

Em Services Private Limited v Triple Five Transportation & Engineering Construction Pte Ltd  
[2001] SGHC 2

**Case Number** : Suit 1451/1996  
**Decision Date** : 02 January 2001  
**Tribunal/Court** : High Court  
**Coram** : Lai Siu Chiu J  
**Counsel Name(s)** : Jeffrey Beh Eng Siew & Siow Hua Lin (Lee Bon Leong & Co) for the plaintiffs; Tito Shane Issac & Mustaffa bin Abu Bakar (Tito Isaac & Co) for the defendants  
**Parties** : Em Services Private Limited — Triple Five Transportation & Engineering Construction Pte Ltd

**JUDGMENT:**

*Cur Adv Vult*

*The background*

1. The plaintiffs in this action, EM Services Pte Ltd (EMS/the plaintiffs), sued the defendants Triple Five Transportation & Engineering Construction Pte Ltd (TF/the defendants), for breach of contract. The plaintiffs sought to recover damages (in the region of around \$670,000.00) with interest, from TF. As I informed the parties at trial, I will be dealing with the issue of liability only and leave the question of damages if any, to be assessed by the Registrar at a later date.

2. The parties had entered into the contract in question in or around May 1995. At that time, EMS were the managing agents of three (3) plots of land, located at Kay Siang Road, Ridout Road and Hume Heights Estate, belonging to the Housing & Development Board of Singapore (HDB). In or about early April 1995, EMS put out an open tender for certain projects to be carried out at these locations. TF tendered for the projects. Their tender price of \$69,125.00 was accepted by EMS in late May 1995. The contract period was to be for three (3) months, commencing 1 June 1995 and finishing on 31 August 1995. The general description contained in the contractual documents of the works to be carried out was as follows:

1. Clearance of trees, shrubs, saplings, vegetation, etc on the marked out land parcels;
2. Turfing to open terrain including preparation and top soil mixture as specified;
3. Repairs to boundary fencing;
4. Preservation of existing trees (exceeding 600mm in girth) including trimming;
5. Other works which are incidental to the foregoing or are contingently necessary for the completion of the project.

3. The present action is only concerned with the works carried out by TF at Hume Heights Estate. TF commenced work there around end May 1995. Some time around 10 June 1995, they offered to carry out additional contractual works at another part of the Hume Heights Estate at no extra charge, and this offer was accepted by EMS (the two parcels of land on Hume Heights Estate will hereinafter be referred to collectively as Hume Heights or the Hume Heights site). TF completed the project around the end of September 1995. However, EMS were dissatisfied with TFs performance of the contract at Hume Heights.

4. In brief, EMS made the following allegations against TF: firstly, the contract between the parties only required TF to carry out minor earth-filling works to fill out pot-holes found at the Hume Heights site instead of which, TF had carried out unauthorised and unsolicited land-filling activities by dumping large quantities of earth at the site; secondly, the earthwork material (the soil) used by TF was of unacceptable quality - it contained hardened cement mortar, decayed roots, and other impurities; thirdly, TF had failed to carry out their duties under the contract

to reinstate and restore the site after performance of the contract and in particular they failed to, clear choked surface drains, remove dead trees, clean up dirtied roads and repair damaged roads leading to, adjoining or surrounding the site; finally, that TFs poor performance of their contractual duties resulted in damage and defects at the site including the breeding of pests, potential soil erosion, damage to barricades, lamp poles, electrical cable poles, sewer lines, a manhole and some tenants property.

5. TF denied all of the above allegations. They argued that they had performed all their contractual duties satisfactorily. They counterclaimed against EMS for payment due to them for work done pursuant to the contract, and for payment due to them for additional work done outside the scope of the original contract.

### *The plaintiffs claims*

#### *(i) Unauthorised land-filling activities*

6. The first issue to be determined is a factual one whether the land-filling activities carried out by TF at Hume Heights were unauthorised and outside the scope of the parties agreement.

7. Some explanation of the terrain of the Hume Heights site is required in this regard. The plot of land making up the Hume Heights site was located along a minor slip road. Prior to the defendants' land-filling operation, the original terrain of the land was valley-like. Starting at the road level, the land sloped gently downwards and away from the road to form a slight valley, about two to three metres lower than the road level. By all accounts, the land-filling operation carried out by TF drastically transformed the original terrain. After TF had completed their works, the land sloped upwards and away from the road to form a plateau of about two to three metres above the road level. The volume of earth deposited at the site was estimated to be about 33,409.49 cu. m or around 2,000 to 3,000 lorry loads. Indeed, so much earth was deposited on the land that a lamp post located at the site (which was originally six (6) metres tall) was reduced to two (2) metres in height. Thus, as a rough estimation, it would be fair to say that the earthworks carried out by TF resulted in an average increase of about four (4) metres in the height of the land at Hume Heights.

8. According to EMS, the land-filling operation was completely unauthorised and outside the scope of the contract. They claimed that the agreement between the parties was for TF to carry out minor earth-filling works on the site only, the chief purpose being to fill out pot-holes on the site to match existing terrain or ground level, so as to achieve a more uniform and even ground surface, which would in turn facilitate turfing and future development of the site. However, TF turned a routine simple pot-hole filling job into an elaborate and massive landfill operation, quite outside the scope of the contract.

9. To determine whether the land-filling activities had been within the scope of the parties agreement, the first point of reference must be the contractual and tender documents themselves. What struck me was that, whereas the contractual documents contained clear and detailed specifications as to the clearance and turfing works to be carried out by TF, there was only scanty reference to the earthworks to be performed. Indeed, the only reference made to earthworks was in cl 17 of the Supplementary Specifications. Even this clause was vaguely worded, it stated:

#### FILLING OF VOIDS AND EXCAVATED AREAS

All voids and excavated areas shall be backfilled with excavated material and levelled to match existing earth fillings shall be compacted manually to the satisfaction of the Superintending Officer.

The only other reference to earthworks was contained in an amendment letter dated 19 April 1995, issued by EMS, which stated, inter alia,:

.please note the following amendments: -

#### Technical Specifications

The scope of works shall be extended to include the following:-

(i) Clearance of overgrown oil palm trees, stumps, dead tree trunks and the like within the contract boundaries.

(ii) Dismantle and remove existing fencing (along the roadside) at Ridout Road as indicated on plans.

(iii) *Earth filling from Contractors own source to formation level to match existing terrain or ground level where applicable.*

(iv) Turfing to open space/fields at Hume Heights Estate is excluded from this tender.

[Emphasis added]

10. The fact that the contractual documents contained such scanty reference to the earthworks to be carried out by TF supported the case of EMS that the agreement had been for TF to carry out minor earth-filling works only. As far as I could see, the contractual documents made no reference to land-filling operations. There was also a conspicuous absence of detailed plans and engineering drawings, that one would normally expect to find accompanying a contract for land-filling operations. In sharp contrast, the contractual documents contained meticulous descriptions, detailed instructions, site drawings and plans with regards to the clearance and turfing works to be carried out by TF.

11. TF conceded that the contractual documents contained no direct reference to land-filling operations. Their defence was simply that they had received oral instructions from the officers and representatives of EMS to carry out such work. The first witness for TF was their managing director Tan Lee King (Tan) who testified that he had spoken by telephone to the Senior Contracts Executive of EMS, Lee Hak Jin, as early as April 1995, and that the latter told him then that the earth-filling required under the contract was to ensure, as far as possible, that the land would match the existing main entrance road level. Tan further alleged that the plaintiffs' site supervisor, one Ganesan had issued oral instructions for land-filling to be carried out. According to Tan, Ganesan had been in charge of the activities and progress at the site and had directed the land-filling operation at Hume Heights, which took place from early June 1995 to late June 1995. Tan and Ganesan met on a daily basis to discuss the project. About 80 to 120 lorry loads of earth were transported every day to the site and this could not have escaped the attention of Ganesan. Indeed, Tan alleged, it was Ganesan who had noted and approved of, the quality and quantity of earth that was brought to the site each day.

12. EMS called their managing director, Kua Soo Chong (Kua) as their first witness. He denied that anyone from EMS had at any time instructed TF to carry out any land-filling activities. He said that the only instructions that had been issued by EMS pertaining to earthworks were from Ganesan, who had merely instructed TF to fill up a certain water tank on the site. Kua testified that some time in June 1995, EMS's site representatives and officers had observed TF's workers transporting large quantities of earth onto the site and depositing the same there. Thereafter, his officers repeatedly raised their objections verbally to TF's workers, but to no avail. By the end of June 1995, the height of the earth deposited at the site had already exceeded the road level. On 30 June 1995, EMS wrote to TF requesting that TF *not to allow further sand refill without prior instructions*. Despite this letter, TF continued to deposit more earth material at the site. On 14 July 1995, EMS wrote again to TF, the relevant part of which letter states:

The clearance works at Hume Heights Estate and Ridout Road refer.

We would like to bring to your attention the following issues for your immediate action :

A Despite our constant reminders not to import any more earth material into the site, you did not follow the instruction and take action accordingly. For this, we would not hesitate to instruct you to remove additional earth fill which is not called for in the contract at your own cost.

13. The above letters(2) of 30 June 1995 and 14 July 1995 substantiated the plaintiffs' contention that they had been protesting against the

defendants' land-filling activities at least as early as 30 June 1995, if not earlier. This contradicted Tans testimony. In his evidence-in-chief, Tan mentioned a meeting which took place between the parties on or about 14 July 1995. He alleged that the plaintiffs did not during that meeting instruct any removal of earth from the site. He further claimed that even as at 28 July 1995, EMS had not objected to the earth-filling. Instead, TF were instructed repeatedly to ensure that the earth-filling be carried out to match the existing main entrance road level. Tan said that it was only around 29 September 1995 that *EMS took a sudden change of position* and wrote to TF stating that they did not admit having ever requested TF to carry out land-filling activities at the site. This came as a shock to TF, who were *taken aback by the sudden change of instruction*.

14. I was not convinced by this portion of Tans evidence as, it was not borne out at all by the correspondence between the parties. In addition to the letters of 30 June 1995 and 14 July 1995 mentioned above, EMS had written several other letters to TF in the period between July 1995 and October 1995. In those letters, they consistently maintained the position that they had never requested for any land-filling to be carried out at Hume Heights. They also repeatedly requested for the unwanted and excess earth to be removed from the site. As an example, there is clear evidence that on 28 July 1995, a meeting took place between the parties and thereafter, EMS wrote to TF, requesting the latter to remove the excess earth material over and above the existing main road level. Again, in a letter dated 24 August 1995, EMS stated:

We refer to our site meeting at Hume Heights this afternoon.

We note that you still permit the dumping of earth at Hume Heights Estate. This is despite of our various letters to you dated 30 Jun, 14 & 19 July 95, instructing you to stop all lorries from dumping earth in the estate. You have failed to follow our instruction and on the contrary continue to dump excessive amount of earth in and outside of the contract boundary.

You are hereby instructed to remove all the additional earth from the estate and dispose them immediately. We want to note that you have also infringed into the State Land by dumping earth (clay soil) on the right hand side of the drive way near to the main gate. This is despite of our instruction to you not to allow any earth into the area and warning you to stay clear from the place. You are to remove all earth in the said area and reinstate it to the original condition within the next 7 days. Failing which we will engage a third party and without further notice to you, carry out the works. The cost incurred for the works will be borne by you.

This particular letter was even copied to the Land Management Department of the Land Office, with whom EMS also lodged the following complaint against TF:

The above contractor has illegally dumped earth onto state land, just inside and next to the main entrance of Hume Heights (off Lorong Sesuai) Singapore 1259. Please carry out appropriate enforcement action against them should they fail to remove it by the stipulated time frame.

Thank you."

15. In two other letters, both dated 25 August 1995, EMS wrote again to protest against the dumping of earth material at Hume Heights. They emphasised that this had been done without their knowledge and approval and, they instructed TF to remove the excessive earth material that was over and above the road level. In one of these letters, EMS stated:

According to Item (iii) of the Amendment Letter dated 19 Apr 95, the formation level in backfilling shall be submitted to the Superintending Officer before any work is carried out. This is in view of the various sites (3 in total) involved and the several possible formation levels that may arise in the course of carrying the works. In fact, some of the sites do not have a fixed terrain or ground (existing)

reference point.

No approval was sought for all the sites including Kay Siang and Hume Heights from the Superintending Officer whether in writing or verbal confirmation and you went ahead with the works. Your reply to our letter ref EM/CL/03 dated 19 July 1995 has no basis and was not agreed upon by the Superintending Officer in writing. In fact, our letter ref EM/CL/03 dated 19 Jul 95 instructed you to remove earth filling brought to Kay Siang Site from time to time. Your reasoning and argument are unfounded and contradict our letter mentioned.

*In view of the above, we hereby instruct you to remove excessive earth material which was over and above the road levels which you have conveniently assumed as the formation level at Hume Height site (as shown in the contract drawing) and also in Kay Siang Site (including the bamboo area) by the end of project.*

Otherwise, we would engage a third party to carry out the same and all costs incurred shall be deducted from any monies due to you.

[Emphasis added]

16. From the evidence thus far, it was obvious that EMS had repeatedly issued clear written instructions to TF throughout July and August 1995 to remove earth materials from the site and to ensure that the land matched the road level. At the same time, they had consistently maintained that they had never requested for the land-filling in the first place. Accordingly, I find that Tans evidence was contradicted in several material aspects by the documentary evidence adduced by the plaintiffs. Indeed, having heard his testimony and observed him in the witness box, I find that Tan was not a credible or reliable witness.

17. It would appear that despite receiving all those letters from EMS, TF did not take any action to remove the soil deposited at the site. EMS wrote to TF again on 29 August 1995 to register their protest and repeated their warning to the defendants to cease their earthworks activities. They repeated their instructions for TF to level the terrain at the Hume Heights site so as to match the road level (which was below the main entrance road level), and for additional earth to be removed by 5 September 1995. EMS also reserved their rights under the contract. EMS did not ask for the original terrain of the land to be restored. Clearly, that would have been a very difficult, if not impossible, task. It was clear to me that their request for the removal of only the earth over and above road level was only a concession, and not an indication that they had requested for land-filling to be carried out in the first place. This is borne out by their letter dated 29 September 1995, the relevant portion of which stated:

*We maintain our position in that we never requested any landfill at Hume Heights Estate or at the Kay Siang site. The scope of works under the contract essentially involved only the clearance of the overgrowth, vegetation and turfing. However, in view of the extensive landfill brought by you on the site we are prepared to compromise our position provided the following work specifications, reinstatement and clearance works are complied with to our satisfaction and without further delay.*

*A) With regard to the contract site at Hume Heights Estate (refer to Plan 1(a)).*

Start with sector 4, upon completion to continue with other sectors and sites. The scope of works to be completed are as follows:

- i) Reduce the existing levels caused by the dumping to reduce levels established within the boundaries demarcated on the plan. The site is broken down into four sectors in consistent gradients.*

ii) Form slopes at each change of level to a ratio of 1:2 (Vertical : Horizontal) by compacting and grading. All slopes at the edges and sides should be compacted and graded in the manner described above;

iii) Excavate and remove all dumped earth outside the demarcated boundaries indicated in the contract drawings;

iv) Remove all dead and fallen trees and debris resulting from the works on site;

v) Remove all hardcore, broken stones and debris in the earth from the site;

Please note that all the above must not only be removed but must be completely cleared away from the site and all surrounding areas.

Please commence and complete reducing the level indicated within 7 days hereof.

[Emphasis added]

18. The above letter was accompanied by a detailed site plan, containing technical specifications. Notably, this was the first time that EMS forwarded any plans to TF which even represented engineering plans concerning earthworks. As mentioned earlier, the original contractual documents certainly did not contain any engineering drawings on earthworks which one would normally expect to accompany contracts calling for land-filling. EMS's second witness, Mr Ling Lee Teck (Ling), whom I found to be a credible and reliable expert witness, testified that a land-filling operation, being a potentially complex project, would require proper engineering drawings on earthworks, with detailed specifications as to performance standards, as well as technical data, such as the angles of the terrain and slopes before and after the land-filling, the gradient, and the final platform levels to be achieved. In my opinion, the absence of such drawings prior to 29 September 1995 supported the plaintiffs' case that the contract had never called for any land-filling activity.

19. It was also significant that under the Urban Redevelopment Authority planning guidelines, land-filling operations involving more than 2,000 sq.m of land (as was the situation in the present case) require a special planning permission. In the present case, neither EMS nor TF had applied for such a permit in relation to the site at any point in time. The requirement of a special permit from the relevant authorities was something which TF should have been aware of. Tan himself admitted in cross-examination that he had carried out land-filling projects before, and was aware that a permit was required in such instances. EMS claimed that they had not even been aware at the material time that TF's activities amounted to land-filling. It was only when their representatives met with officers from the HDB some time in November 1995 that they were informed of this. The absence of the requisite permit reinforced the plaintiffs' case.

20. Apart from the significant absence of technical specifications, engineering drawings or plans and planning permit, there had also been no discussion between the parties as to the contractual price due to TF for land-filling works. The breakdown of TF's tender contract price in relation to Hume Heights Estate simply stated:

1 Clearance of trees/ shrubs/saplings/vegetation etc.	: \$20,000
2 Repairs to boundary fencing	: NIL
3 Other works which are incidental to the foregoing or are contingently necessary for the completion of the project	: NIL
Total	: \$20,000

The above quotation was prepared by TF themselves. It was not their case that there was any subsequent oral agreement between the parties as to the contractual price due for the land-filling operation. Although the failure to state the contractual price was not a bar to the formation

of a contract, I found that in the present case, this fact was indicative that there was no agreement between the parties to begin with.

21. It was also pertinent that despite the claims of TF that they had received verbal instructions from EMS, specifically, from Lee Hak Jin in April 1995 and from Ganesan in June 1995, to carry out the land-filling operation, they had not mentioned those verbal instructions in any of their correspondences to EMS before September 1995. This was despite the fact that EMS had sent many letters to TF stating that they had never requested for land-filling to be carried out. The first mention of such 'verbal instructions' was made in a letter from TF to EMS dated 19 September 1995. This rather lengthy letter addressed several issues and objections which had been raised in EMS's earlier letters. In particular, TF stated that their labourers, machine operators, sub-contractors and site foremen had been instructed by Ganesan to carry on with the land-filling operation at Hume Heights. They also stated:

*Please appreciate that it is inequitable for you now to insist that we remove the earth, particularly when we have already acted upon the approval/representation given to us to fill the area.*

If indeed, there was objection to the earth filling in this area, then the objection from you should have been forthcoming immediately after our filling work at the site and letter of 14/6/94. Yet, your first letter of 30/6/95 merely mentioned that we reduce/grade the level of the earth fill.

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You will agree that provision of levels must be a matter within your purview. Yet, at no time were levels given to us.

*Since the levels were for you to decide and you were fully aware that earth filling works were in progress, we merely continued with the earth filling until you decided when the earth filling was sufficient.*

Further, your representatives, Mr Ganesan, has visited and inspected the site everyday. There was no mention of any overfilling or any discrepancy to the works at all times despite he did the site inspections everyday.

In the case of Hume Heights Estate, we carried out earth filling works from 1/6/95 to 30/6/95 for one whole month. It was only on 30/6/95 that we received your first letter of 30/6/95, which incidentally did not require us to remove any alleged "excessive earth".

If indeed there was excessive earth, we must have passed that limit level sometime between 1/6/95 and 30/6/95. Yet, we did not receive any instructions from you until 30/6/95. By this time, we were already at the stage with the final levels as they are now.

[Emphasis added]

This letter was one in a series of letters written by TF, all dated 19 September 1995 but which were sent out only much later; this was admitted by TF. In fact, EMS only received the above letter on 17 October 1995. When cross-examined as to the discrepancies in the date, Tan's only explanation was that he was very busy at the relevant time and had no time to fax the letter to EMS. I did not find this to be an adequate explanation at all. Having expended much time meeting up with his consultant Oh Joo Huat (Oh) and having made the effort to draft such lengthy letters to EMS, it was illogical that Tan did not bother to take a little more time to fax out these letters. The natural inference to be drawn was, that the letter was not drafted on the date stated but its contents might have been formulated by TF retrospectively, in an effort to refute EMS's assertions on the record. For this reason, I found this particular piece of documentary evidence to be suspect and of little probative value.

22. The evidence of Tan's consultant Oh, did not go very far in helping TF's case. Oh, who was TF's second witness, testified that he had

helped Tan to draft letters to EMS from around August 1995, as Tans command of English was poor. Oh said that the letters dated 19 September 1995 were probably drafted in September, but he could not confirm this absolutely. Nor could he say with certainty that the letters were not drafted in October instead. On the whole, Ohs testimony failed to add to the evidence already before the court. When asked for his opinion on the scope of the contract, Oh said that it probably called for land-filling but he could not substantiate this statement with any concrete reasoning. In fact, he conceded that the contractual documents did not indicate the precise levels to be achieved by the land-filling operation, nor were there any drawings which could indicate to him how much earthworks was called for.

23. Having taken all the relevant evidence into account, I find on a balance of probabilities, that EMS and TF had never contracted, either in written terms or verbally, for the latter to carry out land-filling at Hume Heights. Those activities were unsolicited and unauthorised, and probably resulted from either miscommunication within TFs own ranks or (more likely), from Tan's own interpretation of the contract between the parties. He had revealed under cross-examination (N/E111) that he had obtained the earth (removed from basement and bored piling) for the land fill, from a site in Bukit Batok, for which he charged the supplier \$30 per lorry load. That would explain the unsolicited and 'complimentary' land fill of 1,000-2,000 lorry loads done on site no. 2 by TF. The more excavated construction material (which was what TF provided to EMS despite Tan's denial) that the defendants dumped on Hume Heights, the more Tan was paid. Indeed, he admitted (when cross-examined at N/E 112), that he received around \$100,000 from the supplier.

#### *Use of unacceptable earthwork materials*

24. The second issue for my determination was whether TF had used soil of unacceptable quality in their earthworks, and had also dumped the same on the Hume Heights site without authorisation. To support their case, EMS adduced the reports of two companies, LT Ling Consulting Engineers (LTL) and Geotechnique Pte Ltd (GT), whom they had engaged to carry out investigations and soil tests at the Hume Heights site.

25. GT was engaged by EMS in or around November 1995, for the purposes of conducting soil tests on the soil on the Hume Heights site. According to expert witness Lim Beng Tiat (Lim), soil samples taken randomly from the Hume Heights Estate site contained an assortment of impurities such as rock fragments, decomposed wood, hardened cement mortars, decayed roots and plastic. In addition, all the soil samples taken from the site were tested and found to be in a loose state and were not properly compacted.

26. Counsel for TF sought to cast doubt on GTs reports by suggesting first, that there could have been some tampering or manipulation of the tests to yield results in favour of EMSs case. Next, he submitted that the fact that GT had not acted independently in collecting the samples, but had merely followed the directions and plans supplied by EMS, meant that the results of the tests were not completely reliable. I was not convinced by these submissions. There was nothing to indicate that GT had not acted independently in gathering the soil samples, or in conducting the laboratory tests on those samples. The samples had been gathered randomly from the site. The plans and instructions supplied by EMS merely indicated the general locations where the land-filling activities had taken place. The soil tests carried out by GT were, by all accounts, standard and normal soil tests. There was no evidence to indicate that anything was amiss or irregular in the conduct of these tests. TFs counsel also suggested that GTs tests were not reliable as Lim had not been personally present at the time the soil samples were gathered from the Hume Heights site, and no photographs of the ground surface had been taken during the tests. Again, I was not convinced. There was no evidence to support the suggestion that GTs field employees had erred in any way whilst collecting the soil samples. The fact that Lim was himself absent from the site at the relevant time was not enough on its own, to convince me that the test results were unreliable. Since the tests carried out were in relation to the quality of the soil, I do not find the absence of photographs of the surface terrain to be a crucial factor. On the whole, I find Lim to be a consistent, independent and reliable witness. There is no reason to doubt the reliability or independence of the reports made by GT.

27. Detailed analysis of the soil at the Hume Heights site was also carried out by LTL, who were engaged by EMS in or around October 1995. Three (3) reports made by LTL were adduced as evidence in the trial. LTLs first report, dated 26 February 1996, concerned the stability of the slopes on the Hume Heights site. This report concluded that the slopes were safe and stable, since tests based on the slip-circle method, showed a safety factor of 3.0, which was over and above the minimum acceptable slope safety factor of 2.0. LTLs second report, dated 29 February 1996, contained results from tests of four (4) factors affecting the quality of the soil, being: slope stability; the liquid limit and plasticity of the soil; the requirement of clean soil; and soil bearing capacity. The tests were based on the basic standards laid down by the Singapore Institute of Standards and Industrial Research (SISIR) and the Public Works Department (PWD). In making their second report, LTL also took into account GTs reports. LTLs second report stated:



In Singapore, the standard and quality of backfill earthwork materials (soil) and workmanship at site must meet and satisfy all the following criteria, which are based on in-situ soil tests data and related engineering calculations:

- (a) Slope stability safety factor must be greater than 2.00;
- (b) Soil with low water retention liquid limit (LL) and plasticity index (PL) of backfill earth work materials (soil) must not exceed 70 and 30 respectively;
- (c) Clean soil backfill earthwork materials ("soil") must be free from impurities such as construction waste and debris, material from swamps, peat, logs, stumps and perishable material, material susceptible to spontaneous combustion. The soil must be free from toxic material;
- (d) Soil bearing capacity the safe soil bearing capacity calculated based on appropriate method must not be less than 100 KN/M2.

The report concluded that the soil used by TF at the Hume Heights site failed two (2) out of the four (4) tests: the minimum standard set for slope stability was met; the liquid limit and plasticity index for soil samples collected at the site was also within acceptable limits; however, the soil contained various impurities, and did not qualify as clean soil, nor did it pass the minimum standard set for safe soil bearing capacity, which was 100 KN/M2.

28. Ling from LTL, testified in the capacity of an expert for EMS. With regards to the 'clean soil' factor, Ling testified that 'clean soil' was soil which was 'free from impurities such as construction waste and debris, material from swamps, peat, logs, stumps and perishable material, and free from toxic material.' Based on LTLs second report, Ling testified that all the soil samples collected by LTL from Hume Heights contained an assortment of impurities such as rock fragments, decomposed wood, hardened cement motors, decayed roots and plastic. In relation to soil bearing capacity, LTLs second report stated that the guidelines set by PWD considered a soil bearing capacity of not less than 100 KN/M2 as reasonably strong soil for supporting economical and safe footing foundation. Usually, a well compacted backfill earth work materials would easily achieve safe soil bearing capacity of more than 100 KN/M2. Based on the second report, Ling testified that all the soil samples from the Hume Heights site had been found to be in a loose state and were not properly compacted. Moreover, all the soil samples had failed to achieve acceptable soil bearing capacity of 100 KN/M2. In the event, the minimum safety standard set by PWD for soil bearing capacity had not been reached. The report also cautioned that the loose state of the soil would lead to undesirable settlement in future, and there was a high possibility that soil erosion and landslides would occur. Thus, EMS were strongly advised to undertake the turfing of the sites in order to prevent soil erosion and landslides.

29. LTLs third and final report was dated 12 April 1996. That report, which was based primarily on GTs test results, stated:

Based on the Report on the soil investigation carried out by M/s Geotechnique Pte Ltd, the quality of the earthwork materials used to fill the above site at Hume Heights was within the industrial acceptable limit.

These backfill earthwork material used can be classified and considered as the suitable fill material because the liquid limit of the above soil did not exceed 70 and/ or plasticity index did not exceed 35.

The soil bearing capacity of the above backfill earthwork material was estimated to be in the region of slightly below 100 KN/M2 which was much greater than the industrial acceptable minimum allowable soil bearing capacity of 50 KN/M2.

There was no "unsuitable material" such as material from swamps and peat used as backfill earthwork material.

Although small traces of metal were detected in soil samples, there was no toxic material present in the backfill earthwork material

There were small amount of impurity such as decomposed wood present in the backfill earthwork material which is unacceptable. We recommend that these undesirable material must be removed whenever possible.

We strongly recommend that all the exposed earth in the above sites to be covered with turf to prevent soil erosion

Our report on the slope stability analysis for works at Hume Heights Estate dated 26 February 1996 showed that the summary for analysis of the stability of slopes based on slip circle method have safety factor against slip, F of at least greater than 3.0 even for most critical condition. The acceptable factor of safety of slope stability for building project is usually taken as 2.

Therefore in my professional opinion, the said slopes at Hume Heights Sites are safe and stable."

30. Cross-examined on the third report, Ling maintained that this report was consistent with LTLs previous two reports in all material aspects. He explained that when the third report stated that the soil was 'within the industrial acceptable limit', that was strictly with reference to the liquid limit and plasticity of the soil only. The quality of the soil was still considered 'unacceptable' in that it failed the standard set for 'clean soil', as the samples contained unacceptable and undesirable impurities such as decomposed wood. In relation to the soil bearing capacity factor, Ling conceded that the acceptable minimum industrial standard was 50 KN/M<sup>2</sup>, and not 100 KN/M<sup>2</sup>, as stated previously in the second report. However, he maintained that the soil samples taken from the Hume Heights site had still tested below the minimum standard. He explained that when the third report estimated the soil bearing capacity to be 'slightly less than 100 KN/M<sup>2</sup>', the reference was not to the immediate soil bearing capacity of the soil found on the Hume Heights site in 1995 or 1996. Instead, that referred to the long term bearing capacity of the soil, which would be achieved after some 50 years when the land settled naturally.

31. Ling emphasised that his conclusion in the third report on the soil bearing capacity factor was only a theoretical estimation, based on soil test results and long term analysis. Such theoretical estimation did not include the compaction factor. 'Soil bearing capacity' was the soils capacity as a material to carry a load directly placed on it vertically, and the more compact the soil in question was, the higher its bearing capacity. If the material was sandy or not well-compacted, the bearing capacity would be poor or low. In the long term, however, certain materials like sand, could achieve a maximum stability. In reply to a query from counsel for TF of what the actual soil bearing capacity of the soil was in 1995, Ling replied that the test result was Value 3, which meant only 30 KN/M<sup>2</sup>. This was well below the acceptable minimum industrial standard of 50 KN/M<sup>2</sup>.

32. Counsel for TF sought to convince me that Ling was a biased and unreliable witness who had tailored the LTL reports and his evidence, to support EMSs case; I find no merit in these submissions. Indeed, having observed his demeanour and having heard his testimony in the witness box, I consider Ling to be a reliable and consistent witness, who was unswerving in his testimony despite being subjected to rigorous cross-examination. On the whole, the language, tone and conclusions of his reports were fair and objective. Moreover, he was an independent witness giving his expert opinion with no motive to lie. His testimony was consistent with the reports that LTL had made back in 1995. The explanations that he provided in relation to the conclusions in LTLs third report were credible and logical.

33. TFs expert witness, Chong Kee Sen (Chong) testified that LTL and GTs method of testing the soil for impurities, namely, the 'bore hole sampling' method, was not adequate, and that results yielded by using such a method were inaccurate. According to him, impurities in the soil were most likely to be seen by visual inspection through digging of trial pits on the site, rather than based solely on a few small diameters of soil samples taken from bore holes made in the site. However, during his cross-examination, Chong conceded that he had studied the log borings recorded by GT, and that the records showed that the same sort of impurities had been founded by GT in all the four (4) bore holes. He conceded that the bore holes had been randomly made by GT on the site, and that they were quite a distance away from one other. He agreed that the samples collected from those bore holes were a good representation of the soil that was randomly found at the site. In view of this evidence, I am not minded to discredit the methods adopted by GT and LTL, who after all, had expertise in this domain. In my judgment,

the defence has not succeeded in casting a doubt on this part of the plaintiffs' evidence. In the event, based on GT and LTLs reports, I find that the soil deposited and used by TF in their earthworks at the Hume Heights site was of unacceptable quality, in that, first, it did not meet the standard set for clean soil, and, secondly, it had failed the minimum acceptable industrial standard set for soil bearing capacity.

*Particulars of defendants failure to carry out other duties, and the resulting damage caused*

34. EMS also alleged that TF had failed to perform the various other obligations under the contract. I will now set out each allegation in turn, as well as the relevant contractual provisions pertaining to each allegation.

35. First, it was alleged that TF had failed to reinstate and clear surface drains which had been choked up and damaged in the course of their works. The duty of the contractor to maintain surface drains, and to repair and reinstate such drains was set out clearly in the contract. Clause 11.5 of the Technical Specifications stated:

**DIVERSION OF EXISTING DRAINS AND SUBSOIL DRAINS**

The Contractor shall be responsible and bear all the costs for the diversion of the existing drains. Before the existing drains are cut off, the Contractor shall submit his proposal for the diversion and maintenance of the existing drains during the whole period of construction to the Superintending Officer for approval.

The Contractor shall be responsible for the maintenance of the free flow of the drains at all times. At no times shall the Contractor obstruct or reduce the free flow area of the existing drain without the prior approval of the Superintending Officer

If, in the opinion of the Superintending Officer, the Contractor has not carried out or ie. unable to carry out all such maintenance of temporary drain diversion to the Superintending Officers satisfaction, the Superintending Officer reserves the right to employ separate Contractor to carry all such works to ensure the proper maintenance of all such temporary works and deduct the cost of all such works plus administrative charge from any money due to or become due to the Contractor.

The Contractor shall remove all such temporary works as soon as those are no longer required and reinstate the site to its original condition to the complete satisfaction of the Superintending Officer.

Another relevant clause would be cl 19 of the Supplementary Specifications, which stated:

**MAINTENANCE OF DRAINS**

The Contractor shall maintain existing open drains on site to ensure regular and smooth flow of the waste or drainage water in raining days or seasons.

36. Second, EMS alleged that the excessive earthworks dumped by TF had suffocated trees on the site, which they had to uproot and replant at their own cost. The Technical Specifications in the contract contained detailed instructions as to the contractors duties and obligations to preserve existing mature trees, exceeding 600mm in girth. In particular, cl 14 (iv)(c) stated:

If the growth of the preserved trees is stifled, the Contractor shall inter alia bear the cost of making good and charges shall be imposed against the Contractor,

In addition, cl 18 of the Supplementary Specifications stated:

#### 18 REMOVAL OF TREES

The Contractor shall remove cleared trees/shrubs/vegetation/saplings on site from time to time as the works progress. All chokages in existing drains caused by or arising out of the works shall be cleared at the Contractors costs and expenses.

37. Third, EMS alleged that TF had failed to clean up and reinstate roads surrounding adjoining and leading to the site, which they had dirtied and damaged in the course of their works. TFs duties in this regard were set out in the following clauses :

#### CLAUSE 1.2.3 (GENERAL SPECIFICATIONS)

##### CLEANING OF PUBLIC AND EMPLOYER MAINTAINED ROADS AND DRAINS

The Contractor shall ensure that all vehicles used by him, his servants or agents, or by his sub-contractors or suppliers, their servants or agents (hereinafter referred to as "the Contractors vehicles") do not dirty the public and Employer maintained roads (and drains) used by these vehicles. In this respect, it is the Contractors responsibility to ensure that all such vehicles are properly cleaned before they move onto the public or Employer maintained roads

#### CLAUSE 11.6 (TECHNICAL SPECIFICATIONS)

##### BACKFILL AND REINSTATEMENT

The existing carriageway, centre island, hard shoulder, side-table, kerbs and drains etc. shall be reinstated to their original condition to the satisfaction of the Superintending Officer. The Contractor shall make good any depression of the carriageway arising as a result of settlement of backfill material and other defects due to unsatisfactory reinstatement immediately and as directed by the Superintending Officer.

38. Next, it was alleged that due to excess amount of earthworks at site and defendants failure to properly compact soil, plaintiffs had to undertake turfing to stabilise the soil and prevent soil erosion and water stagnation and to lessen possibility of landslides.

39. Fifth, EMS sought to claim the cost of engaging pest control services to eliminate and prevent the breeding of mosquitoes due to water stagnation and defendants filling up of Septic Tanks and various pot holes, not properly compacting the soil. Clause 10 of the General Specifications was relevant in this regard:

#### PEST CONTROL

The Contractor shall ensure minimum collection of rainwater or water pools at sites. Comprehensive pest control and surveillance programme shall be implemented on site to prevent breeding or harbouring of vectors, all to comply with the requirements of ENV

40. Finally, EMS alleged that TF had negligently or wrongfully caused damage to public and private property in the course of their works. The particulars were as follows:

- (a) due to the unauthorised landfilling activities, the height of lamp posts and cable posts had to be raised as they were a safety hazard;
- (b) TF had damaged an electrical cable in the course of their work;
- (c) TF had removed without authorisation certain metal bollard posts and barricades at a slip road, which EMS have had to replace;
- (d) due to the excessive and unauthorised earthworks, EMS have had to relocate sewer lines and an active manhole which had been buried under the earthworks;
- (e) TF had, in the course of their works, caused damage to tenants property.

The relevant contractual clauses were:

Clauses 1.1.8 of the General Specifications :

In the event that damage is done to public/private services or property such as cables, pipes, etc. by the Contractor whether by accident or otherwise causing black-out or other nuisance or inconvenience to the public or which is likely to bring the Employer into disrepute, all expenditure for such necessary reinstatements or repairs incurred shall be recoverable by the Employer from the Contractor by direct payment or by deduction from monies due or becoming due to the Contractor or as a debt due by the Contractor to the Employer.

Clause 1.1.15 of the General Specifications :

The work shall be carried out without damage to the adjoining part of the structure, adjoining roofing, adjoining pavement and property. The Contractor shall reinstate and make good at his own expense any damage caused as a result of the works. Such repairs made good are to be properly executed with materials and workmanship to match in every respect with the surrounding work.

Clause 43:

1.5.5 The Contractor shall be responsible for :

- (a)
  - (b) any injury or damage to property of every kind of the Employer or of any other person or corporation or
  - (c) any damage to the works the subject of this Contract
- from any cause whatsoever arising directly or indirectly out of or in relation to or in connection with the works under the contract.

Clause 4 of the Supplementary Specifications para 2:-

The Contractor shall take every preventive measure including timber propping to prevent any trees/shrubs/saplings to damage existing boundary, fencing, open drains and surrounding school and residential buildings. Any damage done or reinstatement works expenses incurred shall be borne by him.

*Evidence of the defendants failure to carry out other duties, and the damage caused*

41. There was ample evidence before me to support all of the above allegations against TF. As a start, EMSs many letters to TF, dating from 30 June 1995 to 25 September 1995, showed that they had made repeated requests to TF to rectify and reinstate the damage caused by the latter. EMS also produced several photographs, taken in or around September and October 1995, showing the damage caused by TF. Two (2) photographs showed lamp posts which had been reduced from their original heights of 6 to 2 or 4.5 metres. There were also photographs showing that the lowest sag points of existing electrical cables had been reduced from 2 to 0.5 metres. Other photographs evidenced the fact that existing mature trees, which should have been preserved in the course of TFs works, had dried up and died. Still other photographs revealed damaged and dirtied roads, submerged roads or sewer lines and buried manholes, damaged and choked surface drains and stagnant water pools. EMS also adduced in evidence various letters written by several disgruntled tenants living in the vicinity, in the months of July, August and September 1995 complaining inter alia, of black-outs, short-circuits, dirtied and damaged roads, soil erosion, breeding of pests and damage to their property. There were also letters from the Ministry of Environment and the HDB recording complaints of damaged and choked surface drains and dirtied and damaged roads in or around the Hume Heights site.

42. TF denied the above allegations; they claimed that they had carried out reinstatement and repair works before leaving the site, and that they had restored the site, including the drains and the roads, to a satisfactory condition. Other than that assertion, they had no concrete answer to this part of EMSs case. The only argument they made was in relation to the damage of the roads they alleged that EMS had allowed other contractors access to the site, and that those other contractors were the ones who had caused the damage to the roads. Kua, however, testified on behalf of EMS that the only other parties who had access to the site at the relevant time were contractors employed by the developer of a neighbouring site, namely Hillside Condominium, and some contractors engaged by Singapore Broadcasting Corporation (SBC). The developers of the Hillside Condominium had obtained the permission of EMS to store some pre-cast drains on the Hume Heights site in July 1995. As for the contractors engaged by SBC, they had merely entered the site in late 1995 to do some work on SBCs transmission tower. He disagreed that these were the parties responsible for the damage to the roads surrounding, adjoining or leading to the Hume Heights site.

43. In relation to all the allegations of damage caused on the Hume Heights site, except for damage to the roads, I find that the said damage must have been caused by TF as they were the only parties who had access to the site, and who were carrying out any substantial construction activities there at the relevant time. They were the only party whose activities could have resulted in the said damage. In relation to the damage to the roads, I find on a balance of probabilities, that it was more likely than not that TF were the parties responsible for the damage. It was highly unlikely that the vehicles or contractors from the Hillside Condominium had caused the said damage to the road, as evidenced in the photographs, simply by transporting pre-cast drains for storage on the site. In any event, these contractors had entered the site in July 1995, while TF were still on the site and, if they had damaged the roads, TF would clearly have raised this fact to EMSs attention somewhere in the contemporaneous correspondence. It was also unlikely that the contractors engaged by SBC had caused the said damage. The works that they were carrying out on SBCs transmission tower were confined to the area immediately surrounding the tower in question, and there is no evidence indicating that such activities had affected the Hume Heights site or the roads in question. In any event, the photographs taken by TF relating to the work carried out by SBCs contractors were dated July 1996, which was some time after the relevant period in which the damage to the roads had occurred, namely late 1995.

*The defendants counterclaims*

44. I will now turn to consider TFs counterclaims against EMS. TF sought to claim the sum of \$69,125.00, being the total tender contract price under the original contract for the three projects at Hume Heights, Kay Siang Road and Ridout Road. In addition, TF sought to claim the sum of \$147,459.95 for additional works which they had allegedly carried out at the request of EMS.

45. I allow TFs first counterclaim for \$69,125.00. It is a well established contractual principle that so long as there is substantial performance of a contract, the contractor is entitled to the stipulated price, subject only to a cross-action or counter-claim for the omissions or defects in execution (*Bolton v Mahadeva* [1972] 2 All ER 1322). In the present case, I find that TF had substantially performed the contract which fact was not seriously disputed by EMS.

46. In the course of the trial, counsel for TF pointed out that the sum of \$69,125.00 comprised of \$20,000.00 for work done at the Hume Heights site, \$14,000.00 for work done at Ridout Road and \$35,125.00 for work done at Kay Siang Road. The gist of his submission appeared to be that there were three (3) separate contracts between TF and EMS, in relation to the works done at each of the three (3) sites, and that only the price due for work done at the Hume Heights site (that is \$20,000.00), could be off-set from EMSs successful claims. There was no merit at all in this argument. As the tender and contractual documents covered the work to be done by TF at all three (3) sites, there was clearly only one contract existing between the two parties, and not three (3) separate contracts. Under cl 38 of the General Conditions of the contract, EMS were entitled to set off any amounts due to TF under the contract. Clause 38 stated:

All damages (including liquidated damages), costs, charges, expenses, debts or sums for which the Contract is liable to the Employer under any provision of this Contract between the Employer and the Contractor may be deducted by the Employer from monies due or becoming due to the Contractor under the Contract, including any financial indemnity or security deposits or bonds.

In any event, TF had pleaded the sum of \$69,125.00 as a counterclaim against EMS, and not strictly as a set-off. Although a set-off and a counterclaim are both cross-claims, they are distinguishable from each other. The true nature of a set-off, unlike the counterclaim, is that of a defence. Being a defence, a claim in the nature of a set-off must, as a general rule, be between the same parties and be made in the same capacity. A counterclaim however, is treated as a separate action within the proceedings. Order 15 rule 2(1) of the Rules of Court provides that:

Subject to Rule 5(2), a defendant in any action who alleges that he has any claim or is entitled to any relief or remedy against a plaintiff in the action *in respect of any matter (whenever and however arising)* may, instead of bringing a separate action, make a counterclaim in respect of that matter; and where he does so he must add the counterclaim to his defence.

[Emphasis added]

Under O 15 r 2(4), where a defendant establishes a counterclaim against the claim of the plaintiff, and there is a balance in favour of one of the parties, the Court may give judgment for the balance. The implication of this is that even if there were three (3) separate contracts, TFs successful counterclaims would still be counterbalanced or off-set against EMSs successful claims. Thus, there was no basis for the submission by TF, that EMS should only be allowed to off-set \$20,000.00 from its claims, and not the total sum of \$69,125.00.

47. TFs other counterclaim for \$147,459.95 was for additional work done, the particulars being:

- (a) clearance of 35 trees of girth exceeding 600 mm;
- (b) desilting of a drain requiring manpower of 10 men for 20 days on nine hour shifts;
- (c) compensation for inability to carry out earth-filling works at Hume Heights site in accordance with the initial boundary marks in the tender drawings as a result of incorrect boundary demarcations;
- (d) mobilization of equipment for works at Hume Heights for 15 days when access was denied due to an official ceremony;

(e) change of method of clearance at Kay Siang site from machinery to manual, claim for down-tool time;

(f) additional clearance and turfing work done at Ridout Road;

(g) change of method of clearance at Ridout Road site from machinery to manual and claim for down tool time.

48. EMS disputed liability to pay TF for any of the above additional works. They denied that they had at any time requested the additional work done by TF, or that any of their representatives had ever issued any instructions for the additional work to be done. Thus, the issue was a question of fact, with Kua testifying on behalf of EMS against the word of Tan testifying on behalf of TF. Having considered the evidence before me, I find that TF had not adduced sufficient evidence to prove its counterclaim for additional works. Indeed, there was hardly any evidence at all to substantiate this counterclaim. There were no records whatsoever of any requests made by EMS for the additional works. The entire project was completed in September 1995. Yet, the only quotation sent by TF for the additional works was a statement of claim dated 12 December 1995. Notably, the dispute between the parties had already become full-blown by that date. TF adduced one document showing a request by the organisers of an official ceremony in the vicinity of Hume Heights for land fill work to be suspended at the Hume Heights site from 7 to 9 July 1995. This did not substantiate their claim that they had incurred costs for mobilizing their equipment for 15 days. In any event, the document stated that land-fill work (as opposed to all activities) should be suspended between 7 and 9 July 1995, and TF themselves had said that all earthworks at Hume Heights were completed by the end of June 1995. The other evidence adduced by TF was various photographs, which I do not find sufficient to prove their counterclaim for additional works.

#### *Conclusion*

49. Accordingly, I award interlocutory judgment to EMS with costs on their claim against TF, with damages to be assessed at a later date; the costs of such assessment shall be reserved to the Registrar. I allow TFs first counterclaim for \$69,125.00, being the contract price due to them, with interest at 6% from the date of filing (25 February 2000) of the counterclaim until this date and costs. However, their second counterclaim in respect of additional work done, is dismissed with costs. The costs awarded to the defendants for their first counterclaim shall be set-off against the costs dismissing their second counterclaim; as the former would likely be cancelled out by the latter in effect, it means no order for costs on the entire counterclaim. Finally, as the plaintiffs' claim after assessment may well exceed the defendants' first counterclaim, there shall be a stay on the defendants' receipt of the latter sum until after the assessment of the damages due to the plaintiffs. There will be no prejudice caused to the defendants thereby as the interest awarded continues to run on the sum of \$69,125.00 until their receipt of the same or, until the date of set-off against the plaintiffs' claim or costs (when taxed) as the case may be.

Lai Siu Chiu

Judge