

ILAM RESEARCH WEBINAR SERIES 2020



Feasibility Study on the Establishment of ILAM Standard Specification for Softscape

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Introduction

This exercise was carried out to initiate a feasibility study on the potential to establish the standard specification of softscape works by the Institute of Landscape Architects Malaysia (ILAM). This study was found to be necessary and should be given priority based on the facts that at present, there is no specific standard specification for softscape works available in Malaysia. As a result, the absence of the document leads to the limitation in quality control for landscape works in general due to lack of standardization that can be verified by relevant authority, thus protecting all parties involved in the project. The feasibility study covered the key aspects related to the development of standard specification for softscape works in landscape development projects in Malaysia.

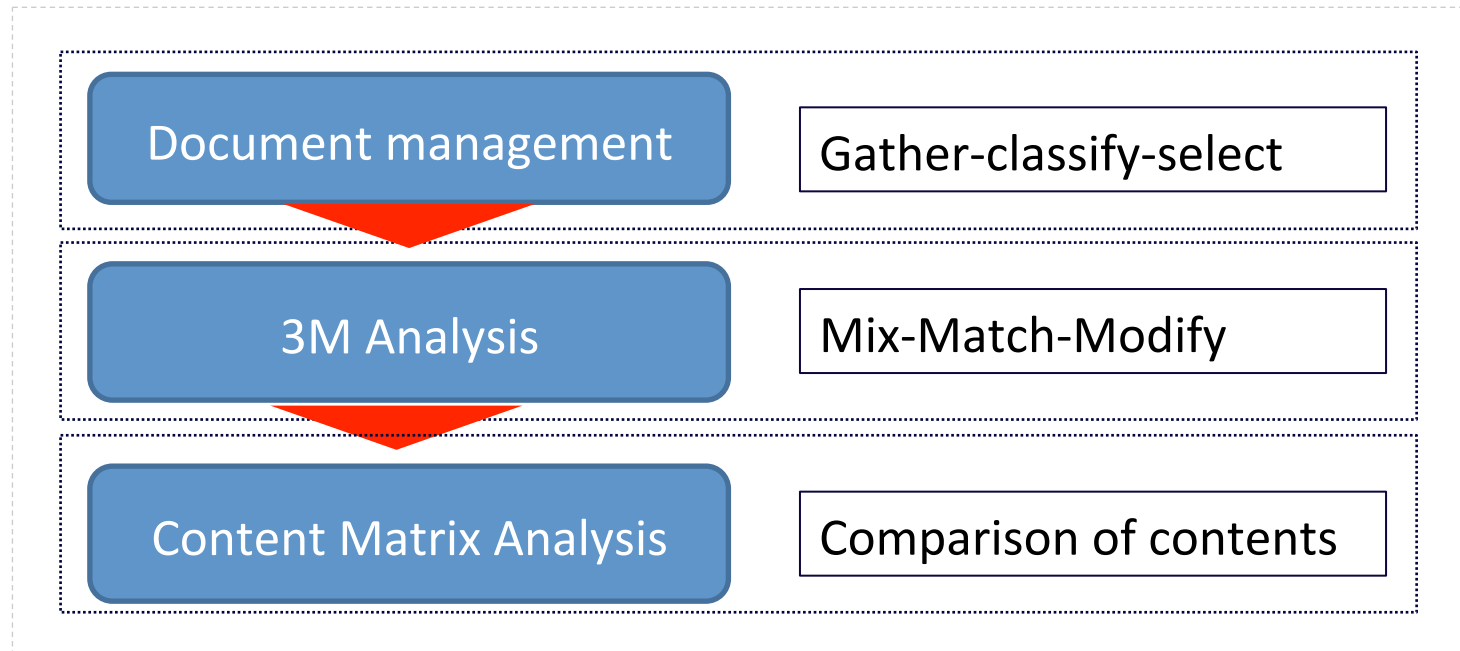
Aim & objectives

- i. To compile and conduct content analysis of existing documents of softscape specifications and planting guidelines commonly used for landscape development projects in Malaysia.
- ii. To conduct needs analysis for softscape specifications of Softscape works in the field of landscape architecture in Malaysia.
- iii. To recommend to ILAM on the possibility of establishing standard specifications for softscape works in Malaysia.

Methodology

The study started with the process of collecting published documents of softscape specifications and planting guidelines commonly used for landscape development projects from agencies related to the field of built environment in Malaysia as a reference for the feasibility study. The content analysis was carried out through the Mix-Match-Modify method (3M) where process began with the establishment of a pool of all topics/areas from all selected documents. Second stage of the process was matching up the topics/areas that have similar meaning and the third process was modifying the words of the topics/areas to represent the group of the topics/areas established in the second stage. The modified list of topics/areas was established and used as a basis of the documents content analysis. The findings of the content analysis will be the basis for the feasibility study on the establishment of Standard Specification by ILAM.

Research flow



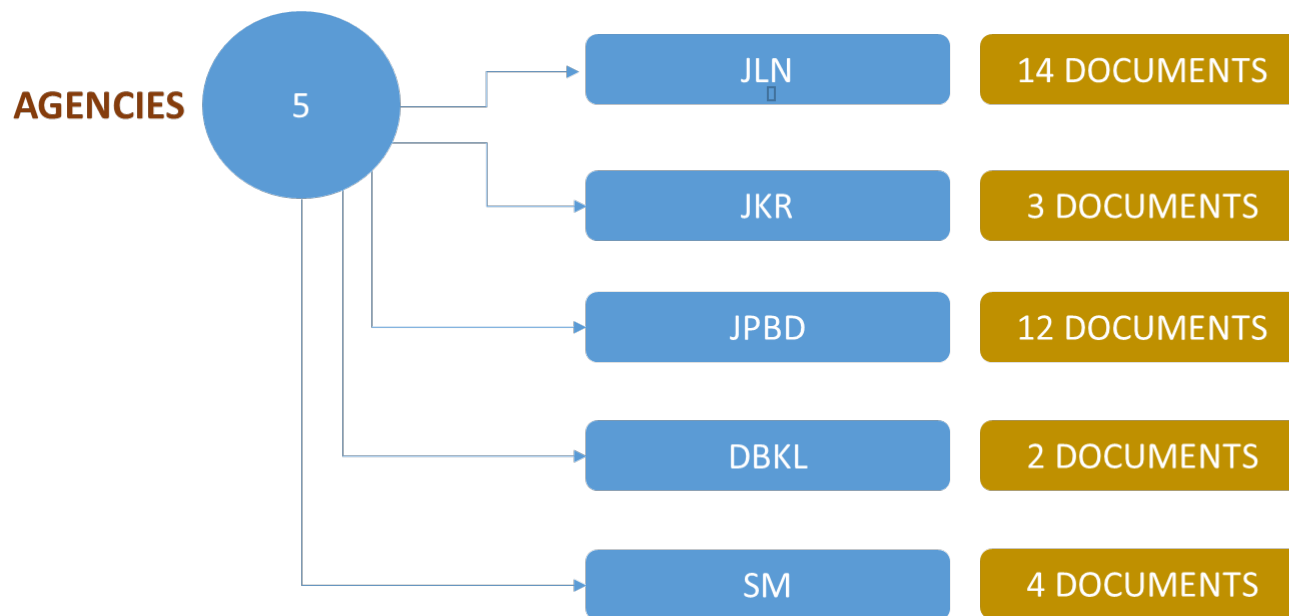
Key findings

Document collection and management

The study manage to collect 35 documents from 5 agencies namely Jabatan Landskap Negara (JLN), Jabatan Kerja Raya (JKR), Jabatan Perancangan Bandar dan Desa (JPBD), Dewan Bandaraya Kuala Lumpur (DBKL) and Standard Malaysia (SM). The study continued with the content analysis to identify the documents that consist of the content related to softscape works. Out of 35 documents related to landscape developments collected from 5 agencies, 16 documents have been identified to be consisting of contents related to softscape works. Further study has been carried out on the 16 documents that consist of contents related to softscape works to identify the documents that consist of the contents that have been written the specification format. Out of 16 documents related to softscape works, the study managed to identify 11 document from 3 agencies that consist of contents that have been written in the specification format. The 11 documents identified were selected to undergo the detail content analysis.

Key findings

Document collection and management

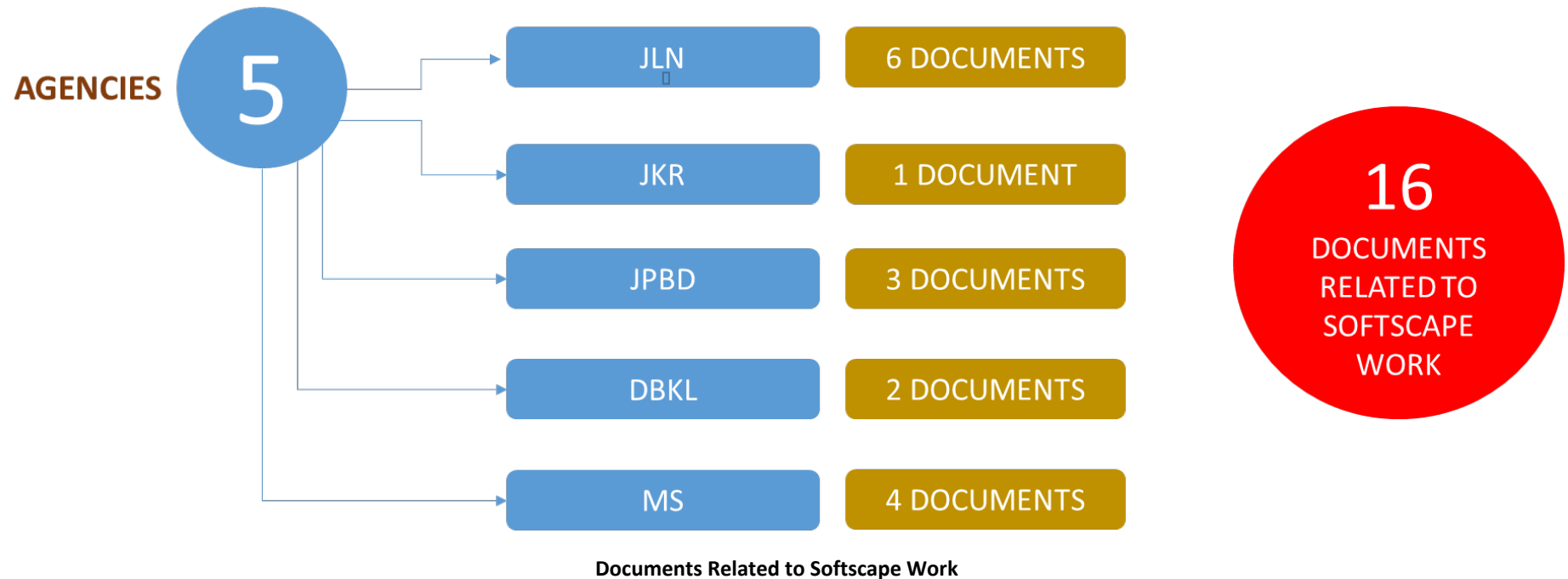


Documents Related to Landscape Development

35
DOCUMENTS
RELATED TO
LANDSCAPE
DEVELOPMENT

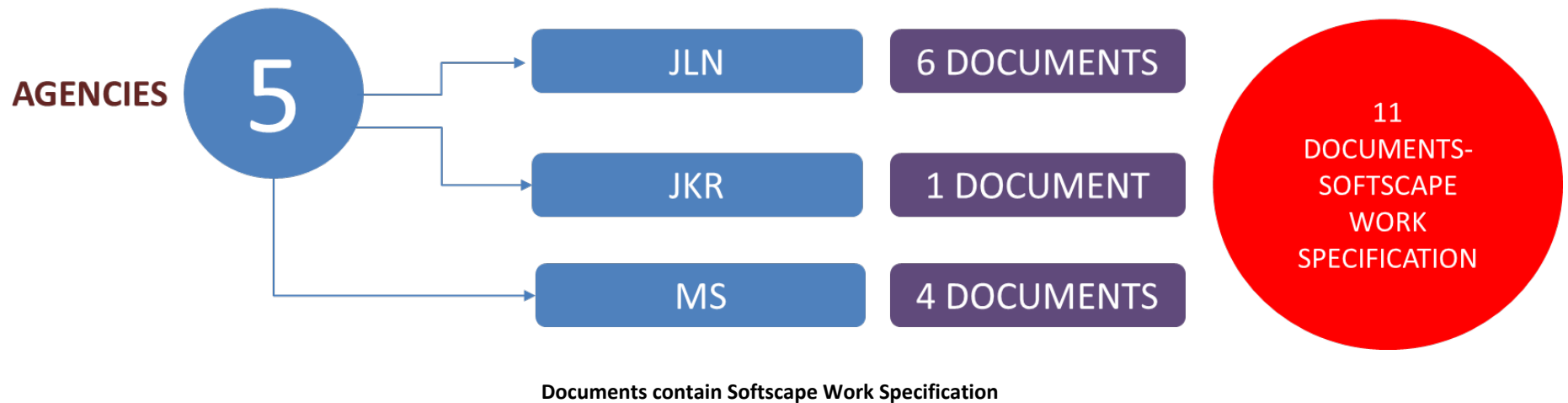
Key findings

Document collection and management



Key findings

Document collection and management



Key findings

Document collection and management

6 DOCUMENTS FROM JLN

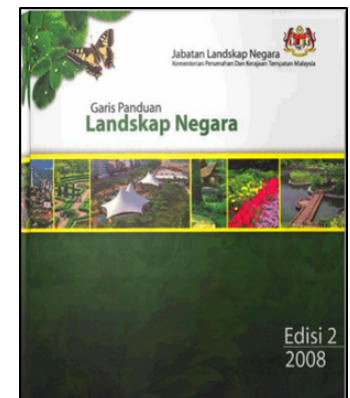
No	Name of Document	List of Related Contents
1.	Garis Panduan Landskap Negara, ed.2 (2008) (JLN 1)	<ul style="list-style-type: none"> Guidelines on Softscape for Landscape Works Softscape Maintenance
2.	Panduan Penanaman Pokok Teduhan (2008) (JLN 2)	<ul style="list-style-type: none"> Tree Specifications and Planting Techniques Tree Maintenance e.g. irrigation, fertilization, pruning
3.	Pengurusan Perosak dan Penyakit Utama Pokok Ameniti Melalui Kawalan Kimia (2009) (JLN 3)	<ul style="list-style-type: none"> Chemical Technique to Control Pest and Diseases Schedule on Chemical Control and Pesticides
4.	Manual Pemangkasan Pokok Ameniti (2009) (JLN 4)	<ul style="list-style-type: none"> Pruning Types and Practice Specification of Pruning Works
5.	Piawaian Produktiviti Penyelenggaraan Landskap (2008) (JLN 5)	<ul style="list-style-type: none"> Landscape Maintenance Monitoring Procedure
6.	Serangga Perosak Pokok Ameniti (2009) (JLN 6)	<ul style="list-style-type: none"> Technique to Control Pest (Chemical, Physical and Biological)

Key findings

Document collection and management

Garis Panduan Landscape Negara, ed. 2 (2008)(JLN1)

Section 4 of the document stipulates the guidelines related to softscape works specification. The document consists of 13 topics as follows: 1) *Method of plant selection*, 2) *Handling method for transporting plant to the site*, 3) *Preparation of site nursery*, 4) *Preparation of soil mixture*, 5) *Preparation of planting holes*, 6) *Staking*, 7) *Mulching*, 8) *Finishing and planting holes treatment*, 9) *Preparation of organic matters*, 10) *Erosion control*, 11) *Pruning*, 12) *Labors and equipment*, 13) *Maintenance program*

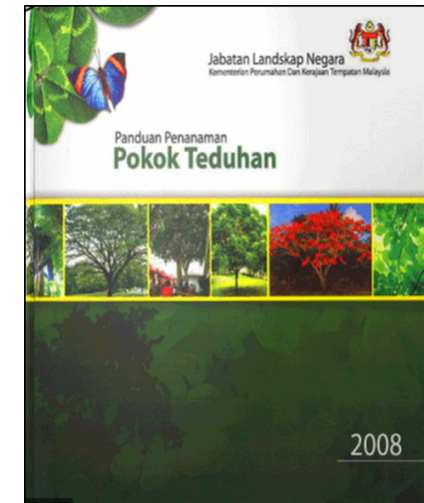


Key findings

Document collection and management

Panduan Penanaman Pokok Teduhan (2008)(JLN2)

This document is developed as a guideline specifically for shade tree planting and literally extraction from GLPN under Section 4.



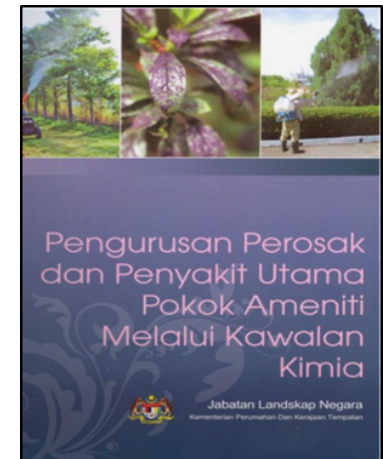
Key findings

Document collection and management

Pengurusan Perosak dan Penyakit Utama Pokok Ameniti Melalui Kawalan Kimia (2009) (JLN3)

Published by JLN in 2009, authored by Ridzuan Yahaya. The book in general comprises the method of pests and diseases control including the safety of the workers. The book in general comprises the information related to:

1. Method of pests and diseases control
2. Safety measures of the workers
3. Schedule chemical control
4. Schedule of pesticide activities

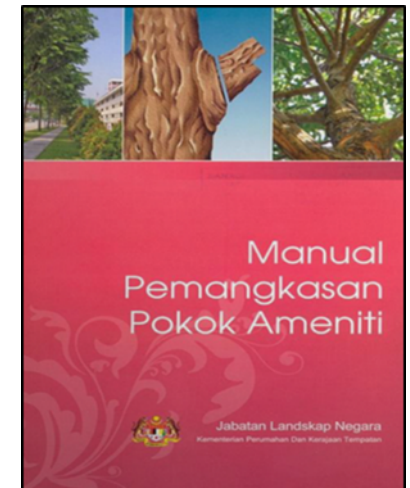


Key findings

Document collection and management

Manual Pemangkasan Pokok Ameniti (2009) (JLN4)

This guideline is actually a book published by JLN in 2009, authored by Amat Ramsa Yaman, Manogaran Munisami, and Mansor Mohamad. The book consists of guidelines for pruning works for amenity trees at roadside area, residential area, open spaces, public parks and pedestrian walkways.

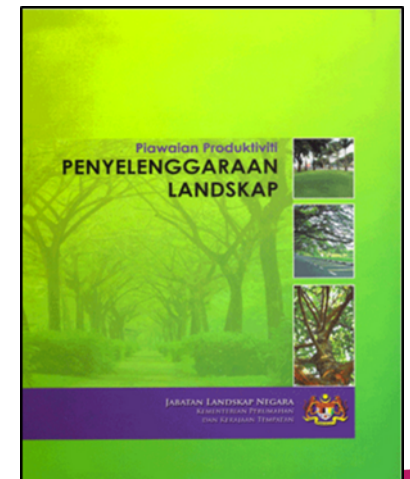


Key findings

Document collection and management

Piawaian Produktiviti Penyelenggaraan Landskap (2008) (JLN5)

This document can be considered as management standards, published by JLN as a guideline for landscape maintenance works. The purpose of the publication is to be an indication of the productivity rate of landscape maintenance work. It was also intended to serve as a guide for the implementing agencies such as the Local Authorities and private practitioners to monitor the implementation of landscape maintenance works.



Key findings

Document collection and management

Serangga Perosak Pokok Ameniti (2009) (JLN6)

The book in general comprises the information related to:

1. *Types of pests.*
2. *Signs and insect damage.*
3. *Pest control methods such as chemical, physical and biological control methods.*



Key findings

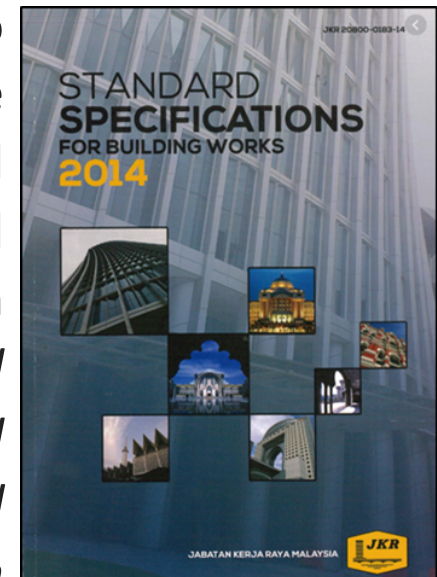
Document collection and management

1 DOCUMENT FROM JKR

No.	Name of Document	List of Related Contents
1.	Standard Specifications for Building Works 2014 (JKR1)	<ul style="list-style-type: none"> Landscaping and Turfing Works

Standard Specifications for Building Works 2014 (JKR1)

The document was specifically developed to be an addendum to the contract document for building construction works. The document consists of twenty sections of instructions and specifications. Specification and instruction for landscaping and turfing works stipulated in Section R. This section consists of ten sub-section as follows: 1) General, 2) *Classifications and Characteristics of Plants* 3) *Size of Plants*, 4) *Handling and Planting*, 5) *Soil Mixture, Soil Conditioners and Chemical Fertilizers* 6) *Turfing* 7) *Football and Playing Fields*, 8) *Relocation and Protection of Existing Tress*, 9) *Maintenance of Plant and Turf* 10) *Final Handing Over*



Key findings

Document collection and management

4 DOCUMENTS FROM SM

No.	Name of Document	List of Related Contents
1.	MS 2603:2015 Landscape Planting Materials -Trees – Specification (MS1)	<ul style="list-style-type: none"> • Methods of Preparation and Techniques of Plant Handling ; Requirements, Inspection, Sapling
2.	MS 2677:2017 Landscape Planting Materials - Palms – Specification (MS2)	<ul style="list-style-type: none"> • Methods of Preparation and Techniques of Plant Handling ; Requirements, Inspection, Sapling
3.	MS 2671:2017 Vegetative Propagated Turfgrass Planting Materials – Specification (MS3)	<ul style="list-style-type: none"> • Methods of Preparation and Techniques of Plant Handling ; Planting Materials, Land Preparation, Plot Maintenance and Inspection, Requirements
4.	MS 2700:2018 Landscape planting materials - Shrubs – Specification (MS4)	<ul style="list-style-type: none"> • Requirements and Methods of Preparation

MS 2603:2015 Landscape Planting Materials -Trees – Specification (MS1)

The document comprises specification for tree planting works. This Malaysian Standard specifies requirements, category, methods of preparation and sapling for the landscape tree planting materials and techniques of plant handling to the planting site for landscape works.

Key findings

Document collection and management

MS 2677:2017 Landscape Planting Materials - Palms – Specification (SM2)

The document comprises specification for palm planting works. This Malaysian Standard specifies categories, requirements, methods of preparation, sapling and handling of palm planting materials for landscape works

MS 2671:2017 Vegetative Propagated Turfgrass Planting Materials – Specification (SM3)

The document comprises specification for turfgrass planting works. This Malaysian Standard specifies methods of preparation and quality requirements for vegetative propagated turfgrass planting materials.

Key findings

Document collection and management

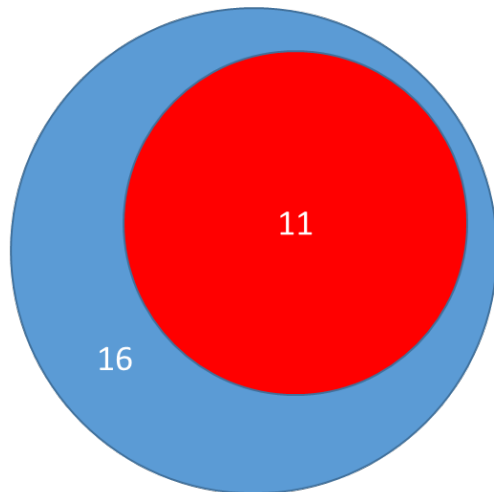
MS 2700:2018 Landscape planting materials - Shrubs – Specification (SM4)

The document comprises specification for shrubs planting works. This Malaysian Standard specifies categories, requirements, methods of preparation, sapling and handling of shrubs planting materials for landscape works.

Key findings

Document collection and management

16 DOCUMENTS RELATED TO SOFTSCAPE WORK



11 DOCUMENTS RELATED TO SPECIFICATION AND
INSTRUCTION FOR LANDSCAPE WORK

CONTENT
MATRIX
ANALYSIS



Key findings

3M analysis

Through 3M analysis, the study managed to establish 6 main topics with 22 sub-topics. The 6 Main topics are: 1)Planting works, 2) Existing tree protection, 3) Transplanting, 4)Turfing, 5) Football and playing field, 6) Maintenance.

No.	Main Topics	Sub-Topics
1.	PLANTING WORKS	1. Planting selection 2. Plant specification 3. Handling 4. Preparation of site nursery 5. Preparation of soil mixture 6. Preparation of planting hole 7. Planting method 8. Plant support/staking 9. Mulching 10. Planting hole treatment
2.	TUEXISTING TREE PROTECTION	-
3.	TRANSPLANTING	-
4.	TURFING	-
5.	FOOTBALL AND PLAYING FIELDS	-
6.	MAINTENANCE	1. Watering 2. Fertilizer 3. Site clearance 4. Pets and disease control 5. Filling and plant replacement 6. Pot replacement 7. Application of organic matters 8. Mulching 9. Erosion control 10. Pruning 11. Workers and equipment 12. Maintenance programme

Key findings

Content matrix analysis

6 main topics with 22 sub-topics were used as a basis of content matrix analysis

Content matrix analysis

		Shortlisted Documents															
		JLN1	JLN2	JLN3	JLN4	JLN5	JLN6	JKR1	JPBD1	JPBD2	JPBD3	SM1	SM2	SM3	SM4	DBKL1	DBKL2
CONTENTS (Topics/Areas)	A. PLANTING WORKS																
	1. Planting selection	■	■					■									
	2. Plant specification	■	■					■				■	■	■	■		
	3. Handling	■						■				■	■	■	■		
	4. Preparation of site nursery	■						■				■	■	■	■		
	5. Preparation of soil mixture	■	■					■				■	■	■	■		
	6. Preparation of planting hole	■	■														
	7. Planting method	■	■					■									
	8. Plant support/staking	■	■					■									
	9. Mulching	■	■														
	10. Planting hole treatment	■	■														
	B. MAINTENANCE																
	1. Watering	■	■			■		■									
	2. Fertilizer	■	■			■		■									
	3. Site clearance	■				■											
	4. Pest and disease control	■		■		■	■	■									
	5. Sulaman and plant replacement	■				■											
	6. Pot replacement	■				■											
	7. Application of organic matters	■				■											
	8. Mulching	■				■											
	9. Erosion control	■				■											
	10. Pruning	■	■		■	■						■		■			
	11. Workers and equipments	■				■											
	12. Maintenance program	■				■											
	C. EXISTING TREE PROTECTION	■															
	D. TURFING	■							■								
	E. FOOTBALL AND PLAYING FIELD								■								
F. TRANSPLANTING	■	■						■									

Key findings

Content matrix analysis

The content matrix analysis revealed the status of availability of the topics/areas in all selected documents.

No.	Documents (JLN)	No of topics/areas match to 26 developed topics/areas
1.	JLN 1	25
2.	JLN 2	12
3.	JLN 3	1
4.	JLN 4	1
5.	JLN 5	12
6.	JLN 6	1

No.	Documents (JKR)	No of topics/areas match to 26 developed topics/areas
1.	JKR 1	12

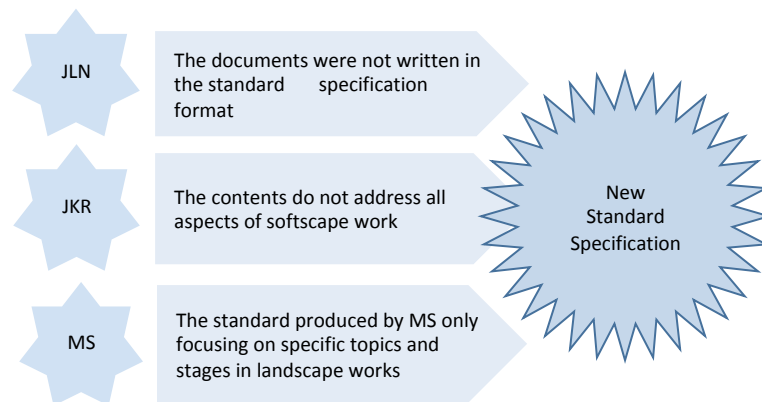
No.	Documents (SM)	No of topics/areas match to 26 developed topics/areas
1.	SM 1	3
2.	SM 2	3
3.	SM 3	3
4.	MS 4	3

Key findings

Needs analysis

The findings of the needs analysis was derived from the findings of the contents analysis. The findings of content analysis suggesting that all the facts derived from the analysis is a driving factor to the establishment of Standard Specification by ILAM.

No impediment factor was found in the study



Key findings

Technical feasibility of establishing Standard Specification

The technical feasibility study outlines the following findings:

1. 11 documents collected consist of guidelines and specification related to softscape works.
It suggests that sufficient documents are available to be used as a basis of reference for the establishment of a new standard specification
2. Garis Panduan Landskap Negara, ed. 2 (2008) (GPLN) is only lacking 1 topic/area of softscape works in overall contents suggesting that the document can be the main reference for the establishment of standard specification.
3. ILAM as a professional body is in the right and good position to establish a special committee for the establishment of standard specification.

Recommendation

The study found there is a need to establish a new Standard Specification by ILAM in order to have a sound and reliable quality control document that addresses all aspects of softscape works in Malaysia based on the following findings:

1. All existing documents do not address all aspects of softscape works.
2. All documents except for STANDARD SPECIFICATION from JKR were not written in the Standard Specification format
3. Existing **STANDARD SPECIFICATION** from JKR has only 12 areas of softscape works compared to 26 topics generated by the study.
3. ILAM as a professional body for landscape architecture should take charge of producing, managing and verifying the document related to landscape development.

Thank you

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