

Responses to Queries from 17 November 2023 ECM Night

S/No	Queries	Response
1	<p>How to implement the smart ECM for road side drain construction?</p> <p>Can HDB implement the OKP system?</p> <p>If its really effective(2.0)and work mean . The authorities like HDB ,PUB,LTA etc can implement to new projects ?</p>	<p>OKP has shared the smart ECM system at one of LTA's Road projects. The presentation slides are attached. For further information, you may contact OKP directly.</p> <p>HDB's projects are contained within a defined boundary and contractor is usually on-site to activate and operate the ECM system. If the costs of the smart system drop significantly, HDB may consider implementing the smart system.</p> <p>HDB, PUB, LTA will study the scope of individual projects and implement a suitable ECM system which may include the smart ECM system.</p>
2	<p>What is the difference between ECO and ECMO?</p>	<p>Please refer circular dated 9 Dec 2014 regarding ECMO. https://info.pub.gov.sg/Lists/Circular/Attachments/31/circular_2014Dec09.pdf</p> <p>All construction sites of site area 0.5ha and above shall have at least a full-time site staff with ECMO qualification at the construction site.</p>
3	<p>What are the costs involved for OKP's ECM System for Version 1 & 2?</p> <p>Appreciate if able to disclose the cost of setup?</p> <p>What is cost of update system into old ECM system?</p>	<p>Please contact OKP for information on costs of the ECM system.</p>

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4	If there is flooding, can we just let the silty water flood into the drain? Usually I think it's yes, will this be called for interview by PUB and get fined?	<p>Contractor shall construct temporary drainage system and implement Earth Control Measures (ECM) in accordance to approved drawings before commencement of any earth works.</p> <p>The ECM system shall be reviewed, monitored, and maintained at all times. All collected silty water shall be treated and discharged within 10 hours after the rainstorm to prepare for the next rainfall event.</p> <p>It is not considered an ECM non-compliance, should there be silty water discharge that overflow from the site during intense storm, beyond the design capacity [COP clause 6.3.5 – Design criteria on ECM].</p> <p>Notwithstanding this, contractor could deploy sandbags/flood barriers etc to contain/minimise the silty discharges from flowing into public drains, for public safety. The contained silty water shall be pumped into the ECM holding tank, after the storm event.</p>
5	Will the slides be shared?	Please refer to attached PDF slides.
6	Qecp plan ECM plan for how many % down pour?	QECPs design ECM in accordance with the design criteria as stated in Code of Practice.
7	What is the OKPs system Genset fuel update?	Level sensors are used to monitor the fuel level in genset.
8	What is the total estimated ECM cost for HDB project including professional fee?	Please contact Kay Lim for information on costs of ECM for the HDB project.
9	Is there an official submission procedure to PUB for a closure/removal of ECM?	PUB does not require an official submission for removal of ECM. Contractor just needs to inform PUB via email [refer to COP clause 6.3.11].

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10	<p>Is the chemical mixing also done automatically within treatment plant in OKP system based on silty content value of incoming water or to be added manually?</p> <p>How does smart system work for chemical refill?</p>	<p>Yes, the chemical mixing is done automatically within treatment plant based on the characteristics of the incoming silty water.</p> <p>Level sensors monitor the chemical and send alerts for refill.</p> <p>Notwithstanding the above, ECMO shall also conduct regular inspections and maintenance of the ECM treatment plant to ensure all components of the plant are in working condition.</p>
11	<p>The QECP design on ECM is 80 mm of rain. But when we face rain above 110mm and more. The ECM holding tank can't cope with rain. What we can do to improve.</p>	<p>If the overflow of the detention tank is due to intense rain (ie. $\geq 80\text{mm/hr}$ of rain) which is beyond the design capacity of the holding tank, it is not considered as a ECM non-compliance.</p> <p>Notwithstanding this, contractor could deploy sandbags/flood barriers etc to contain/minimise the silty discharges from flowing into public drains, for public safety. The contained silty water shall be pumped into the ECM holding tank, after the storm event.</p>
12	<p>How would us able to contact OKP for the setup details?</p> <p>Can share where can get 200\$ silt stopper</p>	<p>Please refer to PDF slides for the setup details. For further information, you may contact OKP directly.</p> <p>For further info on silt stopper, you may contact Kay Lim directly.</p>
13	<p>If the soil is highly precipitable like sand. Can we use run off coefficient less than 0.65 with the support of percolation calculation? Large sandy areas.</p>	<p>The design of ECM shall be in accordance with the design criteria as stated in Code of Practice. For project-specific design details, please consult a QECP.</p>

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14	Can u share the sample daily & monthly ECMO checklist. thank you.	Please refer to PUB website for sample checklist. QECP/Contractor shall develop an ECM checklist based on specifics of the individual project.
15	What is the typical treatment system used in the treatment tank?	Please refer to leaflet from the various treatment plant suppliers. If necessary, contractors can invite suppliers to brief the construction team.
16	Do we need update PUB, whenever shifting the ECM system internally on site, but the capacity of ECM pond remains same in another location?	<p>If the capacity of ECM pond remains the same and shifting of the pond does not increase the risk of silty discharge, Contractor/QECP are not required to submit revised ECM plans to PUB for approval when they shift the ECM system <u>internally on site</u>.</p> <p>Nevertheless, contractor/QECP are reminded that design submission should properly capture the ECM design for different phases of the construction. If there are significant changes to the ECM design, revised ECM plans shall be submitted to PUB for approval. The revised ECM plans must be kept on site and made available to the PUB upon request.</p>
17	What should we do if the TSS sensor in our 2.0 system raises a faulty alarm?	Please work with the supplier to fine-tune the system and conduct regular maintenance to ensure no faulty alarms.
18	QECP is also required to inspect the ECM provision on site during the heavy downpour not just after the rain. Has this requirement being enforced?	If there is any silty discharge from the construction site, Contractor/ECMO shall take immediate actions on site to rectify the issues, and work with the QECP on preventive measures and keep PUB informed, at all times not limited to heavy downpour only.

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19	Is PUB check and approve those ECM system supplier to ensure those system work well?	ECM product / technology suppliers are to ensure that their products and treatment plants are able to effectively manage and treat silty water generated from the construction site, when installed and operated accordingly to supplier's instructions/recommendations. Contractor/ECMO can inform PUB should they encounter any compliance issues with the ECM products or treatment plants installed at their sites.