

THE INSTITUTION OF ENGINEERS, SRI LANKA

120/15, Wijerama Mawatha, Colombo 7.

BUILDING SERVICES ENGINEERING SECTIONAL COMMITTEE

Visit BSESC web page on
<http://iesl.lk/page-1579092?>



PROGRESS REPORT

For the Period between
1st April 2020 and 31st May 2020

Activity No: 1 – BSESC Involvement for COVID 19 Pandemic

Understanding the prevailed situation in the country related to COVID 19 pandemic, Building Services Engineering Section Committee (BSESC) of IESL decided to give priority to this national level issue and established a subcommittee with its senior members headed by the Chairman and the Secretary on 6th April 2020 to contribute to defeat COVID-19. Sub Committee Members are;

- Eng. Suran Fernando (Chairman - BSESC)
- Eng. Lakmal Isuru (Secretary - BSESC)
- Eng. Palitha Abeywardana
- Eng. Samantha Gunawardana
- Eng. Shiran Jayalath
- Eng. Lasantha Dharmathilake
- Eng. Prasanna Naragoda
- Eng. Sampath Godamunne
- Eng. Suranga Lekamwasam
- Eng. Priyan Bellana

Having conducted several web-based meetings on ZOOM, it was decided to give priority to the requests received from the medical officers who are currently engaged in the treatment and preventions of this pandemic.

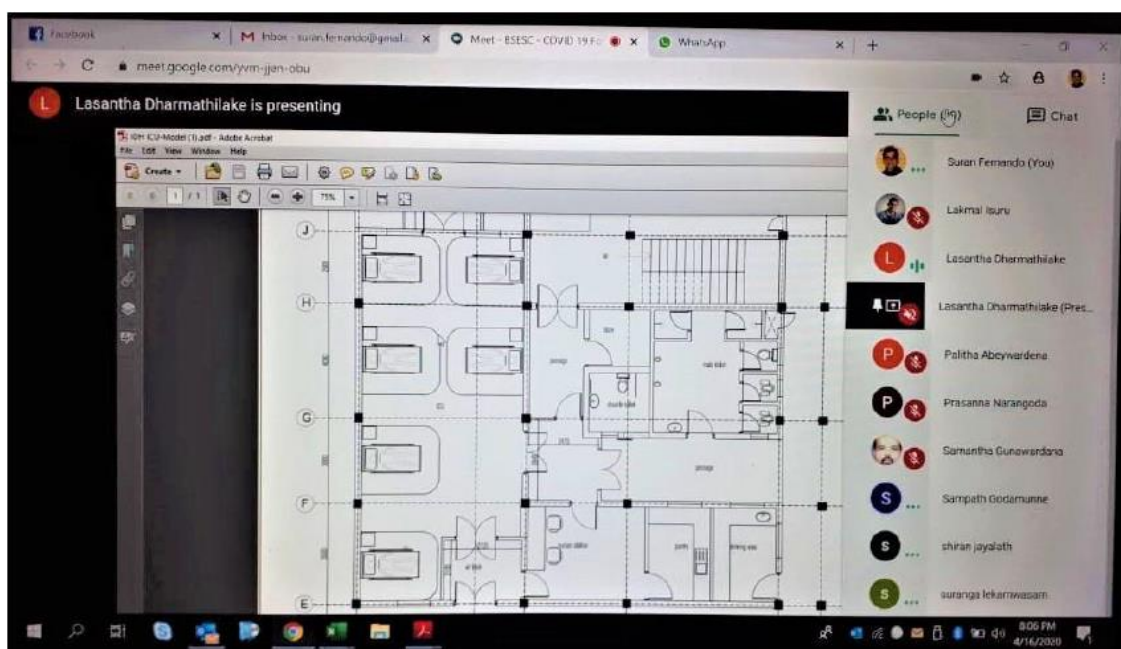


Image 1: Screen Shot of a Web Meeting of BSESC COVID-19 Sub Committee

(1) Modification of the MVAC System of the IDH ICU Complex #01

Infectious Diseases Hospital (IDH) in Angoda is the main focal location related to COVID-19 pandemic in which most of the COVID-19 patients diagnosed in Sri Lanka are getting treatments. Noting a comment made by a Senior Medical Consultant of IDH hospital in a live TV program telecast on 'Sri Lanka Rupavahini', BSESC Chairman immediately contacted Dr. Hasitha Atthanayake (Director, IDH) & expressed the willingness of IESL BSESC to assist to convert the standard MVAC (Mechanical Ventilation & Air Conditioning) system of its ICU Complex to cater specially for Covid-19 patients. On invitation of the IDH Director, BSESC team members visited the ICU Complex at IDH on 10th April 2020 and examined its existed MVAC system. It was identified that its MVAC system was not suited for the COVID-19 patients.



Image 2-4: Inspection & Discussions at IDH ICU Complex

Major point highlighted by the BSESC members were,

- Creating proper negative pressure condition in the isolated ICU rooms of the Corona patients in order to avoid possible contaminations to the HCWs (Health Care Workers)
- Increase the ventilation rates of the 100% fresh air system in the ICU by introducing additional blowers
- Getting the return air draft of the isolation rooms from a lower elevation (which is closed to the head position of the corona patient) to avoid the exposure of the HCWs to the return draft, as in its existed arrangement
- Proper high-performance filtration to be employed for both suction and return air
- Introduce additional air conditioners and an air curtains to the passages and nurses' station to avoid possible contaminations

Physical modification and renovation works were carried out by SL navy with the consultation and guidance of BSESC.



Image 5:
“Lankadeepa” Newspaper article on the IDH ICU Project done jointly by IESL & SL Navy

IDH ICU #01 Handing Over Ceremony:

This project was successfully completed & handed over to the hospital management on 28th April 2020 with a small ceremony organized by IDH in which Dr. Anil Jasinghe (DG of Health Services) was the chief guest.



Image 6-7: BSESC members at the Handing over ceremony of ICU #01

(2) Building Services Engineering Consultation in the proposed ICU Complex #02 in IDH

On the immediate requirement to enhance the ICU facilities at IDH Hospital due to the rapidly growing numbers of the Covid-19 infected patients, BSESC team expressed its willingness to support to convert another area in the IDH to an ICU. BSESC subcommittee has completed a preliminary design proposal to IDH and that was discussed in the meeting held on 15th of April 2020 at IDH hospital. The senior medical officers including the Director IDH has requested the BSESC team to go ahead with the proposal to present a detailed technical and financial proposal. With the support of a fellow members, BSESC is now in the last stage of the architectural/ MEP proposal.

The following are tasks handled by the BSESC.

- Conditioned air supply and exhaust arrangement inside the room while maintaining the recommended parameters (temperature, relative humidity, ventilation rates, proper negative pressures, number of air exchanges etc) as per the internationally accepted standards
- Proposing changes to the partition layout
- CFD (Computerized Fluid Dynamics) simulation of air flow inside the room
- Lighting and pressure monitoring arrangement



Image 8-11: Discussions with the Senior Medical Consultants and Nursing Staff of IDH

(3) Preparation of a Technical Engineering Guideline to Building Managers/ Building Operators in the post COVID-19 Operations in Commercial & Other Buildings

BSESC is now at the last stage in the process of compiling two separate guidelines for building operators. Those are;

- Technical guideline for the measures to be adopted in the operation of all types of Air Conditioning systems which are currently functioned at commercial & other buildings.
- Operational guideline which can be followed by the building operators to operate buildings safer, under the following 3 main aspects.
 - Implementation
 - Enforcing
 - monitoring & improvement

(4) Contribution to the “TOWARDS A NEW NORMAL” Guideline prepared jointly by WHO, MOH, GMOA & SJKMC by providing Engineering Inputs

BSESC Covid-19 Subcommittee volunteered to contribute with engineering inputs to the national guideline titled ‘INSTRUCTIONS FOR SELECTED PUBLIC ACTIVITIES/WORK SETTINGS FOR THE PREVENTION AND CONTROL OF COVID- 19’, published on 28th May 2020 jointly by the Ministry of Health and Indigenous Medical Services, World Health Organization (WHO), Government Medical Officers Association (GMOA) and Sri Jayawardenepura Kotte Municipal Council (SJKMC).

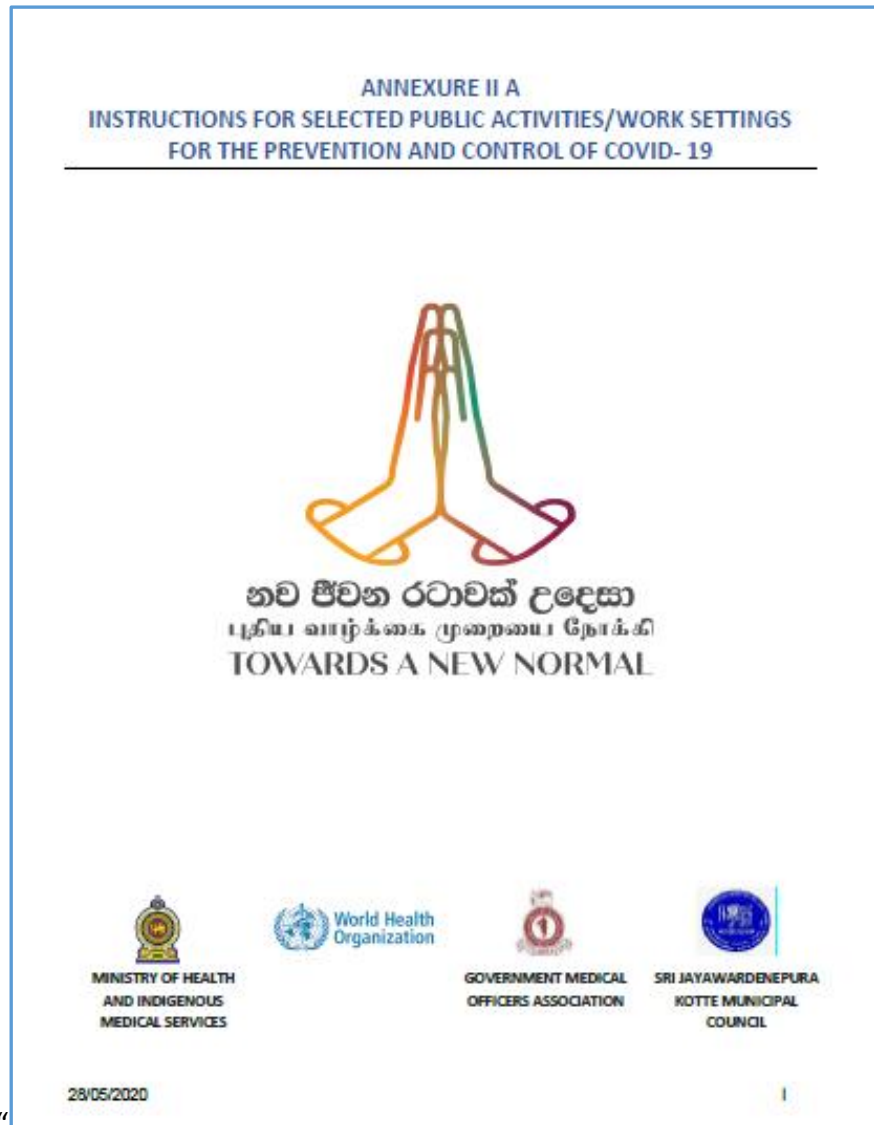


Image 12: Front Page of the National Guideline “Towards A New Normal”

The link to the guideline is given below.

http://www.health.gov.lk/moh_final/english/public/elfinder/files/feturesArtical/2020/46/Annexure%20II_Final_28052020_compressed.pdf?fbclid=IwAR3n76scXo2RW2_Bj6kIFAFNAykuZOYJhr1waFIMTM6QB_E6dkkThcPzMPKM

There are 46 members in the list of contributors to this national guideline in which there are only 5 non-medical/ health sector senior officers. Among that 5 non-medical/ health service experts, it is to be noted that the 4 names out of that 5 are the names of IESL BSESC members. This indicates that IESL BSESC is a party which has made a major contribution to this guideline.

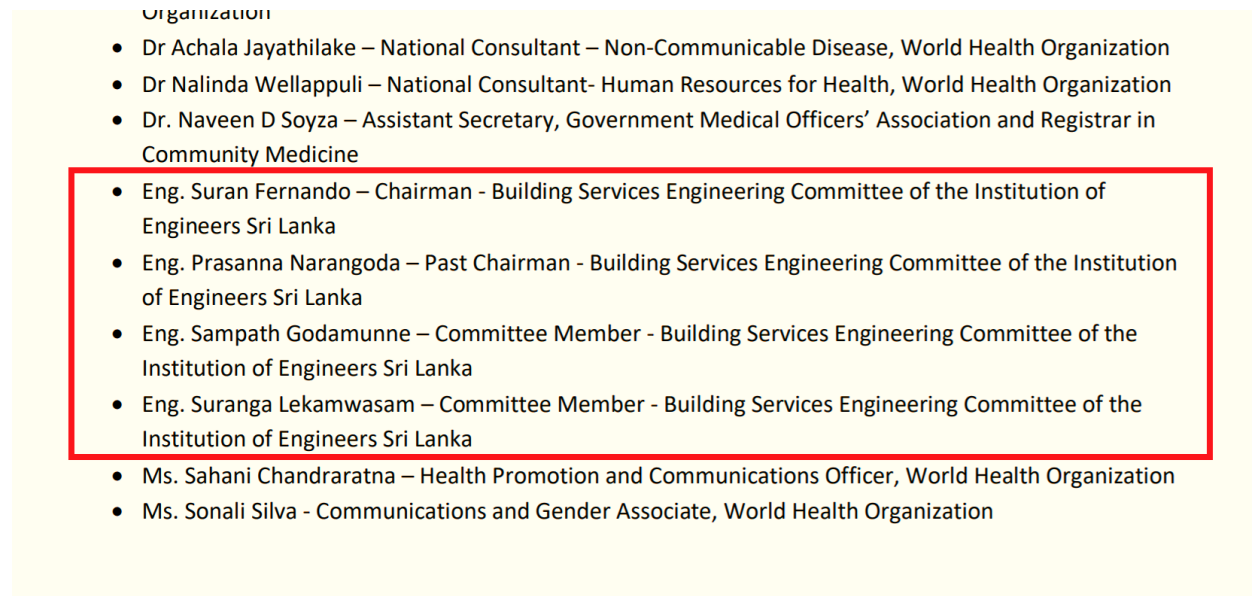


Image 13: Extract from the page (vi) of the Guideline Document which display the List of Contributors in which the names of the BSESC members are included

Now BSESC in the process of developing a separate annexure for the same guideline on the MVAC aspects related to the different work settings as per the request made by Dr. Susie Perera (Deputy Director General – Public Health Services).

Activity No: 2 - Special Web-Meeting for the BSESC members

On 05th of May 2020, a special BSESC web-meeting was conducted via IESL ZOOM platform to discuss the changes in the way forward plan for session 2019/ 2020 under the prevailing unexpected background. During the meeting, committee agreed to continue following tasks.

- Expanding the services for COVID 19 pandemic.
- CPDs on BSESC areas to be continued on online platform
- Public lectures shall be continued as webinars

SPECIAL WEB-MEET
05TH MAY 2020
BUILDING SERVICES ENGINEERING SECURITY COMMITTEE
SESSION 2019/2020

CONTINUING TASKS

Committee Decision	
	Planning to continue as webinars
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	Planning to continue
	Planning to complete all 3 monographs: Heritage Exploration, Plumbing & AC
	Getting involved as per the work plan followed by CIDA (once the situation

-The End -

Prepared by,

Eng. Lakmal Isuru
 (Secretary, BSESC)