

Press Release

The HKIE's views on the 2022 Policy Address and report "Recommendations on Streamlining Building Works and Infrastructure Development Processes"

(Hong Kong, 14 October 2022) The Hong Kong Institution of Engineers (hereafter "the HKIE") has recently made recommendations to the Administration for its formulation of the 2022 Policy Address. The HKIE endorses the Administration's legislative proposals (set out in a paper delivered in March 2022 to the Legislative Council) to streamline development-related statutory processes, but holds that some downstream statutory and administrative processes at design and construction stages, while being equally crucial to the timely delivery of development projects, are not being dealt with in them. After thorough examinations, at the end of last month the HKIE issued a report entitled "Recommendations on Streamlining Building Works and Infrastructure Development Processes", providing practical and feasible suggestions, mainly, on the processes at design and construction stages.

In the press conference, President Ir Aaron Bok said that the HKIE, as a professional body representing the engineering industry, would submit its suggestions on the Policy Address to the Administration after collecting the interested parties' views. These suggestions include reviewing procurement policy, augmenting manpower of the engineering profession in response to societal development, streamlining development processes, boosting land and housing supply, developing innovation and technology capacity, reviewing funding application processes, integrating into the Greater Bay Area, transportation, education, as well as sustainable and smart development of the city. Ir Bok put particular emphasis on the need on the Administration's part to review the school curricula and university entry requirements in a timely manner, step up efforts to promote STEAM education, exert greater effort to foster mutual recognition of professional qualifications, thereby coping with the increasing demands for I&T and engineering talents following the city's development.

In addition, the Institution supports adopting a multi-pronged approach persistently to tackle the shortage of land supply. To take forward the reclamation at the Harbour Metropolis, the planning, design and construction stages ought to be fast-tracked. The Institution also calls for a detailed infrastructure blueprint on the Administration's part, a blueprint that will specify key milestones of delivery of land parcels and infrastructure

works. It also advocates separating government, institutional and community facilities from residential blocks in public rental projects, such that modular integrated construction (MiC) method could be adopted thoroughly to further compress the construction time.

Ir Dr Barry Lee Chi Hong, the Institution's Senior Vice President, elaborated on the report on streamlining approval processes. He suggested that a specific department or entity should be designated to process plan submissions and must set deadlines in its responses to the submissions. He further suggests adopting a 'pre-application consultation step', such that the projects' potential technical issues may be identified beforehand and the approval and consultation processes may be facilitated under the principle of problem-solving. Provided that the original approved design principles and construction methodologies are observed, the need to seek for consent approval due to minor amendments should be avoided. Government departments should also be encouraged to serve their roles as both regulators and facilitators under the premise that quality, safety, as well as the principle of fairness and openness would not be compromised. In the report is also the proposal for a new public housing project delivery model: in the case of suitable projects, the site formation/infrastructure works, design, and building works would be implemented by one single department in order to shorten the time needed for construction.

The HKIE looks forward to a multi-pronged approach from the Administration. It is hoped that, as regards land and housing supply, a "wholesale enhancement in speed, efficiency, and quantity" will be achieved so that citizens may live and work in ways that meet their preferences.

For media enquiries, please contact:

The Hong Kong Institution of Engineers

Corporate Communications Section

Tel: 2895 4446

Fax: 2882 6825

Email: corpcom@hkie.org.hk



President Ir Aaron Bok (3rd right), Senior Vice President Ir Dr Barry Lee (3rd left), and Council Members Ir Alexis Lee (1st left), Ir Rupert Leung (1st right), Ir Michelle Tang (2nd right) and Ir Tang Whai Tak (2nd left) holding copies of the HKIE's views on Policy Address and its Recommendations on Streamlining Building Works and Infrastructure Development Processes

Appendix

1. Views for Formulating 2022 Policy Address

- i. Significantly low bids from tenderers should be curtailed to improve the ecology of the industry and attract next generations of engineering talents, so that the increasing demands following the city's development may be met. The Institution's suggestions in this connection are detailed in its report on procurement policy review, outlined below under (4).
- ii. A multi-pronged approach should continue to be adopted to tackle the shortage of land supply. To take forward the reclamation at the Harbour Metropolis, the planning, design and construction stages are suggested to be fast-tracked. A detailed infrastructure blueprint specifying key milestones of delivery of land parcels and infrastructure works is also called for. Rezoning of sites in the Northern Metropolis should be continued in order to reap on the advantages of their strategic locations and foster a greater integration of Hong Kong into the Greater Bay Area. Urban renewal projects should also be facilitated by the much-needed solution spaces provided by the development of the Harbour Metropolis and Northern Metropolis.
- iii. In addition to the Advance Allocation Scheme to be implemented in public rental housing projects, the Institution suggests separating government, institutional and community facilities from residential blocks such that modular integrated construction (MiC) method could be adopted to further compress the construction time. Meanwhile, MiC factories and prefabrication yards shall be set up in line with the increasing application of the construction method. Long-term provision of the housing of these facilities may be made by considering housing them in new development areas such as the Northern Metropolis and reclamations in Lung Kwu Tan. To make full use of the market force, the Administration is suggested to consider offering more incentive to private sectors to support the development of other subsidised housing. In particular, Private Sector Participation Scheme (PSPS) and design-and-build (D&B) procurement model are suggested to be reactivated and expanded respectively.
- iv. To promote the development of innovation and technology (I&T) ecosystem, the procedures and requirements of the funding application should be scrutinised in order to raise Hong Kong's status and competitiveness on this front and effectively expand the talent pool. To further encourage the transfer of academic research to the manufacturing industry, the Administration shall also consider modifying the requirements of the funding scheme and provide incentives for both the academia and private sector to achieve mutual success.

- v. With the vast opportunities in the Greater Bay Area, in addition to the development of infrastructure to enhance connectivity with the area, it is important that the Administration exerts greater effort to foster mutual recognition of professional qualifications. To facilitate the development of Lok Ma Chau Loop which will deepen cooperation between Shenzhen and Hong Kong, the Institution supports further opening of the Joint Policy Package to encourage the flow of talent and scientific research, and the early implementation of the Northern Link Spur Line to enhance the transportation network for the Loop.
- vi. Echoing the idea of infrastructure-led development, we suggest the Administration review the overall transportation networks, such as conducting a comprehensive transport study (CTS) in view of the various planned developments at the Northern Metropolis and Harbour Metropolis, while taking into consideration the latest strategic development of the city and the neighbouring cities. To fully capitalise on Hong Kong's logistics capacity which is invigorated by the third runway of the Hong Kong International Airport, the Administration is suggested to expand the intermodal code-sharing Services.
- vii. To respond to the widening gap between the supply and demand of I&T and engineering professionals, exacerbated by the implementation of upcoming megaprojects, the Administration needs to review the school curricula and university entry requirements in a timely manner and step up the effort to promote STEAM education.
- viii. The Administration should accelerate the review of regulations associated with the Smart City Blueprint 2.0, such as noise control and smart technology applications, to help Hong Kong strive towards being a smart and sustainable city. For the same reason, it should also spell out details of public-private partnership and of how enterprises with different expertise can work together on this front. Moreover, to combat climate change and achieve carbon neutrality, the Administration should press for the adoption of carbon capture, utilisation and sequestration technology, as well as the strengthening of renewable energy (RE) and waste-to-energy projects.

2. The report “Recommendations on Streamlining Building Works and Infrastructure Development Process”

“The Legislative Proposals to Streamline Development-related Statutory Processes” put forward by the Development Bureau to the Panel on Development of the Legislative Council on 22 March 2022 outlined the Government’s latest thinking to streamline and modernise the more critical statutory processes pertinent development projects.

The Hong Kong Institution of Engineers (HKIE) provided our views in June 2022 in which we gave our support for this policy initiative to expedite the planning and development process so that the developable land for housing and other uses can be made available more efficiently and quickly. We however expressed explicitly in our views that the proposal addressed mainly the upstream statutory processes from green sites to mature land lots, whereas the actual building construction and other infrastructural development-related statutory processes, such as those stipulated in the Building Ordinance (Cap. 123) and Fire Services Ordinance (Cap. 95), etc. are left out of the discussions. These are however critical to the delivery of any development projects.

In view of this, HKIE has set up a Task Force to collect and review the feedback from the industry on their first-hand experience of the current building construction and infrastructural development process; and to make suggestions on the possible ways of streamlining and fast tracking the existing processes that would benefit the society. Following Section 1 of the background description, the identified issues of the current practice and our recommendations are presented in three separate sections, namely, (a) Streamline the statutory regime, (b) Streamline the administrative arrangements, and (c) Expedite public housing projects using a new project delivery model.

Section 2 of the report highlights the important advantage of a new demeanor for the officers of government when dealing with statutory submissions. While discharging their statutory duties on the role of regulators to ensure minimum standards of safety and quality of works for the developments, for the benefit of the community at large, they should also shoulder a facilitator role to provide advice to project proponents on how they can achieve progress, all under the premises of not foregoing any safety, quality and statutory requirements and in fair and open manner. Bureaux and Heads of Department should clearly advise this to their officers to ease their worry on being complained later on offering privilege. In parallel, various government authorities, i.e., Buildings Department (BD), Geotechnical Engineering Office, Fire Services Department (FSD), Lands Department (LandsD), etc., should conduct appropriate reassessment and consider measures that we suggested in Section 2 of this report to streamline the submission, checking, supervision and approval processes with an aim to advance building and infrastructural developments in a more expeditious manner.

Section 3 of this report describes our proposals of adopting a ‘pre-application consultation step’ such that the project proponent may request workshops with the authorities for the presentation of their design concept of the proposed development and for exchange of views on the major areas of concern. We also propose that the authorities will consider accepting draft statutory submission vetting so that early advice can be given to the project proponent and in turn, such streamlined administrative arrangement can expedite the statutory application and approval process. We also propose that tree felling application and approval shall be processed in parallel with the General Building Plans (GBP) vetting and approval mechanism.

Section 4 of this report illustrates our idea of implementing a new project delivery model for public housing projects so that the site formation/infrastructure works and the subsequent building construction would be managed and implemented by one single government department or entity in lieu of the current practice of splitting the works between Government and the Hong Kong Housing Authority. By doing this, we believe that the overall duration and cost of delivery of a public housing project could be substantially reduced.

The last section of this report summarizes our recommendations on streamlining building construction and infrastructure development processes.



Full Report

3. Report on “Research on Augmenting Engineer Manpower to Cope with the Foreseeable Surge in Demand”

A new development blueprint for Hong Kong has been rolled out with some major announcements made recently in the National 14th Five-Year Plan, 2021 Policy Address and Hong Kong 2030+ final report. In the foreseeable future, it is expected that large scale developments such as the Lantau Tomorrow Vision and Northern Metropolis would be under active planning and construction to meet the land and housing demand as well as to develop Hong Kong into a Technology & Innovation hub.

As a result, the construction volume will surge and there would be a concern on whether there will be sufficient engineers (amongst other players) in the engineering industry to deliver the vision and commitments made in the development blueprint.

In view of this, the Hong Kong Institution of Engineers (the HKIE) has set up a Task Force to research the foreseeable workload and the local engineering manpower supply situation in the coming decades.

This report summarises the findings of the Task Force on the prevailing construction expenditures and the current engineer manpower situation in Hong Kong. An estimation on the future construction expenditures has been made from 2021/22 to 2040/41. With large-scale developments such as Lantau Tomorrow Vision and Northern Metropolis, the construction expenditure may increase by up to 28% and 50% in 2030/31 and 2040/41 respectively compared to 2021/22.

Together with data of the past and current manpower supply retrieved from different parties of engineering and tertiary education institutions, the report demonstrates a widening supply gap will occur in the years to come. There are currently around 14,000 engineering professionals engaging in the construction industry. To match the surge in construction volume, additional manpower in the corresponding magnitude may be required. Though some of the supply gaps shall be overcome by means such as increase in productivity through innovation within the industry itself, concerted effort among Government, the Academia and the industry on all fronts shall be called upon to look into the matter and implement more drastic revamps. These may include possibly reviewing and streamlining the submission and approval process, reforming school curriculums, etc.; and more importantly, curtailing the vicious circle as mentioned below thus attracting more talented successors.

As mentioned, it is observed that a vicious circle has apparently been repeating in the industry for the past decade. It is expected that this vicious circle will only be worsened with an expected increase in construction volume, resulting in a long-term augment of engineering manpower deficiency; unless actions are taken to reverse/ alter this.

This vicious circle could be briefly described as follows:

- “Alleged” or “reported” reduction in quality of the deliverables in the construction industry.

- As a result, more rigorous checking and supervision were imposed by the regulatory bodies.
- More professional staff are required by the checking authorities to exercise enforcement of the above enhanced rigorous measures. The professionals transferred to these authorities are often from middle or entry-level of private sectors.
- With their departure, maintaining the quality of deliverables in the industry is becoming a bigger challenge;
- Remaining professionals in the middle or entry-level of private sector will need to struggle to survive through bigger challenges under poorer working environments; rendering the profession less attractive to future successors.

Without any improvement, young talents will be further deterred from joining the engineering industry.

Taking into account the present difficulties fronting the professionals together with the upcoming challenges, recommendations to possibly tackle the problems are identified and presented in this report. The major observation made is the public's adverse perception of the engineering industry and the possible worsening of the vicious circle above. Therefore, a suggestion for enhancement in promoting engineering to the general public is made. There are also other suggestions such as improving the engineer's working environment and condition; strengthening the engineering community base; cultivating interest and also enhancing the quality of youngsters.

The suggestions presented aim to improve the perception of the public on engineers, attract young talents to become engineers; and most importantly, reduce the spinning of the vicious circle that is affecting the whole engineering profession. However, these measures will require concerted and sustained efforts among all stakeholders in the years to come.



Full Report

4. Report on “Research on Procurement Policy Review for Works Contracts and Consultancy Contracts”

There has been growing concern in the engineering industry on the trend for some accepted tender prices of Public Works Contracts and Consultancy Agreements being significant lower than that allowed in the original Pre-Tender Estimates for the projects concerned. This could affect project programme and trigger quality, health and safety issues which are not to the best interest of the Government as well as the public. Significantly low tender prices could also lead to poor working environment for the engineering professionals, especially the younger ones. In view of this, The Hong Kong Institution of Engineers (the HKIE) has set up a Task Force to research into the current Procurement Policy of the Government of the HKSAR and how the current practices can be possibly enhanced. This report illustrates the result of the research and recommends proposals for possible enhancing the procurement systems, including three proposals for Works Contract and three proposals for Consultancy Contracts respectively.

Works Contract

1. Tender Evaluation with 50/50 Ratio for the Marking Scheme Approach
2. Extending the Fee Diving Control Mechanism of Consultancy to Works Contract to Mitigate Incentive for Significantly Low Bid
3. Report of Contractor’s Performance - Further Elaboration / Use of Claim Attitude Attribute

Consultancy Contract

1. Enhancing the Fee Diving Control Mechanism to Discourage Unreasonably Low Bid
2. Quantifying Common Consultancy Services
3. Applying the MPS Salary Point Staff Rates for non-RSS Consultancy Staff

On top of the above recommended proposals, an observed practice named the “Cost-Plus Approach” is also outlined as a potential means for future consultancy applications for further study by relevant parties.



Full Report