Similarly, to be a Qualified Person, a Professional Engineer must be qualified and registered in accordance with *s 15 of the PE Act,*[14] and have a valid practising certificate in accordance with *s 18 of the PE Act.*[15]

In the case of structural design for major building works and geotechnical works, Accredited Checkers are appointed to check on the design and calculations of the Qualified Person in accordance with *s 8(1)(e) and (f) of the BC Act.*[16] The Building Control (Accredited Checkers and Accredited Checking Organisations) Regulations[17] provide the qualifications needed for registration as an Accredited Checker.

Having been appointed as a Qualified Person, an Architect or C&S Engineer, undertakes duties as required under *s 9 of the BC Act.*[18] These are statutory duties and any breach of them may attract penalties provided within the section. Similarly, *s 18 of the BC Act,*[19] provides for duties and penalties of Accredited Checkers.

1.2.3.3 Quantity Surveyor

When the Owner approved the concept drawings (see para 1.2.3.1) the Quantity Surveyor ("QS") will be requested to provide an estimate for the cost of the construction project. Naturally, the estimate should meet with the Owner's approval before proceeding with the detailed design.

The estimate approved by the Owner is usually the budget set by the Owner for the construction and completion of the project. It will be the responsibility of the consultancy team to ensure that the final development cost of the project is kept within the budget set by the Owner.

The QS role is to advise on and procure the following:

- a compilation and collation of the specifications and drawings;

14 (Cap 253, 1992 Rev Ed).
15 (Cap 253, 1992 Rev Ed).
16 (Cap 29, 1999 Rev Ed).
17 (Rg 2, GN No S 149/1989).
18 (Cap 29, 1999 Rev Ed).
19 (Cap 29, 1999 Rev Ed).

- provide tender instructions;
- provide form of tender and other tender documents.

with the object of providing a complete set of tender documents consisting of terms, conditions, bills of quantities (if any), specifications and drawings for tendering by tenderers.

The QS will also advise on pre-qualification of tenderers based on criteria such as previous performance, track record and financial category. The Building and Construction Authority ("BCA") provides a record of contractors registered according to workheads or trades and financial category[20] and serves as a guide for inviting tenderers to tender for public projects.

Thus the QS administers the tendering process and among other things provides the following:

- recommends appropriate tenderers to invite to tender for the project (if based on selective tendering process);
- sends letters of invitation to tender to prospective tenderers;
- posts tender notices (where appropriate);
- makes appointment for site showround with tenderers and consulting team;
- arranges for tenderers for collection of tender documents;
- collects tender deposits; and
- upon closing of tender, evaluates and recommends acceptance of the lowest price tender which complies fully with the tender documents.

During construction, the QS administers the Construction Contract in the valuation of progress payments, valuation of variation, finalising of accounts at the completion of the construction works and provides contractual advice.

Although the QS profession is not regulated by an Act of Parliament, the interests of the profession is served by the Singapore Institute of Surveyors and Valuers.

20 http://www.bcadirectory.sg/index.php

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1.2.3.4 *Mechanical and Electrical Engineers*

Upon the Owner's approval of the concept drawings and cost estimates, the Mechanical and Electrical Engineers ("M&E Engineers") will also be appointed.

Such Engineers will also have to be Qualified Persons. The M&E Engineers will be required in the design and supervision of air conditioning, lighting, pumps and other mechanical and electrical installations.

1.2.4 Contractor

After the consultancy team has designed the structure and installations, the specifications, drawings and tender documents would be drafted and finalised for calling of tenders (see para 1.3.1.2) to engage a Contractor.

In Singapore, no person could carry on the business of a building contractor unless he has a *general builder's licence* or *specialist builder's licence*.

Section 29B of the BC Act,[21] provides as follows:

> **Prohibition against unlicensed builders**
>
> **29B.**—(1) Subject to the provisions of this Act, no person shall —
>
> (a) advertise or hold himself out or conduct himself in any way or by any means as a person who is authorised to carry on the business of a general builder or a specialist builder in Singapore; or
>
> (b) assume, take or use (either alone or in combination with any other word, letter or device) the name or title of "licensed general builder" or, as the case may be, "licensed specialist builder", or any name, title or description calculated to lead others to believe he is so licensed, or by words or conduct hold himself out as being so licensed, unless he is in possession of a general builder's licence and a specialist builder's licence, respectively.
>
> (2) Subject to the provisions of this Act, no person shall —
>
> (a) carry on the business of a general builder in Singapore unless he is in possession of a general builder's licence;

21 (Cap 29, 1999 Rev Ed).

> (b) carry on a business carrying out, or undertaking to carry out, (whether exclusively or in conjunction with any other business) general building works and minor specialist building works or minor specialist building works only, unless he is in possession of a general builder's licence; or
>
> (c) carry on the business of a specialist builder in Singapore unless he is in possession of a specialist builder's licence.

The BC Act[22] has strict requirements[23] for anyone who wishes to apply for a general or specialist builder's licence in the interest of upholding standards and for the public good.

Further, as mentioned previously, the BCA provides a contractors' registration system as a guide in the procurement of public works contractors. This system may also be used by the private sector in the selection of tenderers.

Generally, only tenderers who possess the relevant builder's licence may be allowed to tender. Eventually, the Owner accepts a tenderer's tender, and this successful tenderer becomes the contractor of the project.

1.2.5 Subcontractors

The Contractor who is accepted by the Owner to perform the whole of the construction works usually does not do all the works himself. The Contractor (called "Main Contractor") subcontracts parts of the works to other contractors (called "Subcontractors").

Traditionally, the air conditioning works and electrical works (e.g. supply and installation of lighting) are subcontracted to Air conditioning and Electrical Subcontractors respectively as these are specialist works. Although such specialist works are subcontracted to Subcontractors, the Main Contractor remains responsible and liable to the Owner for the satisfactory completion of these specialist works.

22 (Cap 29, 1999 Rev Ed).
23 BC Act, ss 29F and 29G.

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Thus, for example, if the air conditioning works were badly carried out by the Subcontractor with defects such as inadequate air flow, the Owner's cause of action for a claim in breach of contract is against the Main Contractor, not the Subcontractor. This is so, as the Main Contractor has contracted with the Owner ("Main Contract") on the basis of carrying out and completing the whole of the works satisfactorily, including air conditioning and other specialist works. Even though it was the Subcontractor who caused the inadequate air flow due to his bad workmanship, the Owner may not take action against the Subcontractor for breach of contract due to bad workmanship as there was no contract between the air conditioning Subcontractor and the Owner. The contract would have been entered into between the air conditioning Subcontractor and the Main Contractor ("Subcontract"). Though the Main Contractor subcontracted a part of his works to the air conditioning Subcontractor, the Main Contractor remains responsible and liable to the Owner for the air conditioning works.

Depending on the manner in which the Subcontractors were selected, they are known as follows:

1.2.5.1 Designated Subcontractors (in the SIA form of contract)

In the SIA form of contract, the Articles and Conditions of Building Contract – Measurement Contract[24] ("SIA Form"), a Designated Subcontractor[25] is one who has been identified in the contract between the Main Contractor and the Owner. In other words, the Owner has, in the contract, directed the Main Contractor to engage an identified Subcontractor to perform certain specified works.

1.2.5.2 Nominated Subcontractors

A Nominated Subcontractor is one who is selected after the appointment of the Main Contractor. Hence, the Main Contract does not identify a particular Subcontractor but has specified that part of the Main Contract

24 Singapore Institute of Architects (ed), Articles and Conditions of Building Contract – Measurement Contract, 9th edn (Singapore: Singapore Institute of Architects, 2011).
25 *Ibid*, cl 28(1)(a).

works would be performed by a Subcontractor to be nominated by the owner. Usually, the appointment of a specialist Nominated Subcontractor takes place later in the construction period.

1.2.5.3 Domestic Subcontractors

A Domestic Subcontractor is one who is engaged by the Main Contractor without the Owner playing any part in the selection. For example, the Main Contractor may subcontract the supply and installation of all the doors in a construction project to a specialist door supplier. The Owner may not take part in the selection process of the door supplier.

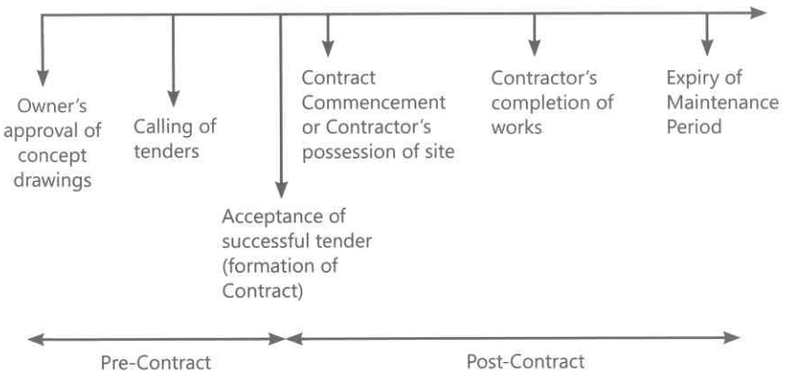
1.3 STAGES IN A CONSTRUCTION PROJECT

The stages in a construction project may be broadly categorised as follows:

- Pre-Contract
- Formation of Contract
- Post-Contract

Fig 1.1 is a timeline showing some of the major stages and milestones of a construction project:

Fig 1.1 Timeline for major stages and milestones of a construction project



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1.3.1 Pre-Contract

1.3.1.1 Owner's approval

Upon the Owner's approval in respect of the construction, the Architect will prepare plans for submission to the relevant authorities for approval. Usually, time would be taken to revise plans and drawings to satisfy the relevant authorities with respect to the planning policies. Upon the authorities' approval, the tender drawings and documents would be prepared and finalised for tendering.

1.3.1.2 Calling of tenders

In order to obtain a competitive tender (or bid or offer), open or selective tendering may be applied in the procurement of a Contractor. Open tendering refers to the process where any contractors who are qualified will be allowed to submit one tender each. Selective tendering refers to the process where only selected tenderers will be invited to tender for the project. In some special circumstances, there may not be competitive bidding. The Owner negotiates with one tenderer for construction of the project. This may occur for special construction where there is only one specialist contractor suited for the job or where the developer prefers to engage a contractor from in-house's list of preferred contractors to carry out his projects.

1.3.2 Formation of Contract

A tender is an offer by the tenderer to carry out and complete the construction works at a price and in accordance with the specifications and drawings within the specified time period.

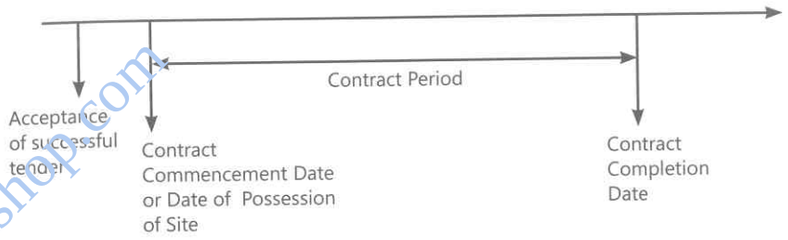
Based on the tender documents (consisting of specifications and drawings, etc), tenderers will usually be required to prepare a lump sum bid to construct and complete the whole project. Each tenderer will submit one lump sum bid for the project. Upon the deadline for closing of tenders, all the tenders are evaluated and usually, the lowest tenderer who complies fully with the tender documents would be recommended for acceptance.

Upon posting the Letter of Acceptance or Letter of Award to the successful tenderer, a Contract is formed between the Owner and the successful tenderer. The successful tenderer is bound to construct and complete the whole of the works specified in the tender documents within the construction period (known as the "Contract Period") in return for the Owner's payment of the lump sum price.

1.3.3 Post-Contract

1.3.3.1 Contract Commencement or Contractor's Possession of Site

Fig 1.2 Timeline for Contract Commencement or Possession of Site



After receipt of the Letter of Acceptance, the Contractor (being the successful tenderer) will take over the site from the Owner on a specified date (known as the "Contract Commencement Date" or "Date of Possession of Site", see Fig 1.2). Thereupon, the Contract Period will commence from the Date of Possession of Site. The Contract Period is the period required in the contract for completion of the whole of the works. Hence, it is usually expressed in the contract as, for example –

> Contract Period
>
> The Contractor shall complete the whole of the works within the Contract Period of twenty-four (24) months from the date of possession of site.

In practice, it is common to have the Contract Commencement Date coincide with BC Act's[26] date of issuance of Permit to Commence Building Works.

26 (Cap 29, 1999 Rev Ed).

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3.4 ARCHITECT'S DIRECTIONS AND INSTRUCTIONS

3.4.1 Meaning

Upon commencement of works, the Architect (in the SIA Form[9]) or the Superintending Officer (or "SO" in the PSSCOC Form[10]) would be inspecting the works regularly to ensure that the works are constructed in accordance with the drawings and specifications in the Contract.

The SIA Form[11] provides that the Architect shall have power of issuing Directions, Instructions, certifications and other powers stipulated. In the PSSCOC Form, the powers are vested in the Superintending Officer. The Superintending Officer may be an Architect, Engineer or other person appointed by the Employer.

In the course of inspection, they may "order" the Contractor to carry out certain tasks in relation to the construction works. An example of such an "order" may be an order that instead of providing floor tiles, the Contractor shall provide rubber mat in the construction of a kindergarten classroom in the interest of safety of the children. There may be other changes to the Contract drawings and specifications for functional, ornamental or other reasons. Under the Contract, the Contractor must carry out such orders.

In the SIA Form,[12] such orders are known as Instructions where, in principle, additional payment or changes in payment would be made to the Contractor. Directions are orders where *no* additional payment may be made to the Contractor. In the PSSCOC Form,[13] an order is simply an Instruction, which may or may not give rise to additional payment to the Contractor.

9 Singapore Institute of Architects (ed), Articles and Conditions of Building Contract – Measurement Contract, 9th edn (Singapore: Singapore Institute of Architects, 2011).
10 Building and Construction Authority (ed), Public Sector Standard Conditions of Contract for Construction Works, 7th edn (Singapore: Building and Construction Authority, 2014).
11 Singapore Institute of Architects (ed), Articles and Conditions of Building Contract – Measurement Contract, 9th edn (Singapore: Singapore Institute of Architects, 2011).
12 Singapore Institute of Architects (ed), Articles and Conditions of Building Contract – Measurement Contract, 9th edn (Singapore: Singapore Institute of Architects, 2011).
13 Building and Construction Authority (ed), Public Sector Standard Conditions of Contract for Construction Works, 7th edn (Singapore: Building and Construction Authority, 2014).

3.4.2 SIA Form[14] provisions in respect of Directions and Instructions

The SIA Form[15] provides for Directions and Instructions as follows:

Clauses	Brief explanation
Cl 1(1)	The Contractor must carry out all Architect's Directions and Instructions. All orders of Architects must be in writing and expressed as Directions or Instructions. Verbal Directions or Instructions (i.e. communicated orally) shall be effective provided: • within 14 days of it being given verbally, the Contractor confirms with the Architect in writing; and • within 14 days of receipt of the confirmation, the Architect does not disagree with or withdraw the Direction or Instruction (see Fig 3.1). If the Architect withdraws within the latter 14 days, the Contractor shall be compensated for expenses reasonably incurred in carrying out the Direction or Instruction. Architect may himself confirm in writing any verbal Direction or Instruction previously given. The Contractor need not carry out: • verbal Direction or Instruction of the Architect; and • other orders or requests not expressed as Directions or Instructions, unless there has been a written confirmation and properly expressed as a Direction or Instruction. Contractor shall not be entitled to claim additional payment unless there was a written Direction or Instruction or confirmed in writing as such.

14 Singapore Institute of Architects (ed), Articles and Conditions of Building Contract – Measurement Contract, 9th edn (Singapore: Singapore Institute of Architects, 2011).
15 *Ibid.*

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Clauses	Brief explanation
	Where the Architect issues a Variation order (see para 3.5) to change the original part of works in the Contract to something else, e.g. a Variation order to change the wall painting work specified in the Contract to wall tiling, the Architect will have to issue an Instruction in writing to the Contractor in respect of the Variation order. A verbal instruction need not be carried out by the Contractor and even if it has been carried out, the Contractor may not be paid for it (see *KCS Design & Construction Pte Ltd v Miracle Management Pte Ltd*[16]). However, there are instances where the court has ruled in favour of payment despite failure of the issue of an Instruction in writing but these are due to other circumstances, e.g. estoppel. Directions or Instructions given by Clerk of Works ("CoW") shall be of no effect unless confirmed in writing by the Architect.
Cl 1(2)	"Direction" means an order of the Architect which when carried out by the Contractor will: • not entitle the Contractor to additional payment; • not increase the Contract Sum; or • in some instances reduce the Contract Sum. "Instruction" means an order of the Architect which when carried out by the Contractor will: • in principle, entitle the Contractor to additional payment; • in principle, result in an increase in the Contract Sum; or • in some instances, reduce the Contract Sum.
Cl 1(3)	Principal matters for which an Architect may give Directions are as follows:
Cl 1(3)(a)	secure Contractor's compliance of existing obligations under the Contract, e.g. a Direction to the Contractor to ensure that all workers on-site wear safety helmet and boots. The Direction requiring worker to wear safety helmet and boots on-site is part of the Contractor's existing obligation under the Contract;

16 [2011] SGDC 346.

Clauses	Brief explanation
Cl 1(3)(b)	in cases of Contractor's failure, secure Contractor's compliance with methods of working and temporary works which will: (i) be reasonably safe and proper during construction; or (ii) ensure properly constructed permanent work.
Cl 1(3)(c)	at Contractor's request, vary works so as to assist Contractor to overcome difficulties (see *Tan Chiang Brother's Marble (S) Pte Ltd v Permasteelisa Pacific Holdings Ltd*,[17] The *Tharsis Suplur and Copper Co v McElroy & Sons*[18]);
Cl 1(3)(d)	vary the works as a consequence of defective works, e.g. due to defectively constructed beams, there was a Direction to construct additional beams to compensate for the defectively constructed beams. Such a course could only be pursued under this sub-clause if the rebuilding of the original defective beams would involve unreasonable expense or delay or may prejudice the permanent works;
Cl 1(3)(e)	suspend or postpone works to carry out investigation in consequence of defective works. In the example of the defectively constructed beams above, a Direction may be issued to the Contractor to suspend works for a period of time whilst investigations are carried out and remedial measures adopted. The Contractor may suffer loss during the period of suspension of works, but there would be no claim as the suspension was due to the Contractor's defective works;
Cl 1(3)(f)	change a previous Direction.
Cl 1(4)	Principal matters for which an Architect may give Instructions are as follows:

17 [2001] SGHC 386.
18 [1878] 3 AC 1040.

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Clauses	Brief explanation
Cl 1(4)(a)	vary the permanent work as desired by the Architect or Employer, e.g. an Instruction to the Contractor to change painting to wall in the bathroom as required in the Contract to wall tiling. This change may be required by the Architect for ornamental and functional reasons;
Cl 1(4)(b)	vary the temporary works or methods of construction as desired by the Architect or Employer, e.g. an Instruction to the Contractor to carry out excavation using a mechanical excavator to speed up the work instead of manual hand tool excavation which may be sufficient for the purpose of the Contract;
Cl 1(4)(c)	postpone or suspend work where not due to any defective work, e.g. Instruction to the Contractor to suspend work for a week due to the Developer's preparation and soft launch for the sale of condominiums;
Cl 1(4)(d)	carry out work or supply goods by Designated or Nominated Subcontractors which are under a PC Sum or Item, e.g. after the tender for air conditioning Nominated Subcontract work was evaluated, an Instruction was given to the Contractor to enter into contract with the successful air conditioning Nominated Subcontractor;
Cl 1(4)(e)	carry out work or supply goods either by the Contractor or NSC or suppliers which are under a Provisional or Contingency Sum, e.g. an Instruction to the Contractor to provide furniture and home appliances as particularised in the Instruction after completion of construction work. Usually, a Provisional Sum for the furniture and home appliances would have been provided as part of the Contract Sum. The Provisional Sum or Contingency Sum is an estimated value for the supply of the furniture and home appliances;
Cl 1(4)(f)	change a previous Instruction.

Clauses	Brief explanation
Cl 1(5)	The expression 'Direction' or 'Instruction' in an order of the Architect shall not bind the Contractor or the Employer in a dispute in Arbitration or the courts. However, the Contractor has to, within 28 days from receipt of the order or confirmation expressed as a 'Direction': (a) dispute the classification expressed as 'Direction'; or (b) claim additional payment; or (c) give a notice of arbitration in regard to the classification expressed. If the Contractor fails to do either (a), (b) or (c) as mentioned above, the Contractor shall be conclusively deemed to have undertaken to comply with the Direction without any additional payment (see Fig 3.2). If within 14 days of the Direction or confirmation, the Contractor requests the Architect for information under which provision of the Contract the Direction was given, the Contractor may dispute the classification expressed within 14 days after the Architect has replied (see Fig 3.3). If the Contractor wishes to object to the classification of an order as a Direction, Cl 1(5) provides the Contractor with the procedure to do so. Naturally, it would be in the interest of the Architect and Employer to issue Directions as the carrying out of Directions under the Contract is mandatory and does not incur additional payment for the Employer. But, the Contractor, in carrying out the Direction, may incur additional cost. In fairness to the Contractor, this sub-clause allows the Contractor to raise an objection to the classification as a Direction. In other words, the Contractor objects to carrying out the order as a Direction and may claim for additional payment and, in an appropriate case, an Extension of Time. The Contractor's objection does not relieve him of carrying out the work.
Cl 1(7)	If the Contractor fails to carry out the Direction or Instruction within 7 days of receipt, the Employer may employ other contractors to do so.

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5.3.3 Defects occurring during Contract Period under the PSSCOC Form[10]

The relevant sub-clauses of cl 10 are powers of the Superintending Officer in the investigation and remedy for defects during the Contract Period. Clause 18 of the PSSCOC Form provides powers for the Superintending Officer for the investigation and remedy of defects during the Defects Liability Period (called the Maintenance Period in the SIA Form[11]). Care must be taken to distinguish the two clauses. With the exception of cll 18.3 and 18.4, cl 18 powers may not be used by the Superintending Officer during the Contract Period.

The table below explains the relevant PSSCOC Form[12] clauses on defects during the Contract Period.

Clauses	Brief explanation
Cl 1.1(j)	"Defect" has been defined as any part of work not executed or completed in accordance with the Contract. As the work is carried out by the Contractor, Defect refers to any part of such work which is not carried out in accordance with the Contract. "Contract" includes specifications, drawings and other documents forming part of the Construction Contract between the Employer and Contractor.
Cl 10.1	All plants, materials, goods and workmanship shall be: • of the respective kinds described in the Contract and in accordance with the instructions of the Superintending Officer; and • subject to such tests as the Superintending Officer may by Instruction require.

10 Building and Construction Authority (ed), Public Sector Standard Conditions of Contract for Construction Works, 7th edn (Singapore: Building and Construction Authority, 2014).

11 Singapore Institute of Architects (ed), Articles and Conditions of Building Contract – Measurement Contract, 9th edn (Singapore: Singapore Institute of Architects, 2011).

12 Building and Construction Authority (ed), Public Sector Standard Conditions of Contract for Construction Works, 7th edn (Singapore: Building and Construction Authority, 2014).

Clauses	Brief explanation
Cl 10.3	Samples shall be supplied by the Contractor at his own cost.
Cl 10.4	The cost of the tests required by the Superintending Officer shall be borne by the Contractor if: • provided in the Contract; or • the test is required in consequence of prior failure or breach by Contractor. If the test is neither required in the Contract nor is a consequence of prior failures, the cost of carrying out the test shall be paid by the Contractor if the test discloses defects in the works. If the test does not disclose defects, the Contractor shall be entitled to claim Loss and Expense and Extension of Time as appropriate. See Fig 5.6 below.
Cl 10.5	Prior to covering the works or putting it out of view, the Contractor shall allow the Superintending Officer an opportunity to examine and measure the works. Failing which:
Cl 10.5(a)	the Superintending Officer may require the Contractor to uncover any part of the works for inspection and the cost shall be borne by the Contractor, whether or not such part uncovered discloses any defects; and
Cl 10.5(b)	additional costs or any other measures required by the Superintending Officer shall be paid by the Contractor. See Fig 5.7 below.
Cl 10.6	If examination of the works by the Superintending Officer under cl 10.5 has been carried out, part of the works covered up, and the Superintending Officer wishes to uncover part of the works again, the Contractor shall do so according to the Superintending Officer's requirement. If the uncovered works are found to be in accordance with the Contract, the Contractor shall be entitled to claim for Loss and Expense and Extension of Time as appropriate.

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Clauses	Brief explanation
	In any other case, the Contractor shall not be entitled to any claim or Extension of Time. See Fig 5.7 below.
Cl 10.7	If there are any defects during the progress of the works, the Superintending Officer may instruct the Contractor as follows:
Cl 10.7(a)	demolish and reconstruct so that the works will be in accordance with the Contract;
Cl 10.7(b)	remove materials or goods that are not in accordance with the Contract and replace with materials or goods that are in accordance with the Contract; and
Cl 10.7(c)	remove defective plant and replace with plant that is in accordance with the Contract. If the Contractor disputes the above cll 10.7(a), (b) and (c), he shall nevertheless carry it out, but may claim for Extension of Time and Loss and Expense as appropriate. If the claim comes before the Superintending Officer or arbitrator, and it was assessed that the Superintending Officer was not entitled to issue the Instruction, then, provided that the Contractor has complied with cll 14, 23, 32 or 35, the Contractor shall recover Loss and Expense and Extension of Time as appropriate. See Fig 5.8 below.
Cl 10.8	If the Contractor fails to carry out the Instruction in cl 10.7, the Employer shall be entitled to employ and pay others to carry out the works and any losses or damages may be recoverable from the Contractor.

Fig 5.6 Flow chart in respect of cl 10.4 for the payment for cost of test and corresponding Extension of Time under the PSSCOC Form

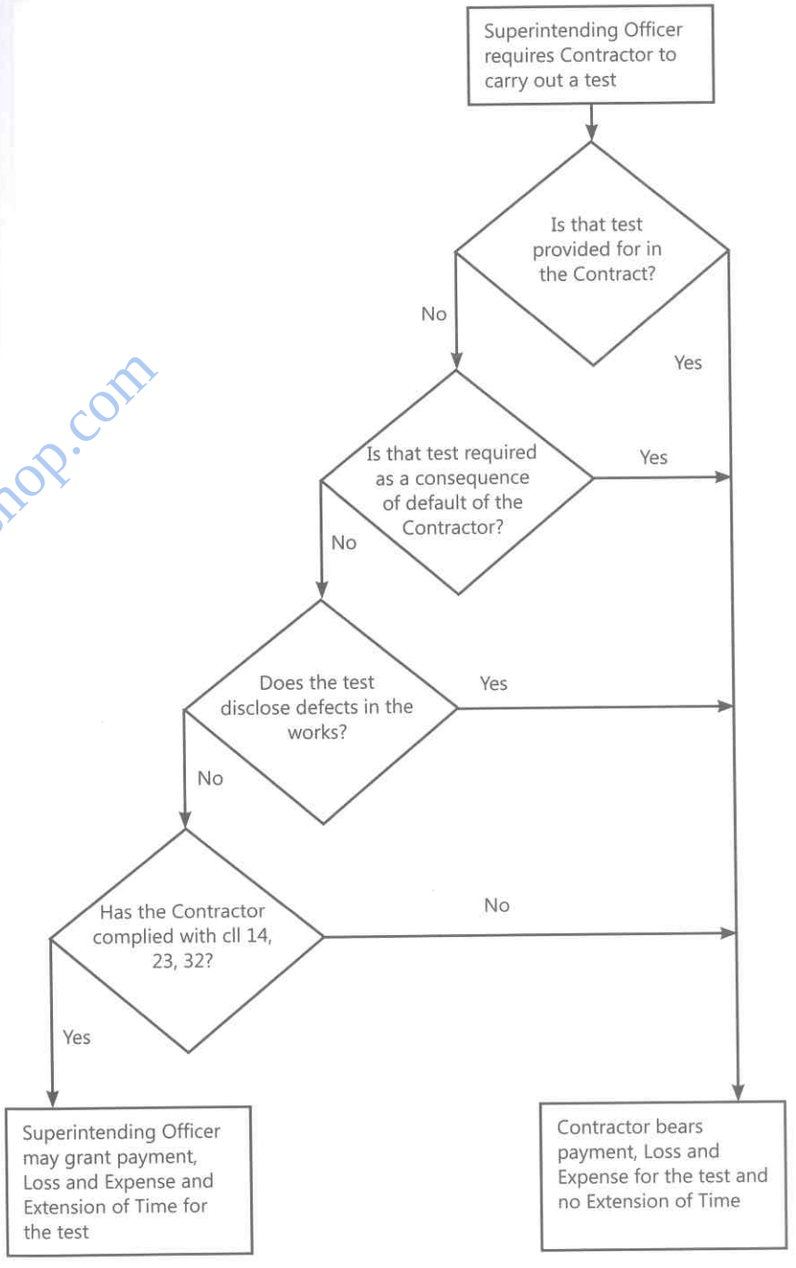

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Fig 5.7 Flow chart in respect of cll 10.5 and 10.6 on examination, covering up of works, payment of cost and corresponding Extension of Time under the PSSCOC Form

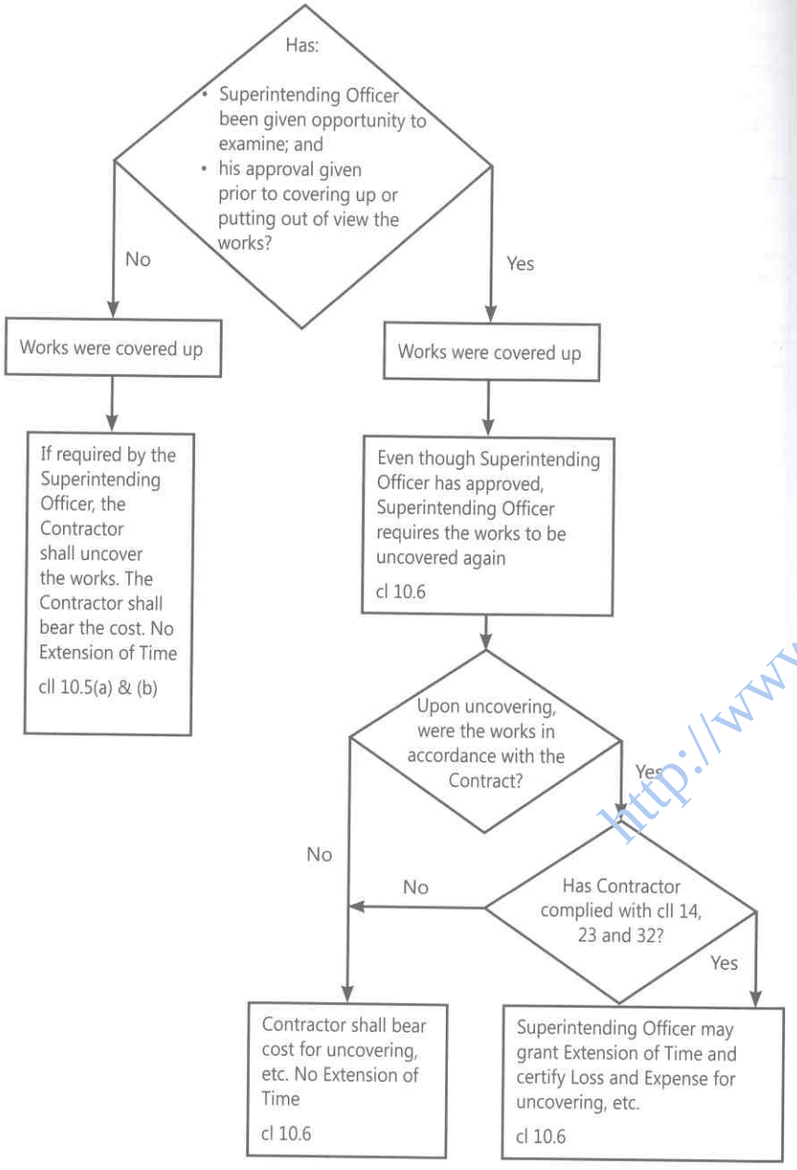
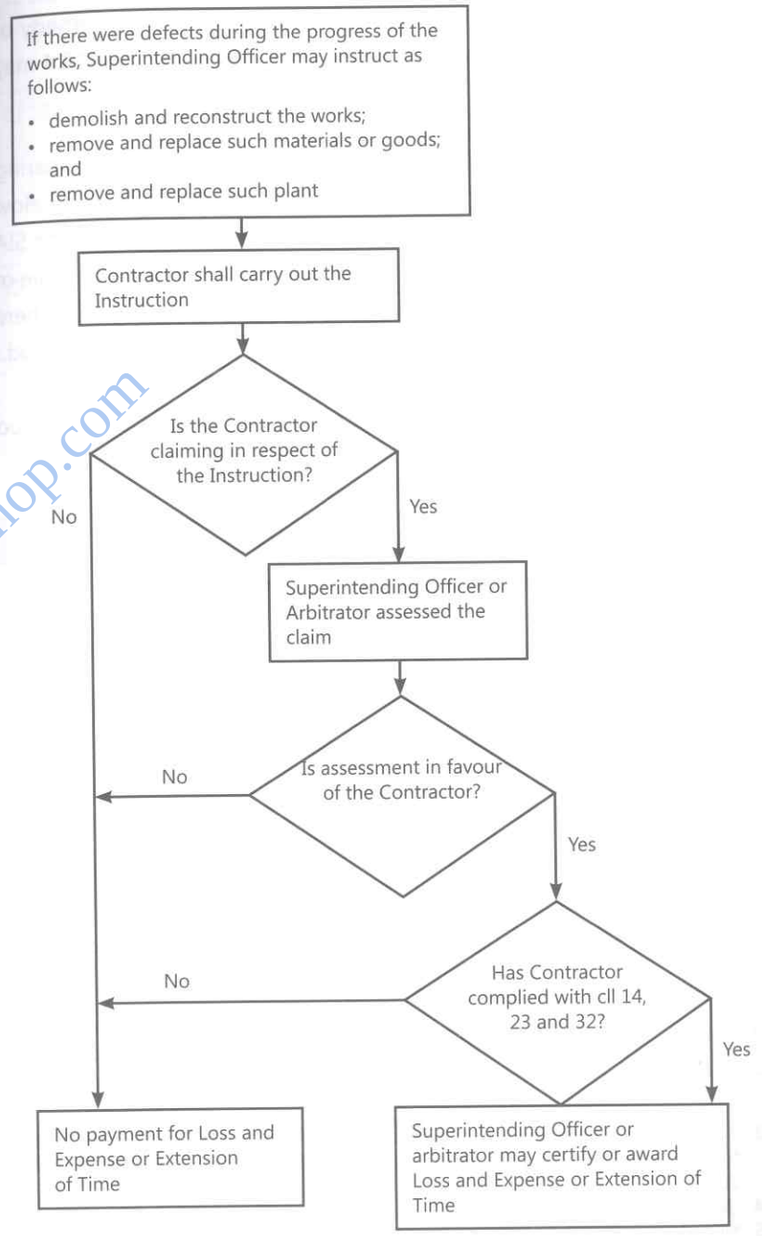


Fig 5.8 Flow chart in respect of cl 10.7 rectification and claim for defects during progress of works under the PSSCOC Form



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5.3.4 Defects during Defects Liability Period under the PSSCOC Form[13]

Clause 18 of the PSSCOC Form[14] specifically provides for the remedy of defects during the Defects Liability Period. Further, cll 18.3 and 18.4 may also be applied during the Contract Period.

A similar period in the SIA Form[15] is the Maintenance Period. Comparing Fig 5.5 above (the Maintenance Period in the SIA Form) to Fig 5.9 below (the Defects Liability Period in the PSSCOC Form), one notes that the SIA Form provides for further treatment in the application of the Schedule of Defects after the Maintenance Period. In the PSSCOC Form, however, there is no provision for Schedule of Defects after the Defects Liability Period.

The table below explains the relevant clauses on the Defects Liability Period under the PSSCOC Form.

Clauses	Brief explanation
Cl 1.1(k)	The "Defects Liability Period" has been defined as the defects liability period as set out in the Appendix, calculated from the Date of Substantial Completion.
Cl 18.1	The Contractor shall, during the Defects Liability Period:
Cl 18.1(a)	complete any outstanding work at the Date of Substantial Completion; and
Cl 18.1(b)	remedy defects and other faults. See Fig 5.9 below.
Cl 18.2	The Contractor shall remedy the defects at his own cost if in the opinion of the Superintending Officer:
Cl 18.2(a)	it is a defect;
Cl 18.2(b)	design fault on the part of the Contractor; or

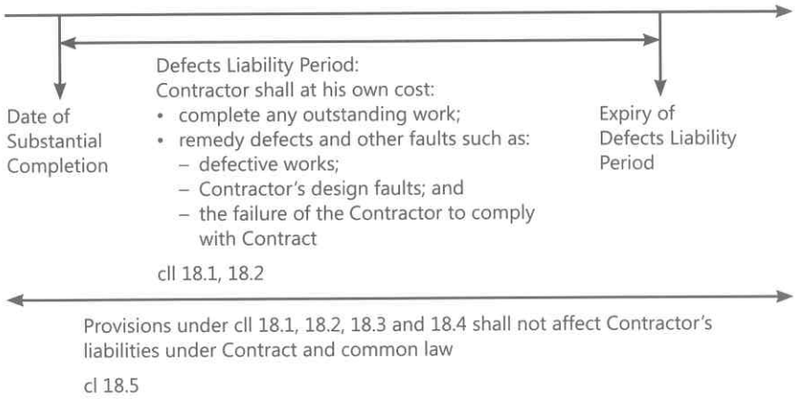
13 Building and Construction Authority (ed), Public Sector Standard Conditions of Contract for Construction Works, 7th edn (Singapore: Building and Construction Authority, 2014).

14 *Ibid.*

15 Singapore Institute of Architects (ed), Articles and Conditions of Building Contract – Measurement Contract, 9th edn (Singapore: Singapore Institute of Architects, 2011).

Clauses	Brief explanation
Cl 18.2(c)	failure of the Contractor to comply with any part of the Contract. See Fig 5.9 below.
Cl 18.3	If, in the opinion of the Superintending Officer, any defect would be impracticable or inconvenient to rectify, the Superintending Officer shall ascertain the diminution in value due to the defect, and such diminution in value shall be recoverable by the Employer from the Contractor.
Cl 18.4	If any defect appears at any time from the commencement of works to the end of the Defects Liability Period, the Superintending Officer may instruct the Contractor to search for the cause of the defect. The cost of search and remedy shall be borne by the Contractor: • if the defect or other fault is one which the Contractor is liable for under the Contract; or • the necessity of the search was caused by the Contractor or arises from some default of the Contractor.
Cl 18.5	The provision in cl 18 shall not affect the liability of the Contractor under the Contract or liability under common law.

Fig 5.9 Timeline in respect of the Defects Liability Period under PSSCOC Form



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> been done, the expense incurred by a subsequent purchaser of the house in putting the defect right was pure economic loss; and that to hold that a local authority, in supervising compliance with the building regulations or byelaws, was under a common law duty to take reasonable care to avoid putting a purchaser of a house in a position in which he would be obliged to incur such economic loss was an extension of principle that should not, as a matter of policy, be affirmed.

The Plaintiffs were therefore not entitled to recover damages, as the rectification of a defective house was pure economic loss. The Judgment made an about-turn back to the legal position pre-*Anns*[10] where pure economic loss was not recoverable in an action in negligence.

8.5 MOVING AHEAD

In light of the changes in the law of tort of negligence in the United Kingdom explained above, the loss suffered by an owner of a building in rectifying defects to the building caused by the negligence of the builder is not recoverable. This caused much dissatisfaction. The question then was whether the courts in Singapore would apply *Murphy*[11] in cases concerning defective buildings. The question was finally settled by the Singapore Court of Appeal in the case *RSP Architects Planners & Engineers v Ocean Front Pte Ltd and another appeal*[12] (*"RSP Architects v Ocean Front"*).

The facts of this case were that the management corporation of a condominium known as "Bayshore Park Condominium" had sued the Developer, Ocean Front Pte Ltd, for damages arising out of faulty construction of the common property. The Developer subsequently served a third party notice on RSP Architects Planners & Engineers, the Architect involved in the development of the condominium.

At trial of preliminary issues of law, two issues came up for determination: one, whether the management corporation Plaintiff was competent to institute and maintain the action against the Defendant Developer claiming

10 [1978] AC 728, HL.
11 [1991] 1 AC 398, HL.
12 [1996] 1 SLR 113; [1995] SGCA 79.

damages in negligence in the construction of the various parts of the common property; and two, whether the Plaintiff had a claim against the Defendant, whether in contract or in tort, for pure economic loss in the form of cost of repairs, or making good those defects complained of. The trial judge ruled in favour of the Plaintiff. Both the Developer and Architect appealed.

The Court of Appeal held:

> ... It seems to us that both questions basically can be resolved into one, namely, whether the developers in the construction of the condominium and in particular the common property owe to the management corporation a duty to exercise reasonable care so as to avoid causing to the management corporation the kind of damage the latter sustained, namely, the costs and expenses incurred or which would be incurred in making good the common property, *i.e.* pure economic loss. By the term "economic loss" we mean only mere economic loss not consequent on any injury to person or damage to property.
>
> The management corporation had a cause of action in negligence for pure economic loss. The two-stage test from *Anns v Merton London Borough Council* [1978] AC 728, applied by Lord Roskill in *Junior Books Ltd v Veitchi Co Ltd* [1983] 1 AC 520, was used to determine whether there was a duty of care. In regard to the first stage, the following facts were considered in determining that there was **sufficient proximity between the developer and the management corporation which gave rise to the duty of care**: (a) the management corporation was an entity conceived and created by the developer; (b) the developer was the party who built and developed the condominium including the common property and undertook the obligations to construct it in a good and workmanlike manner and was alone responsible for such construction; (c) after completion of the condominium the developer was the party solely responsible for the maintenance and upkeep of the common property; (d) the management corporation as the successor of the developer took over the control, management and administration of the common property and had the obligations of upkeeping and maintaining the common property; (e) the performance of these obligations was very much dependent on the developer having exercised reasonable care in the construction of the common property; (f) the developer obviously knew or ought to have known that if it was negligent in its construction of the common property the resulting defects would have to be made good by

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> the management corporation. In regard to the second stage, there was no policy consideration negativing this duty of care. ...

Faced with the House of Lords' decision in *Murphy*[13] ruling that pure economic loss was not recoverable and other judgments in other jurisdictions of Australia[14] and New Zealand[15] ruling in favour of recovery for pure economic loss, the Court of Appeal in Singapore ruled in favour of the recovery of pure economic loss in *RSP Architects v Ocean Front*.[16]

Subsequently, in *RSP Architects Planners & Engineers (formerly known as Raglan Squire & Partners FE) v Management Corporation Strata Title Plan No 1075 and another*,[17] the Court of Appeal continued to rule in favour of recovery in pure economic loss.

The facts of the case were that falling bricks and brick tiles from a wall of a condominium block damaged one of the units in another block. The first Respondent, Management Corporation Strata Title Plan No 1075 ("MCST"), incurred costs in carrying out rectification works to the damaged property and to all wall claddings (which had not fallen) to avoid any future injury to persons or damage to property. Although the falling bricks and brick tiles caused physical damage to the roof and contents of the unit #03-01 of the Libra block, which MCST had made good, the main expenses incurred by them were in respect of rectification of the wall claddings, which had not fallen, so as to avoid any future injury to persons and/or damage to property. These were the expenses which MCST sought to recover from the Appellant Architect, RSP Architects Planners & Engineers ("RSP"), and the expenses were not loss sustained in consequence of injury to person or damage to property. They were pure economic loss.

The MCST sued RSP for negligence in the design and supervision of the construction of the condominium walls. RSP asserted that as there was no proximate relationship between RSP and MCST, and RSP owed no

13 [1991] 1 AC 398, HL.
14 *Bryan v Maloney* [1995] 128 ALR 163.
15 *Bowen & Anor v Paramount Builders (Hamilton) Ltd & Anor* [1977] NZLR 394.
16 [1995] 3 SLR(R) 653; [1995] SGCA 79.
17 [1999] 2 SLR(R) 134; [1999] SGCA 30.

duty of care to MCST resulting in their liability for the pure economic loss suffered by MCST. RSP, alternatively, claimed that the failure of the wall claddings was due to the bad workmanship of the second Respondent Engineering Construction Pte Ltd, the Main Contractor, and sought an indemnity or contribution from it in third party proceedings. The Main Contractor argued that the failure was due to the lack of movement joints in the structure of the walls and not any lapse in its workmanship. The High Court allowed MCST's claim and dismissed RSP's claim against the Main Contractor. RSP appealed.

The Court of Appeal held:

> (1) To establish duty of care, the approach should be as follows: the court first examines and considers the facts and factors to determine whether there was sufficient degree of proximity in the relationship between the party who had sustained the loss and the party who was said to have caused the loss which would give rise to a duty of care on the part of the latter to avoid the kind of loss sustained by the former. Having found such degree of proximity, the court next considered whether there was any material factor or policy which precluded such duty from arising.
>
> (2) There was sufficient degree of proximity in the relationship between the architects and MCST resulting in the architects owing a duty to exercise reasonable care to avoid the loss sustained by MCST. They knew that MCST which would be in charge of the common property would rely on their care and skill in the design and supervision of the construction of the common property. There was an assumption of responsibility of professional competence on the part of the architects. MCST depended on the architects to get the design of the building right.

The Court of Appeal therefore ruled in favour of the MCST's claim for pure economic loss in the rectification of defective works.

Finally, in *Spandeck Engineering (S) Pte Ltd v Defence Science & Technology Agency*[18] ("*Spandeck v DSTA*"), the Court of Appeal in Singapore restated the test for negligence to be applied and ruled in favour of recovery in pure economic loss.

18 [2007] 4 SLR(R) 100; [2007] SGCA 37.

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The facts were that the Government entered into a Contract using the Public Service Sector Conditions of Contract, among other Contract documents, with Spandeck Engineering (S) Pte Ltd ("Spandeck"), for the construction and completion of certain buildings. The Defence Science & Technology Agency ("DSTA") was the Government's Superintending Officer under the PSSCOC and they had to assess the value of works done and recommend payments to the Contractor. There were disputes between DSTA and Spandeck over the valuation of works and payment. Eventually, Spandeck novated the Construction Contract to a third party. Due to the novation of the Construction Contract, Spandeck lost its right to recover against the Government under Contract for underpayment. It then sought to recover under the tort of negligence against DSTA. The issues before the court were as follows:

- whether DSTA owed a duty of care towards Spandeck;
- if the above is answered affirmatively, whether DSTA breached that duty of care; and
- if there was a breach, whether the breach caused losses and damages to Spandeck.

The Court of Appeal laid down the universal test for duty of care for negligence cases, being:

- factual foreseeability;
- proximity; and
- policy considerations.

The test laid down by *Spandeck v DSTA*[19] is explained in paras 8.5.1, 8.5.2 and 8.5.3 below.

8.5.1 *Spandeck v DSTA* and factual foreseeability

The preliminary question asked is whether the Defendant could factually foresee that the Plaintiff would suffer damage from the Defendant's carelessness. In most of the cases, the answer would be affirmative and thus cross the low threshold and we move on to the first stage of the test for duty of care through the analysis of proximity between the parties.

19 [2007] 4 SLR(R) 100; [2007] SGCA 37.

8.5.2 *Spandeck v DSTA* and the first stage of proximity

This stage requires an analysis of the closeness in the relationship between the parties and includes the following considerations:

- physical proximity, as in nearness between the two parties;
- circumstantial proximity, as in an overriding relationship between employer and employee, professional man and his client;
- causal proximity, as in a certain conduct causing injury or damage; and
- assumption of responsibility where one party assumes responsibility to take care of another party and the other party relies on the first party for such care and for which the first party ought to know of such reliance.

Any of the above factors may be taken into consideration in deciding whether there is a proximate relationship between the parties. However, such factors should not limit the finding of a proximate relationship in a new situation.

If the analysis does not disclose a proximate relationship, there is no duty of care owed by one party to another and the enquiry stops here. If the analysis discloses a proximate relationship, there is at first appearance (*prima facie*) a duty of care owed by the Defendant to the Plaintiff.

8.5.3 *Spandeck v DSTA* and the second stage of policy considerations

If there is a proximate relationship determined in the first stage, then one proceeds to the second stage to determine whether any policy considerations should be applied to negate the proximate relationship. Examples of policy considerations which may negate a proximate relationship may be as follows:

- an existing Contract where the rights and liabilities of the parties had been defined;
- moral claims; and
- social welfare goals.

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The scope of policy considerations may not be limited and may entail a balancing of economic and social benefits in diverse situations.

If the second stage discloses some policy considerations which negate the proximate relationship, then there is no duty of care owed. Otherwise, the Defendant owes a duty of care to the Plaintiff.

8.5.4 The Court of Appeal's application of the two-stage test in *Spandeck v DSTA*

In applying the factual foreseeability question of whether it was factually foreseeable to DSTA that any negligence on their part in respect to certification of payment may cause loss to Spandeck, the Court of Appeal answered affirmatively.

In respect to the question of whether a proximate relationship existed between the parties, the Court of Appeal considered the contractual relationship entered into between the Government and Spandeck. The Contract provided for an arbitration clause where any dispute was to be referred to arbitration. It was not in the contemplation of parties that DSTA would owe a duty of care to Spandeck in the event of any dispute. Hence, there is no proximate relationship between DSTA and Spandeck in respect of the claim for under-certification. By virtue of the arbitration clause, any dispute (including under-certification of payment) would be referred to arbitration.

Assuming that there had been proximity in relationship between the parties, the Court was of the view that there was a policy consideration in that a duty of care should not be superimposed on a contractual framework which Spandeck had agreed.

Hence, the Court ruled that DSTA was not liable in negligence to Spandeck on the grounds that there was no proximity between the parties and therefore DSTA did not owe a duty of care to Spandeck.

8.6 POST-SPANDECK V DSTA CASES

The cases after *Spandeck v DSTA*[20] demonstrate the test for establishing liability in negligence as follows:[21]

- the Defendant must have owed the Plaintiff a duty of care;
- the Defendant's acts or omissions (i.e. conduct) must have breached the reasonable duty of care;
- the Plaintiff has suffered loss; and
- the Defendant's breach of duty must have been a cause of the Plaintiff's loss.

In *Animal Concerns Research & Education Society v Tan Boon Kwee*,[22] Animal Concerns Research and Education Society ("ACRES"), employed A.n.A. Contractor Pte Ltd ("ANA") to construct a shelter for animals. ANA, in turn, appointed their director Tan Boon Kwee to be the clerk of works for the construction project. Part of the project required backfilling of low-lying areas. In a breach of Contract, ANA backfilled the low-lying areas with wet soil and wood chips, which resulted in the pollution of the area. ACRES sued ANA and Tan Boon Kwee for breach of Contract and negligence respectively.

The Court of Appeal applied the *Spandeck v DSTA*[23] test, as explained in the following sections.

On factual foreseeability, the question whether Tan Boon Kwee could reasonably foresee that if he did not take care in supervising the backfill, ACRES would suffer loss or damage was answered affirmatively. For instance, poor supervision in backfilling may lead to subsidence of the land and damage to the structure standing on it.

Having satisfied the question on factual foreseeability, the Court of Appeal analysed the issue of proximity between the parties. It found that Tan Boon

20 [2007] 4 SLR(R) 100; [2007] SGCA 37.
21 *Chen Qiangshi v Hong Fei CDY Construction Pte Ltd and another* [2014] SGHC 177 at [125].
22 [2011] 2 SLR 146; [2011] SGCA 2.
23 [2007] 4 SLR(R) 100; [2007] SGCA 37.

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