

Resolutions for the 6th Annual Engineering Conference

1. The conference resolved to incorporate the Green Building standards as a part of Bhutan Building Rules. Architects and designers should promote locally available materials and promote construction along the natural contours creating the least environmental damage - **Action by MoWHS and its agencies.**
2. Hollow Interlocking Compressed Stabilized Earth Block (HI-CSEB) is economical, affordable, environmentally friendly, easily available, stronger, energy saving, easy to make and offers better insulation. However, further research is required to promote the use of HI-CSEB especially in buildings with more than two storeys. Moreover the built-up item rate for HI-CSEB should be reflected in the BSR to make it readily available for estimation - **Action by SQCA.**
3. SQCA was advised to improve on the existing Bhutan Schedule of Rates (BSR), for which the existing software shall be further developed to suit our requirements and to facilitate regular updating of the BSR, DUDES should support the SQCA as the BSR would no longer be the mandate of the SQCA after it becomes the Bhutan Standards Bureau. - **Action by SQCA until it becomes Bhutan Standards Bureau.**
4. The regular market rate updates for all construction materials should be made available by agencies like National Statistical Bureau for the purpose of real-time and the most realistic rate analysis, at the time of costing. - **Action by MoWHS.**
5. The conference felt the need to have active coordination between MoAF and MoWHS to fine tune policies on Farm Roads and discuss on issues like Right of Way and avoidance of roadside constructions; road ownership and maintenance works; strengthening the capacity of either Dzongkhag Engineering Sector or DoR to conduct survey and design for farm roads or to transfer the responsibilities of farm roads to DoR - **Action by MoWHS and MoAF.**
6. Although rare, but in the instances of cancellation of a project after award of work, due to Government policies or lack of funds, the contractor concerned should be informed, citing proper reasons, and

duly compensated on expenses incurred for the works - **Action by procuring agencies.**

7. In the event of re-tendering a work, the conference resolved that all the bidders should be accordingly intimated, citing all the reasons for re-tendering. Administrative actions should be taken against the dealing person failing to inform the bidders - **Action by all procuring agencies.**
8. The Dzongkhag Engineering Sector should approach concerned ministries through Dzongkhag Authority for amicable settlement on difference in the resources available in order to carry out the Ad-Hoc works successfully – **Action by Dzongkhag Engineering Sectors.**
9. The conference felt importance of planned urban development. Structural Plan is required for all towns falling under the classification of Dzongkhag Thromde A, Dzongkhag Thromde B and Yenlag Throms - **Action by DUDES and Dzongkhag Authorities concerned.**
10. It was recognized that the Procurement Manual and Standard Bidding Document did not reflect any instances of Dungkhag Tender Committee. The conference felt the need for Dungkhag Tender Committee since it was critical for decentralization. The participants of the conference requested the team from PPPD, MoF to kindly look into the matter and come up with proper recommendations. - **Action by CDB and PPPD, MoF.**
11. The conference resolved that we should keep ourselves updated with the emerging technologies in water treatment and supply system, sewer treatment system and solid waste management system. All agencies concerned should gear towards develop or import the best available technology to come with the most effective solutions to the emerging problems in the country. - **Action by all agencies concerned.**
12. With global warming and climate change, the physical features of our world are going through unwelcoming change. The conference recognized that our clean water sources are drying up. The conference resolved that we should take every possible measure to protect our water source. Moreover, to meet the requirement of growing water demand, the government should take proactive measures to sensitize people on how to

conserve treated water and to look for other relevant, effective solutions like rain water harvesting, reservoir, etc. – **Action by MoWHS.**

13. MoWHS has been providing technical backstopping for urban development works such as ensuring structural safety of housing infrastructure, basic water and sanitation need. The conference felt the need to extend the support to rural settlements also. The conference resolved that MoWHS should be responsible for providing technical support and framing rules to ensure the standards for structural safety, sanitation, roads for all settlements, both urban and rural - **Action by DUDES and MoWHS**
14. The conference resolved that the MoWHS would deliberate on the issue of coordination between National Land Commission and Thromdes regarding the issuing of Lagthram and matters in general. If necessary, important matters concerning land maybe submitted to the Cabinet – **Action by concerned agencies in MoWHS**
15. An active coordination is needed amongst all the government ministries owning engineering divisions, to discuss issues related to use and development of human resource for optimum utilization of scarce resource – **Action by all concerned agencies and DUDES, MoWHS.**
16. The Ministry will pursue with RCSC on certain pertinent issues of Dzongkhag Engineers such as job remapping, provision of stipend and college fees for in-service candidates in CST and provision of Office Assistant - **Action by DUDES and HRD, MoWHS to follow up with RCSC.**
17. Deliberation on modalities for recruitment of project based staff through project fund is required at the highest level – **Action by MoWHS.**
18. Regarding the termination of contract, clause 58 of GCC (General Conditions of Contract) of the SBD (Standards Bidding Document), the conference was informed that the provisions under sub clause 58.2 which stipulate conditions that constitute fundamental breach of contract was inadequate and is not explicit enough to terminate a contract when it came to consistently poor workmanship by a contractor or unreasonable delays in the progress of work. Therefore, in order to take timely and appropriate action by the client, it was resolved to

include “the contractor exhibits consistently poor workmanship at site despite instructions for improvement by the client and unreasonable delays in the progress of work” via amendment/addendum under sub-clause 58.2 of GCC of the SBD - **Action by PPPD, MoF and MoWHS.**

19. On the issue of housing crunch, the Ministry has already earmarked land for developing more than 800 units of low income housing mainly in Thimphu and Phuentsholing, and a few in other Dzongkhags. The Ministry and NHDC should explore fund for physical development of the housing infrastructure - **Action by NHDC and MoWHS.**
20. Since Mid-Term Review of the 10th Five Year Plan is approaching, all agencies should identify and prepare plan for provision of budget for developing urban centers – **Action by all concerned agencies.**
21. The conference endorsed the proposal of the new Point Based System of evaluation and award of work in principle. PPPD, MoF and CDB, MoWHS shall create awareness among engineers and contractors on benefits to all parties concerned on the new Point Based System and conduct trainings on the usage of IT tool for evaluation – **Action by PPPD, MoF and CDB, MoWHS.**
22. The proposal to reclassify contractor into Large, Medium and Small category was endorsed by the House. However, a basic criteria was needed to be put in place for class ‘Small Category’ in light of enhanced financial ceiling and number of works - **Action by CDB.**
23. In order to promote aspiring and capable contractors, direct entry to any class/category would be allowed, provided they meet the minimum financial and technical requirements (pass experience also has some plus points) - **Action by CDB.**
24. Our agencies and the construction industry should look in to technologies like rock filling instead of building bridges, half tunneling instead of full width excavation and other modernized construction technology. These methods would not only be more economical but time saving as well. - **Action by all agencies concerned.**

25. CDCL was advised to publicize and promote the advantages of all relevant means of mechanized activities such as rock drill rig machine through media, etc – **Action by CDCL.**
26. MoWHS and CAB need to discuss on category of works CDCL would be eligible to participate in competitive bidding. 40% of CDCL shares will be floated. Government should decide on time frame for divestment - **Action by MoWHS.**
27. The floor stressed that CDCL should not be limited only to mechanization of roads, but also be involved with construction of buildings and other infrastructure by using innovative technologies, which could be also done by the private contractors after lessons learnt from CDCL – **Action by CDCL.**