Water for All
Conserve, Value, Enjoy

Dialogue with Professional Bodies

Building Plan Unit
OUTLINE

1. Service Improvement
2. Requirements on Location and Leak Tightness Test of Sanitary Pipes
3. Enhancements to the Procedure for Water Service Works
Service Improvement

We launched a new online self-service system for water services plan in Apr 2015.

<table>
<thead>
<tr>
<th></th>
<th>Old Approach</th>
<th>New E-Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process</td>
<td>Approach 2 different agencies (NEA for SIP/DIP) and write to WSN for WSPs</td>
<td>One stop e-service where users can ask for all 3 types of plans from PUB</td>
</tr>
<tr>
<td>Cost</td>
<td>$40 per mapsheet</td>
<td>$14 per mapsheet</td>
</tr>
<tr>
<td>Typically response time</td>
<td>5-7 working days</td>
<td>Within 3 working days</td>
</tr>
</tbody>
</table>
Service Improvement

Preview of new e-services
1. Online Consultation Booking
2. Submission Status Check

- The new e-services will be launched in Oct.
- There will be a transition period where walk-in consultations are still available until Dec 2015.
- Priority will be given to QPs with an appointment.
- After the transition period, consultations by appointment would replace walk-ins.
Dear Sio Wei Hurng,

Your consultation appointment is booked at PUB office located at 40 Scotts Road, ENV Building, Level 2 on 08/10/2015 from 10:00:00 to 10:40:00.

Please check your e-mail to confirm appointment.

All queries on submissions may be made through a hotline +65 6731 3512 or email (pub_bpu@pub.gov.sg). Please call hotline only during office hours between 9am to 5pm.
Dear Sio Wei Hung

Your consultation appointment is booked at PUB office located at 40 Scotts Road, ENV Building, Level 2 on 08/10/2015 at 10:00:00 to 10:40:00.

Please click here to confirm your appointment booking.

If you wish to change or cancel the consultation, please visit PUB QP Portal Consultation Booking page

Your booking reference number: BR2015105161554696

Best Regards,

Building Plan Unit, PUB, tel: 65313512

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This message was sent from a notification-only email address. Please do not reply to this message. Should you require any assistance, please contact us at 67313512 or email pub_bpu@pub.gov.sg. For more information on the plan process, please visit us at BPU.
Service Improvement

We will be revising our response time for major submissions from 21 to 14 days.

<table>
<thead>
<tr>
<th>KPI</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of case cleared within 7 days</td>
<td>36.9%</td>
</tr>
<tr>
<td>% of cases cleared within 14 days</td>
<td>76.6%</td>
</tr>
<tr>
<td>% of cases cleared within 21 days</td>
<td>94.2%</td>
</tr>
</tbody>
</table>

More than 80% of the submission are cleared with the first 2 submission.

<table>
<thead>
<tr>
<th>Type of Submission</th>
<th>Typical Response Time Current</th>
<th>Typical Response Time Revised</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major (include DC, DP and CSC submissions)</td>
<td>21 working days</td>
<td>14 working days</td>
</tr>
</tbody>
</table>
Requirements on Location and Leak tightness Test of Sanitary Pipes

PUB Water Reclamation (Network) Department

06 Oct 15
Outline

• Location of Sanitary Pipes over Dry Areas, Water Tanks
• Leak tightness Tests to Sanitary Pipes and Drainlines
Recent many feedback by owners on sanitary pipes at bedroom /kitchen

**Case 1:** A unit below a penthouse unit. Owner saw:
- big box suspended in the ceiling to conceal the sanitary pipes
- low height clearance and uneven false ceiling
- Several other units having the same issue.
- They sought compensation from developer

**Case 2:** A unit at ground floor
- Burst offset pipe of common discharge stacks at ceiling outside kitchen area
- After repaired, pipe burst again a few weeks later
Recent feedback on Sanitary Pipes over Water Tank:

Potable water tank:

Within the balancing tank:
Recent feedback on sewage smell in many units

- Leak in WC pans from the unsealed gap between pan collar and discharge pipe.

- Leak in sanitary stacks in common shaft. 2 holes were found in stack pipe thru CCTV inspection.
Toilet bowl/Sanitary Pipes over Dry Areas (such as bedroom, study room, living /dining area) or Kitchen

Owner objection.
- Superstitious reasons
- Concerns on leak, noise, nuisance during maintenance,
- Food contamination (for pipe above kitchen cooking area)

Such layout of sanitary pipes can be avoided. Good Practices for toilet over dry area:

- Use P-trap WC, Shallow FT (not for kitchen)
- Prefab Bath Unit
Prefabricated Bath Unit

- Eliminates pipes protruding to below unit
- Shallow floor trap, P connection WC
Location of Sanitary Pipes

Current Regulations: No sanitary pipes shall be laid:
- in any place where it can endanger the health or safety of any person.
- over, above or across any potable water tank, electrical transformer or switch gear.

PUB’s COP will be revised. QPs/Plumbers are reminded:

- No sanitary pipes shall be located above potable water tanks and electrical transformers/switchgears.

- No sanitary pipes shall be located above swimming pools and balancing tanks. If unavoidable, adequate protection measures shall be provided to ensure that they do not cause any health and safety hazards. These measures must be clearly illustrated in the detailed plans.
For strata titled and multi-storey buildings
(eg HDB block, apartment, condominium, etc):

• no sanitary pipes from adjacent dwelling units shall be located within the dry areas
  (such as bedroom, living room, dining room, study room, etc) of a dwelling unit.

• no sanitary pipes serving toilet bowls shall be located within the kitchen area of
  any dwelling unit.

• any common sanitary pipe maintained by the MCST or Town Councils shall only be
  located either in common areas or in the toilet/bathroom.

Common sanitary pipes may be located outside the dwelling unit (eg aircon ledge) if
adequate protection measures are provided to ensure that they do not pose health and
safety hazards or give rise to maintenance problems.
Leak tightness Tests to Sanitary Pipes and Sanitary Drainlines, Sewers

Remind QPs and Plumbers to ensure that:

- only approved pipe/fitting materials that comply with PUB’s prescribed standards are used,

- carry out tests for water/air tightness of the sewerage system, sanitary drain-lines and sanitary plumbing system as specified in the COP:
  
  (a) hydrostatic (water tightness) test for the sewers, sanitary drainlines, inspection chambers and sewers/manholes as specified in the current Code of Practice or in accordance with BS EN 1610;
  (b) air tightness test for the sanitary plumbing system (ie discharge pipes/stacks and ventilating pipes/stacks, etc) in accordance with BS EN 12056-2 as specified in the current Code of Practice.

- QP to submit the material test reports/certificates and water/air tightness test results prior to the site audit inspection and test by PUB.
Enhancements to the Procedure for Water Service Works
SE Lee Cai Jie, WSN
Enhancements to the Procedure for Water Service Works

• Current Procedure for Water Service Work

• Enhanced Measures to the Current Procedure for Water Service Work

• Review of Joining Methods for Potable Water Applications
Current Procedure for Water Service Work

- Since Nov 2001, a simplified procedure for water supply application was adopted by PUB

Water service workers to notify PUB before commencement of work via Notification of Water Service Work form

Water service workers to certify that water service installation is completed according to Act, Regulations, etc after completion via Certificate of Satisfactory Completion of Water Service Work (CSC) form
Enhanced Measures to the Current Procedure for Water Service Work

1. Enhancements to the existing Notification of Water Service Work and Certification of Satisfactory Completion forms

2. Indication of joining methods in schematic drawings

3. Enhanced water sampling by PEs/LPs for new developments

Targeted timeline for implementation:
For all notification of water service work submitted to PUB from Q1 2016
Enhancements to the Existing Notification of Water Service Work and Certification of Satisfactory Completion forms

Layout to be changed

Water for All: Conserve, Value, Enjoy
# Indication of Joining Methods in Schematic Drawings

Schematic drawings to indicate clearly the joining methods (i.e. brazed joints, press fitting, compression joint, mechanical joint, etc)

## Typical indication of water fitting material in schematic drawings

<table>
<thead>
<tr>
<th>PIPE MATERIALS, JOINTING AND TEST PRESSURES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EXTERNAL PIPES (BURIED OR EXPOSED)</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NOMINAL BORE (mm)</th>
<th>MATERIAL</th>
<th>TYPE OF JOINTS</th>
<th>TEST PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIA 75 AND ABOVE</td>
<td>DUCTILE IRON TO BS EN545 WITH CEMENT INTERNAL LINING</td>
<td>FLANGED</td>
<td></td>
</tr>
<tr>
<td>BELOW DIA 75</td>
<td>STEEL PIPES TO SS 367 WITH uPVC LINING</td>
<td>SCREW JOINTS TO BS 21 THREADS</td>
<td>1200 kPa</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>INTERNAL PIPES</strong></th>
</tr>
</thead>
</table>

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<tr>
<th>NOMINAL BORE (mm)</th>
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<th>TYPE OF JOINTS</th>
<th>TEST PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIA 75 AND ABOVE</td>
<td>DUCTILE IRON TO BS EN545 WITH CEMENT INTERNAL LINING</td>
<td>FLANGED</td>
<td></td>
</tr>
<tr>
<td>BELOW DIA 75  (SUBJECT TO LOAD)</td>
<td>COPPER TUBES TO BS EN1057</td>
<td>CAPILLARY FITTINGS</td>
<td>700 kPa</td>
</tr>
<tr>
<td>BELOW DIA 28 (EXPOSED)</td>
<td>COPPER TUBES TO BS EN1057</td>
<td>COMPRESSION FITTINGS</td>
<td></td>
</tr>
<tr>
<td>BELOW DIA 75 EMBEDDED IN ALL FORMS OF MASONARY AND/OR NOT SUBJECT TO LOAD</td>
<td>COPPER TUBES TO BS EN1057</td>
<td>CAPILLARY FITTINGS</td>
<td></td>
</tr>
<tr>
<td>HYDRAULIC PIPES (ALL SIZES) AFTER THE HYDRAULIC TANK</td>
<td>GALVANISED STEEL</td>
<td>SCREW JOINTS TO BS 21 THREADS</td>
<td>1200 kPa</td>
</tr>
<tr>
<td>HYDRANT PIPES (ALL SIZES)</td>
<td>DUCTILE IRON TO BS EN545 WITH CEMENT INTERNAL LINING</td>
<td>FLANGED</td>
<td></td>
</tr>
</tbody>
</table>

(ALL WATER FITTINGS USED IN WATER SERVICE INSTALLATION SHALL COMPLY WITH STANDARDS STIPULATED BY PUB)
Enhanced Water Sampling by PEs/LPs for New Developments – Developments with Potable Water Tanks

Existing Requirements

- CP 48 stipulated for water service worker to carry out chemical and bacteriological analyses for potable water tanks upon cleaning and sterilisation of water tanks, before putting the tanks to use

- CP 48 also stipulated chemical and bacteriological analyses to be carried out for service pipes upon cleaning and sterilisation

Enhancement

- In addition to the existing requirements, water service workers are to conduct water sampling for at least one potable water tank and one tap/mixer per development in accordance with the sampling parameters stipulated in Table 1, upon the cleaning and sterilisation of the water service installations

- The water sampling shall be carried out by water service workers prior to the application of the Temporary Occupation Permit (TOP) for the development
Enhanced Water Sampling by PEs/LPs for New Developments – Developments w/o Potable Water Tanks

Existing Requirements

• CP 48 stipulated for water service worker to carry out chemical and bacteriological analyses for service pipes upon cleaning and sterilisation

Enhancements

• In addition to the existing requirements, water service workers are to conduct water sampling for at least one tap/mixer per development in accordance with the sampling parameters stipulated in Table 1, upon the cleaning and sterilisation of the water service installations.

• The water sampling shall be carried out by water service workers prior to the application of the Temporary Occupation Permit (TOP) for the development
Any query or feedback on the proposed enhancements to the existing simplified procedure for water supply?
Review of Joining Methods for Potable Water Applications

Type of Joints

- Capillary Joints
  - Soldering
  - Brazing
  - Welding

- Mechanical Joints
  - Compression
  - Push on/Press fit
  - Threaded

Not allowed for potable water application in Singapore

PUB is currently looking at alternatives to capillary joint for potable water applications
Thank you