

Hotel Royal @ Queens Pte Ltd trading as Hotel Royal @ Queens v J M Pang & Seah (Pte)
Ltd
[2014] SGHC 109

Case Number : Suit No 248 of 2012
Decision Date : 02 June 2014
Tribunal/Court : High Court
Coram : Tan Siong Thye JC
Counsel Name(s) : Savliwala Fakhruddin Huseni and Subramaniam Sundaram (M/s Bogaars & Din) for the plaintiff; Ian De Vaz, Seng Yen Ping and Tay Bing Wei (M/s WongPartnership LLP) for the defendant.
Parties : Hotel Royal @ Queens Pte Ltd trading as Hotel Royal @ Queens — J M Pang & Seah (Pte) Ltd

Tort – Negligence

Contract – Breach

02 June 2014

Judgment reserved.

Tan Siong Thye JC:

Introduction

1 On 19 December 2009, a flashover incident occurred in the High Tension Switch Gear Room ("HTSGR") on the Plaintiff's premises at the Queen Wing of 12 Queen Street, Singapore ("the Premises"). The Plaintiff seeks to recover from the Defendant, the Plaintiff's Licensed Electrical Worker ("LEW"), the losses and damages it alleges to have suffered as a result of the flashover incident. The trial was bifurcated and the only issue to be dealt with in this trial is that of liability. This requires an assessment of whether the Defendant had owed the Plaintiff a contractual and tortious duty of care. If the answer is yes, I must ascertain whether there is a breach of this duty. Thereafter I have to determine if there is any contributory negligence on the Plaintiff's part which will serve to mitigate the liability of the Defendant such that the Defendant is only liable for a portion of the losses and damages suffered by the Plaintiff.

The facts

The Plaintiff

2 The Plaintiff is a company that operates a hotel business at the Premises. The Plaintiff bought the Premises in 2004 when it was known as "Allson Hotel" and renamed it "Hotel Royal @ Queens". Allson Hotel continued to run its own hotel business in the adjacent Victoria Wing located at the same address, 12 Queen Street, Singapore.

The Defendant

3 The Defendant is a company that is in the business of carrying out project management and engineering consultancy services. The general scope of services provided by the Defendant includes,

but is not limited to:

- (a) the provision of consultancy services in respect of high/low voltage electrical installations;
- (b) services for the purposes of obtaining licences from the Energy Market Authority ("EMA");
- (c) inspection and maintenance services; and
- (d) testing and measurement services for electrical installations.

4 The Defendant has been the LEW for the previous owners of the Premises since 1986. The Defendant continued as the Plaintiff's LEW for the Premises after the Plaintiff bought over the premises in 2004.

The Agreement

5 Although the agreement was only entered into on 29 January 2007, it is not disputed by both parties that the Defendant had been acting as the Plaintiff's LEW since the Plaintiff bought over the Premises in 2004. This is despite there being no formal written agreement. Nonetheless, the agreement laid down the scope of the Defendant's duties as an LEW. For the services, the Plaintiff was required to pay the Defendant a monthly retaining fee of \$150 (inclusive of GST).

6 As the scene of the flashover incident is the HTSGR, it is necessary to explain the apposite electrical equipment sited in the HTSGR on the Premises and the various types of servicing regimes required for these equipment.

The HTSGR

7 At all material times, there were four switchgears in the HTSGR. Three switchgears were high tension transformer feeder switchgears ("HTTFS") and the other was the main power grid incoming switchgear. Two HTTFS provided electricity and power to the Premises. The other HTTFS provided electricity and power to the Victoria Wing ("the third HTTFS"). All the equipment in the HTSGR had not been changed since the Premises was constructed in 1983. All four switchgears were being utilised when the Plaintiff took over the Premises in 2004. The Plaintiff allowed Allson Hotel, which still occupied the Victoria Wing, to continue drawing electricity and power from the third HTTFS. The Plaintiff itself made use of the other HTTFS.

8 On 28 January 2005, Allson Hotel managed to secure another source of electricity and power. Thereafter, on 31 January 2005, the third HTTFS which Allson Hotel drew electricity and power from in the HTSGR was switched off and racked out as it was no longer utilised by Allson Hotel. The third HTTFS was left in the HTSGR as a spare HTTFS.

The maintenance of the HTSGR

General overview

9 The Defendant, as the Plaintiff's LEW, conducted bimonthly inspections on the equipment in the HTSGR in accordance with the agreement. These inspections are of a purely visual and sensory nature. This involves the external reading of measurements of gauges, instruments and control panels mounted on the exterior of the electrical equipment and do not require any internal inspection of the interior components of the electrical equipment. For internal inspection, a proper and complete shutdown of the electricity supply is required. This is for safety purposes. Such a shutdown

maintenance ("SM") may only be done with the consent of the Plaintiff as a separate contract of services is required.

Shutdown maintenance

10 A SM is the most comprehensive and effective form of maintenance and servicing regime since it entails, *inter alia*, the cleaning and checking of the interior components of the HTTFS, testing on the relays and high-potential testing of the HTTFS. A SM allows for internal examination and maintenance work to be done. The LEW will be able to detect any defects in the HTTFS which can then be rectified immediately. However, the carrying out of a SM will be disruptive to the Plaintiff's business operations as it will require the electricity and power supply to the Premises to be shut down for a period of three to four hours. The last SM conducted for the HTSGR was done by the Defendant on 14 December 2004.

Partial discharge measurement testing

11 Partial Discharge Measurement ("PDM") testing is not as comprehensive as a SM. A PDM testing is a limited and less comprehensive form of testing of the HTTFS since it is only a measurement of the insulation health of the HTTFS by continuous mode, on-line and non-intrusive measurement. A PDM testing would only measure one aspect of the functionality of the HTTFS, *ie.* the insulation health. It would not comprehensively identify any other problems within the said electrical equipment. However, a PDM testing does not require a shutdown of the electricity and thus the power supply to the Premises is not affected. Hence a PDM testing does not disrupt the Plaintiff's business operations.

Cost of shutdown maintenance and partial discharge measurement

12 Although the Defendant performed the bimonthly inspections as part of its obligations under the agreement, any SM or PDM testing conducted was premised on a separate agreement. The Defendant would recommend a SM or a PDM testing and provide the Plaintiff a quotation for any such service performed by the Defendant. This would be subject to the Plaintiff's consent. If the Plaintiff did not agree, the Defendant would not conduct any such recommended service. A SM is also considerably more expensive than a PDM testing. A PDM testing costs the Plaintiff around \$3,000 whereas a SM costs the Plaintiff somewhere around \$7,000 to \$8,000.

The flashover incident

13 The flashover incident occurred on 19 December 2009 at the Plaintiff's HTSGR. The source of the flashover was identified to be the third HTTFS. The third HTTFS is a Yorkshire YSF6 model switchgear. It consists of three fixed rod contacts at the top and three fixed rod contacts at the bottom of the spare panel for connection to a circuit breaker. Each fixed rod contact is partly insulated from the environment by a plastic conical attachment known as a spout insulator. The fixed rod contacts at the top were connected to the cables that linked to a transformer whereas the fixed rod contacts at the bottom were connected to the busbars of the entire switchgear assembly. These fixed rod contacts were located in a busbar chamber. A busbar is an electrical conductor, maintained at a specific voltage and capable of carrying a high current, usually to make a common connection between several circuits in a system.

The vulnerability of the third HTTFS

14 After Allson Hotel stopped utilising the third HTTFS, it was made a spare switchgear. The fixed rod contacts at the top were no longer energised, *ie.* connected to a live power source, whereas the

fixed rod contacts at the bottom remained energised. Furthermore, the circuit breaker of the switch gear was in the rack-out position as compared to the rack-in position it was in previously when being utilised. When the circuit breaker is in the rack-in position, the circuit breaker compartment is more or less closed to the external environment. This prevents the ingress of dust particles into the circuit breaker compartment. However, when it is in the rack-out position, the circuit breaker compartment will be exposed to the external environment due to the presence of air gaps between the circuit breaker truck and the switchgear enclosure.

15 More specifically, gaps at the busbar shutters allowed the ingress of dust particles into the space behind the shutters, and the dust particles settled on the surface of the spout insulators behind these shutters. Therefore, after Allson Hotel stopped utilising the third HTTFS on 31 January 2005, the spout insulators of the third HTTFS became progressively contaminated by dust particles from the environment. This was due to the air gaps present between the rack-out circuit breaker trolley and the switchgear enclosure. The dust particles absorbed moisture from the atmosphere. The combination of dust particles and moisture led to the phenomenon of tracking on the surface of the spout insulators in the presence of electric field stress created as the fixed rod contacts at the bottom remained energised.

Tracking – Loss of insulation

16 Tracking is the result of a permanent conducting path, usually carbon, being formed across the surface of insulation. This phenomenon is caused by the degradation due to continuous discharges and erosion. In this case, the surfaces of the spout insulator were progressively contaminated by dust and other particles. The moisture absorbed from the atmosphere as a result of a humid environment and the contaminants provided a continuous, conducting path between the high voltage electrode, the energised fixed rod contacts at the bottom, and the ground. The surface resistance of the spout insulators also decreased considerably in the presence of contaminants and moisture. Therefore, there was a complete breakdown of the insulation surface. A conducting path propagated to the extent that the remaining insulation was incapable of withstanding the system voltage. This surface tracking then caused an electrical fault within the switchgear. It is this electrical fault that gave rise to the flashover incident.

SM could have prevented the flashover incident

17 The parties agree that a SM conducted on the third HTTFS would have allowed for the Defendant to discover the accumulation of contaminants on the surface of the spout insulators. A SM is necessary because the spout insulators are behind the busbar shutter and, for safety purposes, the busbar shutter can only be lifted to inspect the spout insulators behind when the electricity supply is cut off during a SM. Therefore, both parties agree that if a SM had been conducted, the appropriate remedial measures could have been taken to avoid the surface tracking that caused the flashover incident.

Damages caused by the flashover incident

18 The flashover itself caused damage to the third HTTFS. It also caused an overall power failure for the entire Premises. The Premises was without power for more than a day and guests of the Plaintiff had to be relocated to a sister hotel. Subsequently, the Plaintiff brought this suit against the Defendant and claimed for the loss that arose as a result of the flashover incident. The Plaintiff's claim is premised on the fact that the Defendant had failed to properly advise the Plaintiff as to the maintenance of the HTSGR and that the Defendant had not properly maintained the HTSGR. The parties have agreed for the issue of liability to be determined here and for any necessary assessment

of damages to be determined at a later stage.

The Plaintiff's case

19 It is the Plaintiff's case that the Defendant has breached its duties of care in both contract and tort. Its submissions are:

- (a) That the Defendant failed to provide reasonable consultancy services for effective preventive maintenance and power failure as required by the agreement;
- (b) That the Defendant failed to maintain the Plaintiff's electrical equipment properly as an implied term under the agreement;
- (c) That the Defendant failed to take reasonable care when conducting its bimonthly inspections by failing to take note of the high moisture levels within the HTSGR; and
- (d) That the Plaintiff was itself not negligent in any way to give rise to contributory negligence.

The Defendant's case

20 The Defendant accepts that it has a duty in contract and in tort to provide reasonable consultancy services to the Plaintiff. However, the Defendant disputes that it breached the standard of care required to be taken. Furthermore, the Defendant disputes that it is under a duty of care to maintain the Plaintiff's electrical equipment under both contract and tort. The Defendant also argued that it did not breach its duty to take reasonable care in the inspection of the HTSGR because its duty did not require it to measure humidity within the HTSGR.

21 Even if it is found that the Defendant had breached any of its duties of care, the Defendant submitted that the Plaintiff's repeated failures to heed the Defendant's reminders to conduct a SM amounts to unreasonable conduct which acts as a *novus actus interveniens* that breaks the chain of causation and absolves the Defendant of its own negligence. In the alternative, such failures are signs of negligence on the part of the Plaintiff and the liability of the Defendant should be reduced in light of the Plaintiff's contributory negligence.

The Issues

22 It is not disputed that there was a flashover incident that occurred at the third HTTFS which is a spare switchgear in the Plaintiff's HTSGR. The crux of this case is: whose fault is it? The parties are blaming each other for the cause of the flashover incident. In order to arrive at a just and fair decision I shall deal with the following issues:

- (a) Was there a duty of care owed by the Defendant to the Plaintiff under the agreement to provide reasonable electrical consultancy services for effective preventive maintenance to avert power failure? At the same time, was there a duty of care owed by the Defendant to the Plaintiff in tort?
- (b) Did the Defendant owe a duty of care to the Plaintiff under the agreement and/or in tort to reasonably maintain the equipment in the HTSGR?
- (c) If the Defendant owed the Plaintiff any of the above duties of care, what is the corresponding standard of care to be met and did the Defendant breach its duty by failing to

meet this standard?

(d) Did the Defendant also owe the Plaintiff a duty to take reasonable care when inspecting the premises and was this duty breached?

(e) If the Defendant breached any of the duties above, was such breach the direct proximate cause of the flashover incident or was there an intervening event that broke the chain of causation?

(f) Has the Plaintiff contributed towards the Defendant's negligence when it repeatedly refused to accept the Defendant's recommendations to conduct a SM? If so, what is the apportionment of the negligence between the Plaintiff and the Defendant?

The functions and duties of an LEW

Under the EMA Handbook

23 For the purposes of determining whether there exists a duty of care in relation to consultation and/or maintenance, it is important to understand the functions and duties of an LEW under the licensing scheme for electrical installations. Under the Handbook for Application of Electrical Installation Licence issued by the EMA ("the EMA Handbook"), an LEW is a person who is technically competent in carrying out electrical work and is licensed by the EMA. There is no dispute that the Defendant was an LEW properly licensed by the EMA at all material times. The licensing of electrical workers is pursuant to the licensing scheme for electrical installations such as the HTSGR which the EMA introduced in 1975. As stated in para 1.3 of the EMA Handbook, the licensing scheme was introduced to ensure that owners of electrical installations engage a competent person, viz, an LEW, to take charge of and maintain their electrical installations.

24 Upon appointment, the LEW will inspect the electrical installation and obtain an electrical installation licence on behalf of the owner if the LEW is satisfied that the electrical installation is safe to use or operate. This is pursuant to para 6.1 of the EMA Handbook. According to para 5.1 of the EMA Handbook, the owner may only utilise the electrical installation if it is licensed. Paragraph 7.1 of the EMA Handbook then states that the electrical installation has to be inspected and certified fit for operation by the appointed LEW at least once a year. Certification, which may only be done by an LEW, is necessary for the renewal of the electrical installation licence so that the owner may continue to utilise the electrical installation.

25 Under para 9 of the EMA Handbook, the roles and responsibilities of an appointed LEW include, but are not limited to, carrying out inspection and testing of the electrical installation, certifying its safety for use and operation, recommending servicing or maintenance work when necessary and providing advice on any technical or licensing matters related to the electrical installation. Therefore, the Defendant, as the Plaintiff's LEW, was required to inspect and test the HTSGR located on the Premises annually so as to certify its safety for use and operation. It was also required to recommend servicing and maintenance for the equipment in the HTSGR as and when necessary. The inspection and testing, as well as any recommended servicing or maintenance, are to prevent any safety hazard that may arise as a result of defects, such as those caused by the wear and tear, in the wirings, electrical fitting and apparatus in the electrical installation. This is described in para 2.2 of the EMA Handbook which details the objectives of the electrical installation licensing regime.

Under the Singapore Standard Code of Practice for Maintenance of Electrical Equipment of Electrical Installation

26 Furthermore, it is stated at para 1.4.3 of the Singapore Standard SS 538:2008 Code of Practice for Maintenance of Electrical Equipment of Electrical Installation ("the Code") that "[o]nly authorised persons and competent persons or persons working under the supervision of such authorised persons may have access to the switchroom." An authorised person and competent person may only be an LEW as defined at paras 1.3.7.1 and 1.3.7.2 of the Code respectively. In this case, the Plaintiff's HTSGR was not accessible to anyone except the LEW, the Defendant. Hence, the Plaintiff had to completely rely on the Defendant as regards the operation of the installations in the HTSGR. Consequently, it is clear from the EMA Handbook and the Code that the Defendant played a significant role in the maintenance of the HTSGR to ensure safety and to avoid power failure. Bearing this in mind, I proceed to consider the duties of care in relation to consultancy services and maintenance.

Duty to provide reasonable consultancy services

27 The Plaintiff submitted that the Defendant owed the Plaintiff a duty of care to provide reasonable consultancy services. This duty of care arose from two sources. The first source is contract and this is premised on the agreement entered into between the Plaintiff and the Defendant on 29 January 2007. The second source is tort. Based on the Defendant's submissions, it appears that the Defendant does not deny the fact that it owes a duty of care to the Plaintiff in relation to consultancy services. What is vehemently contested by the Defendant is that it has not breached that duty of care. Nevertheless, I shall ascertain whether there is a duty of care owed by the Defendant to the Plaintiff in contract and in tort as this is the foundation of the Plaintiff's claim.

Duty under the contract

28 The Defendant was engaged to provide consultancy services in relation to the HTSGR long before the Plaintiff occupied the Premises. This contractual relationship went back as far as 1986. However, on 29 January 2007, the Defendant and the Plaintiff signed an agreement for the former to continue to provide consultancy services to the same HTSGR. This agreement bound both the parties in this suit. It is also the key basis in which the duty of care under contract arises. I shall reproduce the scope of work in this agreement:

(A) Scope of work

1. Act on your behalf regarding EMA licensing matters.
2. Provide twenty-four (24) hours standby breakdown services for major power failure to be charged on hourly basis.
3. Provide consultation services for effective maintenance and power failure.
4. Provide every two months inspection at the main switchboard and submit report to EMA.

29 For the above services, the Defendant charged the Plaintiff a "monthly retaining fee of \$150 plus 5% GST". The clause to be considered here is cl A3 which requires the Defendant to provide consultation services for effective maintenance and power failure to the Plaintiff. This must be considered in light of the fact that the EMA Handbook also requires the Defendant, as an LEW, to recommend servicing or maintenance work. Furthermore, given that only the Defendant may inspect and operate the HTSGR pursuant to the Code, it is consequently the only one capable of providing consultancy services for effective maintenance. I am therefore of the view that there is a contractual duty of care owed by the Defendant to the Plaintiff to provide reasonable consultancy services for

effective maintenance of the HTSGR.

Duty in tort

30 To establish a duty of care in tort, the test laid down by the Court of Appeal in *Spandeck Engineering (S) Pte Ltd v Defence Science & Technology Agency* [2007] 4 SLR(R) 100 ("*Spandeck*") must be satisfied. Under the *Spandeck* test, a threshold requirement of factual foreseeability must be met before a two-stage test is applied.

31 The threshold requirement of factual foreseeability is clearly met here. The Defendant ought to have known that failure to take reasonable care in giving advice could result in the Plaintiff taking inappropriate measures in relation to maintenance. This would then lead to the Plaintiff suffering damages such as those caused by power failure resulting from inappropriate maintenance.

32 Given that the threshold of factual foreseeability is met, the first stage of the *Spandeck* test follows. This stage requires sufficient legal proximity between the Plaintiff and the Defendant. This is described as a "composite idea, importing the whole concept of the necessary relationship between the claimant and the defendant": *Spandeck* at [79]. Proximity encompasses a wide spectrum of factual situations. It includes the notions of physical proximity, circumstantial proximity and causal proximity: *Spandeck* at [78]. The fact that the Agreement clearly stipulated that the Defendant was to provide consultation services to the Plaintiff establishes such a necessary relationship. Furthermore, para 1.3 of the EMA Handbook required the Plaintiff to engage an LEW, the Defendant in this case, to take charge of and maintain its electrical installation. This coupled with the fact that only the Defendant may operate and inspect the facility under the Code further confirms the legal proximity between the Plaintiff and the Defendant.

33 The second stage is an enquiry as to policy considerations that would discourage the imposition of the duty of care. The Defendant has not raised any policy considerations in this regard and I do not find any reason why such a duty of care should not be imposed in such a factual matrix. Therefore, given that the two-stage *Spandeck* test is satisfied, the Defendant owed the Plaintiff a duty to take reasonable care in the provision of consultancy services to the Plaintiff in tort.

Duty to maintain the HTSGR

34 The Plaintiff also argued that in addition to the duty to provide reasonable consultancy services, the Defendant also owed a duty to the Plaintiff to maintain the HTSGR properly. The Defendant denied that there is such a duty. Although the EMA Handbook makes it the duty of the Defendant to ensure the safe operation of the HTSGR, I do not think that the duty requires the Defendant to properly maintain the HTSGR in this case.

35 Firstly, there is no obligation on the part of the Defendant to actually maintain the HTSGR under the agreement. It cannot be implied that the Defendant must provide maintenance services because it is clear, based on the dealings between the Plaintiff and the Defendant, that any maintenance service is to be conducted on the premise of a separate contract. This is seen from the fact that whenever PDM testing or SM was recommended by the Defendant, the Defendant would also submit a fresh quotation to the Plaintiff for its approval. Under the agreement, the Defendant was required to conduct bimonthly inspection, provide consultancy services and make applications for licence renewal on behalf of the Plaintiff. The Plaintiff paid the Defendant \$150 per month for these services pursuant to the agreement. When this paltry sum is compared with the cost of a PDM testing (about \$3,000) and the cost of a SM (about \$7,000 to \$8,000), it must follow that the agreement does not require the Defendant to also provide maintenance services. Furthermore, it is also clear that the Plaintiff is

free at all times to engage another LEW to perform the maintenance of the facilities.

36 This was eventually conceded by PW4, Mr Lee Chu Bing, the Plaintiff's General Manager during cross-examination:

Q. Now Mr Lee, given the cost of a shutdown maintenance, do you agree that shutdown maintenance services could not have been part of the S\$150 fee under the January 2007 agreement?

A. Agreed.

Q. If you were to turn to Tab 5 (of the DBOD), Mr Lee ... [y]ou will see, at the bottom of the quotation, there is an acceptance portion; Is there, Mr Lee?

A. Yes

Q. This confirms the fact that shutdown maintenance would be the subject of a separate contract; agree?

A. Yes [\[note: 1\]](#)

I therefore find that although the Defendant is under a duty to provide reasonable consultancy services to the Plaintiff, it does not owe a duty of care to the Plaintiff to maintain the HTSGR.

What is the standard of care for the provision of consultancy services by the Defendant?

37 Given that the duty to provide reasonable consultancy services is established under both contract and tort, I proceed to consider whether the Defendant has breached this duty of care. This issue requires the determination of the appropriate standard of care to be met by the Defendant. This standard of care is usually the same under the contract and in tort: see *Deutsche Bank AG v Chang Tse Wen and another appeal* [2013] 4 SLR 886 at [51]. I see no reason to depart from this usual position. Furthermore, as the parties in this case have not submitted on there being different standards of care under the agreement and in tort, I shall proceed on the basis that the standards are the same in this case.

Standard of care is pegged to that of a reasonable LEW

38 In this case, the standard of care required in relation to a duty of care cannot be the general objective standard of a reasonable person using ordinary care and skill. This is because the factual matrix in this case is materially different. The Defendant was the Plaintiff's LEW. An LEW is a professional electrical engineer who is technically experienced and competent in carrying out electrical work. An LEW is licensed by the EMA to manage the HTSGR. The Plaintiff, on the other hand, is a lay person who has neither the knowledge nor the competence to manage the HTSGR. That is why the Plaintiff is not allowed to enter the HTSGR despite being the owner. Thus this is a situation of information asymmetry in which the Defendant is in the position of a professional as contrasted with the Plaintiff who is a layman in relation to electrical work. Therefore, the standard of care to be discharged by the Defendant cannot be that of the reasonable man. It must be pegged to that of a reasonable LEW in the industry. The question to ask then would be this—what would a reasonable LEW recommend to his client for the purposes of effective maintenance under the circumstances of this case?

Industry standards under the Code

39 To determine the standard of consultancy services to be provided by a reasonable LEW, regard must be had to industry standards. As noted by V K Rajah JA in *Jurong Primewide Pte Ltd v Moh Seng Cranes Pte Ltd* [2014] 2 SLR 360 at [43]:

The standard of care required in relation to a duty of care is usually the general objective standard of a reasonable person using ordinary care and skill (*Blyth v The Company of Proprietors of the Birmingham Waterworks* (1856) 11 Exch 781). However, factors such as industry standards and normal practice can be taken into account at this stage. Cases such as *The "Emma Maersk"* [2006] SGHC 180 (at [51]) and *Tesa Tape Asia Pacific Pte Ltd v Wing Seng Logistics Pte Ltd* [2006] 3 SLR(R) 116 at ([17]) are instances where the courts accepted what was shown to be normal practice to be the standard of care. As such, we affirm the Judge's observation that the industry standard guidance provided by the Singapore Standard SS 536 2008 Code of Practice ("the Code") for the safe use of mobile cranes would be applicable here (GD at [26]). We note that the Code was listed as a useful reference under the Workplace Safety and Health Council's Technical Advisory for the Safe Operation of Lifting Equipment. Significantly, the Code was accepted as the "reasonable standard of care to be observed by crane operators" by all counsel during the trial. In addition to the Code, the stipulations under the [Workplace Safety and Health Act (Cap 354A, 2009 Rev Ed)] would also be relevant in pitching the standard of care.

40 The Court of Appeal in the above case accepted the Singapore Standard SS 536:2008 Code of Practice for the Safe Use of Mobile Cranes as evidence of industry standards for the safe operation of mobile cranes. It was accepted as the "reasonable standard of care to be observed by crane operators". In this case, the Plaintiff made reference to the Code. As stated in the Foreword, the Code was "established through joint efforts of knowledgeable representatives from the industry, tertiary institutions, major users, electricity authority, contractors associations, and engineering services suppliers." It was "intended to establish good practice standard for the maintenance of electrical installations, to be used by maintenance personnel, Licensed Electrical Workers, property and factory owners, contractors, facility managers, electrical engineers and practitioners." Therefore, regard should be had to the recommendations under the Code as to the frequency and type of maintenance to be conducted in relation to particular electrical installations. Any recommendations provided by an LEW under his duty to provide consultancy services for effective maintenance should accord with the recommendations suggested under the Code.

41 Under para 1.6.2.2 of the Code, a table is provided to suggest the frequency of maintenance to be conducted for electrical installations:

Table 1.1 – Maintenance frequency matrix

Maintenance frequency matrix (Year intervals)				
		Equipment condition		
		Poor	Average	Good
Equipment category	Low	1.0	2.0	2.5
	Medium	0.5	1.0	2.0
	High	0.5	0.75	1.0

42 In this table, the HTSGR which the Plaintiff utilised to operate a hotel falls under the medium or high equipment criticality category pursuant to paras 1.6.2.3(b)(iv) or 1.6.2.3(c)(iv) of the Code respectively. Therefore, with the equipment falling under the category of average condition, the maintenance regime for medium equipment criticality is for a SM to be conducted annually. The maintenance regime for high equipment criticality is for a SM to be conducted every nine months. If this is so, then a reasonable LEW in this case should have recommended a SM be conducted for the HTSGR every nine months or, at the very least, annually. In fact, in the identical letters sent by the Defendant to the Plaintiff on 16 September 2008 and 18 February 2009, the Defendant also stated that a SM should be conducted “once a year by industry standard.”

Poor condition of the equipment

43 From the table, it is also clear that for equipment of poorer condition, a higher maintenance frequency is recommended. This would mean that the condition of the equipment affects the recommendation a reasonable LEW would provide under his duty to provide consultancy services for effective maintenance. The general guide to determine equipment condition provided under para 1.6.2.4 of the Code illustrates some of the factors to be considered *vis-à-vis* the condition of the equipment:

1.6.2.4 Equipment conditions

The electrical equipment’s condition shall be based on physical aspects, usage, location, environmental conditions and *age of equipment*.

[emphasis added]

44 Therefore, it is evident from the above that the age of the equipment is a factor to be considered when a reasonable LEW gives his recommendation as to maintenance of the electrical installation. In this case, the HTSGR consists of Yorkshire FS6 22kV high voltage equipment that has not been replaced since 1983. It was 26 years old at the time of the flashover incident. This would mean that frequent conduct of SMs is more crucial for the purposes of effective maintenance and a reasonable LEW should factor this into his recommendations to the Plaintiff.

EMA’s inspection and maintenance regime

45 Other than the Code, regard should also be had to the EMA Handbook to determine the appropriate standard of care to be met by the Defendant. Under the EMA Handbook, Table 3 provides a recommended inspection and maintenance regime for different types of electrical installations:

Type of Installation	Inspection Frequency	Remarks
Construction Worksites	At least once per month	Electrical installations at construction worksites are subjected to more wear and tear and shall be inspected at least once a month to ensure they remain safe to use.
Trade fairs, mini-fairs, festive lightings etc	Daily	Safety inspections should be carried out daily to ensure all parts accessible to the public remain safe and all protective devices in good working condition.

Multi-tenanted buildings, condominiums etc	At least once in six months	Communal electrical services such as risers, lightings, socket-outlets, protective systems, etc should be inspected to prevent causing danger to the public.
High voltage installations	Inspection and maintenance schedule shall be worked out by the appointed LEW, but inspection shall be carried out at least once a year	The manufacturers of high voltage equipment/apparatus should be consulted on the maintenance requirements.
Others	Annually	Inspection shall be carried out before renewal of the electrical installation licence.

46 DW1, Mr Whye Yip Kwong, the director and principal consultant of the Defendant, testified that the Premises fell under the category of "Multi-tenanted buildings, condominiums etc". The Defendant had conducted inspections every two months pursuant to the agreement. This was above and beyond the recommended inspections every six months under the EMA Handbook. By DW1's suggestion, the table also seemed to imply that no SM is required for the purposes of maintaining the electrical installation at the Premises. This cannot be the case. First, the Defendant itself had recommended the conduct of a SM on several occasions to the Plaintiff for the purposes of certifying the fitness of the electrical installations for renewal of the Plaintiff's electrical installation licence. This would be contradictory to the Defendant's belief that no SM is necessary. Second, the table only suggests inspection frequencies for different types of installations and does not determinatively state that maintenance is not necessary. In fact, under the "Frequently Asked Questions" section of the EMA Handbook, the following is stated:

Q8. How often should I carry out maintenance on my electrical installation?

Ans: Your appointed LEW will recommend to you a suitable maintenance schedule after assessing the operating conditions, operation needs, age of the equipment/apparatus and any other relevant factors.

47 This seems to suggest that a maintenance schedule is required for all electrical installations although the type and frequency of maintenance may differ. Therefore, it cannot be that Table 3 of the EMA Handbook recommends that no SM is necessary at all for the electrical installation at the Premises.

48 In any event, I am of the view that the electrical installation at the Premises falls under the category of "High voltage installations" instead. Under the EMA Handbook, the term "High voltage installations" is defined in a footnote 9 as "[e]lectrical installations taking electricity supply at the voltage of 6.6kV and above. The Plaintiff's Yorkshire switchgears are 22kV and this places the electrical installation under the category of "High voltage installations" instead of "Multi-tenanted buildings, condominiums etc". PW7, Dr Anthony Yee Kum Choon, the Plaintiff's expert witness, DW4, Mr Lee Wai Meng, another director and principal consultant of the Defendant, and DW5, Dr Tan Yoke Lin, the Defendant's expert witness, all agreed that the electrical installation at the Premises should be classified under "High voltage installations".

49 Under the "High voltage installations" category in Table 3 of the EMA Handbook, it is further provided that "[i]nspection and maintenance schedule shall be worked out by the appointed LEW".

This is clear evidence that the electrical installation at the Premises must be maintained, such as through the conduct of a SM. The EMA Handbook also states that the LEW should consult the manufacturer of the Yorkshire equipment as to the maintenance requirement for the vintage Yorkshire switchgears. There is no evidence to suggest that the Defendant did so. The failure of the Defendant to do so is a breach of its duty of care. Further, this means that I must fall back on the industry standards established under the Code to determine whether the maintenance recommendations made by the Defendant accorded with the appropriate standards. Based on the industry standards established above, the Defendant should have recommended the conduct of a SM every nine months or, at the very least, annually. It must also be considered that timely recommendation of maintenance is more crucial given the very old age of the Yorkshire equipment. Bearing these factors affecting the standard of care in mind, I proceed to determine whether the Defendant failed to meet the requisite standard of care required of him in discharging his duty to provide consultancy services.

Breach of duty of care to provide reasonable consultancy services

50 Based on the conduct of the Defendant taken as a whole, I find that the Defendant failed to meet the requisite standard of care in providing consultancy services for the purposes of effective maintenance. It is not disputed that surface tracking was the cause of the flashover incident on 19 December 2009. The parties also agreed that the flashover incident caused by surface tracking would have been avoided if a SM was conducted any time before the flashover incident. The last time a SM was conducted for the HTSGR was on 14 December 2004 and no SM was conducted for the following five years up till the flashover incident. This is despite industry standard requiring a SM to be conducted within nine to twelve months. To show how the Defendant failed to meet the requisite standard of care, I shall proceed to analyse the conduct of the Defendant from 14 December 2004 till 19 December 2009.

2004 – 2005: the last SM and subsequent PDM testing

51 A SM was conducted by the Defendant on the Premises on 14 December 2004. The results of the SM showed that there were no issues with the electrical equipment in the Plaintiff's HTSGR. However, in 2005, the Defendant wrote to the Plaintiff on several occasions to recommend and convince the latter to carry out PDM testing. The Defendant's conduct is baffling as he should know that a PDM could not substitute the conduct of a SM.

52 On 5 April 2005, the Defendant wrote to the Plaintiff and recommended PDM testing by sharing with the latter a successful case of PDM testing conducted by the Defendant. [\[note: 21\]](#) The Defendant attached PDM case reports illustrating how electrical installations were maintained without the need for a shutdown of electricity. It also informed the Plaintiff that it used EA Technology from the UK to detect early signs of partial discharge activity of HT apparatus using the continuous mode transient earth voltage technique.

53 On 27 May 2005, the Defendant again wrote to the Plaintiff informing the latter of the benefits of conducting an infrared thermographic inspection. In that letter it further added:

... Many establishments have actually adopted Infrared Thermography as one of their main predictive and preventive maintenance program, usually on a per annual basis, depending on how much each establishment values the importance of having a well maintained and trouble-free electrical system.

54 On 11 July 2005, the Defendant wrote to the Plaintiff to share with it a recent incident where there was a violent explosion of Yorkshire FS6 22kV switchgears at a plant in Singapore on 6 July

2005. In its concluding remarks, the Defendant advised the Plaintiff to conduct a PDM testing:

In view of the recent explosion, I will strongly recommend a on-line, continuous mode partial discharge management of at least 24 hrs to detect potential poor contact problem. This measurement does not require any electrical shutdown. Should the partial discharge reading be high, then a shutdown maintenance should be planned for as soon as possible.

55 Despite a very recent violent explosion at another location which also used the same Yorkshire switchgear, the Defendant, nevertheless, recommended PDM testing. The Plaintiff, being a lay person, would not know what would be the best cause of action to undertake to avoid an explosion in its HTSGR. Therefore, it would have to rely on the best judgement and recommendation of the Defendant, its appointed LEW.

56 On 15 July 2005, the Defendant sent the Plaintiff a quotation for PDM testing for \$3,600. The Plaintiff accepted the quotation and the Defendant conducted a PDM testing at the HTSGR from 18 to 20 July 2005. After the PDM testing was conducted, no further maintenance of the HTSGR was recommended or conducted for the remainder of the year. This was despite the fact that industry standard required a SM to be conducted annually, *ie*, by 14 December 2005. The Defendant was also well aware that PDM testing should not be a substitute for a SM. It appeared that the Defendant was more interested in marketing its services in relation to PDM testing. The Defendant explained that PDM testing was recommended as it was the Defendant's view that there was no pressing need for a SM to be conducted since only half a year had passed by the time the PDM testing was conducted. Nonetheless, this does not explain why no SM was recommended afterwards. This failure to recommend a SM in 2005 is the first evidence of a breach of duty on the part of the Defendant.

2006: PDM testing

57 On 24 May 2006, more than one year after the last SM was conducted on 14 December 2004, the Defendant wrote to the Plaintiff recommending the Plaintiff to conduct a SM for the HTSGR so as "to ensure continuous safe and smooth operation of your power supply." The Defendant also provided its quotation for the conduct of a SM in the same letter. However, there was no response from the Plaintiff.

58 On 16 September 2006, the Defendant sent the Plaintiff a letter titled "EMA LETTER ON ELECTRICAL MAINTENANCE OF YOUR ELECTRICAL INSTALLATION AT 12 QUEEN STREET LICENCE NO. E70964". The contents of this letter are reproduced as follows:

The renewal of your annual electrical installation license from EMA (Energy Market Authority) is a statutory requirement. EMA will renew the license to you if the licensed electrical engineer certified your electrical installation to be in healthy condition. Such a certification of fitness can only be given after a shutdown maintenance of the electrical installation, which is once a year by industry standard. Should such a frequency be not possible due to the nature of your business, it is common and acceptable to defer the shutdown maintenance to the next calendar year. In place of the deferred shutdown maintenance, it is common to measure the insulation health of your electrical installation by continuous mode, on-line and non-intrusive partial discharge measurement for high tension switchgear, dissolve gas analysis for transformer, infrared thermography for low tension switchboard and HFCT partial discharge measurement of the high voltage cables. Such measurements can be done without any electricity disruption to you.

If you have no plans for shutdown maintenance for this calendar year, I will strongly recommend the above mentioned measurement be done so that I will be able to certify your electrical

installation fit for the renewal of your EMA license.

In the letter, there was no quotation for any proposed SM or PDM testing. The Plaintiff did not respond to the letter. The Defendant subsequently wrote to the Plaintiff again on 9 October 2006 recommending the Plaintiff to have a SM conducted for the HTSGR. However, there was again no response from the Plaintiff.

59 Subsequently, one of the Defendant's service engineers, DW3, Mr Seah Yew Chuan Ernest, called the Plaintiff's Building Manager, PW5, Mr Mohamad Sharif bin Suhaini, approximately one to two weeks after the letter dated 9 October 2006. DW3 asked PW5 for the Plaintiff's response in relation to the recommendation to conduct a SM. PW5 informed DW3 that the Plaintiff's management had not given the approval to carry out the SM proposed by the Defendant. This was because the Plaintiff was not willing to schedule and carry out a SM as the hotel had high occupancy rates. An interruption to the electricity supply required by a SM would adversely disrupt the Plaintiff's business operations.

60 PW5 instead inquired as to whether there was any alternative maintenance measure to a SM which could be conducted to service, maintain and test the electrical equipment on the Premises. DW3 recommended that a PDM testing be done although he did inform PW5 that a PDM testing is not a perfect substitute for a SM. PW5 then requested DW3 to issue the Plaintiff a quotation for the carrying out of a PDM testing.

61 On 20 November 2006 the Defendant then proceeded to issue the Plaintiff a quotation for the carrying out of a PDM testing. The Plaintiff accepted this quotation. A PDM testing was subsequently carried out on the Premises from 9 to 11 December 2006. At this time, it had been two years since the last SM was done. In other words, the conduct of a SM was long overdue at this point in time. Nonetheless, the Defendant still recommended and conducted a PDM testing in place of a SM. Furthermore, the Defendant was the one who suggested that PDM testing could be done in lieu of a SM in its letter to the Plaintiff on 16 September 2006. The Defendant also indicated in the same letter that it would still certify the electrical installation at the Premises as being in a healthy condition so as to obtain renewal of the electrical installation licence for the Premises. It was therefore not surprising that the Plaintiff opted for PDM testing instead of a SM under such circumstances in 2006.

2007: No PDM testing and no SM

62 On 1 October 2007, the Defendant sent a letter to the Plaintiff recommending a SM be conducted for the Premises. The Defendant did not recommend anything to the Plaintiff for the first three-quarters of 2007 despite the fact that it had already been more than two years since the last SM was conducted. The Plaintiff did not respond to this letter. According to DW4, when there was no response to the letter, he called PW5 to enquire as to the Plaintiff's response to the Defendant's recommendation. The Plaintiff did not provide a definite response to this enquiry. Consequently, no PDM testing or SM was done in 2007. Nonetheless, the Defendant continued to certify the electrical installation at the Premises fit for renewal despite the fact that no SM had been conducted since 14 December 2004.

63 This certification, despite the fact that no SM had been conducted, is further evidence of the Defendant's breach of duty of care. The Plaintiff would not know the actual condition of its electrical installation and such certification in the absence of any maintenance would lead the Plaintiff to believe that the current state of affairs then was acceptable. The Defendant failed to highlight the importance of conducting a SM to the Plaintiff.

2008: No PDM testing and no SM

64 On 20 February 2008, the Defendant sent to the Plaintiff a quotation for the conduct of a PDM testing by the Defendant. Such a recommendation at this juncture is inappropriate. The Defendant should have insisted on a SM being conducted as the last SM was done more than three years ago. However, the Plaintiff did not respond to the Defendant's quotation. I must highlight that the need to insist on a SM being conducted becomes more and more dire as time passes since the risk of a safety hazard occurring increases with the delay in the conduct of a SM.

65 The Defendant did not recommend any further maintenance measure to the Plaintiff up till 16 September 2008 when it sent to the Plaintiff a letter identical to the one sent on 16 September 2006 (reproduced at [58]). The Plaintiff did not respond.

66 The Defendant followed up on 4 December 2008 by sending to the Plaintiff a letter recommending a SM to be conducted with a quotation for a SM contained within. There was again no response. This would have been the second year in which neither a PDM testing nor a SM was conducted. As far as the conduct of a SM was concerned, it was four years since it was last done. The Defendant did not bring to the attention of the Plaintiff the fact that it was very dangerous for it not to carry out a SM for such a long time. Nonetheless, the Defendant continued to certify the fitness of the electrical installation at the Premises when it must have known that it was unsafe to continue without conducting a SM and had the electrical installation licence renewed.

2009: PDM testing

67 On 18 February 2009, the Defendant sent the Plaintiff a letter with the exact same content as the one the Defendant sent to the Plaintiff on 16 September 2006 and 16 September 2008. It appears that this advisory was sent almost as a matter of routine by the Defendant without applying its mind to actual situation it faced. It was highly inappropriate for the Defendant to send this same advisory considering the extensive delay in the conduct of both a SM and a PDM testing.

Abnormal readings from the PDM testing

68 DW3 then called PW5 sometime later to enquire as to the Plaintiff's response to the Defendant's letter dated 18 February 2009. PW5 informed DW3 that the Plaintiff wanted to do a PDM testing instead of a SM. The Defendant subsequently sent the Plaintiff a quotation for the proposed PDM testing to be done on 13 March 2009. The Defendant should not have acceded to the Plaintiff's requests. It should have emphasised the dire need for the Plaintiff to conduct a SM so as to ensure the safety of the electrical installation and insisted on the conduct of a SM instead. Nevertheless, a PDM testing was carried out on 18 to 19 March 2009. The PDM testing results revealed low levels of partial discharge being detected in the quiet background in one of HTTFS. This was communicated to the Plaintiff on 23 March 2009. However, nothing was done as a follow-up to this abnormality.

May 2009: electrical shutdown by SP PowerGrid Ltd

69 On 29 April 2009, the Chief Engineer of Allson Hotel, Mr Kelvin Kwan, notified the Defendant that SP PowerGrid Ltd had sent Allson Hotel a notice, informing Allson Hotel that SP PowerGrid Ltd would be carrying out equipment maintenance on the equipment housed at the PowerGrid sub-station supplying electricity to both the Premises and Victoria Wing, which Allson Hotel is situated at. This was to be done on 20 May 2009 at 11.59 pm and would last until 6 am on 21 May 2009. This maintenance would have resulted in the disruption to the electricity supply of both the Plaintiff and Allson Hotel. Furthermore, the period of disruption coincided with the usual amount of time needed to conduct an SM.

70 In light of the notice given on 29 April 2009, DW1 proceeded to call PW5. DW1 informed PW5 about the equipment maintenance by SP PowerGrid Ltd and the inevitable electricity disruption. PW5 confirmed that he had received the same notice from SP PowerGrid Ltd in the form of a letter dated 29 April 2009. DW1 then recommended to PW5 that a SM be conducted during the period of disruption. The Plaintiff did not respond to this recommendation. The Defendant also took no further steps to insist on the conduct of a SM and, in the end, no SM was conducted during the electrical shutdown. In fact, after the electrical shutdown, no SM was recommended by the Plaintiff before the flashover incident occurred on 19 December 2009.

71 The Defendant, being an experienced LEW, who had been managing the Plaintiff's Yorkshire equipment since 1986 ought to have known of the urgency of conducting a SM during this power disruption. First, the Yorkshire equipment was 26 years old at that point in time. Second, the industry standard was for a SM to be conducted annually and it was about four years overdue in this case. Third, the recent anomalous PDM testing results should have made the conduct of a SM even more crucial than before. Collectively, these factors would have caused serious concerns to a reasonable and responsible LEW. Such an LEW would have alerted the Plaintiff that the situation had turned very critical and that no further delay could be tolerated for the conduct of a SM. It appears that DW1 only informed PW5 to take advantage of the electrical shutdown on 21 May 2009 to carry out a SM. Neither DW1 nor the Defendant explained to PW4, PW5 or the Plaintiff how critical it was for the immediate conduct of a SM when the Plaintiff did not respond to the recommendation for a SM to be conducted. At this juncture, it was more than a matter of convenience to take advantage of the situation to conduct a SM. The conduct of a SM was a matter of necessity and exigency. The Defendant failed to discharge his duty of care by failing to follow up with actions to explain the critically dangerous situation to the Plaintiff. Despite these signs that something was not right with the Plaintiff's installations, the Defendant did the unthinkable. He continued to certify the fitness of the Plaintiff's electrical installation on 20 March 2009 for the renewal of the electrical installation licence which would have expired on 7 June 2009.

The overall conduct of the Defendant

72 The Defendant in its overall conduct behaved in a lackadaisical manner. It did not pay heed to the increasingly apparent danger signs and failed to take reasonable steps to draw the attention of the Plaintiff to these signs. No effort was undertaken on the part of the Defendant to explain how crucial the conduct of a SM was for the purposes of the smooth and safe operation of the electrical installation at the Premises. The Defendant only mentioned that a SM was necessary for such smooth and safe operation without explaining the rationale behind such a necessity. Even then such reminders that came with the recommendations to perform a SM were clearly perfunctory.

73 The Defendant had also failed to take into consideration the vulnerability of the third HTTFS which was racked-out since 2005 when Allison Hotel stopped using it. This became a spare switchgear and was in a rack-out position. The circuit breaker compartment was exposed to the external environment. The presence of air gaps between the circuit breaker truck and the switchgear enclosure allowed containment and moisture to form. This resulted in the flashover incident at the third HTTFS. The Defendant ought to know of this danger, especially, when the third HTTFS was not maintained for about five years. Therefore, the nonchalant attitude of the Defendant when the Plaintiff did not respond positively to its recommendation for a SM on 20 May 2009 to coincide with SP PowerGrid Ltd's equipment maintenance was another indication of its negligence. The Defendant had therefore failed to advise the Plaintiff correctly in relation to effective maintenance and had breached its duties.

Was the Defendant in a state of helplessness?

74 The Defendant sought to argue that in light of the Plaintiff's non-response to its recommendations, it was unable to do anything as regards the conduct of a SM. However, I do not think that the Defendant is as helpless as it would like to portray. What the Defendant should have done, which I agree with the Plaintiff on, was to refuse to certify the safety of the Premises and renew the Plaintiff's licence unless the Plaintiff conducted a SM as the HTSGR was no longer fit for safe operation. This, in my view, is what a responsible and civic-minded LEW must do in such a situation.

75 Most, if not all, businesses are always cost conscious to maximise profits and the Plaintiff is no exception. In this case, the dangers associated with the failure to conduct a SM for several years were not conveyed to the Plaintiff. Instead, the Defendant recommended PDM testing as a viable alternative which the Plaintiff clearly favoured and consequently had chosen as PDM testing costs less than a SM and is less disruptive. If the Plaintiff was informed that the Defendant would not certify the Plaintiff's electrical installation for the annual renewal of its licence, this would have caught the Plaintiff's immediate attention as the latter could not operate its hotel without electricity. The Plaintiff would then have been more agreeable to the conduct of a SM so as to preserve its business interests.

76 In the end, the Defendant failed to take a stance against its client, the Plaintiff. I emphasise here that, unlike certain service providers who must strictly obey their clients' instructions, professionals like the Defendant cannot simply accede to the client's demands and bend over backwards. This is especially so because professionals, such as LEW, lawyers and accountants, owe a civic duty to society. In the case of the Defendant, he must ensure that the electrical installation is safe so as to protect not only the Plaintiff but others, such as the occupants of the hotel, as well. Just as how a lawyer must ensure that his client acts within ethical and legal boundaries regardless of the demands of his client, the Defendant should have taken the adequate steps to ensure that the Plaintiff acted within safe boundaries instead of allowing the Plaintiff to indefinitely defer the long overdue SM.

EMA's investigation into the flashover incident

77 EMA carried out an investigation into the flashover incident. The court was not informed of the details of that investigation. The Defendant submitted that the EMA "could not find any evidence to suggest that Mr Whye Yip Kwong had violated any safety rules". [\[note: 3\]](#) This was a reply by the EMA to the Plaintiff's counsel dated 17 September 2012. Therefore, the Defendant argued that it should not be liable for negligence. However, in an earlier response to the same counsel dated 28 August 2012, the EMA stated that "[a]ppropriate action has already been taken on the licensed engineer Mr Whye Yip Kwong after our investigation". This would then suggest that DW1 had breached some duty he was under as an LEW so as to warrant appropriate action to be taken. It appears that the letters sent by the EMA reflect conflicting outcomes of their investigations. This evidence therefore does not assist either party. It also does not assist this court on the issue of whether the Defendant had breached its duty of care owed to the Plaintiff. Any decision as to breach of duty on the part of the Defendant must therefore be made independent of the EMA investigation.

78 For the reasons above, I find that the Defendant had breached the duty of care to provide reasonable consultancy services to the Plaintiff. However, before I proceed to deal with the issues of causation and contributory negligence, I shall first deal with an ancillary issue raised by the Plaintiff in relation to the Defendant's duty to inspect the electrical installation at the Premises.

Duty of care in relation to the bimonthly inspections

79 Shortly after the flashover incident, the Plaintiff engaged Matcor Technology & Services Pte Ltd ("Matcor") to conduct a failure assessment for the flashover incident. PW3, Ken Sidharta, an electrical engineer employed by Matcor, inspected the HTSGR shortly after the flashover incident and prepared a failure assessment report ("the Matcor Report"). In the Matcor Report, PW3 observed that there was corrosion with paint blistering on a part of a wall in the HTSGR. He also observed moulds and watermarks in other areas of the HTSGR. Furthermore, "traces of condensed moisture and corrosion were observed at scattered areas of the internal and external [surfaces] of the electrical panels." These observations were corroborated by photographic evidence and are evidence of a high moisture levels within the HTSGR.

80 It is therefore the Plaintiff's submission that the Defendant breached its duty owed to the Plaintiff as it failed to take note of the signs of high moisture levels within the HTSGR which were identified in the Matcor Report. According to the Plaintiff, the Defendant was under a duty to check for such danger signs within the HTSGR when it was inspecting the HTSGR and notify the Plaintiff accordingly if any such phenomenon is detected. However, the Defendant did not do so in this case.

Is the Defendant under a duty to check for high moisture levels within the HTSGR?

81 Under cl A4 of the agreement, the Defendant had agreed to conduct bimonthly inspections at the main switchboard in the Plaintiff's HTSGR so that it may advise the Plaintiff accordingly. This bimonthly inspection is visual and sensory and could only be conducted by the Defendant as an LEW since the Plaintiff is not permitted to access the HTSGR under the Code. The purpose of such a bimonthly inspection is to allow the LEW to detect potential safety risks within the HTSGR so that it may notify the Plaintiff for the Plaintiff to act accordingly. Under para 1.4.13 of the Code, moisture is identified as a potential threat to the safe operation of electrical installations:

1.4.13 Moisture and contamination

Moisture is always a potential danger. Temperature variations which occur in the switchroom may result in condensation due to high humidity. This moisture coupled with dirt and dust may lead to electrical breakdown. Preventive measures may include sealing of unnecessary openings and installation of dehumidifiers or heaters. Routine inspection should include verification that such devices are functioning properly.

82 Hence, based on the Code itself, it would seem that the Defendant owed a contractual duty of care to check for high moisture content within the HTSGR given its high threat value. The Defendant disagreed on the basis that it is not required to measure humidity levels within the HTSGR. The Defendant's bimonthly inspections were conducted pursuant to a standard checklist issued by the EMA under the EI(R1) Report by Licensed Electrical Worker for Condominiums and Multi-Tenanted Buildings ("the EMA Checklist"). Earlier (at [48]), I stated that the electrical installation at the Premises falls under the category of "High voltage installations" rather than the category of "Multi-tenanted buildings, condominiums etc". The contents of the EMA Checklist, therefore, are not conclusive of the scope of duty that the Defendant owed. However, to the extent that the EMA Checklist may be illustrative of the items that an LEW commonly takes note when inspecting electrical installations, I have given it further consideration. As the Defendant has asserted, the EMA Checklist does not reveal any specific requirement for an LEW to check the humidity levels in an electrical installation. Therefore, according to the Defendant, since it was not required to check humidity levels, it was not in breach of its duty for failing to take notice and notify the Plaintiff of the evidence of high moisture levels within the HTSGR found in the Matcor Report.

(1) Is the presence of water in HTSGR important?

83 I would like to explain the difference between humidity and moisture. Humidity refers to the amount of water vapour in the air. Moisture, on the other hand, relates to any presence of water within the environment regardless of whether it is in the gaseous or liquid state. Humidity will contribute to moisture levels within an environment but is not necessarily the only source of moisture. Furthermore, as noted by para 1.4.13 of the Code, it is moisture that is a potential danger and high humidity levels only contribute to it. Although the Defendant is not required to measure the humidity within the HTSGR, it does not mean that it may ignore evidence of high moisture levels within the HTSGR such as those observed in the Matcor Report. Corrosion, paint blistering, moulds and watermarks are easily noticeable. As a professional electrical engineer, the Defendant should have paid attention to such danger signs and alerted the Plaintiff of them when conducting the bimonthly inspections.

(2) The EMA Checklist

84 In any event, I also notice that item 3.6 of the EMA Checklist under the heading "Switchroom Requirements" is generally termed "Danger signs". This is clear indication that the EMA Checklist does not seek to specifically limit the scope of a LEW's duty when it comes to the detection of potential hazards. This item 3.6 serves as an overarching, catch-all provision to account for other danger signs not specifically defined and listed under the EMA Checklist. Based on the Code, I am convinced that corrosion, paint blistering, moulds and watermarks are danger signs indicative of high moisture levels within the HTSGR. These phenomena are therefore danger signs that fall under item 3.6 of the EMA Checklist which the Defendant should have checked for and alerted the Plaintiff about under its contractual duty to perform bimonthly inspections.

(3) Specific conditions of the third HTTFS

85 The third HTTFS was in the rack-out position since 2005 when Allson Hotel ceased utilising it. As it was in the rack-out position, the circuit breaker compartment was exposed to the external environment due to the presence of air gaps between the circuit breaker truck and the switchgear enclosure. As a result, dust particles would accumulate on the surface of the spout insulators behind the busbar shutters as a result of the gaps at the busbar shutters. The accumulated dust particles would then absorb the moisture within the HTSGR. Such a combination of dust and moisture is the cause of surface tracking, surface tracking being the cause behind the flashover incident itself. Therefore, the fact that the third HTTFS was in the rack-out position meant that it was more vulnerable to surface tracking. As a professional LEW, the Defendant should have been aware of this and should have paid greater attention to the signs of high moisture levels since such levels vary proportionately with the risk of surface tracking.

86 Based on these circumstances, the *Spandeck* test is easily satisfied. The threshold test of factual foreseeability is met as evidenced by the flashover incident itself since surface tracking as a result of absorption of moisture by dust particles is accepted as the undisputed cause of the flashover incident. Furthermore, there is sufficient proximity since the Defendant was the Plaintiff's LEW and, pursuant to the Code, was the only one who could access the HTSGR to detect such danger signs. Since there are no policy considerations in this case that act against the imposition of such a duty to detect danger signs of high moisture levels in tort, the Defendant was accordingly under such a duty in tort as well.

Scope of the Defendant's duty

87 Even though the Defendant should have paid attention to the danger signs in this case, this does not mean that the Defendant must examine the HTSGR meticulously to detect signs of moisture

when conducting its inspections. I note that the inspection conducted by the Defendant is visual and sensory in nature. Corrosion, paint blistering, moulds and watermarks could be easily seen and it would not take the Defendant much effort to detect them visually. These are obvious signs of high moisture levels and should have been detected well before the flashover incident since these are not signs that simply appear overnight. Therefore, all that is required of the Defendant is to identify the obvious visual signs of high moisture levels within the HTSGR and to notify the Plaintiff of such levels and the associated risks. I do not think this is too onerous on the part of the Defendant who, as a professional, should be well aware of the dangers of moisture.

Breach of duty of care

88 The Defendant clearly failed to pay attention to the signs of corrosion, paint blistering, moulds and watermarks caused by high moisture levels and consequently failed to alert the Plaintiff as to the associated safety hazards. Nonetheless, the Defendant also sought to explain why it was not necessary for the Defendant to do so in this case.

89 The Defendant argued that the humidity levels inside and outside the HTSGR are the same. However, as I have pointed out, humidity is not equivalent to moisture. Having the same humidity levels inside and outside the HTSGR does not disprove the fact that there existed high moisture levels within the HTSGR and does not avoid the Defendant's obligation to take note of the danger signs which it should then have alerted the Plaintiff to. In fact, the Defendant also submitted that the high moisture levels were a result of water seepage or ingress from adjoining walls. This further reinforces the conclusion that there existed high moisture levels within the HTSGR which the Defendant should have been cognisant of as a result of the obvious signs of corrosion, paint blistering, moulds and watermarks. Just because the moisture did not originate from the air does not make it less dangerous. The danger is more apparent in this case as the third HTSS was racked out since 2005 and was thus more susceptible to containments and moisture.

90 Therefore, I find that the Defendant breached its duty of care in relation to the bimonthly inspections when it failed to pay attention to the obvious danger signs of high moisture levels within the HTSGR which it should have alerted the Plaintiff to. At this juncture, I would like to add that high moisture levels contributed to the flashover incident as well since moisture is a direct cause of surface tracking. The high moisture levels within the HTSGR resulted in a greater risk of surface tracking which the Plaintiff should have acted on by conducting a SM. The Defendant was therefore negligent as it failed to alert the Plaintiff to the presence of moisture in the HTSGR. This also increased the importance of conducting a SM.

Causation

91 It is not disputed by the parties that the conduct of a SM would have averted the flashover incident. Therefore, if the Defendant had taken reasonable care in giving advice and ensured that the Plaintiff conducted a SM, the flashover incident would have been avoided. This is sufficient to establish causation. It is, however, the Defendant's submission that the Plaintiff's entirely unreasonable behaviour, in the form of its repeated refusal to conduct a SM, is a *novus actus interveniens* that breaks the chain of causation. Therefore, the Defendant's negligence could not be said to have caused the flashover incident and the Defendant argued that it should not be made liable for the losses that arose from the flashover incident.

92 This legal principle espoused by the Defendant is clearly explained by *Clerk & Lindsell on Torts* (Sweet & Maxwell, 20th Ed, 2013) at para 2-119:

When the conduct of the claimant exacerbates or adds to the injuries of which he complains, that conduct will generally result in a reduction of his damages on grounds of contributory negligence, or failure in his duty to mitigate. However it may be that the conduct of the claimant is so wholly unreasonable and/or of such overwhelming impact that that conduct eclipses the defendant's wrongdoing and constitutes a *novus actus*. His own conduct is found to be the effective cause of the injury.

93 The Court of Appeal applied this doctrine in *TV Media Pte Ltd v De Cruz Andrea Heidi and another appeal* [2004] 3 SLR(R) 543 at [76]:

We do not agree that Andrea's omission to seek medical aid as so "wholly unreasonable" as to constitute a *novus actus interveniens* which would obliterate TV Media's wrongdoing. It is only where the act or omission of a party is of such a nature as to constitute a wholly independent cause of the damage that the intervening conduct may be termed a *novus actus interveniens*: *Muirhead v Industrial Tank Specialities Ltd* [1986] QB 507. Thus, in *McFarlane v Tayside Health Board* [2000] 2 AC 59, the House of Lords emphatically confirmed that the failure to undergo a termination of pregnancy or to give the child up for abortion did not break the chain of causation between a negligently performed sterilisation operation and an unwanted birth. Similarly, we fail to see how Andrea's failure to seek medical aid could be anything more than part of the sequence of events. It was certainly not a wholly independent cause of her damage.

94 This was also elaborated by Lord Reid in *McKew v Holland & Hannens & Cubitts (Scotland) Ltd* [1969] 3 All ER 1621 at 1623:

... if the injured man acts unreasonably he cannot hold the defender liable for injury caused by his own unreasonable conduct. His unreasonable conduct is *novus actus interveniens*. The chain of causation has been broken and what follows must be regarded as caused by his own conduct and not by the defender's fault or the disability caused by it.

95 The question is: is the Plaintiff's repeated refusal to conduct a SM so unreasonable as to constitute a *novus actus interveniens*? I am not persuaded it is so. In my view, the Plaintiff's refusal to conduct a SM was not a wholly independent cause of the flashover incident. It may have contributed to the flashover incident but it does not absolve the Defendant of all blame for two reasons. The Defendant's negligence itself had contributed to the Plaintiff's repeated refusal to conduct a SM. First, the letters sent by the Defendant in 2005 encouraging the Plaintiff to conduct PDM testing caused the Plaintiff to believe that PDM testing is a good and viable alternative to conducting a SM. Second, the Plaintiff's belief that PDM testing was a good and viable alternative was further perpetuated by the Defendant's further letters from 2006 onwards that suggested that PDM testing could be done in lieu of a SM for the purposes of certification of fitness and licence renewal. Third, the actual certification of fitness and renewal of licence done by the Defendant in the absence of a SM only served to concretise the Plaintiff's belief. All in all, it must be recognised that the Defendant's continuous acquiescence to the Plaintiff fuelled the Plaintiff's belief that a SM was not necessary and not important. It was the Defendant's service regime that had created a scenario for a disaster to happen which indeed occurred in the form of a flashover incident.

96 In any event, it must also be recognised that the Defendant had also failed to inspect the HTSGR correctly and conscientiously. The Defendant had also failed to alert the Plaintiff of the danger signs of high moisture levels. In all of its refusals to conduct a SM, the Plaintiff was unaware of such a potential hazard. Therefore, the Plaintiff's refusal could also be a result of it being unaware of the increased risks associated with higher moisture levels. This would mean that the refusal was also partly a result of the Defendant's failure to alert the Plaintiff of the high moisture levels within the

HTSGR.

97 Therefore, the Defendant's negligence was the primary and dominant cause of the flashover incident. The conduct of the Plaintiff in refusing to carry out a SM was not the wholly independent cause of the flashover incident. However, the inquiry does not end here. I must next consider whether the Plaintiff had contributed to the flashover incident.

Was the Plaintiff contributorily negligent?

98 The issue is whether the Plaintiff had behaved negligently and whether this negligent behaviour contributed to the poor state of maintenance of the electrical installation that resulted in the flashover incident. The Plaintiff submitted that the Defendant is an experienced LEW whereas the Plaintiff is a lay person who did not have access into HTSGR. Moreover, the Plaintiff was not aware of the conditions of the electrical equipment in the HTSGR which only the Defendant had access to. Does this mean that the Plaintiff is absolved of all responsibility for anything that happens inside the HTSGR, such as the flashover incident? The Plaintiff cited *Jackson & Powell on Professional Liability* (John Powell & Roger Stewart gen eds) (Sweet & Maxwell, 7th Ed, 2012) at para 5-146 in relation to how contributory negligence is supposed to be dealt with in a situation where one party is a professional and the other a lay person:

In the context of professional negligence a successful plea of contributory negligence by the Defendant is less common than in other areas of negligence. This is because the parties often do not stand on an equal footing (as they do in, say, claims arising from road traffic accidents). If the Defendant makes a mistake, it may be difficult to say that the client was negligent not to spot it or correct its effect, unless the client is expected to be wiser than his own professional advisers.

99 This court has to decide whether the Plaintiff can hide behind the shield of ignorance and put the blame solely on the Defendant for the poor state of the electrical installation resulting in the flashover incident. If the matters concerned technical knowledge that were not within the competency of a layperson to understand and appreciate, I think it is generally acceptable to absolve the Plaintiff of responsibility. However, the Defendant in this case had in fact recommended the conduct of a SM to the Plaintiff on many occasions. Yet the latter had repeatedly refused to grant the approval necessary for the Defendant to conduct a SM. In *Nance v British Columbia Electric Railway Company Ltd* [1951] 1 AC 601, Lord Reid at [611] stated:

But when contributory negligence is set up as a defence, its existence does not depend on any duty owed by the injured party to the party sued, and all that is necessary to establish such a defence is to prove to the satisfaction of the jury that the injured party did not in his own interest take reasonable care of himself and contributed, by this want of care, to his own injury. *For when contributory negligence is set up as a shield against the obligation to satisfy the whole of the plaintiff's claim, the principle involved is that, where a man is part author of his own injury, he cannot call on the other party to compensate him in full.* This view of the matter has recently been expounded, after full analysis of the legal concepts involved and carefully examination of the authorities, by the English Court of Appeal in *Davies v Swan Motor Co. (Swansea) Ltd.* (19), to which the Chief Justice referred.

[emphasis added]

100 Hence the question to be asked is whether the Plaintiff had through its repeated refusals failed to take reasonable care in ensuring the safe operation of its own electrical installation. This will

require this court to examine the Plaintiff's conduct, since the last SM was conducted for the electrical installation at the Premises on 14 December 2004.

2005 to 2006

101 From 2005 to 2006, the Plaintiff was not blameworthy. The Defendant itself recommended the conduct of a PDM testing in 2005 and the Plaintiff obediently agreed to such a recommendation. It was not within the Plaintiff's knowledge at the time it adopted the recommendation that the industry standard required a SM to be conducted every nine months, or at the very least, annually.

102 This industry standard was only made known to the Plaintiff on 16 September 2006 when the Defendant sent the Plaintiff a letter explaining that the industry standard was for a SM to be conducted annually. In that same advisory the Defendant indicated that the conduct of a SM could be deferred to the next year and that a PDM testing may be carried out in lieu of a SM so that the Defendant could certify the Plaintiff's electrical installation fit for renewal of its electrical installation licence. This was despite the fact that the last SM was conducted on 14 December 2004. As a result, the Plaintiff did not accept the Defendant's recommendation for the conduct of a SM in October 2006. The Plaintiff instead responded by requesting for the alternative of PDM testing suggested by the Defendant and subsequently accepted the Defendant's quotation for the conduct of a PDM testing. Thereafter, a PDM testing was conducted at the electrical installation of the Premises from 9 December 2006 to 11 December 2006. The preference for the conduct of a PDM testing was on the basis that the conduct of a SM was far more costly than the conduct of a PDM testing. Not only was quotation for the conduct of a SM higher, a SM also affected the hotel's electricity supply and would disrupt the Plaintiff's business operations. Nonetheless, it was not the fault of the Plaintiff that a PDM testing was done in lieu of a SM. This is despite the fact that this did not accord with industry standards. The conduct of a PDM testing was offered by the Defendant as an alternative and the Plaintiff did not have reason to doubt the advice of its LEW.

2007

103 The first sign of the Plaintiff's contributory negligence emerged in 2007. By this time, two PDM testings had already been conducted in 2005 and 2006. On 1 October 2007, the Defendant recommended the conduct of a SM. It also reminded the Plaintiff again that the last SM was conducted on 14 December 2004. The Plaintiff did not respond to this recommendation. DW4 then contacted PW5 to enquire as to the Plaintiff's response. PW5 informed DW4 that he had to consult with the Plaintiff's management and to obtain their approval. However, PW5 did not inform DW4 the decision of the Plaintiff's management afterwards. Only when DW4 enquired with PW5 two weeks later did PW5 inform DW4 that the Plaintiff was not willing to conduct a SM because it would disrupt the Plaintiff's business operations. Furthermore, unlike the previous occasion, the Plaintiff did not request a PDM testing to be conducted in lieu of the recommended SM. It simply disregarded the Defendant's recommendations and paid no heed to the matter thereafter.

104 At this juncture, the Plaintiff was aware that the conduct of a SM was two years overdue in accordance with industry standards. There is no evidence to suggest that the Plaintiff asked or consulted the Defendant on whether it was safe or not for the electrical installations not to have a SM conducted for such a long duration. The Plaintiff was also aware that according to the Defendant's recommendations, even if it refused to conduct a SM, a PDM testing should nonetheless be carried out in lieu of a SM. It did not act in accordance with the recommendation and instead did nothing after refusing to conduct a SM when it should have minimally conducted a PDM testing in accordance with the Defendant's recommendations. Being the owner of the electrical installation, and the party responsible for approving recommended maintenance methods, the Plaintiff had joint

responsibility over the electrical installation at its premises. It had to collaborate with the Defendant to ensure the safe operation of the electrical installation. However, on this occasion, the Plaintiff disregarded the recommendations of the Defendant and refused to conduct a SM. This decision was premised on the business disruption caused by the conduct of a SM instead of the more pertinent safety concerns. Hence the Plaintiff's contributory negligence becomes apparent at this stage.

2008

105 On 20 February 2008 the Defendant sent a recommendation and quotation for the conduct of a PDM testing to the Plaintiff. The Plaintiff did not approve of the Defendant's recommendations again. This was despite the fact that it had rejected the Defendant's recommendation to conduct a SM the previous year and that no SM or PDM testing was conducted at all in 2007. On 16 September 2008, the Defendant sent the same advisory letter sent on 16 September 2006. The letter once again informed the Plaintiff that the industry standard was for a SM to be conducted annually and that a PDM testing may be carried out in lieu of a SM which could be deferred to the next year. This is the second time the Plaintiff was alerted as to the industry standard it should accord with. On 4 December 2008, the Defendant once again recommended the conduct of a SM and the Plaintiff again did not approve the recommendation of the Defendant.

106 At this juncture the Plaintiff would have known that the last SM conducted was already about 4 years ago while the industry standard was for SM to be done annually. The Plaintiff continued to do nothing. Although the Defendant had been certifying the Plaintiff's electrical installation fit for the renewal of its electrical installation licence, the Plaintiff should have done proper due diligence and instead checked with the Defendant whether it was safe to operate the electrical installation without conducting a PDM testing for two years and without conducting a SM for four years. Yet the Plaintiff, while possessing full knowledge of the fact that it was not heeding its own LEW's advice, did not consult the Defendant as to the appropriate course of action and effectively ignored the Defendant's advisory letter and recommendations. If the Plaintiff had asked the Defendant about the need to conduct a SM the latter would have told the Plaintiff to carry out a SM. At this stage the equipment had reached a danger point and an accident was just waiting to happen. This is clearly contributory negligence on the part of the Plaintiff as it is an obvious failure on its part to take reasonable care of its own electrical installation.

2009

107 On 18 February 2009, the Defendant again sent to the Plaintiff the same advisory it sent on 16 September 2006. This would have been the third time the Plaintiff received the same advisory. Although the same advisory suggested that a PDM testing may be conducted in lieu of a SM, the Plaintiff ought to have known that the Defendant was sending out the same advisory. As a lay person reading the letter, the Plaintiff would understand that a SM may only be deferred for one year through the conduct of a PDM testing in the interim. It may not be deferred indefinitely. The Plaintiff should therefore have known by then that even though it did carry out a PDM testing once in lieu of a SM, industry standards required it to have carried out a SM by 2007. Yet Plaintiff once again chose the conduct of a PDM testing over a SM. The PDM testing was conducted on 18 and 19 March 2009 when its electrical installation was badly in need of a SM. It was therefore not surprising that the PDM testing results revealed low levels of partial discharge being detected in the quiet background in one of HTTFS.

108 DW1 subsequently called PW5 upon receipt of the PDM testing results on 23 March 2009. DW1 informed PW5 of the irregularities detected and recommended that another PDM testing be carried out using different equipment in order to confirm the said results. DW1 also recommended that a SM be

conducted in light of such irregularities detected. The Plaintiff did not approve of any SM or any further PDM testing to be conducted by the Defendant thereafter despite its knowledge that the last PDM testing gave anomalous results. At this stage the Plaintiff's actions appear irresponsible. It showed scant regard for safety standards. Unlike a reasonable person who would at least be alerted as to the anomalous results, the Plaintiff simply paid no heed to it and ignored the Defendant's advice.

Should the Plaintiff have approved the conduct of SM when there was an electrical shutdown by SP PowerGrid Ltd in May 2009?

109 The Plaintiff was informed on 29 April 2009 that SP PowerGrid Ltd would be carrying out equipment maintenance at the Premises which required an electrical shutdown for the Premises. Hence there was to be a disruption of electricity supply to the Plaintiff's hotel from 11.59 pm on 20 May 2009 till 6 am on 21 May 2009. The Defendant knew that the Plaintiff was concerned by the electrical disruption caused by a SM. Since the disruption caused by SP PowerGrid Ltd's equipment maintenance was inevitable, and since it was possible for a SM to be conducted during the time when the electrical supply was shut down for the purposes of the maintenance, the Defendant therefore felt that the Plaintiff should take advantage of such an opportunity to conduct a SM. This was especially so in light of the anomalous results from the previous PDM testing conducted. DW1 therefore informed PW5 to ask the Plaintiff's management to approve the conduct of a SM during this shutdown. Again the Plaintiff did not approve the conduct of a SM recommended by the Defendant.

110 The Plaintiff knew that the conduct of a SM was overdue for more than three years. The Plaintiff also knew of the abnormal results of the previous PDM testing which was evidence that something was very wrong with the HTTFS. Any responsible lay person in such a situation would have been very concerned and would have at least undertaken some form of due diligence by asking his LEW whether further delay of the conduct of a SM would be safe. Furthermore, there was less reason for the Plaintiff to refuse to conduct a SM since it would incur no additional costs from the inevitable electrical disruption caused by SP PowerGrid Ltd's electrical shutdown. Unfortunately, the Plaintiff still chose to reject the Defendant's recommendation and the flashover incident occurred on 19 December 2009.

The overall conduct of the Plaintiff

111 From these circumstances, the Plaintiff, being the owner of the Premises, cannot be exonerated from all responsibility for the safe operation of the electrical installation merely because it had appointed the Defendant, a licenced LEW, to take charge of the installation. The Plaintiff cannot simply hide behind the fact that it was a lay person and the Defendant a professional. Although the Defendant was supposed to provide the Plaintiff with professional advice, it was still up to the Plaintiff to heed such advice. The Plaintiff frequently did not heed such advice. Furthermore, it often rejected the Defendant's recommendations on the basis of financial and business considerations rather than safety considerations. As the only one who could approve the conduct of maintenance for the electrical installation at the Premises, the Plaintiff therefore failed to take reasonable care in protecting its own interests by disregarding the Defendant's recommendations on so many occasions. Under such circumstances, the Plaintiff is therefore contributorily negligent. The Defendant is accordingly not wholly liable for the damage caused by the flashover incident. However, before I proceed to address the issue on apportionment of liabilities between the Plaintiff and the Defendant, I would first like to make some comments in relation to public safety.

Public safety

112 The parties in their respective submissions have addressed the importance of public safety from a self-interest perspective. In this case, it was fortuitous that the flashover incident did not lead to any serious ramifications. The Plaintiff has produced documents illustrating the damage to property, injury to persons and major disruption of electricity supply, not only to the owner but also to the wider neighbourhood, caused by flashovers in the past. Flashovers could also result in a raging fire that may lead to devastating effects. People may be injured, or even lose their lives. Properties may be extensively damaged. The potential harm that could arise from such incidents is one of the reasons why the EMA requires owners of high voltage installations to appoint their LEWs to take charge as lay person owners would not know how to manage, maintain and service them.

The Defendant

113 The Defendant is a body licensed by the EMA to safeguard the safety of electrical installations in Singapore. This court is perturbed with the lackadaisical manner in which the Defendant discharged its duty to the Plaintiff. The Defendant was prepared to certify the Plaintiff's electrical installation fit for operation when the Defendant ought to know that it was no longer safe to do so. This is an irresponsible discharge of its statutory duty as LEW. To allow a high voltage installation to continue in operation by having its licence renewed when it is not safe to do so puts public safety at risk.

114 These proceedings disclosed the cavalier *modus operandi* of the Defendant's business operations. I do not have the impression that this case was a one off incident. It appears to be systemic and it is probable that the same conduct is adopted by the Defendant in relation to its other clients. This is worrying because according to D1, the Defendant services about 66 sub-stations in Singapore. If the Defendant adopted the same unacceptable manner of servicing its clients as it had adopted in this case, it would mean that 66 other sub-stations in Singapore are also at risk. In other words, the Defendant's clients' premises may result in an electrical incident arising from poor maintenance which may cause further harm to others.

115 As a professional body that is responsible for such safety, the Defendant owes a responsibility towards not just its clients but society in general as well. As stated by r 5 of the Professional Engineers (Code of Professional Conduct and Ethics) Rules (Cap 253, R 3, 1991 Rev Ed):

Notwithstanding the responsibility to his employer and to his profession, a professional engineer shall act with *prime regard to the public interest*. [emphasis added]

The EMA should conduct a proper audit of the Defendant's services in relation to the maintenance regime of high voltage installations of its clients. I also hope that the Defendant takes its responsibilities seriously in the future. Even though it runs a business, all businesses must practice corporate social responsibility, especially those with professional duties and when public safety is at stake.

The Plaintiff

116 The Plaintiff should also perform its duty as the owner of the electrical installation responsibly. The Plaintiff cannot put the entire blame for the flashover incident on the Defendant. Both the owners of electrical installations and their appointed LEWs have to work together as a team to ensure that these installations are safe for operation. Profits, costs and balance sheets are important for owners of businesses but these cannot be the sole focus when they have high voltage installations located at their premises. Safety to their buildings and the surrounding neighbourhood is paramount as it is necessary for the protection of human lives within the area. In this case, the Plaintiff's main consideration when making decision as to the maintenance of the electrical installation appears to be

cost cutting. If it ever decided to conduct any maintenance at all, it always preferred the conduct of a PDM testing given that it is cheaper and does not cause disruption to the Plaintiff's business operations. Safety considerations seem to have been side-lined. As a hotel business, the Plaintiff owes a duty to ensure a safe stay for its patrons and safety should have been at the forefront of its considerations. Such bottom line mentality featured by the Plaintiff is legally and morally unacceptable. The Plaintiff must reconsider its priorities in relation to its conduct of business.

117 I shall now to deal with the last issue of apportionment of liability.

What is the extent of the Plaintiff's contributory negligence?

118 The Plaintiff argued that there was no contributory negligence on its part whereas the Defendant submitted that the Plaintiff contributory negligence should result in the Defendant being liable only for 10% of the damage caused by the flashover incident. What should be the apportionment of liabilities between the Plaintiff and the Defendant? Here we have the Plaintiff, a layperson and owner of the electrical installation, versus the Defendant, a licensed LEW. There exists information asymmetry between the Plaintiff and the Defendant. The Defendant possesses expert knowledge and experience which the Plaintiff does not have in relation to the maintenance of the electrical installation. The Defendant also had access to the HTSGR which the Plaintiff could not access pursuant to the Code.

119 It is also important to emphasise the fact that the Defendant was actually in a position of power since its certification is necessary for the Plaintiff to obtain a renewal of the electrical installation licence required for it to continue operating the electrical installation. Although the Plaintiff continuously refused the Defendant's recommendation to conduct a SM, the Defendant nonetheless continuously certified the fitness of its electrical installation for the purposes of renewal of the licence. In a way, the Defendant's conduct had encouraged the Plaintiff to opt for PDM-testing for the purposes of maintenance, which is cheaper, instead of an annual SM as required by industry standards.

120 Additionally, I would like to point out that the Defendant's negligence in its failure to pay attention to and alert the Plaintiff of danger signs associated with high moisture levels was not something the Plaintiff could have done anything about as only the Defendant was allowed to enter the HTSGR. I am therefore of the view that the Defendant should bear greater responsibility for the loss caused by the flashover incident.

Conclusion

121 For the above reasons, I find that the Defendant was negligent both under the contract and in tort. However, I also find that the Plaintiff was contributorily negligent. Therefore, the Defendant shall bear 70% of the loss caused by the flashover incident and the Plaintiff shall bear 30% of such loss. Parties will address the court on the issue of costs if there is no agreement.

[\[note: 1\]](#) Notes of Evidence, 22 January 2014, page 96 to 97.

[\[note: 2\]](#) PBOD, page 1.

[\[note: 3\]](#) PBOD, page 129.