MALAYSIAN STANDARD

MS 2677:2017

Landscape planting materials - Palms - Specification

ICS: 65.020.40

Descriptors: landscape, planting materials, palms, specification

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Committee representation

The Industry Standards Committee on Agriculture (ISC A) under whose authority this Malaysian Standard was developed, comprises representatives from the following organisations:

Department of Agriculture Malaysia
Department of Agriculture Sabah
Department of Agriculture Sarawak
Department of Fisheries Malaysia
Department of Standards Malaysia
Department of Veterinary Services
Farmers' Organisation Authority
Federal Agricultural Marketing Authority
Federation of Livestock Farmers' Associations of Malaysia
Forest Research Institute Malaysia
Malaysia Fruit Exporters Association
Malaysian Agricultural Research and Development Institute
Malaysian Association of Standards Users
Ministry of Agriculture and Agro-Based Industry Malaysia
Ministry of Domestic Trade, Co-operatives and Consumerism
Ministry of Health Malaysia
Ministry of Plantation Industries and Commodities
National Farmers Organization
National Seed Association Malaysia
SIRIM Berhad (Secretariat)
The Federation of Vegetables Growers' Associations Malaysia
Universiti Putra Malaysia

The Technical Committee on Planting Materials which supervised the development of this Malaysian Standard consists of representatives from the following organisations:

Crops for the Future Research Center
Department of Agriculture Malaysia
Department of Agriculture Sabah
Department of Agriculture Sarawak
Forest Research Institute Malaysia
Malaysian Agricultural Research and Development Institute
Malaysian Association of Standards Users
Malaysian Society of Plant Physiology
National Landscape Department
National Seed Association Malaysia
SIRIM Berhad (Secretariat)
Universiti Kebangsaan Malaysia
Universiti Putra Malaysia

The Working Group on Landscape Planting Materials which developed this Malaysian Standard consists of representatives from the following organisations:

Bu Seng Chong Nursery Sdn Bhd

Department of Agriculture Malaysia

Institute of Landscape Architects Malaysia

Majlis Bandaraya Shah Alam

Majlis Perbandaran Subang Jaya

Malaysian Agricultural Research and Development Institute

National Landscape Department

SIRIM Berhad (Secretariat)

Universiti Putra Malaysia

Universiti Teknologi Malaysia

Universiti Teknologi MARA

Foreword

This Malaysian Standard was developed by the Working Group on Landscape Planting Materials under the authority of the Industry Standards Committee on Agriculture.

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

Landscape planting materials - Palms - Specification

1 Scope

This Malaysian Standard specifies categories, requirements, methods of preparation, sampling and handling of palm planting materials for landscape works.

2 Normative references

The following normative references are indispensable for the application of this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the normative reference (including any amendments) applies.

Biosafety Act 2007

Plant Quarantine Act 1976

Plant Quarantine Regulations 1981

International Standards for Phytosanitary Measures (ISPM)

3 Terms and definitions

For the purposes of this standard, the following terms and definitions apply.

3.1 burlapped planting material

The planting material root ball which has been properly wrapped with biodegradable material and laced by any suitable material to ensure its intactness.

3.2 clear trunk height

The measurement from the ground line which should be at or near the top of the root zone to the highest point on the trunk of persistent leaf bases.

NOTE. On palms with a crown shaft, the measurement is from the ground line to the base of the crown shaft. Palms with very persistent leaf bases may not have clear trunk height.

3.3 container

Any material to hold plant medium in which plant is grown.

3.4 crown

The portion of a palm consisting of frond, crown shaft, leaflet and the new emerging leaf (see Annex A).

3.5 deformed

An abnormal condition of any plant parts such as but not limited to stunted, misshapened, tattered, chlorotic or necrotic (discoloured).

3.6 diseases

A particular abnormal, pathological condition that affects any part of the plant.

3.7 hardening

An adaptation and conditioning process of planting material prior to transplanting.

3.8 multiple stem palm

Palm with clustering or clumping trunk regularly cylindrical in shape that grows vertically in various sizes and height.

3.9 offshoot

The portion of a palm that develops from axillary buds on the trunk of the mother plant (see Annex A).

3.10 overall height

The measurement from the ground line which should be at or near the top of the root zone to the natural position of the last fully emerged (all leaflets are fully expanded) leaf (see Annex A).

3.11 pests

Any species, strain or biotype of plant, animal or pathogenic agent injurious to palm.

3.12 planting medium

A single or a mixture of materials in which the palm is grown.

3.13 pruning

A process of removal of palm fronds for specific purposes.

3.14 root ball

Intact soil or growing medium containing the roots of the plant.

3.15 single trunk palm

Palm with solitary trunk regularly cylindrical in shape that grows vertically in various sizes and height (see Annex A).

3.16 trenching

A process of digging and root pruning around the palm base for the preparation of transplanting.

3.17 trunk height

The measurement from the ground line, which should be at or near the top of the root zone, to the base of the heart leaf (see Annex A).

4 Palm planting material category

Palm planting materials shall be categorised into two types:

a) single trunk palm; and

b) multiple stem palm.

5 Requirements

5.1 Plant names

All palms shall be referred to their botanical names.

5.2 General characteristics

5.2.1 The physical characteristics of all palm planting materials shall be normal for the species or variety unless otherwise designated.

5.2.2 Palm planting materials shall be free of pests and diseases as well as mechanical injuries.

5.2.3 The crown shall not be deformed by the presence of healthy new emerging leaf.

5.2.4 The stem/trunk shall be free of wounds, fungal fruiting bodies, cracks, signs of damage by insect borers, decays and cankers/lesions.

5.2.5 The root system shall be free of injuries. Root distribution shall be uniform throughout the planting medium.

5.2.6 Importation of palm planting materials shall comply with *Biosafety Act 2007*, *Plant Quarantine Act 1976*, *Plant Quarantine Regulations 1981* and any other relevant legislation related to invasive alien species currently in force in Malaysia. The palm planting materials also shall undergo *Pest Risk Analysis (PRA)* in accordance to *International Standards for Phytosanitary Measures (ISPM) No 2 Guidelines for Pest Risk Analysis* and *No 11 Pest Risk Analysis for Quarantine Pests Including Analysis of Environmental Risks and Living Modified Organisms.*

NOTE. Conditions for importation of palm planting materials depend on their country of origin.

5.3 Specific requirements

Palm planting materials shall comply with specific requirements in Table 1.

Table 1. Specifications for palm planting materials

Category	Minimum number of mature fronds/leaves per trunk/stem	Minimum number of stem	Overall height	Trunk height (mm)	Minimum root ball diameter (mm)	Minimum root ball depth (mm)
Single trunk palm	3	NA	NA	< 500	250	150
			NA	500 to 1 000	300	200
			NA	1 001 to 1 200	350	250
			NA	1 201 to 1 500	400	300
			NA	1 501 to 1 800	500	300
			NA	1 801 to 2 200	600	500
			NA	2 201 to 2 500	800	500
			NA	2 501 to 2 800	1 000	500
			NA	2 801 to 3 000	1 000	500
			NA	3 000 to 3 500	1 000	500
			NA	3 501 to 4 000	1 000	500
Multiple stem palm		3	< 500	NA	250	150
			500 to 1 000	NA	300	200
			1 001 to 1 200	NA	350	250
			1 201 to 1 500	NA	400	300

6 Methods of preparation

6.1 Planting material preparation

The planting material can be prepared from seed or offshoot.

6.1.1 Container grown planting material

The palm planting material shall be repotted accordingly to the stages of the growth.

6.1.2 Burlapped planting material

6.1.2.1 Root ball sizes shall be of a diameter and depth to encompass enough of the fibrous and feeding root system as necessary for the full recovery of the plant (see Table 1).

6.1.2.2 Trenching should be carried out for field grown palm prior to transplanting to minimise transplanting shock.

6.1.2.3 The recommended preparation of burlapped stock as in Annex B.

6.2 Planting medium

The planting medium used shall be free from pests and diseases and should be able to support palm growth.

7 Plant handling

7.1 Prior to transportation, the palm shall undergo a hardening process.

7.2 Plant handling shall be carried out properly to reduce transpiration, root disturbances and other injuries.

8 Inspection

Inspection of all planting materials shall be carried out by inspectors appointed by the relevant certifying agency in accordance with procedures of the agency.

9 Sampling

Appropriate samples shall be taken from planting material consignment and inspected by the certifying agency when necessary.

10 Compliance

All planting material consignments that are inspected by the certifying agency and are found to comply with this Malaysian Standard at the time of inspections, with respect to the trueness-to-type, health and vigor conditions, shall be deemed to comply with this standard.

Annex A
(informative)

Palm planting materials morphology

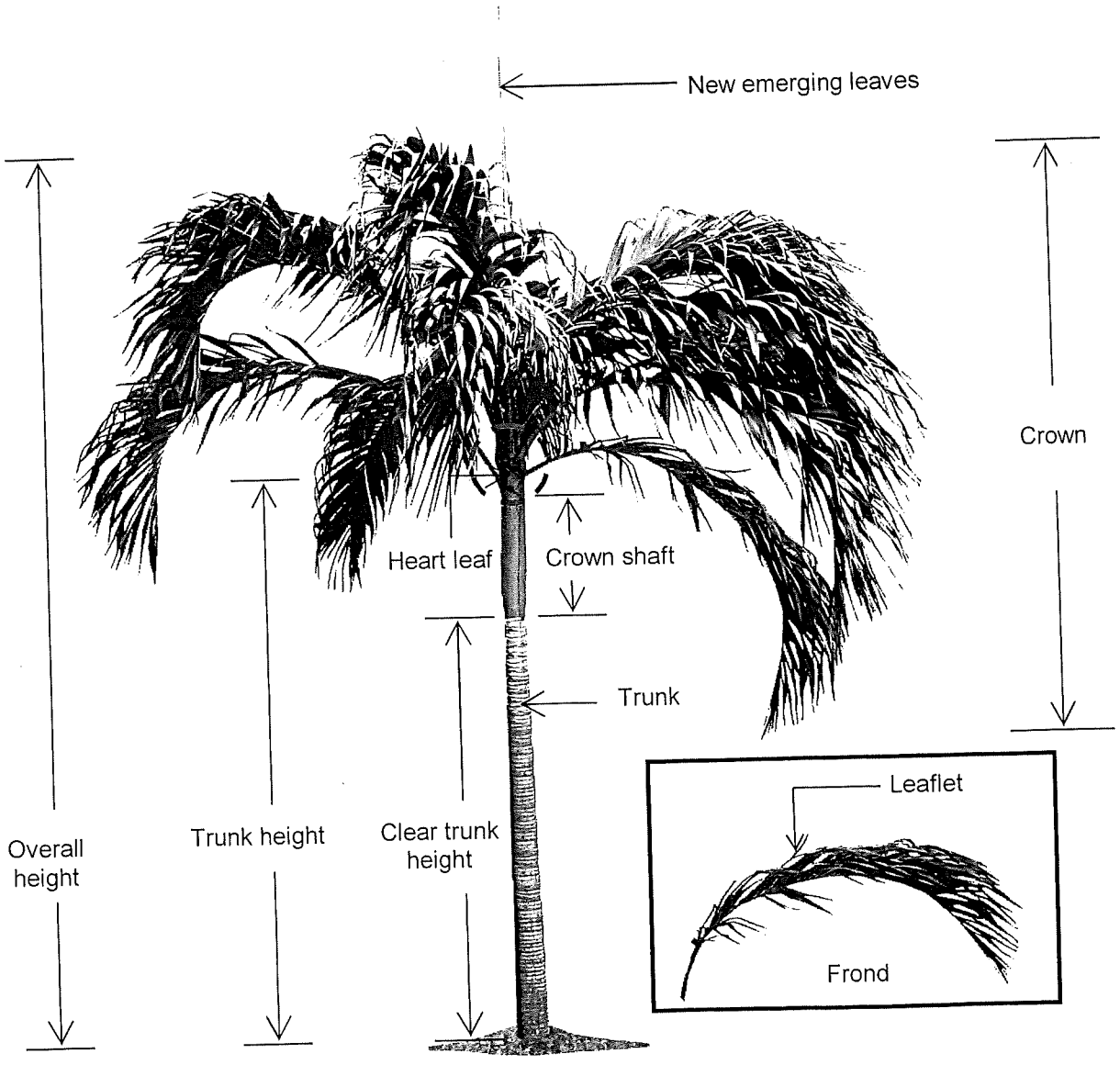

Figure A.1 Single trunk palm - feather leaves

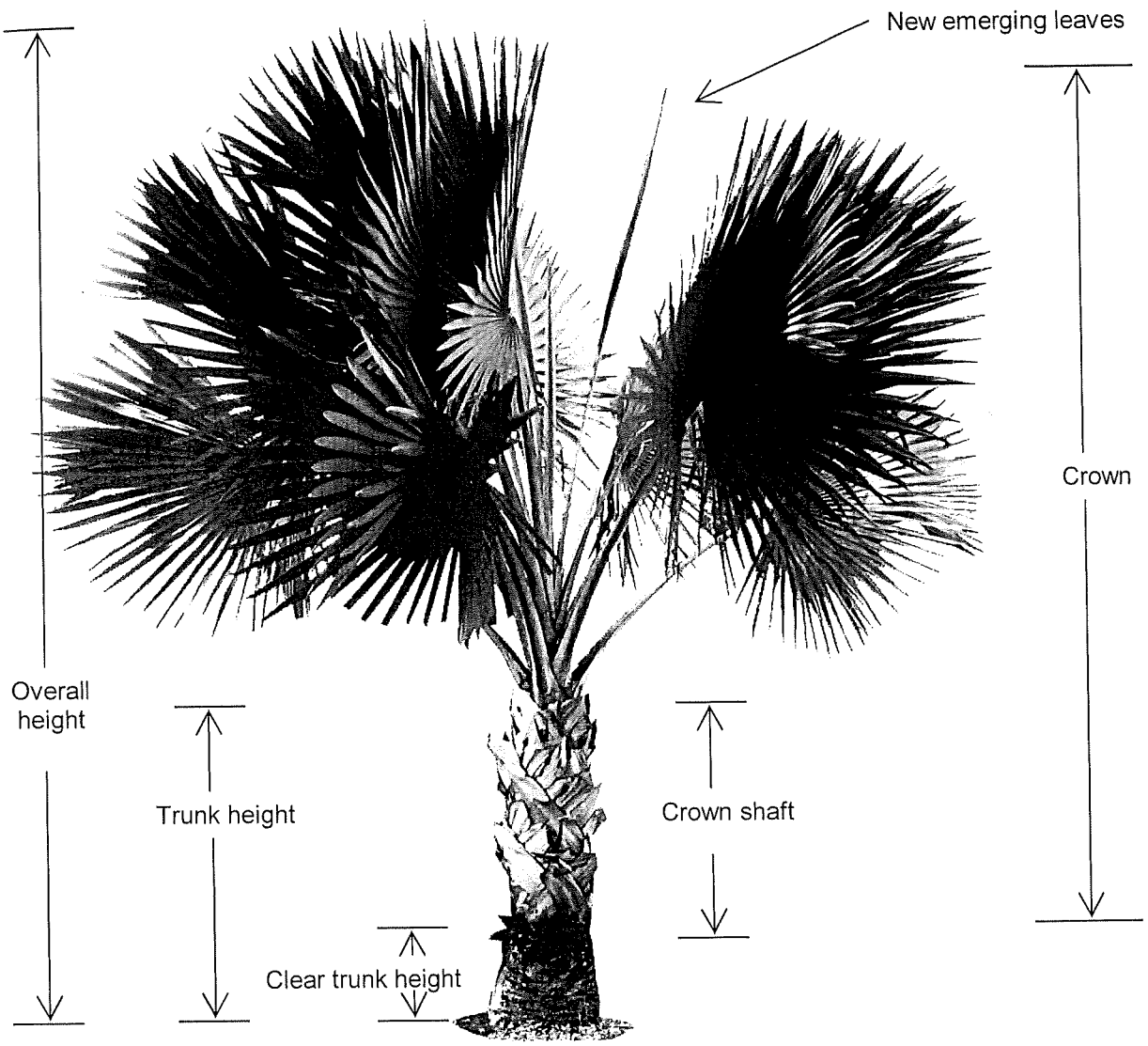

Figure A.2 Single trunk palm - palmate leaves

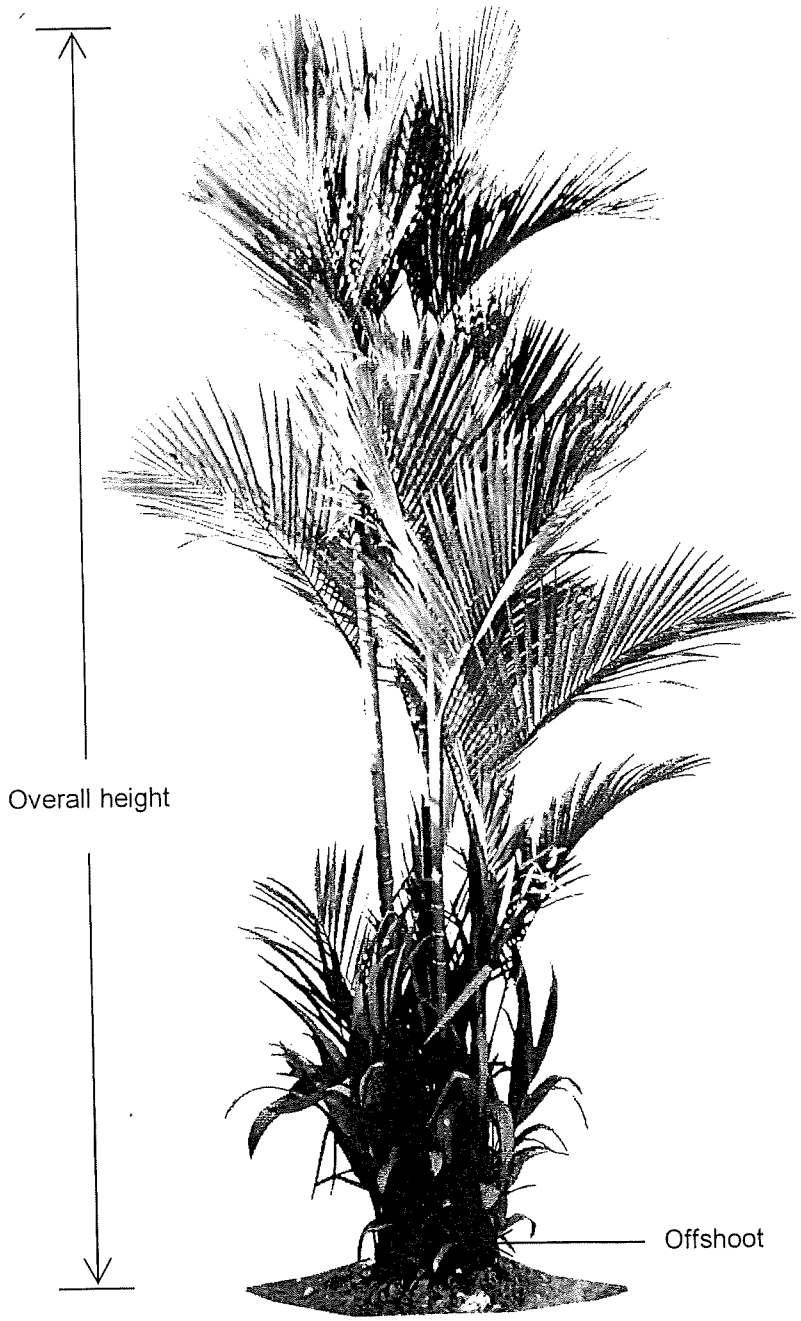

Figure A.3 Multiple trunk palm

Annex B
(informative)

Preparation of burlapped stock

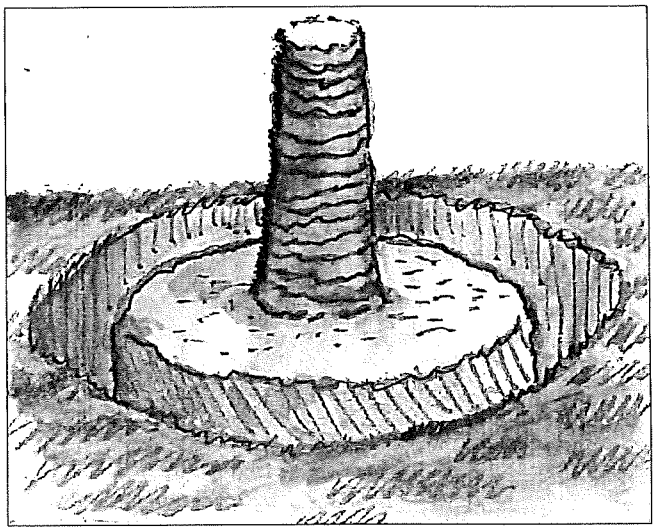

Figure B.1 Trenching process to prepare a root ball

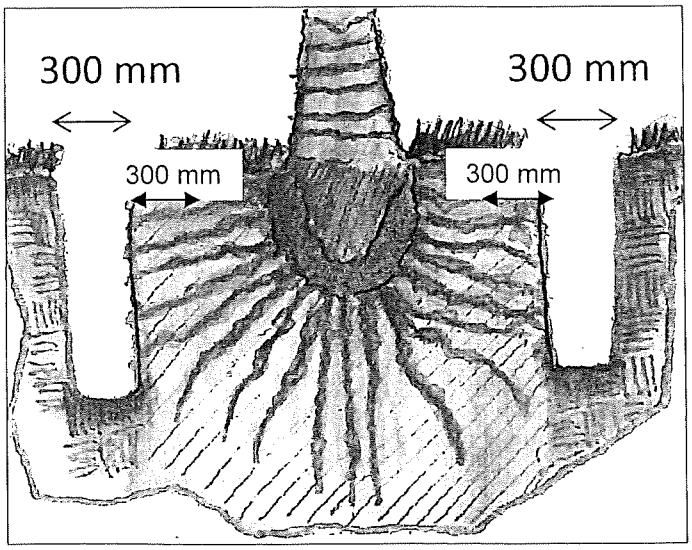

Figure B.2 Cross-section of trenching process

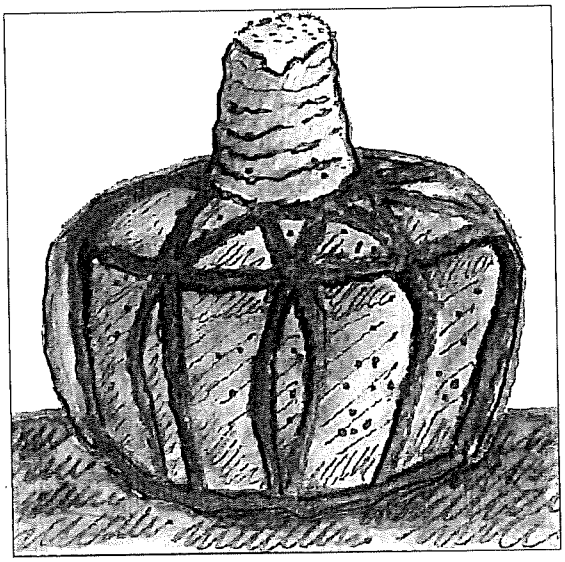

Figure B.3 Burlapped stock ready for transplanting

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[1] ANSI Z60.1–2004, *American Standard for Nursery Stock*

[2] *Jabatan Lanskap Negara, Garis Panduan Landskap Negara (2008), Edisi 2, Kementerian Perumahan dan Kerajaan Tempatan Malaysia*

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