BEM FORM (2009)

MODEL FORM OF MEMORANDUM OF AGREEMENT BETWEEN CLIENT AND ACCREDITED CHECKER

MEMORANDUM OF AGREEMENT made theday of
BETWEEN:
(Name) *Company No./ I/C No.:
(Address)
(hereinafter called "the Client") of the one part
AND:
A.C. No.: P.E. No.:
(Address) (hereinafter called "the Accredited Checker") of the other part. WHEREAS the Client desires to appoint the Accredited Checker for purposes of CHECKING
(hereinafter called "the Designated Works"), prepared by the Consultant viz
(Name) P.E. No.: *Company No. / I/C No.:
(Address)
(hereinafter called "the Consultant")
who was earlier appointed for the Designated Works,

IT IS AGREED as follows:

- 1. The Client having given due notice to the Consultant agrees to engage the Accredited Checker to provide the professional services for the Works subject to and in accordance with the Conditions of Engagement hereinafter set out and the Accredited Checker agrees to provide the professional services for the same subject to and in accordance with the said Conditions of Engagement.
- 2. This Memorandum of Agreement and the said Conditions of Engagement shall together constitute the Agreement between the Client and the Accredited Checker.
- 3. The scope and nature of the Services to be provided by the Accredited Checker shall be described inter-alia as follows:
 - *(i) Attachment A (BEM/RD/AC/02) for structural engineering works.
 - *(ii) Attachment B (BEM/RD/AC/03) for geotechnical engineering works.
- 5. In addition to the above, the Client shall reimburse the Accredited Checker for expenses incurred in connection with
 - (i) taking out professional indemnity insurance cover of RM.....
 - (ii) printing and purchases of all drawings, documents and maps;
 - (iii) telephone, faxes other than local, and all courier services; and
 - (iv) traveling, subsistence and hotel accommodation expenses.
- 6. The proposed stages of payment shall be as follows:
 - (a) Upon appointment of the Accredited Checker, payable in advance 20%
 - (b) Upon submission of the Accredited Checker's Report to the Client 60%
 - (c) Upon issuance of the Accredited Checker's Certificate to the Client 20%
 - (d) Reimbursement of expenses

The payments shall be at monthly interval based on invoice submitted by the Accredited Checker.

In witness whereof the Parties have executed this Memorandum of Agreement the day and year first above written.

Signed by the said,		
Client	(Witness)	
Name:	Name:	
I/C No:		
Designation: Company seal:	I/C No:	
Accredited Checker	(Witness)	
Name: A.C No:	Name:	
P.E. No.:	I/C No:	

ATTACHMENT A

SCOPE OF SERVICES OF ACCREDITED CHECKERS FOR STRUCTURAL WORKS

The Accredited Checker for Structural works in Buildings shall check the design intent of the Consultant's structural design with particular reference to the technical adequacy, constructability, long-term serviceability, and compliance with the relevant legislation, codes of practice, standards and approved design guidelines.

The Tasks* for the Accredited Checker shall include the following:

- (a) Check on the use of the relevant Codes of Practice in the preparation of the structural design in the plans of the building works including its substructure and foundation.
- (b) Check the standards and specifications of materials to be used in the building works including its substructure and foundations.
- (c) Check the design loading for both gravity loads and lateral loads acting on the structure.
- (d) Ascertain the structural design concept adopted including its substructure and foundation and identify the key structural elements to be checked.
- (e) Verify that the key elements of the structure including its substructure and foundation, which are being designed, are consistent with the layout as shown in the building plans and any amendments thereto.
- (f) Perform independent calculations with the view to determining the adequacy of the key structural elements of the building, including its substructure and its foundation to be erected in accordance with the structural plans submitted to the Approving Authorities. If calculations on analysis and elemental design are done with the aid of engineering software, the design assumptions, and limitations of such software should be ascertained and stated. The design parameters, which are the computer input, should be mentioned.
- (g) Check that the stability of the structural system is ensured by proper design against the lateral loads in compliance with the relevant codes of practice. For tall and slender structures, determine the necessity for a dynamic analysis for wind loads and seismic loads where applicable.

- (h) Check that the structural design detailing of the key structural elements including its substructure and foundation is in compliance with the design intent and is in accordance with good engineering practice.
- (i) Check all key structural elements of the building to be erected and ensure that their design intent is in place and is not adversely affected by the construction sequence or methodology specified by the consultant.
- (j) Check the adequacy of other aspects of the design which are peculiar to the building to be erected and which are essential to the structural integrity of the building.
- (k) Check the structural design of the proposed temporary work for the substructure works and its foundation to ensure that it is practical and viable and potential damage to adjoining properties during the construction of the proposed building is minimized and public safety is not endangered.

*NOTE: Amend the Tasks as appropriate, to suit the particular works for which the Services are required and add other Tasks as necessary.

ATTACHMENT B

SCOPE OF SERVICES OF ACCREDITED CHECKERS FOR GEOTECHNICAL WORKS

The Accredited Checker (Geotechnical) shall check the suitability and adequacy of the Consultant's design on all geotechnical engineering works with particular reference to technical adequacy, constructability, short term and long term safety and serviceability including that of the adjacent properties, and compliance with the relevant legislation, codes of practice, standards and guidelines. It should also include independent interpretations and calculations for critical elements of the project.

The Tasks* for the Accredited Checker shall include the following:

- (a) Check the site mapping, topography and geomorphology of the site and adjacent areas.
- (b) Check the geological implication on the design.
- (c) Check the adequacy of the subsurface investigation (S.I.) and laboratory tests carried out for the proposed development.
- (d) Check the interpretation of subsurface investigation (S.I.) and subsoil profiles.
- (e) Check all the assumptions, interpreted and selected design soil/rock parameters and groundwater conditions.
- (f) Check the geotechnical analyses and designs of slopes:
 - (i) Slope terrain classification
 - Zoning of slopes at the site and adjacent sites (if there is an influence on the site) into different classes in accordance to authorities' requirements.
 - (ii) Slope stability analyses of existing, natural and engineered cut and fill slopes. Various failure modes shall be checked including relevant surcharge loads etc.
 - (iii) Exposed rock slopes should include detailed rock mapping and kinematic analyses.
 - (iv) Detailed analyses and design of strengthening works for soil and rock slopes (e.g. soil nails, rock bolts, dowels, etc.) with recommendations for regular monitoring and maintenance.

- (v) Effects on surface and ground water and the provision of adequate drainage measures.
- (vi) Effects on adjacent properties if the proposed works have influence on the safety and serviceability of the adjacent properties (e.g. dewatering, excavation, rock blasting, etc.) Check on proposed mitigating measures.
- (g) Check the geotechnical analyses and designs of foundations:
 - (i) Suitability of the types of foundation systems proposed.
 - (ii) Detailed analyses and designs of the foundations including bearing capacity and deformation predictions.
 - (iii) Proposed testing programme.
- (h) Check the geotechnical analyses and designs of Retaining Walls:
 - (i) Suitability of the types of retaining wall systems proposed.
 - (ii) Detailed analyses and designs of the retaining walls including internal and external stability of the wall.
 - (iii) Deformation prediction and its influence on the surrounding structures, services and slopes.
- (i) Check the Specifications for all geotechnical works.
- (j) Check the construction control measures to be implemented at site. (e.g. monitoring scheme, turfing etc.)
- (k) Check the adequacy of the supervision programme proposed by the Consultant for works such as subsurface investigation (S.I.), earthworks and all geotechnical works.
- (l) Check the long-term maintenance programme of the slopes and retaining walls (such as the maintenance of slopes, permanent ground anchors, drainage and weepholes).
- (m) Check the adequacy of instrumentation and monitoring program and emergency response time.
- (n) Check the construction method in relation to the design assumptions and approaches.

- (o) Perform independent calculations with the view to determine the adequacy of the key elements of the project including slopes, retaining walls and foundations. If calculations on analysis and elemental design are done with the aid of engineering software, the design assumptions, and limitations of such software should be ascertained and stated. The design parameters, which are the computer inputs should be mentioned.
- (p) Check the proposed temporary work for the substructure works and its foundation to ensure that it is practical and viable and potential damage to adjoining properties during the construction of the proposed geotechnical works is minimized and public safety is not endangered.

*NOTE: Amend the Tasks as appropriate, to suit the particular works for which the Services are required and add other Tasks as necessary.

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GENERAL CONDITIONS

1. **DEFINITIONS**

In construing this Agreement unless the context otherwise requires the following expressions shall have the meanings hereby assigned to them:

"Accredited Checker" means the Professional Engineer registered pursuant to section 10B of Registration of Engineers Act 1967 (Revised-2002) as an Accredited Checker with the Board of Engineers Malaysia and appointed by the Client to provide services as to check certain Designated Works.

"the Board" means Board of Engineers Malaysia having its registered office address at Tingkat 17 Ibu Pejabat JKR Kompleks Kerja Raya Malaysia Jalan Sultan Salahudin 50580 Kuala Lumpur Malaysia.

"Client" means any person or persons or group(s) of body(ies) who/which has a project wherein the Designated Works need to be checked.

"Consultant" means any Professional Engineer or body corporate, partnership or sole-proprietorship practising as a consulting engineer already engaged by the Client to provide for the normal professional services for the Designated Works.

"Designated Works" means the works in connection with which the Client has already engaged the Consultant to perform professional services.

"IEM" means The Institution of Engineers, Malaysia having its registered address at Bangunan Ingenieur, Lots 60 & 62, Jalan 52/4, 46720 Petaling Jaya, Selangor Darul Ehsan, Malaysia.

"Party or Parties" means Accredited Checker and the Client endorsing as signatory parties to this Agreement.

"the Services" means the Works in connection with which the Client has engaged the Accredited Checker to perform professional services whether in accordance with Attachment A and/or B as the case may be.

"the Works" means the exact scope of works of the Accredited Checker as defined in the Memorandum of Agreement.

- 1.1 The expression "the Client" where the context so admits include the respective permitted assigns legal representatives and/or successors in title of the Parties to this Agreement but the expression "Accredited Checker" shall include his permitted assigns legal representatives and/or administrators of estate in the event of his demise.
- 1.2 Where the Client is two or more persons obligations expressed or implied to be made by or with such Party are deemed to be made by or with such persons jointly and/or severally.

- 1.3 Words importing one gender include all other genders.
- 1.4 Words importing the singular include the plural and vice versa.

2. ACCREDITED CHECKER'S DECLARATIONS

- 2.1 The Accredited Checker hereby undertakes represents and warrants with the Client that:-
 - 2.1.1 The Accredited Checker is a practising Professional Engineer duly registered under the Registration of Engineers Act, 1967 (Revised 2002).
 - 2.1.2 That he has a validly recognised certificate with the Board of Engineers, Malaysia to practise as an Accredited Checker and covenants to inform of any change of such status.
 - 2.1.3 That he is a person legally competent to execute, deliver and perform the terms of this Agreement.
 - 2.1.4 That he is not an undischarged bankrupt nor deemed insolvent under the Malaysian law.
- 2.2 Prior to entering into this Agreement, the Accredited Checker has done nothing for the purpose of soliciting his appointment hereunder, so as to supplant the role of the Consultant currently on the Project.
- 2.3 Notwithstanding his appointment by the Client hereunder so as to ensure his independence and unbiased opinion, the Accredited Checker whether by himself or otherwise howsoever by any agent(s) or person(s) in any manner related to him, shall under no circumstances agree with the Client to accept any appointment whether in full or part to take over the Consultant's work for the same Designated Works in which he has already been appointed by the Client to act as the Accredited Checker.
- 2.4 The Accredited Checker is not in any manner in a conflict of interest situation vis a vis the Client in accepting this appointment.

3. CLIENT'S DECLARATIONS

The Client hereby affirms and warrants that the appointment of the Accredited Checker hereunder is out of the exigencies of the circumstances of the Project or by statutory requirement as the case may be, not because of any third (3rd) party arrangement canvassing for such an appointment. The Client also affirms that he has informed the Consultant in respect of the engagement of the Accredited Checker for the purpose of the checking of the Designated Works.

4. SCOPE OF ENGAGEMENT

- 4.1 The appointment of the Accredited Checker shall commence from the date of the Agreement or from the time when the Accredited Checker shall have begun to perform for the Client any of the professional services described in the Memorandum of Agreement, whichever is the earlier. A copy of the letter of appointment for the Accredited Checker shall be transmitted to the relevant authority.
- 4.2 On completion of the Services, the Accredited Checker shall prepare and submit to the Client a comprehensive final report in the relevant format as provided viz. **BEM/Form/AC/01** or **BEM/Form/AC/03**. A copy of the report shall also be forwarded to the relevant authority.
 - 4.2.1 In arriving at the conclusion or data to be relied on in his final report the Accredited Checker shall be given full rights to require the Consultant to submit to him, by giving him no less than fourteen (14) days' notice, the required design report to be prepared for the Accredited Checker's consideration in the relevant format as provided viz. **BEM/Form/AC/02** or **BEM/Form/AC/04**.
 - 4.2.2 Such a final report issued by the Accredited Checker shall be submitted to the Client within the agreed time frame or any time extensions granted by the Client from time to time as may be justified under the circumstances, which extension of time shall not be unreasonably withheld;
 - 4.2.3 During his engagement, the Accredited Checker shall use his best endeavour to submit as complete a report as possible, according to the availability of the data provided by the Client and/or the Consultant as the case may be, addressing all items to be checked within the given time-frame or reasonably extended time-frame.
- 4.3 In the event that the Accredited Checker having carried out the Services provided hereunder agrees with the Consultant's design of the Designated Works, he shall proceed to issue a certificate that the Designated Works had been carried out according to the relevant Codes of Practice and adequate in its design in the relevant format as provided viz. BEM/Form/AC/05 or BEM/Form/AC/06.
 - This Accredited Checker Certificate viz. **BEM/Form/AC/05** or **BEM/Form/AC/06** shall be submitted to the Client with a copy to the relevant authority.
- 4.4 In the event that the Accredited Checker having carried out the Services provided hereunder and upon thorough evaluation, analysis and checking of all relevant aspects of the Consultant's Designated Works, fails to agree with the Consultant's design, he shall proceed to issue an interim report to be submitted to the Client for the Consultant's review in the relevant format as provided viz. **BEM/Form/AC/07** or **BEM/Form/AC/08**.

- 4.5 Upon the Consultant being finally in agreement with the Accredited Checker's report he shall immediately take such steps deemed necessary to amend the Designated Works so as to resolve all issues in dispute between the Accredited Checker and the Consultant whereupon its finalisation, the Accredited Checker shall issue the Accredited Checker Certificate viz. BEM/Form/AC/05 or BEM/Form/AC/06 as provided in Subclause 4.3 of this Clause.
- 4.6 In the event of the Consultant failing to agree with the Accredited Checker's report and despite extension of time having been given by the Client notwithstanding, continuous disagreements between the Consultant and the Accredited Checker persist without the sign of any party giving in as to which party is correct, the matter be reported to the Client and the relevant authority concerned and the decision to appoint a second accredited checker to substitute the current Accredited Checker may be taken at their respective decision.
 - 4.6.1 Whereupon the happening of the event whether as provided in Subclause 4.3 or 4.6 of this Clause, the engagement of the Accredited Checker is deemed completed by effluxion of time.

5. ACCREDITED CHECKER'S OBLIGATIONS

- 5.1 The Accredited Checker shall exercise all reasonable skill, care and due diligence in the discharge of his duty for the Services rendered to provide a full and comprehensive report upon checking the Designated Works.
 - 5.1.1 In so discharging his duties, he shall act independently in the checking of the relevant aspects of the Designated Works, without the need for reference to the Consultant's original calculations.
 - 5.1.2 It is not the role of the Accredited Checker to produce for the Client a completely new or alternative design to that of the Consultant's but to advise the Client whether or not the Consultant's design (whether or not fully implemented) is safe and in accordance with relevant by-laws, codes of practice and good engineering practice by way of clear proof to the Client with his supportive calculations and whatsoever demonstrations as deemed adequate to justify his opinion vis a vis that of the Consultant where it differs.
 - 5.1.3 For his engagement hereunder, the Accredited Checker shall stand to be held liable only to the Client while the statutory liability vis a vis the authorities shall remain with the Consultant who is the submitting person for the Project.
- 5.2 If so required by the Client, the Accredited Checker shall take out and maintain a Professional Indemnity Insurance for an amount to be agreed to by the Client. The premium for the Professional Indemnity Insurance shall be borne by the Client.

- 5.3 The liability of the Accredited Checker shall be limited to direct damages up to the value of his fees.
- 5.4 The Accredited Checker shall not divulge any confidential information communicated to or acquired by him in the course of carrying out the work, duties and obligations under the terms of this Agreement. Such information shall not be used by the Accredited Checker on other projects without the prior approval of the Client.
- 5.5 The Accredited Checker shall not have any direct or indirect interests whether by himself, his associates, or by his body corporate or otherwise howsoever connected, in any part of the Designated Works that form the subject of this Agreement without first divulging his interests to the Client and obtaining the consent of the Client.
- 5.6 The Accredited Checker shall notify the Client of any interest that he may have which may significantly conflict with the interests of the Client hereunder.
- 5.7 Any data, report, map, photograph, plan, drawing, record or information given or forwarded by the Client to the Accredited Checker pursuant to Sub-clause 6.1 of this Agreement shall not relieve the Accredited Checker of his obligations under Clause 5.1. The Client gives no warranty in any manner whatsoever for any data, report, map, photograph, plan, drawing, record or other information either as to the accuracy or sufficiency or as to how the same should be interpreted but the ascertainment of its accuracy and completeness be upon the Accredited Checker to the best of his ability. PROVIDED THAT the Accredited Checker shall not be responsible for the techniques, method, programmes, sequences or procedures adopted by any contractor or other third party responsible for executing any aspects of the Project, nor for their performance on time, their failure to carry out the work in accordance with any contract documents or for any other acts or omissions.
- 5.8 In the event of a dispute between the Accredited Checker and the Consultant, the Consultant shall have the right to be given full access to the Accredited Checker's calculations data and justifications to enable him to agree or not to agree thereto for purposes of adopting such proposal(s) or revision to the original design.
- 5.9 The Accredited Checker and the Consultant shall have the right to have direct access to each other or their respective resources as a means of an amicable settlement of all outstanding issues between them upon the tacit consent of the Client.
- 5.10 Notwithstanding any recommendation or lack of recommendation made by the Accredited Checker to the Client, the Accredited Checker shall not be held to have made any warranty or promise as to the suitability, competence or performance of any other consultant, supplier, or other third party.

6. CLIENT'S OBLIGATIONS

- 6.1 The Client shall supply to the Accredited Checker, without charge and within a reasonable time, all necessary and relevant data and information whether in the possession of the Client or within his control through the Consultant, as the case may be, and shall give such expeditious assistance as shall reasonably be required by the Accredited Checker in the performance of his professional services under this Agreement so as to enable the Accredited Checker to meet his dateline.
- 6.2 If such data, report, map, photograph, plan, drawing or information given or forwarded by the Client to the Accredited Checker pursuant to Subclause 6.1 of this Clause is found to be not accurate or sufficient, any services rendered by the Accredited Checker for the purpose of remedying such inaccuracy or insufficiency shall be construed as additional professional services and be paid for by the Client.
- 6.3 The Client shall not hold the Accredited Checker responsible or liable for costs, loss or damage of whatsoever nature arising from:
 - 6.3.1 any errors in or omissions from data, documents, plans, designs or specifications not prepared by the Accredited Checker;
 - 6.3.2 any act or omission or lack of performance or any negligent or fraudulent act or omission by the Client or the Consultant or any other third (3rd) party.
- 6.4 Save and except anything arising from the negligence of the Accredited Checker, the Client shall save harmless indemnify and keep indemnified the Accredited Checker from and against all claims, demands, recovery proceedings, damages, costs, charges and expenses whatsoever which arises out of or in connection with this Agreement or as may be relevant to the Project or the Services.

7. TYPES OF PAYMENT

- 7.1 All sums due from the Client to the Accredited Checker in accordance with the terms of this Agreement shall be paid within forty-two (42) days of the submission by the Accredited Checker of his accounts to the Client and any sums unpaid at the expiry of such period of forty-two (42) days shall bear interest thereafter such interest to accrue from day to day at the rate of two (2) percent per annum above the current prime rate.
- 7.2 Notwithstanding that any item or part of an item of an account rendered by the Accredited Checker is disputed or subject to question by the Client, the Client shall give prompt notice with reasons for disputing the payment by the Client meantime the remainder of that account shall not be withheld nor delayed on those grounds and the provisions of Sub clause 7.1 of this Clause shall apply to such remainder and also to part of the disputed or

- questioned item to the extent that the Client agrees to pay but subject to adjustments after settlement of the disputed or questioned item.
- 7.3 All professional fees due under this Agreement are exclusive of the Government Service Tax or Goods & Service Tax where the amount shall be paid by the Client to the Accredited Checker at the rate and in the manner as prescribed by law.

8. **NATURE OF AGREEMENT**

8.1 This Agreement:-

- 8.1.1 constitutes the entire agreement and understanding between the parties with respect to the matters dealt with in this Agreement and shall be binding on the Parties upon signature hereto. Should there be any inconsistency between the terms of this Agreement and the terms contained in any other document, this Agreement shall prevail as the binding term between the Parties;
- 8.1.2 supersedes all prior representations, any other agreement, letters, correspondence, statements and understandings (oral or written or expressed or implied) entered into prior to this Agreement in respect of the matters dealt with in this Agreement;
- 8.1.3 was not entered into by the Parties in reliance of any agreement, understanding, warranty or representation of any party not expressly contained or referred to in this Agreement; and
- 8.1.4 all Attachments or parts thereof referred to in the Memorandum of Agreement are to be read with together to form part of the arrangements as agreed to between the Parties.
- 8.2 Agreement may be executed in any number of counterparts or duplicates each of which shall be an original, but such counterparts or duplicates shall together constitute but one and the same agreement.
- 8.3 No amendment, variation, revocation, cancellation, substitution or waiver of, or addition or supplement to, of any of the provisions of this Agreement shall be effective unless it is in writing and signed by both Parties.
- 8.4 This Agreement shall be binding upon and inure for the benefit of the respective permitted assigns, legal representatives and/or successors in title/administrators of estate as the case may be, of the Parties respectively.
- 8.5 The Parties shall not assign or transfer all or any part of their respective rights under this Agreement or delegate their performance under this Agreement without the prior written approval of the other Party (except as expressly permitted by any of the provisions of this Agreement), and any assignment, transfer or delegation which is made without such prior

- written approval or consent, which consent shall not be unreasonably withheld, shall constitute a breach of this Agreement.
- 8.6 Each Party has entered into this Agreement in good faith and shall give all such assistance and information to the other Party and execute and do and procure all other necessary person or companies, if any, to execute all such further acts, deed, assurance and things as may be reasonably required so that full effect may be given to the terms and conditions of this Agreement.
- 8.7 If any provisions of this Agreement is or may become under any written law, or is found by any court or administrative body of competent jurisdiction to be illegal, void, invalid, prohibited or unenforceable then:-
 - 8.7.1 such provision shall be ineffective to the extent of such illegality, voidness, invalidity, prohibition or unenforceability;
 - 8.7.2 the remaining provisions of this Agreement shall remain in full force and effect; and
 - 8.7.3 the Parties shall use their respective best endeavours to negotiate and agree to a substitute provision which is valid and enforceable and achieves to the greatest extent possible the economic, legal and commercial objectives of such illegal, void, invalid, prohibited or unenforceable term, condition, stipulation, provision, covenant or undertaking.
- 8.8 Knowledge or acquiescence by any party of, or in, any breach of any of the provisions of this Agreement shall not operate as, or be deemed to be, a waiver of such provisions and, notwithstanding such knowledge or acquiescence, such Party shall remain entitled to exercise its rights and remedies under this Agreement, and at law and to require strict performance of all of the provisions of this Agreement.
- 8.9 The rights and remedies provided in this Agreement are cumulative, and are not exclusive of any rights or remedies of the Parties provided at law, and no failure or delay in the exercise or the partial exercise of any such right or remedy or the exercise of any other right or remedy shall affect or impair any such right or remedy.
- 8.10 This Agreement shall be governed by and construed in accordance with all the laws applied in Malaysia and the Parties submit to the exclusive jurisdiction of the Courts of Malaysia, waive any objection on the grounds of venue or forum of convenience or any similar grounds, and consent to service of process by mail or any other manner permitted by the relevant law.
- 8.11 The Parties hereby agree that this Agreement shall come into force on the date first hereinabove mentioned irrespective of the diverse dates on which the Parties may have executed this Agreement.

9. SUSPENSION OR TERMINATION OF SERVICES.

9.1 **Force Majeure**

- 9.1.1 If circumstances arise for which the Accredited Checker is not responsible and which make it impractical or impossible for the Accredited Checker to perform in whole or in part the Works in accordance with this Agreement then the Accredited Checker shall promptly notify the Client of the same. If by reason of the abovementioned circumstances the Services or part thereof have to be suspended, the time for their completion shall be extended by the extent of the delay plus a reasonable period for their resumption, or if the speed of performing certain part of the Services has to be reduced, the time for their completion shall be extended as is necessary by reason of the circumstances.
- 9.1.2 The circumstances depicted as "Force Majeure" shall be taken to mean 'Acts of God', strikes, lock-outs or other industrial disturbances, wars, insurrections, riots, epidemics and any similar events not within the control of either Party.
- 9.1.3 Upon happening of such circumstances as depicted hereto either Party may immediately notify the other Party in writing of the occurrence of any such circumstances.
- 9.1.4 Upon confirmation in writing by the Client of the existence of any such situation or event, or upon the failure of the Client to respond to such notice within fourteen (14) days, this Agreement shall be deemed terminated and the Accredited Checker shall be relieved from all liability for failure to carry out his obligations. In the case of disagreement between the Parties as to the existence of such situation or event, the matter shall be submitted to arbitration for settlement of disputes in accordance with Clause 10.1 of these Conditions of Engagement.

9.2 **Termination by the Client**

- 9.2.1 The Client may suspend or postpone all or part of the Services or terminate this Agreement by notice to the Accredited Checker by giving the other Party fourteen (14) days' notice in writing who shall immediately make arrangements to stop the Services and minimize further expenditure.
- 9.2.2 If at any time the Client shall decide to suspend or postpone the Services, he shall by notice in writing to the Accredited Checker terminate the Accredited Checker's appointment under this Agreement, provided that the Client may, in lieu of so terminating the Accredited Checker's appointment, require the Accredited Checker in writing to suspend the carrying out of his professional services under this Agreement for the time being. In such event,

the Accredited Checker shall be paid in accordance with the work done or services rendered in accordance with the Memorandum of Agreement.

- 9.2.3 The Client shall be entitled to take this Agreement as deemed terminated without necessity of notification in writing in any one of the following events:-
 - i) if the Accredited Checker becomes bankrupt or is in anyway deemed insolvent or has a receiver appointed over any of its business affairs;
 - ii) if the Accredited Checker assigns the Services or part thereof without the Client's consent; or
 - iii) upon notification of his demise.

9.3 **Termination by the Accredited Checker.**

- 9.3.1 The Accredited Checker may by notice of not less than fourteen (14) days terminate this Agreement or at his discretion but without prejudice to the right to terminate may suspend or continue suspension of performance of the whole or part of the Services:
 - (i) when thirty (30) days after the due date for payment of any account the Accredited Checker has not received payment of that part of it which has not by that time been contested in writing; or
 - (ii) when the Services have been suspended under either Clause 9.1 or 9.2 and the period of suspension has exceeded six (6) calendar months:
 - (iii) whereupon the commencement of the Services up to the completion of the checking services on the original design given to the Accredited Checker, the Accredited Checker not having been negligent, there arises circumstances which warrant a change or changes in design or otherwise any other alternative design(s) for the Designated Works required to be checked, this Agreement shall be deemed terminated and the Accredited Checker relieved from all further liability thereon. NOTWITHSTANDING that there be a further requirement for the Accredited Checker to check on any alternative or change in or new design for the Designated Works shall immediately constitute a fresh agreement to be entered into between the Client and the Accredited Checker.
 - (iv) if the Client becomes bankrupt or is in anyway deemed insolvent or has a receiver appointed over any of its

business affairs relevant to the performance of the Services hereunder;

- (v) if the Client executes any assignment whether of the Project or any part of its business without the consent of the Accredited Checker, for the benefit of or makes any arrangement with its creditor(s) whether approved by judicial processes or otherwise howsoever made which arrangement is detrimental to the Accredited Checker's interests;
- (vi) if the Client being a company goes into liquidation (except for purposes of amalgamation or reconstruction) or has a receiver or administrative receiver appointed otherwise howsoever deemed unable to pay its debts.

9.3.2 Termination upon default of the Client

In the event of the failure of the Client to comply with any of its obligations under this Agreement, which are such as to delay or prevent or unreasonably impede the carrying out by the Accredited Checker of his professional services under this Agreement or otherwise howsoever render the Services difficult to be performed, the Accredited Checker may upon not less than fourteen (14) days' notice in writing to the Client terminate his appointment under this Agreement, provided that, in lieu of so terminating his appointment, the Accredited Checker may;

- (i) forthwith upon any such failure or occurrence of any such circumstances suspend the carrying out of his professional services hereunder for a period of thirty (30) days or as deemed fit by the Accredited Checker (provided that he shall as soon as practicable inform the Client in writing of such suspension and the reasons therefore); and
- (ii) at the expiry of such period of suspension either continue with the carrying out of his professional services under this Agreement or else, if any of the reasons for the suspension then remain, forthwith in writing to the Client terminate his appointment under this Agreement.
- 9.3.3 The Accredited Checker shall, upon receipt of any notice or requirement in writing in accordance with Clause 9.2 or the termination by him of his appointment in pursuance of Clause 9.3, proceed in an orderly manner but with all reasonable speed and economy to take such steps as are necessary to bring to an end his professional services under this Agreement.

9.4 Payment Due Upon Suspension, Termination and Reinstatement

Where the Services are suspended or terminated the Accredited Checker

shall be entitled to payment for the Services based on actual time costs for Services done carried out including consequential costs, expenses and disruption fees incurred as a result of the suspension or termination in accordance with Clause 9.1, 9.2 or 9.3 and remobilization fees on resumption. In such an event happening the Accredited Checker shall be entitled to claim actual time costs and reimbursables and up to the ceiling limit of his full fees under the Memorandum of Agreement or otherwise as may be justified.

9.5 Rights and Liabilities of the Parties.

Suspension or termination of this Agreement shall not prejudice or affect the accrued rights or claims and liabilities of the Parties.

10. **ARBITRATION**

- 10.1 If any matter, dispute or claim arising out of or relating to the Agreement or the breach or termination hereof which cannot be agreed upon by the Parties hereto or which cannot be settled amicably by the Parties, the matter, dispute or claim shall be referred to an arbitrator to be agreed between the Parties hereto, and failing such Agreement, to be nominated on the application of either party hereto by the Director General of the Regional Center for Arbitration in Kuala Lumpur and any such reference shall be deemed to be a submission to arbitration within the meaning of the Arbitration Act 1952. The decision of the arbitrator shall be final and binding on each of the Parties.
- 10.2 All disputes referred to arbitration pursuant to this clause shall be settled in accordance with the Rules for Arbitration of the Kuala Lumpur Regional Center for Arbitration.
- 10.3 Any such arbitration shall be heard at the Kuala Lumpur Regional Center for Arbitration using the facilities and systems available at the Center or at such other venue as may be specified by the arbitrator and agreed by the Parties.
- 10.4 The reference of any matter, dispute or claim to arbitration pursuant to this clause and/or the continuance of any arbitration proceedings consequent thereto shall in no way operate as a waiver of the obligations of the parties to perform their respective obligations under this Agreement.

11. OWNERSHIP OF DOCUMENTS AND COPYRIGHT

- 11.1 The report of the Accredited Checker whether it may be in the final or draft stage cannot be used for other projects by the Client for reasons as follows:-
 - 11.1.1 that the copyright in all drawings, reports, specifications, calculations and other similar or incidental documents provided by

the Accredited Checker in connection with the Services is vested with the Accredited Checker;

- 11.1.2 subject to the condition that all outstanding accounts owing and due for payment to the Accredited Checker has been fully settled, the Client will have the right to use such drawings, specifications, calculations and documents for submission to relevant approving authorities for purposes of the Designated Works;
- 11.1.3 save and except as aforesaid the Client shall not be entitled to make copies of such drawings reports or other similar or incidental documents in connection with the Services hereunder performed by the Accredited Checker for use in any manner for the purpose of engineering works other than that comprised in the Designated Works;
- 11.1.4 in the event that the Client do require the use of the Services whether in whole or part of the Accredited Checker for whatsoever purposes of engineering works other than that comprised in the Designated Works, the Client must first seek the prior written approval of the Accredited Checker and if necessary upon such terms as may be agreed to between the Client and the Accredited Checker.
- 11.2 The Accredited Checker may with consent of the Client publish alone or in conjunction with any other person any articles, photographs or other illustrations relating to the Services.

12. **GENERAL PROVISIONS**

12.1 Governing Law

This Agreement shall be governed by Malaysian law.

12.2 Changes in Legislation

If, after the date of this Agreement, the cost or duration of the Works is altered as a result of changes in, or additions to, any statute, regulation or by-law, or in the requirements of any authority having jurisdiction over any matter in respect of the Project, the agreed remuneration and time for completion shall be adjusted in order to reflect the impact of those changes.

12.3 Costs and Expenses

(a) Each Party shall bear his/its own solicitors' costs of, and incidental to, the preparation of this Agreement;

(b) the Client shall be responsible for and shall pay all stamp duties and registration fees if any payable on this Agreement and other incidental costs hereto as may be incurred from time to time.

12.4 Confidentiality

- 12.4.1 A Party shall not, without the prior written approval of the other Party, disclose the other Party's Confidential Information.
- 12.4.2 A Party shall not be in breach of Subclause 11.4.1 herein in circumstances where it is legally compelled to disclose the other Party's Confidential Information.
- 12.4.3 Each Party shall take all reasonable steps to ensure that its employees agents and the consultant engaged for the purposes of this Agreement, do not make public or disclose the other Party's Confidential Information.
- 12.4.4 Notwithstanding any other provision of this Clause, the Parties may disclose the terms of this Agreement (other than Confidential Information of a technical nature) to its related companies, solicitors, auditors, insurers and accountants.
- 12.4.5 This Clause shall survive the termination of this Agreement.

12.5 **Time Of Essence**

It is the common understanding of the Parties that time wherever mentioned in this Agreement or stipulated by either Party hereafter shall be of the essence of this Agreement.

12.6 Communications

Any notice or other communication to be given under or in respect of this Agreement shall be in writing and may be delivered, given or sent by:-

- 12.6.1 hand; or
- 12.6.2 registered post or other fast postal service; or
- 12.6.3 telex, facsimile transmission or other instantaneous electronic media; to the other party at the address first hereinabove set out, or such other address as either Party may give notice to the other;
- 12.7 All such notices and documents shall be in the English Language.
- 12.8 In proving the giving of a notice or any other document under or in respect of this Agreement it shall be sufficient to show:-
 - 12.8.1 in the case of registered post or other fast postal service, that the notice or other document was duly addressed and posted; or

- 12.8.2 in the case of telex or facsimile transmission or other instantaneous electronic media, that the notice or other document was duly transmitted from the dispatching terminal as evidenced by a transmission report generated by the dispatching terminal.
- 12.9 Any notice hereunder shall be deemed to be sufficiently given if sent by the solicitor of a party on behalf of that party concerned to the other party or its solicitors.

******* End of this page ***********

Format for Accredited Checker's Report

(To be prepared by the Accredited Checker - Structural Works)

TITLE PAGE

(Title Page of the Report should contain the following information)

Name of the Project: Name of the Client:

Name and Address of the Submitting Engineer:

BEM Registration No. of the Submitting Engineer:

Approving Authority and its address:

Approved Building Plan Approval No.:

Date on which construction work is due to commence:

Name and Address of the Accredited Checker:

BEM Registration No. of the Accredited Checker:

Date of the Report:

CONTENTS PAGE

(The contents page should have the following information)

Contents

- 1. Introduction
- 2. Design Information submitted by the Submitting Engineer

 (This section should describe all design information given by the Submitting Engineer)
- 3. Scope of Work of the Accredited Checker

 (This section should mention the key elements that are to be checked)
- 4. Detailed Design Check
 - a. Site Investigation
 - b. Geotechnical design for the Foundation system
 - c. Structural Engineering Design for the Superstructure and the Substructure
 - i. Code of Practices
 - ii. Materials and its Specifications
 - iii. Design Parameters
 - iv. Vertical and Lateral Loadings
 - v. Engineering Soft wares used
 - vi. Construction Methods and the Needs for Public Safety
 - vii. Temporary works
- 5. Discussion and Findings on the existing design
- 6. Conclusion

APPENDICES

(This section should contain all the drawings and independent design check calculations of the Accredited Checker)

Note:

If there is an Accredited Checker for Geotechnical, then item 4(a) and (b) may not be included in the Report.

Rev. No.: 0 Date : 28.6.2004

BEM/Form/AC/03

Format for Accredited Checker's Report

(To be prepared by the Accredited Checker - Geotechnical Works)

TITLE PAGE

(Title Page of the Report should contain the following information)

Name of the Project: Name of the Client:

Name and Address of the Submitting Engineer:

BEM Registration No. of the Submitting Engineer:

Approving Authority and its address:

Approved Building Plan Approval No.:

Date on which construction work is due to commence:

Name and Address of the Accredited Checker:

BEM Registration No. of the Accredited Checker:

Date of the Report:

CONTENTS PAGE

(The contents page should have the following information)

Contents

- 1. Introduction
- 2. Design Information submitted by the Submitting Engineer

 (This section should describe all design information given by the Submitting Engineer)
- Scope of Work of the Accredited Checker
 (This section should mention the key elements that are to be checked)
- 4. Detailed Design Check

The Accredited Checker Report shall include checking, comments and suggestions on the following:-

- (a) Site History
- (b) Site conditions, geology, and drainage.
- (c) Slope terrain classification with zoning of slopes.
- (d) Subsurface Investigation (S.I.) results and subsoil profiles
- (e) Assumptions, interpreted and design soil parameters.
- (f) Slope stability analyses for both soil, rock slopes & designs including strengthening/ stabilisation with studies from both surface and subsurface drainage.
- (g) Analyses and designs of retaining walls.
- (h) Foundation designs for walls, bridges and culverts including assessment on negative skin friction and downdrag as well as settlement predictions.
- (i) Ground treatment analyses & designs.
- (j) Settlement analyses including assessment on total and differential settlements due to the proposed fill & other loads.

Rev. No.: 0 Date : 28.6.2004

BEM/Form/AC/03

(k) Analyses on influence of proposed development on the safety and serviceability of the adjacent properties.

- (1) Instrumentations monitoring and validation tests.
- (m) Construction control measures.
- (n) Specifications and Drawings
- (o) Supervision programme including number of full-time supervising staff, organisation chart, supervising staff's qualifications and experiences
- (p) Long term maintenance programme for the slopes and retaining walls.

In addition, Accredited Checkers are expected to carry out Independent analyses and calculations for critical elements of geotechnical works at sensitive and critical areas such as:

- (i) Stability analyses on few critical slopes.
- (ii) Analyses and designs of foundation for areas with complicated conditions such as negative skin friction, rake piles, transition from deep foundation to shallow foundation, etc.
- (iii) Retaining wall design including global, external and internal stability.
- 5. Discussion and Findings on the existing design
- 6. Conclusion

APPENDICES

(This section should contain all the drawings and independent design check calculations of the Accredited Checker)

Format for the Structural Design Report

(To be prepared by the Submitting Engineer for submission to the Accredited Checker)

1. The title page should contain the following information:

Name of the Project:

Name of the Client:

Address of the Client

Name and Address of the Submitting Engineer:

BEM Registration No. of the Submitting Engineer:

Approving Authority and its Address:

Approved Building Plan Approval No.

Date on which construction work is due to commence:

- 2. The design report should include but not limited to the following information:
 - a. Clear indication of the functional frame, load transfer and stability aspects of the structural scheme.
 - b. Typical design data such as:
 - i) Type of foundation structure
 - ii) Concrete grades for the various structural elements
 - iii) Design stresses for the materials used for construction, i.e. concrete and reinforcement bars
 - iv) Imposed dead loads and live loads for the various structural elements
 - v) Design wind speed
 - vi) Minimum design lateral load due to wind load and notional load
 - vii) Design codes of practices, standards and references used for the analysis and design
 - viii) Engineering soft wares used for the analysis and design

- c. Sufficient design calculations to establish the form and size of all the principal structural element, both for the superstructure and substructure.
- d. Sufficient design calculations for the stability analysis and elemental design for the stabilizing frames and walls for the superstructure.
- e. General arrangement plans, sections to show the dimensions, layout and the disposition of the structural elements with reinforcements details.
- f. Complete structural details for temporary works with precautionary measures taken to avoid damages to adjacent properties
- g. Construction sequence for the structural works
- h. Specifications of the materials.

Format for the Geotechnical Design Report

(To be prepared by the Submitting Engineer for submission to the Accredited Checker)

1. The title page should contain the following information:

Name of the Project:

Name of the Client:

Address of the Client

Name and Address of the Submitting Engineer:

BEM Registration No. of the Submitting Engineer:

Approving Authority and its Address:

Approved Building Plan Approval No.

Date on which construction work is due to commence:

- 2. The geotechnical design report should include but not limited to the following information:-
 - (a) Site history
 - (b) Geology which includes general geology, structural geology (discontinuities)& hydrogeology.
 - (c) Subsurface Investigation (S.I.) results and subsoil profile plotted in crosssections for different area of the sites. They are to be superimposed on proposed roads network, and platforms.
 - (d) Slope terrain classification with zoning of the slopes at the site and adjacent areas (if there is an influence on the site) into different class in accordance with DOE requirements.

- (e) Design soil parameters (shall be plotted in figures together with selected values where relevant) and may include:
 - i) Basic soil properties, e.g., unit weight, soil classifications and etc.
 - ii) Chemical properties of subsoil and its effect to the foundation and structures
 - iii) Consolidation parameters include OCR profile, compression and recompression indices, drainage path, coefficient of consolidation (Cv and Ch) of subsoil and etc.
 - iv) Shear strength parameters include effective (c' and ϕ ') and total stress strength (Su).
 - v) Groundwater level / regime and prediction after excavation or filling of slopes
 - vi) Stiffness of soil (for prediction of deformation of the walls and piles)
- (f) Slope stability analyses of existing, natural and engineered cut & fill slopes. Various failure modes (both circular and non-circular or wedge) shall be checked including relevant surcharge, loads and forces.
- (g) Analyses & designs of retaining works including the options considered and the various stability checks such as global, external & internal stabilities.
- (h) Settlement analyses including assessments of total and differential settlements of the proposed fill, and other buildings imposed loads.
- (i) For exposed rock slopes, detailed rock mapping and kinematic analyses shall be carried out.

- (j) Analyses and designs of slope strengthening and stabilization if used.
- (k) Ground treatment measures including its analyses and designs as well as summaries. This should include design of temporary surcharge if required.
- (l) Foundation designs for walls, structures, bridges and culverts should include the following calculations and designs (both piers and abutments), where applicable:-
 - Assessment of bearing capacity of piles (both single and group)
 - ii) Prediction of settlements
 - iii) Assessment of negative skin friction on piles and prediction of downdrag.
 - iv) Pile group analyses shall include checking on combined bending moment and axial load on piles.
 - Detailing of pile head to pilecap for the assumption of free head or fixed head analyses.
- (m) Analyses on the influence of the proposed development on the safety and serviceability of the adjacent properties and services including movements and induced structural forces (e.g. dewatering, excavation, rock blasting, etc.). If there are potential impacts, mitigation measures shall be proposed.
- (n) Analyses & Designs of both the surface & subsurface drainage.
- (o) Design/construction drawings related to drainage & geotechnical works.
- (p) Construction sequence for the geotechnical works.
- (q) Specifications for all geotechnical works including construction control measures. Recommendations on instrumentations monitoring and validation tests.

- (r) Propose supervision programme including organisation chart, number of fulltime supervising staff, supervising staff's qualifications and experiences.
- (s) Long term maintenance programme for the slopes, retaining walls and etc.
- (t) Engineering soft wares used for the analysis and design.

Rev. No.: 1 Date : 15.8.2008

BEM/Form/AC/05

ACCREDITED CHECKER CERTIFICATE FOR STRUCTURAL WORKS

Name of Client	: _		
Name of Consultant	: _		
Project name *	: _		
Approving Authority/	'Approval	o:	
I,(Name)		,	, ofName of
firm), NRIC	No	being a register	ed Accredited Checker with the
Board of Engineers Ma	ılaysia (Re	stration No) here	eby certify that I have carried our
an evaluation, analysis	and check	of the structural aspects of the	e engineering plans, reports and
specifications of the ab	ove projec	in accordance with the requir	rements of the Scope of Services
of Accredited Checke	rs for Str	tural Works (BEM/RD/AC/	(02) and the relevant Codes of
Practice, and to the be	est of my	owledge and belief, the plan	ns, reports and specifications do
show adequacy in the s	tructural d	ign.	
I hereby certify that th	ie above b	lding structures/key elements	s have been adequately designed
for their intended purpo			
Tot uten mended purpo	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Date:			
		Stamp & Signatu	ure ckers Registration No
		Accredited Chec	ckets Registration no

^{*} Please provide additional paper for details

Rev. No.: 1 Date : 15.8.2008 BEM/Form/AC/06

ACCREDITED CHECKER CERTIFICATE FOR GEOTECHNICAL WORKS

Name of Client	:	
Name of Consultant	:	
Project name *	:	
Approving Authority	'Approva	al No:
		, ofName of
•		Registration No) hereby certify that I have carried out
an evaluation, analysis	and chec	k of the geotechnical aspects of the engineering plans, reports and
specifications of the ab	ove proje	ect, in accordance with the requirements of the Scope of Services
of Accredited Checker	s for Ge	otechnical Works (BEM/RD/AC/03) and the relevant Codes of
Practice, and to the be	est of my	knowledge and belief, the plans, reports and specifications do
show adequacy in the g	geotechnic	cal design.
1 7 6	,	
I hereby certify that th	ne geotec	hnical aspects have been adequately designed for their intended
purpose.	2	
Date:		Ct 0. Cit
		Stamp & Signature Accredited Checkers Registration No

^{*} Please provide additional paper for details

Rev. No.: 1 Date : 15.8.2008 BEM/Form/AC/07

${\bf ACCREDITED\ CHECKER\ FOR\ STRUCTURAL\ WORKS-Letter\ of\ Transmittal}$

Name of Client	:	
Name of Consultant	:	
Project name *	:	
Approving Authority	/Approva	al No:
I,(Name)		, ofName of
firm), NRIC	No	being a registered Accredited Checker with the
Board of Engineers Ma	alaysia (F	Registration No) hereby certify that I have carried out
•		ck of the structural aspects of the engineering plans, reports and ect, in accordance with the requirements of the Scope of Services
of Accredited Checke	ers for S	tructural Works (BEM/RD/AC/02) and the relevant Codes of
Practice, and to the be	st of knov	wledge and belief, the following comments must be addressed by
the first engineer:		
C		
Date:		Stamp & Signature
		Accredited Checkers Registration No.

^{*} Please provide additional paper for details

Rev. No.: 1 Date : 15.8.2008 BEM/Form/AC/08

ACCREDITED CHECKER FOR GEOTECHNICAL WORKS – Letter of Transmittal

Name of Client	:					
Name of Consultant	:					
Project name *	:					
Approving Authority	/Approva	al No:				
I,(Name)				., of	Name	e of
firm), NRIC						
Board of Engineers Ma						
an evaluation, analysis		•		•		
specifications of the ab		_	_	_		
of Accredited Checker			-		_	
Practice, and to the best						
the first engineer:				,		
the first engineer.						
Date:					•••••	
			Stamp & Signar Accredited Che		tration No	

^{*} Please provide additional paper for details