his powers to make such payments under paragraph (c) of the same clause; and

(d) any other costs or expenditure reasonably incurred or to be incurred by the employer in completing the works.

Unlike the majority of certificates issued under the SIA Standard Form, the Cost of Termination Certificate does not enjoy temporary finality and, hence, it is not binding on the parties pending final judgment of the court or award by the arbitrator.

cost plus contract *n.* A construction contract where the contractor is paid the total cost of carrying out the works plus a stipulated fee or profit margin which is expressed as a percentage of total cost. These contracts are used largely for situations where the extent and nature of the work could not be properly ascertained at the outset

167 (1978) 248 EG 687; (1981) 17 BLR 109.
168 (1921) 129 NE 889.
169 [1984] 1 WLR 287.
170 (1996) 46 Con LR 14.

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of the project. An obvious disadvantage to the owner is that the contractor is not incentivised to achieve economies in construction. This difficulty may be reduced to some extent by introducing some limitation on the fee and, in particular, to exclude from the definition of total cost any additional expenditure occasioned by the contractor's default or error. Cost plus contracts should be distinguished from the traditional contract situation where the price or contract sum is either fixed by reference to work as described in the drawings ("fixed price" or "all inclusive price" contract[171]) or by the measurement and valuation of work as it is finally done ("measure and value" contract or contracts based on bills of quantities).

costs *n.* In legal procedure and arbitration, refers to sums paid to reimburse a successful party for expenses incurred in respect of legal services. Costs may be described as *contentious* where they arise from litigious matters and *non-contentious* if they relate to non-litigious matters. In civil matters, the courts or arbitrator has wide discretion in awarding costs but the general principle is "costs follow the event", that is, the successful party is entitled to be paid costs by the unsuccessful party. Generally, costs will be ordered on a *standard basis* (also called *party and party basis*), that is, the unsuccessful party pays a reasonable sum in respect of all costs which were necessarily and properly incurred by the successful party in enforcing or defending his rights. A tribunal may also award costs on one of the other bases:

(a) the common fund basis which covers the costs of all steps reasonably taken by a sensible solicitor in the interests of the client and is more generous than the party and party basis;

(b) the solicitor and client basis, where costs are awarded except in so far as they are of an unreasonable amount or unreasonably incurred; or

(c) the indemnity basis, where all costs are allowed except those unreasonably incurred or of an unreasonable amount and in construing these exceptions, the party who is entitled to costs is given the benefit of the doubt.[172]

However, costs on an indemnity basis or solicitor and client basis are only ordered in the presence of exceptional circumstances. In *Barlett v Barclays Trust (No. 2)* (1980),[173] Brightman LJ said: "It is not, I think, the policy of the courts in hostile litigation is to give the successful party an indemnity against the expense to which he has

171 *Williams v Fitzmaurcie* (1858) 3 H & N 844; 32 LT (OS) 149; *Sharpe v San Paulo Railway* (1873) LR 8 Ch App 597.
172 *E M I Records Ltd v Ian Cameron Wallace Ltd* [1982] 2 All ER 980.
173 [1980] 1 Ch 515.

been put and, therefore, to compensate him for the loss which he has inevitably suffered, save in very special cases."

counsel *n.* Refers to a lawyer in his role as an advocate, that is, in presenting and arguing the case of his client before a tribunal, as opposed to a lawyer who is employed as a solicitor.

counter-offer *n.* A response to an offer which adds to or amends the terms of the original offer. A counter-offer does not constitute an acceptance of the original offer. Instead, it operates as a rejection of the terms of the original offer: *Hyde v Wrench* (1840).[174] Thus, where a contractor submits an offer to undertake work at a certain price and the employer purports to accept the proposal but states in the acceptance letter that the price is to be reduced, the supposed acceptance letter is a counter-offer and has the effect of extinguishing the original offer. Whether a particular response amounts to a counter-offer or a request for clarification or information is a question of fact: *Stevenson v McLean* (1880).[175] See BATTLE OF THE FORMS.

counterclaim *n.* A claim made by a defendant in civil proceedings which asserts an independent cause of action against the plaintiff and may be pleaded together with the other defences to the plaintiff's claim which the defendant may have. By instituting a counterclaim, the defendant does not have to bring a separate action. A counterclaim has to be separately pleaded and the plaintiff is entitled to serve a defence to a counterclaim. For the purpose of the Limitation Act, a counterclaim is considered to have commenced on the same date as the primary action against which the counterclaim is pleaded.[176] See PLEADINGS.

course *n.* Term used in the masonry trade to describe a horizontal layer of brickwork or blockwork along the length of a wall or panel.

course of dealing *n.* A pattern of conduct between two or more parties established over a period of time or a series of transactions and which is cited to demonstrate the manner by which the same parties would conduct themselves in their transactional relationship. Thus, the conduct of the parties in another contract may be cited as evidence of the terms on which they are likely to deal with each other in a particular contract.[177]

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174 (1840) 3 Beav 334. See *Fiscal Consultants Pte Ltd v Asia Commercial Finance Ltd* [1980–1981] SLR (NS) 55; *Hong Kong and Shanghai Banking Corporation v San's Rent-A-Car Pte Ltd t/a San's Tours and Car Rentals* [1994] 3 SLR 593, CA.

175 (1880) 5 QBD 346. See also *Gibson v Manchester City Council* [1979] 1 WLR 294; *The Master Stelios Monvia Motorship Co v Keppel Shipyard (Pte) Ltd* [1983] 1 MLJ 361, PC.

176 Section 31 of the Limitation Act (Cap 63, 1985 Rev Ed), *BEP Akitek (Pte) v Pontiac Hotel Pte Ltd* [1990] SLR 1146.

177 See *Rees-Hough Ltd v Redland* (1985) 2 Con LR 109; *Hanson v Rapid Civil Engineering* (1997) 38 BLR 106.

court *n.* **1.** A body established for the administration of justice and may comprise a single judge or a panel of judges. In this sense, the terms "court", "judge" or "judges" may be understood to be synonymous.

2. A building or hall where justice is administered or a court is held.

Court of Appeal *n.* The final appellate court in Singapore, forming part of the Supreme Court of Judicature. As the final appellate court, the Court of Appeal does not hold itself bound by any of its previous decisions or the decisions of the Privy Council[178] where it is persuaded that "adherence to such prior decisions would cause injustice in a particular case or constrain the development of the law in conformity with circumstances of Singapore".[179]

The Court of Appeal as presently constituted consists of the Chief Justice and the judges of appeal.[180] A judge of the High Court may sit as a judge of the Court of Appeal if the Chief Justice so requests, in which case the judge would have all the jurisdiction, powers and privileges of a judge of the Court of Appeal.[181] An appeal from the decision of the High Court on a civil matter may be made to the Court of Appeal provided that the value of the subject matter exceeds S$250,000.[182] The appellant has to file a Notice of Appeal within one month from the date of the judgment in respect of which the appeal is made and pay a court fee.[183] In addition, he has to deposit a sum of $10,000 (as security for the respondent's costs of the appeal) with the Accountant-General. Upon hearing the parties, the Court of Appeal may either uphold the decision of the lower court or set aside or vary the decision of the lower court.

covenant 1. *v.* To enter into a binding agreement.

2. *n.* An agreement by two or more parties set in a deed by which one or more of the parties pledge to observe a requirement, or do, or refrain from doing something, or to affirm the truth of certain facts.

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178 Previously, a further appeal could be made to the Judicature Committee of the Privy Council in respect of a decision of the Court of Appeal. Appeals to the Privy Council were completely abolished with the enactment of the Judicial Committee (Repeal) Act 1994 (No 2 of 1994).

179 *Practice Statement (Judicial Precedent)* read by the Honourable Yong Pung How CJ at the opening of the Court of Appeal on 11 July 1994.

180 Section 29(1) of the Supreme Court of Judicature Act (1999 Rev Ed).

181 Section 29(3) of the Supreme Court of Judicature Act (1999 Rev Ed).

182 Where the value of the subject matter is S$250,000.00 or less, the approval of the court must be obtained.

183 The quantum of the fee is $1,000 if the value of the claim is up to $1 million and $2,000 if the value of the claim is more than $1 million.

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I

I beam *n.* a structural steel beam or girder taking the cross sectional form of the capital letter *I*. Compared with an H beam, the height of the cross section is taller than the width of the flange.

ICC *n.* See International Court of Arbitration.

ICC Conditions of Contract *n.* See Infrastructure Conditions of Contract.

ICE Conditions of Contract *n.* See Institution of Civil Engineers Conditions of Contract; Infrastructure Conditions of Contract

ICSID *n.* See International Centre for the Settlement of Investment Disputes.

"if" contract *n.* A contract made by an offer on terms which comes into existence only on the prior performance of a certain matter by the party to whom the offer is made. The term "if contract" was first used by Robert Goff J (as he then was) in *British Steel Corporation v Cleveland Bridge and Engineering Ltd* (1984).[1]

igneous rock *n.* "igneous" from Latin *ignis*, meaning "of fire". Refers to a class of rock formed through the cooling and solidification of lava within the earth's crust. It is formed both as intrusive rock below the surface and as extrusive rock on the surface. Because of the long time taken for the cooling of the lava, these rocks are characterised by their coarse grains. Granite is a form of intrusive igneous rock. Much of the areas in central and northern Singapore are formed of igneous rock granite. See Rock.

ignorantia juris non excusat [Latin expression] Ignorance of the law is no excuse.

illegal contract *n.* A contract the performance or purpose of which is prohibited by law. An illegal contract is void: *Mogul SS Co v McGregor, Gow & Co* (1892).[2] Neither party is under any obligation to perform and, regardless of the state of mind of the parties, no action lies for damages or any other remedy, or for an account of profits or for a share of expenses: see *Chai Say Yin v Liew Kwee Sam* (1962).[3] Furthermore, a subsequent or collateral contract which is founded on or derives from an illegal contract is itself illegal and

1 [1984] 1 All ER 504.
2 [1892] AC 25 at 39, *per* Lord Halsbury.
3 [1962] MLJ 152 PC.

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void. The courts would not enforce an agreement which "springs from, and is the creature of, the illegal agreement": see *Fisher v Bridges* (1854).[4]

immovable property *n.* Interests in real property, or property which cannot be physically moved. Examples are land, buildings and fixtures as opposed to choses and movable property.

immunity *n.* An exemption from legal liability, conferred on a person or a group of persons usually on grounds of public policy. Diplomatic immunity, for example, exempts diplomatic officials from the operation of local law while a prosecutor enjoys absolute immunity from civil liability for decisions made and actions taken in criminal prosecution.

"impacted as-planned" analysis *n.* A delay analysis technique which demonstrates the effect of delay events on the sequence of activities and the completion date of a construction project as described in a contractor's baseline programme (or "as-planned" programme). The analysis consists of adjusting the as-planned programme for the impact of each delay event on the duration of the works. It makes no reference to the actual as-built programme. The difficulty with this approach is that it is basically a theoretical construct. It takes the logic in the as-planned programme as given and assumes that the as-planned programme is feasible. See Delay Analysis; As-Planned Verses As-Built Analysis; Collapsed As-Built Analysis; Time Impact Analysis; Windows Analysis.

implied contract *n.* A contract not formed by express agreement of the parties but the existence of which is inferred from the conduct of the parties or from some special relationship between them. An example is where a contractor submits an offer and the client having studied the offer – but without expressing any reservation – allows the contractor to commence work: see *Empirnall Holdings Pty Ltd v Machon Paull Partners Pty Ltd* (1988).[5] In *Trollope & Colls Ltd v Atomic Power Construction Ltd* (1963),[6] following the submission of their tender, sub-contractors were notified of changes to the subject work and instructed to commence work on the following terms: "As soon as matters outstanding between us are settled we will enter into a contract agreement with you, and in the meantime please accept this letter as an instruction to proceed..." Although no contract was actually signed, the English court held that a contract did exist.[7]

4 (1854) 2 E & B 642.
5 (1989) 8 ACLR 65 (CA) NSW.
6 [1963] 1 WLR 333.
7 But see *Shia Kian Eng (t/a Forest Contractors) v Nakano Singapore Pte Ltd* (2001) Suit 600245/2000, HC (unreported, 3 April 2001).

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implied term *n.* A provision which is not an express term in a contract but which is accepted as a term of the contract because

(a) it gives effect to the intention of the parties;

(b) it is imported into the contract by operation of law, although the parties may not have intended to include them; or

(c) it is imported by custom.

To give effect to the intention of the parties, a term to be implied has to satisfy an "officious bystander test".

Under this test, the term to be implied must be "so obvious that it goes without saying".[8] The second test for the implication of a term is the "business efficacy test", under which the term must be shown to be necessary in order "to give the transaction such business efficacy as the parties must have intended".[9] Although it had been earlier suggested that it is sufficient to satisfy either of these tests,[10] the current view appears that it is necessary to show that the term to be implied satisfies both tests.[11]

However, the courts have made it clear that it will not imply terms merely to make a contract more reasonable or more equitable. In the classic case of *The Moorcock* (1889),[12] Bowen LJ emphasised that an implied term must "in every instance [be] founded on the presumed intention of the parties". Lord Pearson in *Trollope and Colls Ltd v North West Metropolitan Regional Hospital Board* (1973)[13] considered that an implied term must have "formed part of the contract which the parties made for themselves." For this reason it follows that a term which is implied by way of the tests discussed should not contradict any express term of the contract: see *Lynch v Thorne* (1956).[14]

8 MacKinnon LJ in *Shirlaw v Southern Foundries (1926) Ltd* [1939] 2 KB 206 at 227 affirmed on appeal in [1940] AC 701 and, later, applied in *North Sea Energy Holdings NV v Petroleum Authority of Thailand* [1997] 2 Lloyd's Rep 418 and affirmed on appeal in [1999] 1 Lloyd's Rep 483.
9 Lord Wright in *Luxor (Eastbourne) Ltd v Cooper* [1941] AC 108 at 137. *Cf Hughes v Greenwich London Borough Council* [1994] AC 170; *Baker v Black Sea & Baltic Insurance Co Ltd* [1998] 1 WLR 974.
10 For example, in *The Manifest Lipkowy* [1989] 2 Lloyd's Rep 138 at 143, it has been suggested that "a term will be implied only where it is necessary in a business sense to give efficacy to a contract or where the term is one which the parties must obviously have intended".
11 *Association of British Travel Agents v British Airways plc* [2000] 1 Lloyd's Rep 169 at 175 affirmed on appeal in [2000] 2 Lloyd's Rep 209; *McAuley v Bristol City Council* [1992] QB 134 at 147.
12 (1889) 14 PD 64.
13 [1973] 2 All ER 260.
14 [1956] 1 All ER 744; [1956] 1 WLR 303.

The Singapore Court of Appeal considered that "the process of implication is separate and distinct from the more general process relating to the interpretation of documents".[15] The implication of terms, whether in fact or in law, involves tests and techniques which are "not only specific but also different from those which operate in relation to the interpretation of documents in general and the terms contained therein in particular".[16] In determining the implication of terms, the court will be "compelled to ascertain the presumed intention of the parties via the 'business efficacy' and the 'officious bystander' tests" and that the court "can ascertain the subjective intention of the contracting parties only through the objective evidence which is available before it in the case concerned.

In *Sembcorp Marine Ltd v PPL Holdings Pte Ltd* (2013),[17] the Court of Appeal affirmed this position, stating that the standard for the implication of terms into a contract is necessity and not reasonableness: "reasonableness is a necessary but insufficient condition for the implication of a term".[18] In filling the gaps in the contract by way of implication, it is of "paramount importance that the courts do so with due regard to what the parties would be presumed to have intended"[19] so that a term should only be implied in a contract where the parties did not contemplate the issue in question and, thus, left a gap in the contract.[20]

A term commonly implied in construction contracts is that the building owner will not interfere with or obstruct an architect or engineer in discharging his duties as a certifier[21]. In the event that the architect or engineer dies or retires before the contract is completed, the owner is thus under an implied obligation to appoint a new architect or engineer[22]. Another important implied term is the obligation on the part of the owner not to interfere with, or to allow his other "direct" contractors to impede the work of the contractor. Thus, in *Penvidic v International Nickel of Canada* (1976)[23], where a railway owner's other direct contractor failed to provide a junction line to the owner's existing line in time to enable the contractor for the new line to obtain access to his work, the Supreme

15 *Foo Jong Peng and others v Phua Kiah Mai and another* [2012] 4 SLR 1267 departing from the position taken by the Privy Council in *Attorney General of Belize v Belize Telecom Ltd* [2009] 1 WLR 1988.
16 [2012] 4 SLR 1267 at para 31.
17 [2013] 4 SLR 193.
18 [2013] 4 SLR 193 at para 82.
19 [2013] 4 SLR 193 at para 93.
20 [2013] 4 SLR 193 at para 94.
21 *Meehan v Jones* (1982) 149 CLR 571.
22 *Perini Corporation v Commonwealth* [1969] 2 NSWR 536.
23 [1976] 1 SCR 267.

Court of Canada held that the owner was in breach of his implied obligation and was liable in damages to the contractor.[24]

Among the implied obligations of a contractor is the requirement that the materials and workmanship delivered shall be of a reasonable standard: see *Rumblebows Ltd v A. M. K. and Firesnow Sprinkler* (1982).[25] Where the owner relies on the contractor to provide the design and specification of a part of the works, there is an implied term that the completed work would be fit for its purpose: see *Viking Grain Storage v T. H. White* (1985)[26] and *Highceed Corp Sdn Bhd v Warisan Harta Sabah Sdn Bhd & Anor* (2000).[27] See EXPRESS TERM.

impossibility *n.* In relation to a contract, a situation where performance is not possible because of a legal or physical condition. Under common law, impossibility of performance *ex post facto* does not discharge a contract but this is subject to a few exceptions. An example is where the subject matter of a contract has been destroyed: *Taylor v Caldwell* (1863).[28] See ACT OF GOD; FRUSTRATION

improvement *n.* The upgrading of the facilities of a building in terms of better quality finishes and services, higher efficiency of layout or improved features and aesthetics. Improvements are principally undertaken in response to market conditions or pursuant to changes in regulatory requirements.

in connection with the contract *n.* The expression is generally considered to encompass all matters that had a direct or indirect nexus with the contract in question: see *Sabah Shipyard (Pakistan) Ltd v Government of the Islamic Republic of Pakistan* (2004).[29] Its compass is considered to be broader than that intended by the expression "under the sub-contract" which is generally confined to matters found within the terms of the contract.

in extenso [Latin expression] in full or at length.

in pari materia [Latin expression] in substance, used in the context of comparing texts to suggest that the texts being compared are essentially similar or relevant.

in principle *n.* **1.** On basic premises but not specifically in relation to a particular situation.

24 [2012] 4 SLR 1267 at para 36.
25 (1982) 19 BLR 25.
26 (1985) 33 BLR 10.
27 [2000] 5 MLJ 337.
28 (1863) 3 B & S 826.
29 [2004] 3 SLR(R) 184 at para 18. See also *Re Rasmachayana Sulistyo (alias Chang Whe Ming), ex parte The Hongkong and Shanghai Banking Corp Ltd and other appeals* [2005] 1 SLR(R) 483 at para 41.

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2. On the basis of some concept or theory.

***in situ* concrete** *n.* Concrete which is cast and allowed to set on the location where the object is to be built as distinguished from precast concrete where the concrete is cast at one location and transported to be erected and assembled on another location.

inclement weather *n.* Synonym for adverse weather conditions. See Adverse Weather Conditions.

inclusive price principle *n.* See All Inclusive Price Principle.

incorporation *n.* The formation of a company under the Companies Act[30] as an entity distinct from those of its members or shareholders. The incorporated vehicle is capable of suing and being sued in its own name. Consequently, members or shareholders of a company where the shares have been fully paid up have no further liability to company creditors for debts incurred by the company. However, the principle of limited liability in corporations does not necessarily insulate directors from criminal liability or liability for negligence arising from the exercise of their corporate powers. In particular, where the acts of directors constitute an affront on ordinary norms of corporate morality, the cloak of corporate immunity may be lifted: *Vita Health Laboratories Pte Ltd v Pang Seng Meng* (2004).[31]

incorporation of contract terms *n.* In relation to the interpretation of documents, this refers to the import of terms into a contract by express reference to a specified set of terms contained in another document. Thus, in a construction contract, the conditions may expressly incorporate the requirements stipulated in the drawings, bills of quantities, specifications, codes of practice, method statements, programmes, technical manuals and other documents by specific reference to these documents. Similarly, sub-contract documents may incorporate certain terms of the main contract by express reference.

In construing whether the words of a contract are sufficient to import certain terms by incorporation, the general proposition is that clear words of incorporation must be used if the terms contained in the other letters or documents are to be incorporated into an agreement: *Dunlop & Ranken Ltd v Hendall Steel Structures Ltd* (1957).[32] In *Chandler Bros Ltd v Boswell* (1936),[33] where the terms of a sub-contract contained a recital that the sub-contractor had agreed to carry out the work in accordance with the terms of the main contract, the court held that this general stipulation was not sufficient to incorporate into the sub-contract a provision in the main contract which empowered the engineer to remove sub-contractors. Likewise, in *Aughton Ltd v M. F. Kent Services Ltd* (1991),[34] the English Court of Appeal held that the terms of an arbitration clause found in a sub-contract were not incorporated into a sub-sub-contract merely by a provision stipulating that "our previous correspondence and the documents…in our enquiry form part of our agreement". It has been further held that a clause in a sub-contract which provided that "the sub-contractor shall observe, perform and comply with all the provisions of the main contract on the part of the contractor to be observed, performed and complied with so far as they relate and apply to the sub-contract works" was insufficient to incorporate the provisions of the main contract into the sub-contract: *Kum Leng General Contractor v Hytech Builders Pte Ltd* (1996).[35]

30 (Cap 50, 1994 Rev Ed).
31 [2004] 4 SLR 162. See also *TV Media Ltd v De Cruz Andrea Heidi* [2004] 3 SLR 543, CA.
32 [1957] 3 All ER 344, CA.
33 [1936] 3 All ER 179.

indemnity *n.* **1.** An undertaking by one party to make good any loss, damage or liability incurred by another.

2. The right of an injured party to be reimbursed for its loss, damage or liability by a person who has a duty to indemnify. Within the construction industry, however, the term is sometimes used loosely as a synonym for "warranty" under which a party (such as a specialist sub-contractor or supplier) is made directly liable to the building owner for defects or other quality problems. Traditionally, an indemnity is considered to afford the indemnified party a clearer recourse against the indemnifying party because it is less likely to be challenged on the grounds that the loss sustained is not within the reasonable contemplation of the parties or, alternatively, that the loss claimed should be reduced for want of effort at mitigation of damages suffered. However, there is an important conceptual distinction. Under a claim advanced pursuant to a contract of indemnity in respect of defects, the indemnified party is expected to rectify the defects complained of and seek reimbursement thereafter from the defaulting party for the costs and expenses incurred. A warranty, on the other hand, is an undertaking to do something and a breach thereof gives rise to an action for damages at law.

This distinction was considered at length by the Singapore Court of Appeal in *Management Corporation Strata Title Plan No. 1933 v Liang Huat Aluminium Ltd* (2001).[36] In that case, the Court of Appeal affirmed the position taken by English authorities on the subject

34 (1991) 57 BLR 1, CA.
35 [1996] 1 SLR 751.
36 [2001] 3 SLR 253, CA, Chao Hick Tin JA dissenting.

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on the basis of the rates contained in the contract. Synonym for *measurement contract*. Compare Lump sum CONTRACT.

measurement *n.* The process of determining the quantity of work on the basis of the dimensions set out in design or construction drawings or the measurement of the work which has been physically completed on site. The results of the measurement are then expressed in a form which allows for the work to be priced or valued in accordance with the rates and prices of a contract. In countries with a quantity surveying tradition, a construction contract may provide for these measurements to be made in accordance with the principles set out in the Standard Method of Measurement, published by the relevant professional body for quantity surveying.

In Singapore, the standard forms have largely departed from this position. As a consequence of the drafting policy taken with the main standard forms of contract used in the industry, the Standard Method of Measurement no longer influences to the same degree the structure and level of particularisation of items in the bills of quantities. Under the Singapore Institute of Architects Standard Form of Building Contract (9th Ed, 2010), for example, the inclusive price principle set out in Article 5 of the contract provides for the rates and prices in the contract to be inclusive of all work and expenditure necessary to bring to completion the works associated therewith. In addition, Clause 13(1)(c) provides that "any suggestions or recommendations or requirements in the Standard Method for the separate description and pricing of individual items of work or work-processes shall have no contractual force and any omission of the Bills to comply with the same shall be of no effect where the full extent of the work undertaken by the Contractor can be deduced or interpreted from the Specification, Drawings, Bills or other Contract Documents taken as a whole as being included in the items set out in the Bills…" The effect is that the quantification of work by any re-measurement at the end of a contract is confined to changes in the quantities of work and does not extend to the measurement of additional items which are considered "indispensably necessary" for the carrying out of the original items of work set out in the contract.

measurement contract *n.* A construction contract where the final sum to be paid to the contractor is to be determined by a measurement and valuation of the work actually completed. For this purpose, the subject contract frequently contains detailed provisions governing the measurement and valuation of the work.[23] In cases where the completed work departs materially from the

23 *Arcos v Electricity Commission* (1973) 12 BLR 65, NSWCA.

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work as described in the original drawings and specifications, the result may be a very substantial change in the price paid to the contractor. These contracts are sometimes described as contracts based on bills of quantities in that the original price is treated as consideration only for the quantities of work as described in the bills of quantities.

Whether a contract is a measurement contract or otherwise is a question of fact and law, the mere description of the contract as a lump sum contract will not prevent the court from considering the conduct of the parties and inferring that the intended arrangement is one which is founded on a measurement contract.[24] One of the versions of the Singapore Institute of Architects Standard Form of Building Contract is intended for use as a measurement contract. In the case of the Public Sector Standard Conditions of Contract, the basic form is intended as a lump sum contract but this can be converted into a measurement contract by expressly incorporating the provisions set out in "Optional Module A – Bills of Quantities". Compare LUMP SUM CONTRACT; MEASUREMENT.

measurement meeting *n.* A meeting called by the architect, superintending office or quantity surveyor at which the contractor is afforded an opportunity to be present and either participate in or witness the measurement of works that have been completed or in progress. In the formulation adopted in the measurement version of the Singapore Institute of Architects Standard Form of Building Contract (9th Ed, 2010), a contractor who fails to attend such a meeting is bound by the quantities so measured provided that these quantities are furnished by ordinary post to the contractor by the quantity surveyor within 14 days.[25]

mechanics lien *n.* A term used largely in the United States to describe a statutory lien which secures payment for labour and materials supplied in improving, repairing or maintaining a building or other real property.

mechanical engineer *n.* An engineer who is primarily concerned with the design and supervision of works relating to air conditioning installation, lifts, escalators, fire protection, security and plumbing. In a construction contract the functions of mechanical engineer are usually undertaken as part of the scope of work of mechanical and electrical engineering services (M&E) or building engineering services. A mechanical engineer who discharges design functions

24 *Ohbayashi-Gumi Ltd v Kian Hong Holdings Pte Ltd* [1987] SLR 94, CA.

25 Clause 13(3) of the Singapore Institute of Architects Standard Form of Building Contract (7th Ed, 2005) which incorporates by reference the operation of Clause 12(3) of the conditions as to the effect of quantities furnished in this manner.

is required to be registered as a professional engineer with the Professional Engineers Board pursuant to the Professional Engineers Act.[26]

Med-Arb *n.* Abbreviated expression to describe the resolution of a dispute through a combination of mediation and arbitration. This combination of approaches is common in China. The American Arbitration Association has since 1996 published rules for mediation combined with arbitration. The principal anxiety with the combined approach is that parties may be hesitant to open up to the mediator on the merits and demerits of their cases if there is a possibility that the mediation could fail and the matter would then proceed to arbitration. Against this anxiety, however, it is considered that the approach improves the likelihood of early settlement and experienced arbitrators would at any rate have an early appreciation of the cases of the parties by reading the documents which have been filed. See ARBITRATION and MEDIATION.

mediation *n.* An alternative dispute resolution (ADR) procedure where the resolution of a dispute is sought with the assistance of a mediator whose role is not to determine the outcome of the dispute but to facilitate the process of enabling each party to clarify and understand the interests and needs of the other party in relation to the dispute, on the basis of which to assist parties to negotiate and settle the dispute on a constructive and informed basis.[27] "The hallmark of ADR procedures, and perhaps the key to their effectiveness in individual cases, is that they are processes voluntarily entered into by the parties in dispute with outcomes, if the parties so wish, which are non-binding."[28]

Although the English courts appear at times to take the position that the courts have an inherent jurisdiction to order a stay of proceedings in order to enable parties to invoke an alternative dispute resolution procedure like mediation,[29] more recent authorities suggest that the courts will not order parties to submit their disputes to mediation against their will. "It is one thing to encourage the parties to agree to mediation, even to encourage them in the strongest terms. It is another to order them to do so. It seems to us that to oblige truly unwilling parties to refer their disputes to mediation would be to impose an unacceptable obstruction on their right of access to the court", *per* Dyson LJ in *Halsey v The Milton Keynes General NHS*

26 (Cap 253, 1992 Ed).
27 Lawrence Boulle and Teh Hwee Hwee, *Mediation: Principles, Process and Practice* (Singapore: Butterworths, 2000), p 8.
28 *Halsey v The Milton Keynes General NHS Trust* [2004] EWCA Civ 576.
29 *Channel Tunnel Group Ltd v Balfour Beatty Construction Ltd* [1993] 2 WLR 262; *Cott UK Ltd v F E Barber Ltd* [1997] 3 All ER 540.

Trust (2004).[30] However, the Court of Appeal in *Halsey* decided that where a party deliberately rejects an opportunity to mediate in a case which is particularly apt for resolution in this manner, this should be considered when addressing the award of costs and this decision was re-affirmed by the same court subsequently in the subsequent case of *Burchell v Bullard* (2005).[31]

Further, the courts in England are also prepared to penalise a party to litigation in costs where that party unreasonably refuses an offer to mediate. In *PGF II SA v OMFS Company and another* (2012),[32] the defendant was found to have unreasonably refused the plaintiff's earlier offers of mediation and the court departed from the usual cost rules and penalised the defendant. This development appears to have been endorsed by the courts in Singapore. For this purpose, suitable amendments have been made to the Practice Directions (notably at paragraphs 35B. and 35C.)

The principal institution associated with mediation in Singapore is the Singapore Mediation Centre. This was established in 1997 to "promote private, non-court based mediation in Singapore", providing "mediation services, train and accredit mediators, maintain a Panel of Mediators and eventually, provide consultancy services in dispute avoidance, dispute management and ADR mechanisms…"[33] The mediation process at the SMC is preceded by a briefing of the parties and their lawyers on the features of the process. If parties intend to proceed with the mediation, they are invited to enter into a mediation agreement. Parties are usually encouraged to exchange concise statements of their case to which they may attach documents referred to in the summary. The Centre then assigns a mediator or, frequently, two co-mediators from the Panel of Mediators to the case. Besides meeting and discussing the issues with the parties jointly, mediators may arrange to meet parties separately in caucuses. If a settlement is reached at the mediation, the terms of the settlement are reduced in writing and signed by the parties.[34]

meeting of minds *n.* Agreement or consent by two or more parties, usually with respect to the terms of a contract or a particular course of action.

30 [2004] EWCA Civ 576.
31 [2005] EWCA Civ 358.
32 [2012] EWHC 83 (TCC).
33 Speech of the Chief Justice Yong Pung How at the Opening of the Singapore Mediation Centre on 16 August 1997.
34 Lawrence Boulle and Teh Hwee Hwee, *Mediation: Principles, Process and Practice* (Singapore: Butterworths, 2000), pp 236 and 237.

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memorandum of understanding *n.* A written statement recording the preliminary understanding of parties who plan to enter into a contract. In most cases, the terms are formulated in a manner which does not commit the parties to any binding agreement. Accordingly, parties may properly negotiate the subject transaction with third parties.

mesh reinforcement *n.* Reinforcement cast in concrete slabs or walls consisting of steel wires or rods placed in two directions at right angles and welded at their intersections. Mesh reinforcement is usually fabricated off-site in standard sizes.

metamorphic rock *n.* A class of rock which originated as either igneous or sedimentary rock but underwent changes by heat, pressure or chemical action. Metamorphic rock lies somewhere between igneous and sedimentary rock in terms of difficulty of excavation.

method of working *n.* Synonym for method statement. The term refers to the sequence and manner by which construction activities are intended to be undertaken on site. Under most construction contracts, the contractor retains control of its site operations and the choice of methods of working. An instruction by an architect or superintending officer requiring the contractor to change or revise its method of working may operate as a variation and entitle the contractor to be reimbursed for any loss occasioned thereby: *Simplex Concrete Piles Ltd v St Pancras Borough Council* (1958).[35] A situation may also arise where an engineer may be bound under the terms of the contract to issue a variation order because the contractor has changed his method of working notwithstanding that this change may not have arisen if not for some error or mistake on his part: *Yorkshire Water Authority v McAlpine and Son* (1985).[36]

method statement *n.* See METHOD OF WORKING.

micron *n.* Physical dimension, millionth part of one metre.

micro-zoning plans *n.* Detailed plans formulated as part of the physical planning regime of Singapore prescribing permissible building heights for a particular area.

micropiling *n.* A specialised piling system used where the headroom is too low or where there are too many physical restrictions preventing the deployment of normal piling rigs. Not unexpectedly, micropiling is expensive relative to driven or bored piles.

35 [1958] (unreported) cited in *Hudson's Building and Engineering Contracts* 10th ed (Sweet & Maxwell, 1970), p 526. See for example, sections 2(1)–(3) of the Singapore Institute of Architects Standard Form of Building Contract (9th Ed, 2010).
36 [1985] 32 BLR 114.

mild steel reinforcement *n.* Steel reinforcement containing between 0.12 to 0.25 per cent of carbon which forms part of reinforced concrete structural members to enable these members to withstand tensile stresses.

milestone *n.* A key stage or significant event in a process. The design process may begin, for example, with a concept design, followed by schematics and detailed design. The completion of each of these would represent a milestone in design development. Similarly, milestones in the construction process may consist of the dates of completion of different parts of a building.

minor works form *n.* A version of a form of contract adapted for smaller and simpler building projects. An example is the Singapore Institute of Architects Standard Form of Contract for Minor Works.

minutes of meeting *n.* Written record of the decisions and observations made in a meeting. Minutes are usually signed by the party making the record and the chairman of the meeting after the minutes have been confirmed as accurate.

misconduct *n.* **1.** A dereliction of duty or incorrect or improper behaviour usually in relation to the carrying out of duties associated with an official appointment.

2. In arbitration, the term is applied to an arbitrator who:

(a) has shown actual bias;

(b) has a relationship with one of the parties or the subject matter of dispute as "to create a risk that the arbitrator has been or will be incapable of acting impartially"; or

(c) where the conduct of the arbitrator has been such as to show that, "through lack of experience, expertise or diligence", he is "incapable of conducting the reference in a manner which the parties are entitled to expect": see *Bremer Handelsgesellschaft mbH v Ets Soules* (1985).[37]

However, misconduct is not limited to situations where the arbitrator has displayed bias or prejudice. In *Koh Brothers Building and Civil Engineering Contractors Pte Ltd v Scotts Holdings Development (Saraca) Pte Ltd* (2002),[38] the Singapore High Court observed that misconduct does not of itself connote any moral turpitude or slur on the arbitrator's character. It can arise from a procedural or technical mishandling that is likely to lead to a serious miscarriage of justice. Thus, misconduct would include situations where an arbitrator:

37 [1985] 2 Lloyd's Rep. 199.
38 [2002] 4 SLR 748.

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(a) exceeds, or fails to comply with, the terms of reference of the subject dispute as where an arbitrator fails to deal with one or more of the issues submitted to him; or

(b) fails to comply with the principles of natural justice as where he carried out his own investigations without giving parties the opportunity to comment on the results of the investigations: *Unit Four Cinemas Ltd v Toscara Investment Ltd* (1993).[39]

misnomer *n.* Any term which is considered to be an inappropriate description of an object or matter.

misrepresentation *n.* A false assertion of fact made by a party in the course of inducing the other party to enter into a contract. A misrepresentation is distinguished from "mere puffs" or statements which are so vague that they have no effect at law or in equity: *Dimmock v Hallett* (1866).[40]

A *fraudulent misrepresentation* is a representation made by a party who did not honestly believe in the statement or was reckless as to whether it was true or false: *Derry v Peek* (1889).[41] The innocent party may set the contract aside and maintain an action in damages. The standard of proof required is high. It has been suggested that a plaintiff who alleges fraud must do more than establish the allegation on the balance of probabilities.[42] However, once fraudulent misrepresentation has been proved, the defendant cannot seek to exclude liability on the basis of a disclaimer: see *Pearson v Dublin Corporation* (1907).[43] Furthermore, motive is irrelevant in an action of deceit.[44]

A *negligent misrepresentation* is a statement made by a party who may have believed that what he has stated is true but has no reasonable grounds for doing so. The party to whom a negligent statement is made may rescind the contract under common law. Under the Misrepresentation Act 1967[45] or by an action in tort, such a party may also recover damages for loss suffered. In construction contract cases, a contractor many allege that the representations concerning the site conditions have been made negligently. This action may be brought against the employer, the engineer or any other person who has been involved in carrying out the site investigations and

39 [1993] 44 EG 121.
40 (1866) LR 2 Ch App 21.
41 (1889) 14 AC 337.
42 See also the Malaysian decisions in *Lau Kee Ko v Paw Ngi Siu* [1974] 1 MLJ 21; *Ang Hiok Seng v Yim Hut Kiu* [1997] 2 MLJ 45.
43 [1907] AC 351.
44 *Foster v Charles* [1830] 6 Bing 396.
45 Now part of the law of Singapore by virtue of Part II of the First Schedule, Application of English Law Act 1993 (Cap 7A, 1994 Rev Ed).

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preparing the information and data which were furnished to the contractor. The principles of liability are set out in *Hedley Byrne & Co Ltd v Heller & Partners Ltd* (1963).[46] These are:

(a) the person to whom the statement was made relied on the maker to exercise a degree of care in making the statement;

(b) it was reasonable, in the circumstances, for that person to rely on the statement;

(c) the maker of the statement knew, or ought reasonably to have known that his statement would be relied on;

(d) the person to whom the statement was made acted on the statement and as a result of which he suffered loss; and

(e) the loss suffered by the plaintiff falls within the general rules of recoverability.

Statutory liability for negligent misrepresentation may be established under section 2(1) of the Misrepresentation Act 1967[47] where the burden of proof is reversed, requiring the party making the misrepresentation to disprove his negligence. It is established that actions under the *Hedley Byrne* principle and the Misrepresentation Act are not mutually exclusive:[48] claims could be brought in the alternative but proving liability under the Misrepresentation Act is usually less onerous. In *Ng Buay Hock v Tan Keng Huat* (1997),[49] the High Court distinguished the cause of action under section 2(1) from that under common law on the ground that liability at common law depends on the existence of some 'special relationship' between the parties and the burden of proof lies on the plaintiff. In a case under section 2(1), "there is no need for the existence of any 'special relationship' and the burden of proof is reversed; the party who made the misrepresentation has to show that he had reasonable grounds to believe that the fact represented was true".[50]

An *innocent misrepresentation* is a false statement made by a party who reasonably believed that it was true when he made it. The aggrieved party is entitled to rescind the contract and, subject to the discretion of the court, he may also recover damages in lieu of rescission. The aggrieved party also elect to affirm the contract in the circumstances. To sustain a case for rescission, the aggrieved

46 [1963] 3 WLR 101; [1963] 2 All ER 575.
47 Applicable in Singapore by virtue of being listed in Part II of the First Schedule of the Application of English Law Act 1993 (Cap 7A, 1994 Rev Ed).
48 *Howard Marine & Dredging Co Ltd v A. Ogden & Sons (Excavations) Ltd* [1978] 2 All ER 1134, CA.
49 [1997] 2 SLR 788.
50 [1997] 2 SLR 788 at 795, *per* Warren Khoo J.

purlin *n.* A horizontal structural member placed at right angle to roof rafters, used to transfer roof loads on to roof beams.

purposive construction *n.* An approach to the construction of a statute or contract in which the courts seek to give effect to the true purpose of legislation or contract and are prepared to look at extraneous material that bears on the background against which the legislation was enacted: see *Pepper v Hart* (1993).[95] In the construction of a statute, the extrinsic material which may be considered consists principally of speeches made by the Minister and members of Parliament during the debate of the bill, together with such other Parliamentary material as was necessary to understand such statements and their effect.

In *Pegram Shopfitters Ltd v Tally Weijl (UK) Ltd* (2004),[96] May LJ in the English Court of Appeal adopted the purposive approach to explain that in enacting the Housing Grants, Construction and Regeneration Act 1996, Parliament had not abolished arbitration and litigation of construction disputes but had merely introduced an intervening provisional stage in the dispute resolution. Subsequently, in another decision of the same court, *RJT Consulting Engineers Ltd v DM Engineering (Northern Ireland) Ltd* (2002),[97] Ward LJ considered the policy of the Act and described the thrust of the regime as "pay now, argue later". Similarly, relevant extracts of Parliamentary speeches were cited in the decisions of the New South Wales courts to show that under the terms of the original Building and Construction Industry Security of Payment Act 1999 (prior to the 2002 amendments), the province of the Act applied only to interim payments: *Parist Holdings Pty Ltd v WT Partnership Australia Pty Ltd* (2003);[98] *Paynter Dixon Constructions Pty Ltd v JF & CG Tilston Pty Ltd* (2003).[99] See also INTERPRETATION OF STATUTES.

purview *n.* Scope of application. Term is used usually in relation to a provision in a contract or statute.

95 [1993] AC 593 at 617, HL.
96 [2004] BLR 65 at 68.
97 [2002] 1 WLR 2344.
98 [2003] NSWSC 365 at para 19.
99 [2003] NSWSC 869 at para 39.

Q

QA *n.* Abbreviation for quality assurance. See QUALITY ASSURANCE.

QC *n.* Abbreviation for quality control. See QUALITY CONTROL.

QS *n.* Abbreviation for quantity surveyor. See QUANTITY SURVEYOR.

qualified person *n.* A person who is entitled under the Building Control Act to apply to the Commissioner of Building Control for the approval of plans for the construction of building works.[1] The term is defined under the Act to mean a person who is registered either as: (a) an architect under the Architects Act[2] and has in force a practising certificate issued under that Act; or (b) a professional engineer under the Professional Engineers Act[3] and has in force a practising certificate issued under that Act. Further, before a builder can proceed to carry out building works, an application has to be made for a permit to carry out building works. This application has to be made jointly by the owner, the qualified person and the builder.[4] In particular, in the absence of a qualified person, a builder cannot carry out any building works nor undertake any concreting, piling, prestressing or other critical structural works.[5]

There is some authority for the proposition that the defence of an independent contractor is not available to a qualified person who has committed a breach of his duty under the Building Control Act. In *Public Prosecutor v Bill Hong Keng Chee, Joseph Huang Wei Ling and BKB Engineering* (2000),[6] the District Court held that a qualified person is not entitled to delegate his work to an employee, even though the employee is suitably qualified, without exercising reasonable supervision over the latter's work.

quality *n.* See QUALITY OF WORK.

quality assurance *n.* A process established by the project team at the commencement of a project to ensure that the project as executed meets or exceeds prescribed quality and performance criteria. The process is introduced in tandem with the project development programme. In a construction project, it covers design, construction, commissioning and documentation.

1 Section 6(3) of the Building Control Act (Cap 29, 1999 Ed).
2 (Cap 12, 2000 Ed).
3 (Cap 253, 1992 Ed).
4 Section 6(1) of the Building Control Act (Cap 29, 1999 Ed).
5 *Ibid*, sections 9(4)(b) and 10(5).
6 (BCA 43-44/99 and BCA 46-48/99) dated 20 March 2000.

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quality control *n.* **1.** That part of the quality assurance process which is concerned with determining whether a project has delivered the required quality.

2. In construction, the term may also be used in a narrower context, referring to the process of ensuring that works constructed and materials delivered conform with requirements set out in the specifications and drawings.

quality of work *n.* The standard of materials and workmanship delivered in a construction project. Most standard forms of contract expressly stipulate that the contractor has a basic obligation to deliver a particular level of quality in the completed works. An example is Clause 11(1) of the Singapore Institute of Architects Standard Form of Building Contract (9th Ed, 2010) which provides that all materials, goods and workmanship comprised in the works shall be "the best of their described kinds" and shall be "in exact conformity with any contractual description or specification and of good quality". Clause 10.1 of the Public Sector Standard Conditions of Contract requires all plant, materials, goods and workmanship to be of the respective kinds as described in the contract and to be subject to such tests conducted at the place of manufacture as the superintending officer may require.

The bills of quantities or specifications of the contract elaborate on the basic expectations of quality delivery, specify inspection procedures to ensure that work is carried out in accordance with the standards so defined and other measures to determine the quality of the work as completed and delivered. These provisions may also require the contractor to furnish supporting quality certificates of testing agencies, proof of source of particular materials and technical literature produced by the manufacturer or supplier.

The bills of quantities or specifications may further incorporate stipulations found in a code of practice or industrial standard with respect to specific items of work. There are also various regulatory regimes regulating the quality of specific aspects of construction work. For example, the Building Control Act[7] provides that the responsibilities for supervising the construction of the works are to be borne by the qualified person,[8] the site supervisors[9] and the builder.[10]

In the absence of any express provisions on the subject, the authorities have held that there is an implied obligation that the goods and

7 (Cap 29, 1999 Ed).
8 Section 9(4) of the Building Control Act (Cap 29, 1990 Ed).
9 *Ibid*, section 10(5).
10 *Ibid*, section 11(4).

materials supplied will be of good quality and be reasonably fit for its intended purpose.[11] These terms may, however, be excluded either expressly or by implication: *Gloucestershire County Council v Richardson & Son* (1969).[12] See WORKMANSHIP.

quantities *n.* The amount or extent of each work item required for a construction project as set out in the bills of quantities. Quantities are usually computed from measurements of work items from tender drawings, supplemented as necessary by information from technical reports and other contract documents such as the specifications and drawings. The Standard Method of Measurement lays down the units by which quantities are to be entered and other rules of measurement. Thus, the quantity of brickwork is given in square metres whereas the quantity of reinforced concrete to structural members such as columns and beams is given in cubic metres.

quantity surveyor *n.* The person who provides cost advice to the owner and the other consultants during the inception and design development of a construction project and who is subsequently responsible for preparing bills of quantities and other contract documents relating to a construction project. In most situations, the quantity surveyor also oversees the procurement process, particularly the invitation and evaluation of tenders. As the works proceed, they assist the architect and engineers in the valuation and certification of sums to be certified for interim or progress payments. It also falls on the quantity surveyor to prepare the final accounts of the contract showing the final sum which is due from one party to the other in settlement of all obligations matters relating to the contract. The profession of quantity surveying is peculiar to the United Kingdom and those Commonwealth countries which have borrowed English construction contract practices. In Europe, quantity surveying work is normally carried out by engineers and architects. A close equivalent of the quantity surveyor in the United States is the cost engineer.

Of the major standard forms, only the Singapore Institute of Architects Standard Form of Building Contract (9th Ed, 2010) expressly mentions the quantity surveyor. Clause 5 of the SIA Contract provides for the quantity surveyor to require the contractor to submit the make up of prices and Clause 12(3) entrusts the quantity surveyor with the task of valuing variations.

11 *Gloucestershire County Council v Richardson & Son* [1969] AC 480; *Young and Marten Ltd v McManus Childs* [1969] AC 454.
12 [1969] AC 480; *Young and Marten Ltd v McManus Childs* [1969] AC 454; *Management Corporation Strata Title Plan No. 1155 v Chubb Singapore Pte Ltd* [1999] 3 SLR 540.

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In the measurement version of the contract, the quantity surveyor is required to attend measurement meetings with the contractor and the results of these meetings may, in certain situations, become binding on the parties. The only certificate issued by the quantity surveyor is the Cost of Termination Certificate which the quantity surveyor issues jointly with the architect pursuant to Clause 26 of the Conditions. In the event that the appointment of the quantity surveyor is terminated for whatever reason, Article 4 of the SIA Contract provides that the employer is obliged to immediately appoint another quantity surveyor.

quantum meruit [Latin expression] A reasonable value. Generally determined for work done or services, goods or materials supplied. **1.** A quasi-contractual action under which the claimant seeks to be compensated for an amount representing the reasonable value of the work which he has already completed, in circumstances where no contract is held to exist between the parties.[13] "[A] plaintiff who successfully brings a *quantum meruit* or a *quantum valebat* claim will recover the reasonable value of the services or goods at the date they were rendered or delivered." [14] In *William Lacey (Hounslow) Ltd v Davis* (1957),[15] contractors submitted a tender for rebuilding war-damaged premises. At the request of the owners' representatives, they did work to provide a "permissible amount" which could be used by the owners for their negotiations with the War Damage Commission. This work included calculations for steel and timber, specifications and estimates together with bills of quantities as well as subsequent amendments thereto. Without awarding the contract to the contractors, the owners subsequently sold the building to another developer. The court held that the work undertaken by the contractors extended beyond the normal scope of work which might be expected to be performed gratuitously by a tendering contractor. They had done so in the belief that the contract would be awarded to them and this provided a basis to sustain an action on quasi-contract. In the circumstances, a promise to pay reasonable remuneration would be implied.

2. The expression has also been used inaccurately to apply to a situation where parties have agreed for certain work to be done, but the price has not been fixed, and the expression is used to suggest that a reasonable price would be paid. In this context, the use of the expression is not strictly accurate because it presumes the existence of an underlying contract which contains an implied term that a

13 See *William Lacey (Hounslow) Ltd v Davis* [1957] 2 All ER 712.
14 Goff and Jones, *The Law of Restitution*, 3rd edn (Sweet & Maxwell, 1986), pp 26–27.
15 [1957] 2 All ER 712.

reasonable price would be paid for work done. In *Lai Yew Seng Pte Ltd v Pilecon Engineering Bhd* (2002),[16] the High Court in Singapore pointed out that a claim for work done on a *quantum meruit* could not be mounted on the contract itself. The better view would be that the expression does not suggest the payment of a reasonable *price* for work done, since the term "price" implies the existence of an underlying contract. Instead, the expression may be read as the reimbursement of a claimant for the *value received by the defendant* in respect of work done by the claimant. However, where the situation of the parties is that there had been previously a contract but work was done on a non-contractual basis, the assessment of the amount to be paid on a *quantum meruit* may be made by reference to the rates and prices contained in the contract. "The conditions in which the remaining work was carried out did not differ materially from those which (it must be assumed) were originally contemplated… Such a contractual basis must be regarded as in principle fair for the purposes of a *quantum meruit*, especially here, where, for example, it is clear that [the contractor's] tender was not abnormally low but was close to others...": *EDRC Group Limited v Brunel University* (2006).[17]

quantum valebat [Latin expression] As much as it is worth. This argument may be raised in a claim arising from a contract for the sale of goods which omits any mention of price. See also QUANTUM MERUIT.

quarrying *n.* The extraction of stones (including granite and marble) from their natural deposits by means of blasting or cutting.

quartering *n.* The act of dividing the quantity of a large sample of material into four approximately equal parts. This is commonly encountered where building materials such as marble or granite are to be supplied on terms that they are to conform to sample. The quartering of a slab of marble, for example, ensures that consistent control samples are provided both for the operations in the quarry and for the assembly of components on the construction site.

quasi-arbitrator *n.* Describes a role with respect to a matter which resembles that performed by an arbitrator in that it involves ascertaining the facts and the application of the relevant principles of law.

quasi-contract *n.* Describes a situation where one party has unduly benefited at the expense of another and is imputed with an obligation to make good the loss suffered by the aggrieved party.

16 [2002] 3 SLR 425.
17 [2006] EWHC 687 (TCC) at para 43.

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This is invoked, for example, in a situation where one party pays a sum of money to another by mistake or where work has been done or materials supplied under a void contract. In the latter incident, the aggrieved party may sue on a *quantum meruit*.

quid pro quo [Latin expression] Something for something, reciprocity.

quiet enjoyment *n.* The right of a person to enter and remain in the enjoyment of property without any unlawful interference or disturbance by the party granting the right or any party claiming through him.

quirk *n* A narrow groove provided at the intersection of two surfaces to reduce the incidence of uncontrolled cracking.

quotation *n.* **1.** A statement offering to supply goods or services at a specified price. In the construction industry, a main contractor may invite quotations from sub-contractors, suppliers and specialist firms in respect of work and supplies required for the carrying out of the main contract works.

2. The listing of shares on a stock exchange.

R

raceway *n.* A protective housing or channel for a group of electrical wires and cables. Raceways may be metallic or non-metallic.

raft *n.* See RAFT FOUNDATION.

rafter *n.* A sloping beam which forms part of the structural frame for a pitched roof. In a typical pitch roof, one end of the rafter is fixed to the ridge while the other end is supported on a beam or a wall. Timber battens are laid across the rafters on to which roof tiles are nailed or fixed. Rafters are normally constructed of timber but the principal rafters may be constructed of reinforced concrete or structural steel.

raft foundation *n.* A foundation constructed as a continuous slab of reinforced concrete by which vertical loads are supported. A raft foundation is used usually where the underlying soil is relatively soft or weak or, occasionally, as an alternative to pile foundations.

rates *n.* In construction contracts, the term refers to the unit prices for various items of work or materials described in bills of quantities or schedule of rates. These rates are intended to apply to the valuation of work completed. It should in principle apply to any variation work which is of a similar nature and has been undertaken under conditions similar to those envisaged for the execution of the work described against the rate. See SCHEDULE OF RATES.

ratification *n.* **1.** The confirmation or acceptance of an act.

2. Adoption of a contract by a person who was not bound by it originally. For example, where a person enters into a contract on behalf of a principal without the authority of the principal, the principal may subsequently adopt the contract by ratification.

3. In company law, ratification refers to a resolution passed at a general meeting approving a matter which was undertaken by the management or official of a company and which requires such approval or sanction. In the absence of such ratification, the transaction would have been irregular.

4. In international law, the term refers to the giving of consent by the legislature of a state in respect of an act undertaken by an official of that state or a treaty which had been previously negotiated by a representative of that state. As a general principle, no treaty is binding on a state until it has been ratified in accordance with the constitution of that state.

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ratio decidendi [Latin expression] The reason or principle on which a decision of the court is based. It is considered to be a statement of law applied to the material facts of a case. The *ratio decidendi* of a case has effect as a precedent on the particular point or points of law in the event that the same point or points are encountered in a subsequent case. There may be more than one *ratio decidendi* of a case. To avoid the application of the *ratio decidendi* of an earlier case, it is open to a party to argue that: (a) the facts in the subsequent case are materially different; or (b) the *ratio decidendi* of the earlier case should not be that as construed by the opposing party.

Following the abolishment of appeals to the Privy Council via the Judicial Committee (Repeal) Act 1994,[1] Privy Council decisions on appeal from Singapore have the same status as decisions of the Singapore Court of Appeal. In a Practice Statement issued on 11 July 1994, the courts decided that "it is proper that the Court of Appeal should not hold itself bound by any previous decision of its own or of the Privy Council, which by the rules of precedent prevailing prior to 8 April 1994 were binding on it, in any case, where adherence to such prior decisions would cause injustice in a particular case or constrain the development of the law in conformity with the circumstances of Singapore."[2]

ready mixed concrete *n.* Concrete which has been mixed in a remote plant and delivered to a construction site by means of specially equipped trucks, ready for placement.

real evidence *n.* Evidence given by the production of an article or object. An example is the production of a defective tile in a case on building defects. When an article is admitted in evidence, it is usually referred to as an exhibit.

real property *n.* The class of property consisting of land and buildings.

Real Estate Developers Association of Singapore (REDAS) *n.* An industry association of major real estate developers in Singapore, founded originally in 1958 as the Singapore Land and Housing Developers' Association. The Association became active following the enactment of the Housing Developers (Control and Licensing) Act in 1965.[3] The present entity was constituted in 1977.

Real Estate Developers Association of Singapore (REDAS) Design and Build Contract *n.* A standard form published by the Real Estate Developers Association of Singapore and intended for use in design and build contracts for building construction. The

1 (No. 2 of 1994).
2 Practice Statement (Judicial Precedent) [1994] 2 SLR 689.
3 (Cap 130, 1985 Rev Ed).

first edition was published in 2001, the second edition in October 2007 and the current third edition was released in October 2010. The drafting of the standard form is dictated to a large extent by real estate developers and, as a consequence, the positions on risk allocation and the various processes have been formulated to serve the purpose of project owners.

reasonable *adj.* **1.** A fair and proper view or assessment of a matter in a particular set of circumstances. Use of the term implies that the view or assessment is not extreme but was made on the principles of fair play and natural justice.

2. In relation to a proposition, one which is advanced after proper reasoning. See also REASONABLE MAN.

reasonable expedition and diligence *n.* The application of reasonable effort and resources to execute and sustain the progress of work in a construction contract. The obligation has been described as a requirement to proceed "continuously, industriously and efficiently with appropriate physical resources so as to progress the work steadily towards completion substantially in accordance with the contractual requirements as to time, sequence and quality of work".[4] In *Jurong Engineering Ltd v Paccan Building Technology Pte Ltd* (1999), [5] the Singapore Court of Appeal held that if the progress of the sub-contract works consistently lagged behind and did not keep pace with the sub-contract programme, then the sub-contractor would not be proceeding with reasonable diligence.

There is no implied obligation on the part of a contractor to proceed with the works with due diligence and expedition so long as the works are delivered within the stated completion date.[6] Many of the current standard forms of contract contain provisions which expressly require the contractor to proceed with reasonable expedition and diligence: see, for example, Clause 21 of the Singapore Institute of Architects Standard Form of Building Contract (9th Ed, 2010) and Clause 4 of the Public Sector Standard Conditions of Contract (7th Ed, 2014). Whether a contractor is proceeding with the works with reasonable expedition and diligence is a question of fact. In practice, this is usually determined by reference to the construction programme and the technical requirements of the works. "You cannot have diligence in the abstract. It must be related to the objective." *Per* Parker LJ in *Greater London Corporation*

4 *West Faulkner Associates v London Borough of Newham* (1994) 71 BLR 1.
5 [1999] 3 SLR 667, CA.
6 See *Greater London Corporation v Cleveland Bridge and Engineering* (1984) 34 BLR 50.

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v Cleveland Bridge and Engineering (1984).[7] See Proceed Regularly and Diligently with the Works.

reasonable man *n.* An ordinary person sometimes called "the man on the Clapham omnibus" around which certain legal attributes or standards are framed. The expression is used for the purpose of determining the standard of care in negligence cases to suggest what a reasonable person might be expected to do in particular circumstances given the foresight of the consequences which may be properly attributed to such a person.

reasonable price *n.* A price for work, goods or services which is justified by the circumstances. A reasonable price may be established by either: (a) considering comparable prices in the market for the subject work, goods or services; or (b) calculated on the basis of the costs of doing the work or supplying the goods or services together with a proportionate margin of profit. Work done on a *quantum meruit* may be paid on the basis of a reasonable price: *William Lacey (Hounslow) Ltd v Davis* (1957).[8] In addition, where a contract is silent as to price, the courts have been prepared, in circumstances where it is clear that parties intend to pay and to be paid for the work,[9] to imply a term that a reasonable price should be paid. In *Constable Hart & Co Ltd v Peter Lind & Co Ltd* (1978),[10] a contract stipulated that a quotation shall remain "fixed price until 3 June 1975 and that any work carried out after this date to be negotiated". The English Court of Appeal held that a term was to be implied that reasonable current prices would be paid for work done after the stipulated date. However, where it is clear that parties have not agreed to a price, there can be no room to impute an agreement to pay a reasonable price and the result is that there is no enforceable contract: *Courtney & Fairbairn Ltd v Tolaini Brothers* (1975).[11]

reasonable supervision *n.* The level of supervisory effort expected of a reasonably experienced architect or engineer in the course of discharging his professional duties in relation to a construction contract. This is understood to mean an obligation on the part of the architect or engineer to inspect the works periodically and to regularly monitor the progress and quality of the work constructed. It does not, however, extend to providing constant or daily

7 (1984) 34 BLR 50 at pp 76-78.
8 [1957] 2 All ER 712.
9 *Hudson's Building and Engineering Contracts*, 11th edn (Sweet & Maxwell, 1995), Vol 1, para 1.017; *Chitty on Contracts*, 26th edn (Sweet & Maxwell, 1989), pp 37–171.
10 (1978) 9 BLR 1.
11 [1975] 3 All ER 416 followed in *British Steel Corporation v Cleveland Bridge and Engineering Co Ltd* [1981] 1 All ER 1077.

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supervision.[12] It is distinguished from detailed supervision which is the kind of close supervision normally expected from a supervisor (whether styled as a resident architect, resident engineer or foreman) who is deployed full time on site. Reasonable supervision does not include an obligation to prevent the contractor from doing unsatisfactory work but requires the architect or engineer to take steps to deter the contractor from delivering poor work and to discover and deal appropriately with such work where it has been done.

reasonableness test *n.* Test prescribed under the Unfair Contract Terms Act 1977 to be satisfied by a contractual term which is relied by one party to exclude liability for loss or damage. The test applies, *inter alia*, to:

(a) a term excluding loss or damage arising from negligence;[13]

(b) in the case of contracts where the party seeking to rely on the exclusion term deals with the other as a consumer or on the basis of his own written terms of business, terms which purport to: (a) restrict liability for breach of contract; or (b) to entitle the first person to: (i) render a contractual performance substantially different from that reasonably expected of him; or (ii) render no performance at all;[14]

(c) in the case of non-consumer contracts of sale or hire purchase, the seller or owner's implied undertakings as to conformity of goods with description or sample or as to their quality or fitness for a particular purpose;[15] and

(d) liability of a supplier of goods in respect of the transfer of ownership of the goods and assurance of quiet possession.[16]

The expression "deals as consumer" is defined in section 12(1) to mean one who did not make the contract in the course of a business or holds himself out as so doing and the goods are those which are ordinarily supplied for private use or consumption.

The test is whether the subject term is one which is "a fair and reasonable one to be included having regard to the circumstances which were or ought reasonably to have been known to or in the

12 *Chuang Uming (Pte) Ltd v Setron Ltd* [2000] 1 SLR 166, CA; *Sim & Associates v Alfred Tan* [1994] 3 SLR 169, CA; *RSP Architects Planners and Engineers v Management Corporation Strata Title Plan No. 1075* [1999] 2 SLR 449, CA.
13 Section 2(2) of the Unfair Contracts Terms Act 1977 other than personal injury or death which is dealt with under section 2(1).
14 These are contracts which fall within section 3 of the Unfair Contracts Terms Act 1977.
15 Section 6(3) of the Unfair Contracts Terms Act 1977.
16 Section 7(4) of the Unfair Contracts Terms Act 1977.

contemplation of the parties when the contract was made".[17] The onus of proving that a term is reasonable lies on the party which claims the terms is reasonable is.[18] Section 11(2) provides that in applying the test, the court is to take into account the matters specified in Schedule 2 and these include: (a) the strength of the parties relative to each other; (b) whether the customer received an inducement to agree to the term; (c) whether the customer knew the existence of the term; (d) where the term restricts any liability if some condition is not complied with, whether it was reasonable at the time of the contract to expect that compliance with the condition would be practicable; and (e) whether the goods were manufactured to the special order of the customer. In addition, the court is required to have regard to the resources which a party expects to be available to him to meet the liability should it arise and whether it was open to him to be covered by insurance.[19]

reasonable time *n.* The period of time within which it is considered reasonable for works to be completed. An obligation to complete a construction project within a reasonable time arises where a construction contract is silent as to time or because the stipulated period for construction has ceased to be applicable for some reason for which the owner is responsible.[20]

Reasonable time is primarily a question of fact. It has to be considered "in relation to the circumstances which existed at the time when the contractual services were performed, but excluding circumstances which were under the control of the party performing those services" and taking into account "extraordinary circumstances" beyond the control of the party doing the work: *British Steel Corporation v Cleveland Bridge and Engineering Co Ltd* (1984).[21] The determination of the issue may involve the use of delay analysis which examines the causal relationship between events encountered during the course of the works and the activities which are critical to the time taken to complete the project.

receiver *n.* A person appointed by a court or by a company for: (a) the protection or collection of property that is the subject of diverse claims; or (b) the realisation of assets charged and the application of the proceeds for the benefit of those entitled.

17 Section 11(1) of the Unfair Contracts Terms Act 1977. See *Stewart Gill Ltd v Horatio Myer & Co Ltd* [1992] 2 All ER 257, CA.
18 Section 11(5) of the Unfair Contracts Terms Act 1977.
19 Section 11(4) of the Unfair Contracts Terms Act 1977.
20 *Hick v Raymond and Reid* [1893] AC 22 at pp 32 and 33, *per* Lord Watson; *Hudson's Building and Engineering Contracts*, 12th edn (Sweet & Maxwell, 2010), para 6.064.
21 [1981] 1 All ER 1077, *per* Robert Goff J.

receivership *n.* The state of a company being in the control of a receiver.

recitals *n.* Statement set out at the beginning of a contract stating the general intentions of the parties and the particulars which relate to the contract such as the names of the parties, the date when the contract was made, the background and general description of the project. Each recital begins with the word "whereas".

recklessness *n.* Indifference on the part of a person doing something as to an obvious risk associated with the act. The concept as understood presently derives from the decision in *R v Cunningham* (1957)[22] in which the issue was considered in relation to the United Kingdom Offences against the Person Act 1861 and where it was held that the determinative test of recklessness is essentially a subjective one.[23]

rectification *n.* **1.** The correction of an error in a document.

2. Refers to the equitable jurisdiction of the court to rectify a written agreement which, because of a mistake, does not substantially represent the real intention of the parties. "The essence of rectification is to bring the document which was expressed and intended to be in pursuance of a prior agreement into harmony with that prior agreement".[24] Rectification, however, will only be ordered if there is strong and convincing evidence that the document fails to record the intention of the parties.[25] The court will, in particular, be vigilant to: (a) ensure that rectification does not lead to the imposition on a party of terms to which he could not have agreed; and (b) recognise that any reference to pre-contract negotiations are likely to hinder "certainty and ready enforcement" of written agreements.[26]

3. In relation to construction work, refers to the repairing and making good of defects in constructed work.

Redfern Schedule *n.* A schedule used to present the views of opposing parties in relation to the hearing of requests for the production of documents. Named after a British arbitrator, Alan Redfern, the schedule consists of four columns. The first column describes the document or class or documents to which the request relates. The second column lists in summary form the reasons of the requesting party for its production. The summary should specify the paragraph of the pleading or submission to which the requested

22 [1957] 2 QB 396.
23 As reaffirmed by the House of Lords in *R v G* [2003] 3 WLR 1060.
24 *Lovell and Christmas Ltd v Wall* [1911] 104 LT 85, *per* Cozens-Hardy MR. See also *United States v Motor Trucks Ltd* [1924] AC 196.
25 *Luk Leamington Ltd v Whitmarch plc* [2002] 1 Lloyd's Rep 6 at 18–19.
26 *Blacklocks v J B Developments (Godalming) Ltd* [1981] 3 WLR 554, Ch D; *The Olympic Pride* [1980] 2 Lloyd's Rep 67.

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