



# MALAYSIAN STANDARD

MS 2526-3:2012

## Urban stormwater management - Part 3: Quality design fundamentals

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## **Committee representation**

The Industry Standards Committee on Building, Construction and Civil Engineering (ISC D) under whose authority this Malaysian Standard was developed, comprises representatives from the following organisations:

Association of Consulting Engineers Malaysia  
Construction Industry Development Board  
Department of Irrigation and Drainage Malaysia  
Department of Standards Malaysia  
Dewan Bandaraya Kuala Lumpur  
Federation of Malaysian Manufacturers  
Jabatan Bomba dan Penyelamat Malaysia  
Jabatan Kerajaan Tempatan  
Jabatan Kerja Raya Malaysia  
Malaysian Timber Council  
Malaysian Timber Industry Board  
Master Builders Association Malaysia  
Pertubuhan Arkitek Malaysia  
Projek Lebuhraya Utara-Selatan Berhad  
Real Estate and Housing Developers' Association Malaysia  
SIRIM Berhad (Secretariat)  
Suruhanjaya Perkhidmatan Air Negara  
The Cement and Concrete Association of Malaysia  
The Institution of Engineers, Malaysia  
Universiti Sains Malaysia  
Universiti Teknologi Malaysia

The Technical Committee on Planning and Design of Urban Stormwater Management Facilities which developed this Malaysian Standard is managed by the Department of Irrigation and Drainage Malaysia in its capacity as an authorised Standards-Writing Organisation and consists of representatives from the following organisations:

Association of Consulting Engineers Malaysia  
Construction Industry Development Board  
Department of Environment  
Department of Irrigation and Drainage Malaysia (Secretariat)  
Department of Town and Country Planning  
Jabatan Kerja Raya Malaysia  
Master Builders Association Malaysia  
Ministry of Housing and Local Government  
National Landscape Department  
Pertubuhan Arkitek Malaysia  
Real Estate and Housing Developers' Association Malaysia  
SIRIM Berhad  
The Institution of Engineers, Malaysia

### **Co-opted members:**

Department of Irrigation and Drainage Malaysia  
PWM Associates Sdn Bhd

## Foreword

This Malaysian Standard was developed by the Technical Committee on Planning and Design of Urban Stormwater Management Facilities under the authority of the Industry Standards Committee on Building, Construction and Civil Engineering. Development of this standard was carried out by Department of Irrigation and Drainage Malaysia which is the Standards-Writing Organisation (SWO) appointed by SIRIM Berhad to develop standards for urban stormwater management.

This Malaysian Standard on Urban stormwater management is part of a series of standards developed for stormwater management design practices in Malaysia. The series from Parts (1 to 20) cover the majority of stormwater facilities, from quantity design to erosion and sediment control. However, Parts (1 to 3) of these standards set the general criteria, common to all facilities, needed to design for either stormwater quantity or quality control and Parts (4 to 20) of these standards set the specific criteria for the design of the individual facility or Best Management Practices (BMP).

These standards are derived mainly from the *Urban Stormwater Management Manual for Malaysia, 2nd Edition (MSMA 2nd Edition)*, which already contains extensive explanatory material as well as detailed technical guides, including work examples. As such, these standards do not replicate the design manual. Rather, they summarise the pertinent aspects of the manual which the user shall comply with as minimum requirements in designing stormwater facilities.

It is hoped that with these standards, stormwater management in the country can be properly implemented and regulated in minimising the present haphazard flash floods as well as deterioration in water quality resulting from developing and developed catchment areas.

This Malaysian Standard does not purport to include all the necessary provisions of a contract. Users of Malaysian Standards are responsible for their correct application.

MS 2526 consists of the following parts, under the general title *Urban stormwater management*:

*Part 1: Design acceptance criteria*

*Part 2: Quantity design fundamentals*

*Part 3: Quality design fundamentals*

*Part 4: Roof and property drainage*

*Part 5: On-site detention*

*Part 6: Rainwater harvesting*

*Part 7: Detention ponds*

*Part 8: Infiltration facilities*

*Part 9: Bioretention systems*

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### **Foreword (continued)**

*Part 10: Gross pollutant traps*

*Part 11: Water quality ponds and wetlands*

*Part 12: Erosion and sediment control*

*Part 13: Pavement drainage*

*Part 14: Drains and swales*

*Part 15: Pipe drains*

*Part 16: Engineered channels*

*Part 17: Bioengineered channels*

*Part 18: Culverts*

*Part 19: Gate and pump*

*Part 20: Hydraulic structures*

Compliance with a Malaysian Standard does not in itself confer immunity from legal obligations.