Sharing on Mechanical Issues

Fire Safety Requirements for Building under Construction

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Background

- There was a surprise internal audit at six contracts under construction in Dec 2013.
- The main objective was to ascertain that all dry rising mains were installed progressively according to Fire Code. ➡



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Accountability

- According to Fire Code & HDB Specs, Contractor's PMs should take the necessary measures for the site enforcement based on the construction progress. ➡
- Consultant's QPs should also monitor and advise the PMs accordingly.



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Penalties

- HDB reserves the right to impose charges based on Clause 44.1 of the standard specifications which states that administrative charges will be imposed on the contractor under the "Nuisance and Irregularities" clause for non- compliance.



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Follow-up Actions

- Demerit points imposed to contractors under Clause 44.1 of Building Specs.
- Consultants are reminded to work with contractors to prevent recurrence.

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Latest Update

- Recent site audit by TMM&E still found non-compliance.

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Measures to Improve Service Level of Registered Inspector (M&E)

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Issues Encountered with RI

- RI went on long vacation leave – no inspection
- Rejected requests from PDs to attend meeting to resolve issues



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Interim Measures (Jan 14)

- New termination clauses were included in the Conditions for Contract
- Specified clearly that RI should be available for inspections throughout the agreed schedule with the consultant/contractor
- RI's scope of work to include attending meetings initiated by HDB

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New Measure (Apr 14)

- Specify that RI to conduct pre-inspection discussion with Consultant for the first residential block & carpark
- Critical items which have to comply with fire safety
- Reduce number of non-compliances during actual inspection
- Consultant should ensure that the site is ready for RI inspection

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New Measure (May 14)

- Specify that RI to arrange a covering RI if he intends to take long leave
- SCDF has agreed to such arrangement
- Consultant to check the specs with Contract Manager

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Code of Practice on Surface Water Drainage

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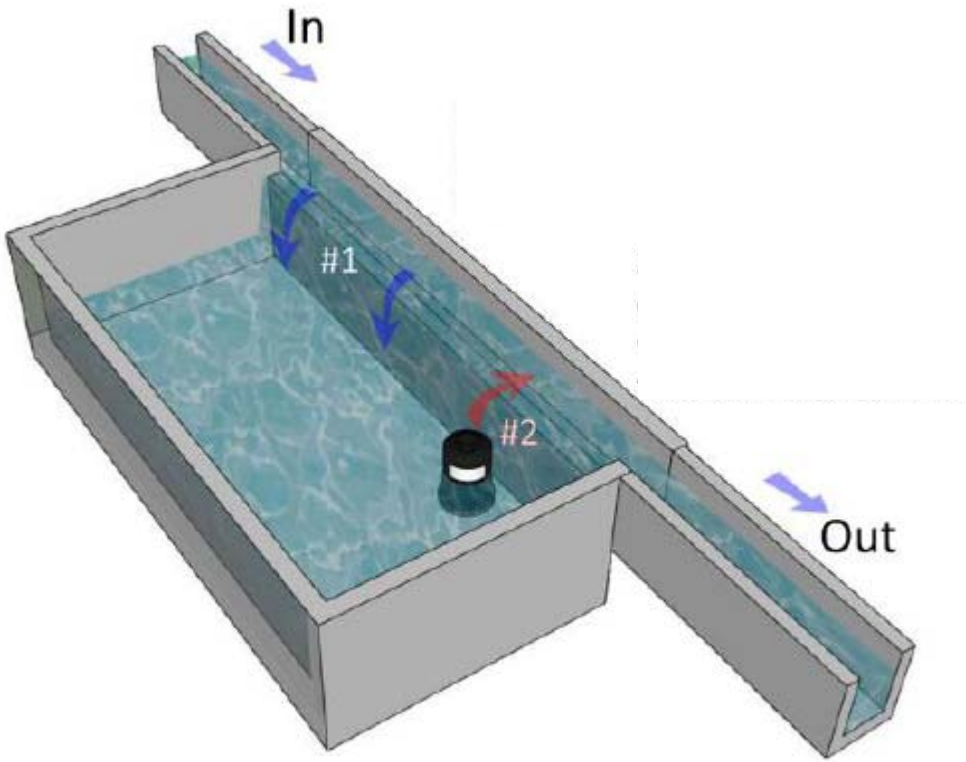
Background

- From 1 Jan 14, max allowable peak runoff to be discharged to the public drains will be calculated based on a runoff coeff of 0.55, for design storms with a return period of 10 yrs & for various storm durations up to 4 hrs.

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Impact on HDB projects

- All new projects need detention tanks.
- Majority needs pumping system.



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Impact on M&E consultants

- Check with Arch & C&S engineer on the requirement of pumping system.
- Design pumping system according to CP & Technical Guide for On-site Stormwater Detention Tank Systems.
- No generator set for pumping system is required.
- Control panel has to be sheltered.
- Pumps to be accessible for maintenance.

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Timber Mock Up & Sample Unit Observations

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Gas Ventilation

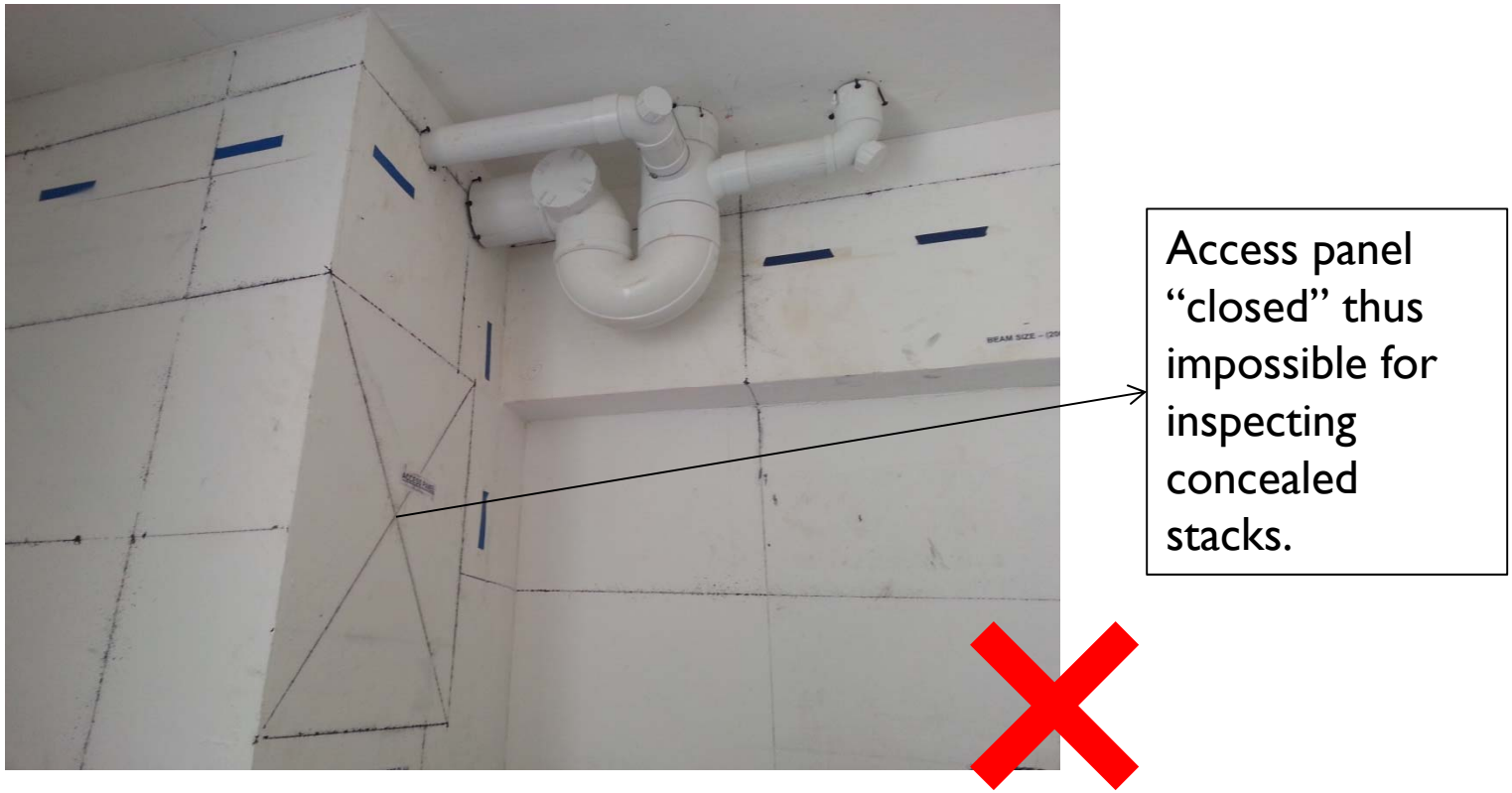
- Gas Ventilation Opening to be Provided Along Kitchen Cabinet Installed in SA Units.



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Access Panel

- Access Panel for Inspection of Concealed Stacks to be “Opened”.



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Access Panel

- Access Panel for Inspection of Concealed Stacks to be “Opened”.



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Washing Machine Short Pipe

- Location of Short Pipe for Washing Machine at Service Yard Area.



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Space for Washing Machine

- A Minimum of 650mm to be Catered for Placing of Washing Machine at Service Yard Area.



Distance between the edge of the service yard wall to the edge of the floor trap is at least 650 mm.

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Sanitary pipes

- Orientation of Cleaning Eyes Provided Along Discharge Pipes to be Accessed Easily



Cleaning Eye is facing away from A/C Ledge Area. Thus may not be easily accessible.

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Sanitary Pipes

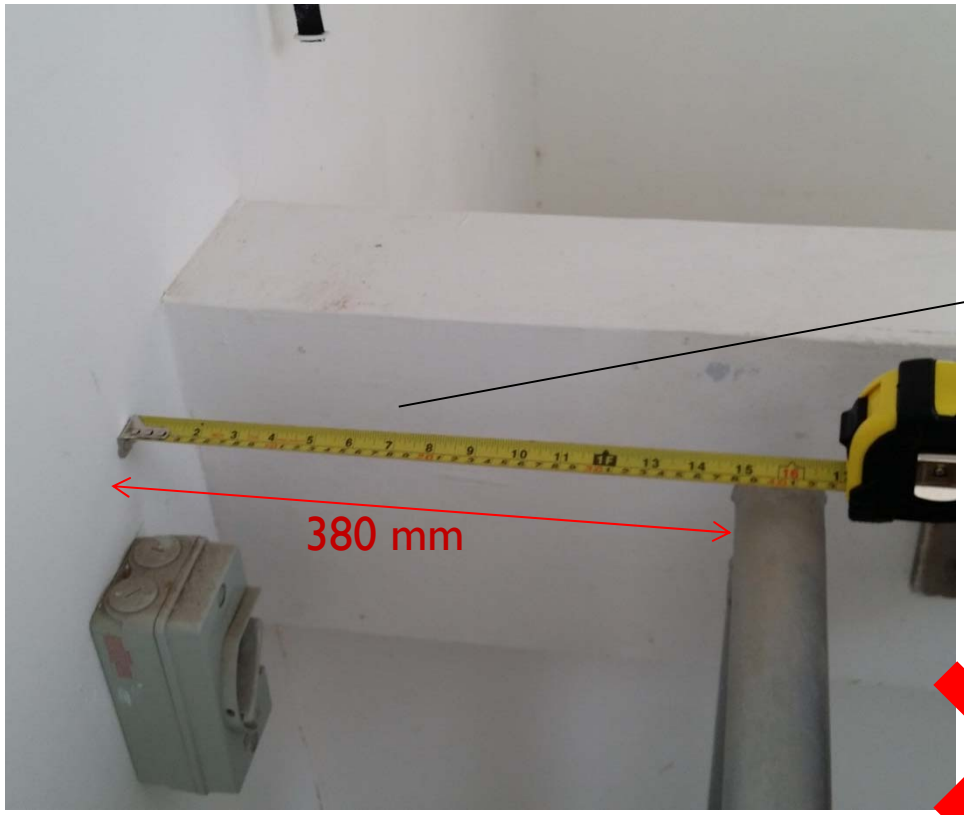
- Orientation of Cleaning Eyes Provided Along Discharge Pipes to be Accessed Easily



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Air-con Ledge

- Sufficient Access Area Provided for Entering Air-con Ledge Area.



The provision of 380 mm may pose some difficulty for entering the a/c ledge area.

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Air-con Ledge

- Sufficient Space to be Provided for Maneuvering Around A/C Ledge Area.



Distance between the railing and the edge of the stack is 370 mm. May pose some difficulty for maneuvering around the a/c ledge area

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Air-con Sleeve

- Provision of adequate space between sanitary pipe & air-con sleeve.



To ensure that sufficient area is provided between the air-con sleeve and the sanitary discharge pipe to facilitate the entry of the air-con pipe from the a/c ledge area.

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Air-con Sleeve

- Provision of Air-con Sleeve.

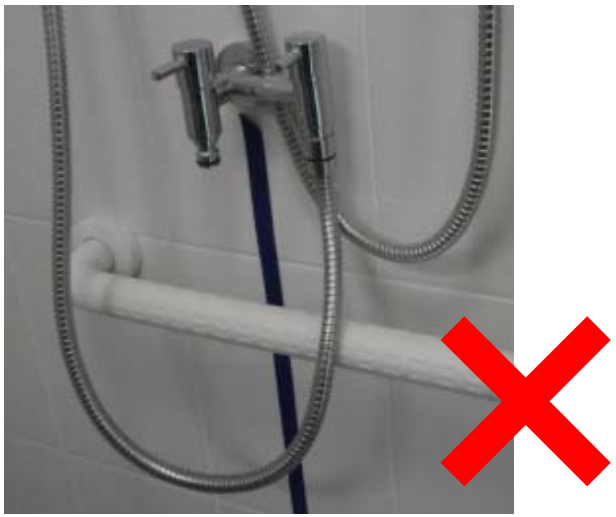
  - To ensure that there is a feasible route for future air-con pipes.
  - For air-con sleeve outside box-up area, the orientation should facilitate the way in which the air-con trunking will be run along the bathroom area in future.

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Water Heater (SA)



- Long flexible hose in the way of grab bar



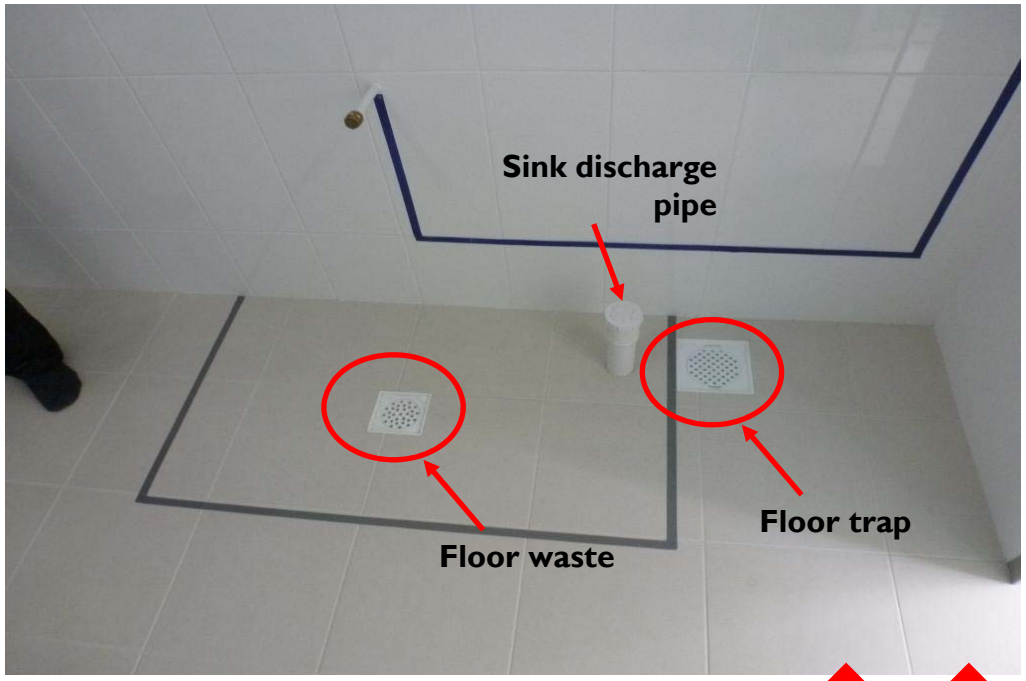
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Other Design Issues

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Floor Waste (Kitchen)

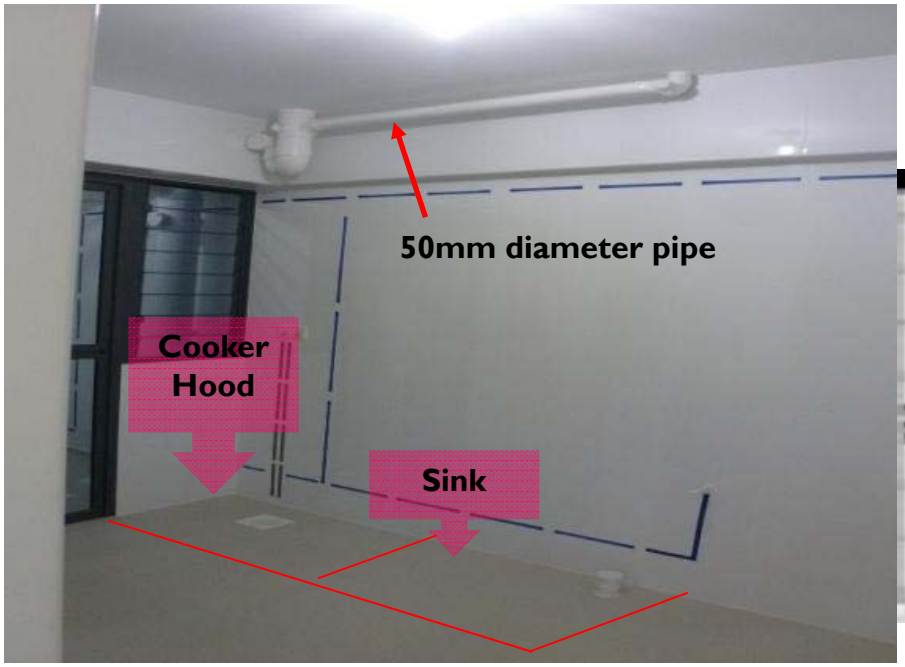


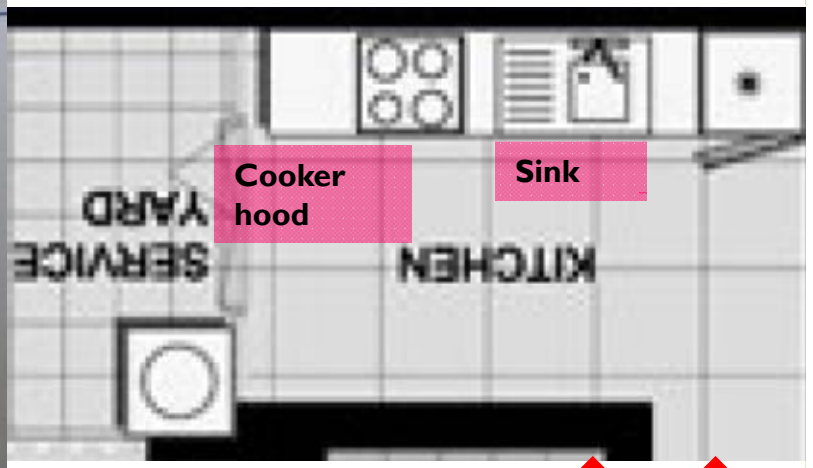


- Additional floor waste in the kitchen not HDB norm

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Discharge Pipe in Kitchen





- Discharge pipe runs across the kitchen
- Unsightly and reduces cabinet storage space

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Discharge Pipe in Kitchen





- Complaint by resident

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Common Area Taps

- PUB has requested that all common area taps have to be locked.
- HDB will update the specs
- Consultant may also include this in the notes for drawings.

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HDB PC Water Tanks

- HDB standard PC tanks are shown in our Guide Drawings.
- Ring tanks for potable water & fire protection may have different capacities.
- Consultants should check the capacities & dimensions accordingly.
- For multi-generation units, provision should be 950L per unit.

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Brand Names

- Pls inform Arch that brand names of sanitary fittings should not be specified in supplementary specs.

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Thank You