

PARTICULAR SPECIFICATION
APPENDIX AY
TEMPORARY GREENING SPECIFICATION

1. TEMPORARY GREENING SPECIFICATION

1.1. General

Different green provisions shall be provided to reduce the loss of greens during construction phase. Different green provisions include:

- a) Shrubs/ hedges/ trees
- b) Vertical Greening
- c) Hoarding with graphics/design
- d) Noise Barriers with graphics/design
- e) Visual Identity Panel
- f) Project Banners/ Community messages

1.2. Shrubs/ hedges/ trees

1.2.1. Design

Shrubs/ hedges/ trees shall be planted if space is available. If through ground is available and the plants will be at a particular place for a long period of time, plants should be planted in the ground with root-control bag.

1.2.2. Application

As much as possible, species used for temporary planting can be re-used for future planting. Contractor to seek NParks' advise on the species and extent of temporary greening. Some recommended species for Hedges and Shrubs are listed below:

- 1. Recommended Hedge species
 - i. *Syzygium leucoxylon*
 - ii. *Garcinia hombroniana*
 - iii. *Neolitsea cassia*
 - iv. *Syzygium myrtifolium*
 - v. *Raphis excelsa*
 - vi. *Cyrtostachys renda*
- 2. Recommended tree species
 - i. *Buchanania arborescens*
 - ii. *Buchanania sessilifolia*
 - iii. *Lagerstroemia floribunda* Jack
 - iv. *Planchonella obovata*
 - v. *Terminalia mantaly*

Do's and Don'ts for shrubs/ hedges/ trees

	<p>* Temporary greening to be re-used for future planting</p> 		<p>* Big shrubs/ hedges/ trees to be used</p> 
	<p>* Planted in the ground with root-control bag</p> 		<p>* Close interval of planting (2m in general, actual interval to be advised by NParks)</p> 
	<p>* Small shrubs/ hedges cannot achieve softening effect</p> 		<p>* Shrubs without close planting interval</p> 

1.3. Vertical greening

1.3.1. Design

Vertical greening such as creepers and climbers are advisable only if through ground is not available.

However, as vertical greening would require irrigation and more maintenance, it is advisable that sensitive areas/corridors that are important to be specially treated with greens.

1.3.2. Application

Contractor to seek LTA/ NParks' advice on sensitive areas for vertical greening.

Do's and Don'ts for Vertical Planting



1.4. Hoarding with graphics/design

1.4.1. Design

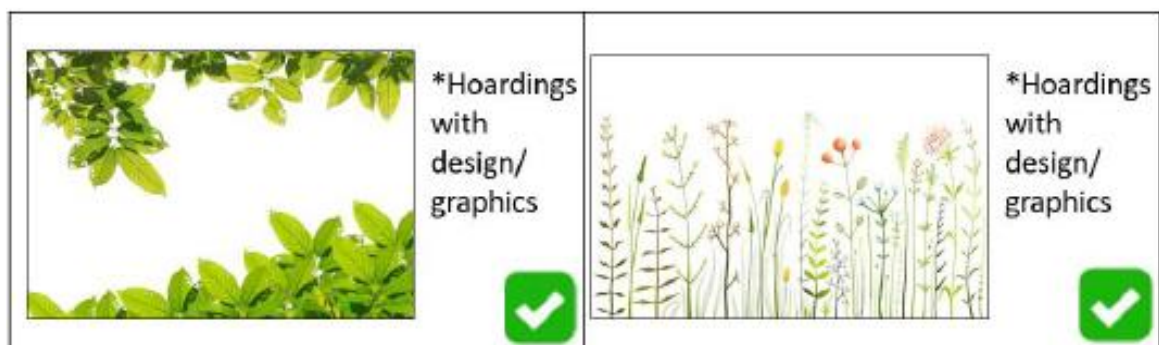
Full-size stickers bearing greenery background (such as trees) can be pasted on hoardings to achieve greenery impression if space is constrained.

Green hoardings can also be installed as an alternative if space is constrained for interim greenery. Colour code (RAL number or Pantone number) is to be approved by LTA/NParks prior to installation.

1.4.2. Application

Contractors to seek LTA/NParks' approval on the proposed graphics/design before implementation. One example of application would be placing sticker wraps and Visual Identity panels/community messages at specific intervals.

Do's and Don'ts for hoardings with design/graphics:





Sticker Wraps & Visual Identity (VI) Panels at specific intervals.

1.5. Noise Barriers with graphics/design

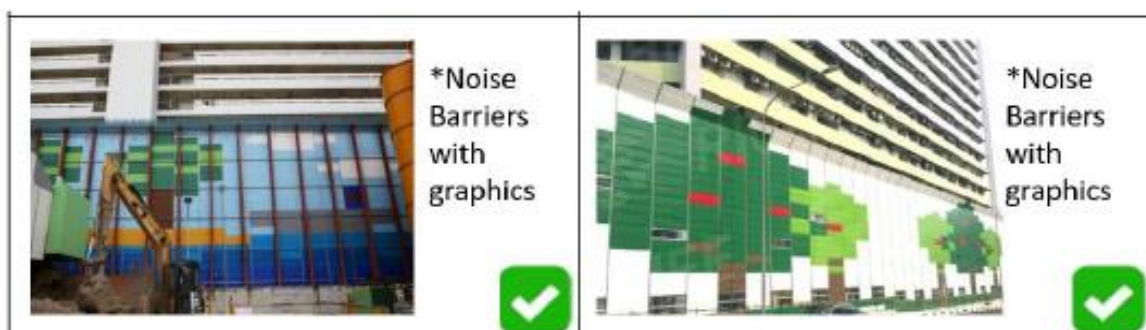
1.5.1. Design

Noise barriers with graphics can also be considered. For areas where noise barriers are facing HDB/Condominium/Landed housing residents, visuals could be considered on both sides of the noise barriers to soften the impact of construction works.

1.5.2. Application

Contractors to seek LTA/NParks' approval on the proposed graphics/design before implementation. Respective stakeholders should also be engaged before finalising the design.

Do's and Don'ts for noise barriers with design/graphics:



1.6. Visual Identity (VI) Panel

1.6.1. Design

Visual Identity (VI) Panels can convey messages to the public, informing them on the timeframe of project completion.

1.6.2. Application

VI panels messages on the timeframe are to be provided by LTA and Contractors are to seek advice from LTA on the locations to be placed.

Do's and Don'ts for VI Panels:



1.7. Project Banners/ Community messages

1.7.1. Design

Project Banners/ Community messages can be placed on hoardings to convey the benefits of the project to the public. Community messages by the various agencies could also be put up.

1.7.2. Application

Project Banners/ Community messages are to be provided by LTA and Contractors are to seek advice on the locations to be placed.

Do's and Don'ts for Project Banners/Community Messages:

 <p>* Project Banners with messages</p> 	 <p>* Community Messages</p> 
 <p>* Obstruction of project banners</p> 	

1.8. Common Site Features and its green provision

1.8.1. Summary of common site features and green provision specification:

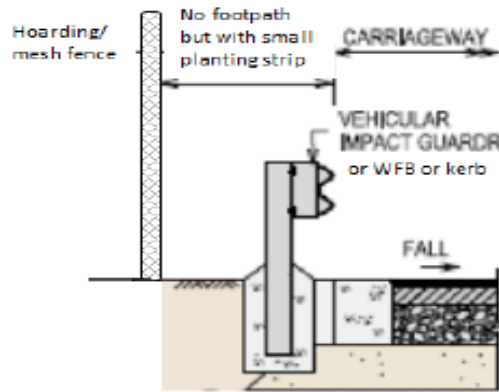
Site Feature	Green provision			
		Type	Height	Species
Available Space / Planting Strip	1	Available planting space is 1m or more Single row of trees with a minimum 6m interval as a general guideline where practicable. In-between the trees planted at 6m c/c, to interplant another smaller tree species at 3m c/c.	Height of plants shall be at least 4m tall	Suitable species of plants to be advised by Arborist/NParks E.g. of suitable species listed in Chapter 1.2.2
	2	Available planting space is more than 300mm but less than 1m Single row of hedge-like plants with a minimum 2m interval as a general guideline where practicable.	Height of plants shall be at least 2.5m tall Live crown ratio of \geq 80%.	Suitable species of plants to be advised by Arborist/NParks E.g. of suitable species listed in Chapter 1.2.2

Hoarding / Noise Barrier <i>(Available planting space is less than 300mm)</i>	1	Green wall/ creepers on hoardings	-	Suitable species of plants to be advised by Arborist/NParks
	2	Green hoarding/ Noise Barriers with graphics/design/sticker wraps	-	Suitable graphics to be submitted and approved by LTA/NParks
	3	Visual Identity Panels, Project Banners, Community message	-	To be advised by LTA

Common Types of Road Typologies in LTA worksites

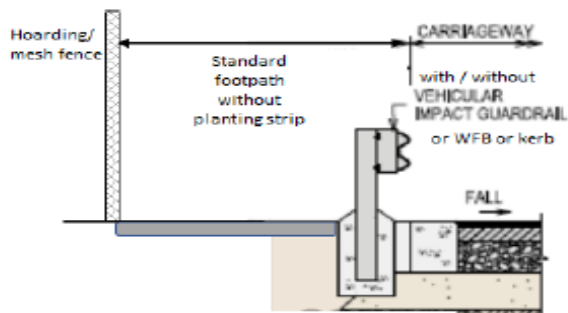
a) Type A

- Hoarding/ mesh fence next to carriageway
- No footpath
- Small planting strip



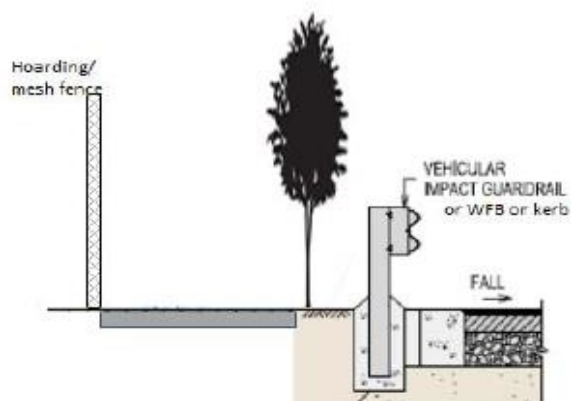
b) Type B

- Hoarding/ mesh fence next to carriageway
- With standard footpath
- Without planting strip



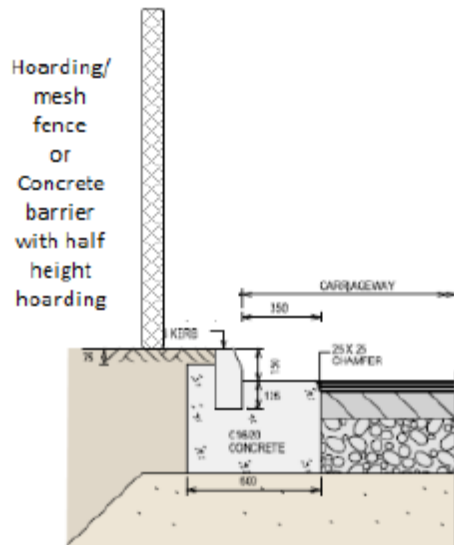
c) Type C

- Hoarding/ mesh fence next to carriageway
- With standard footpath
- With planting strip



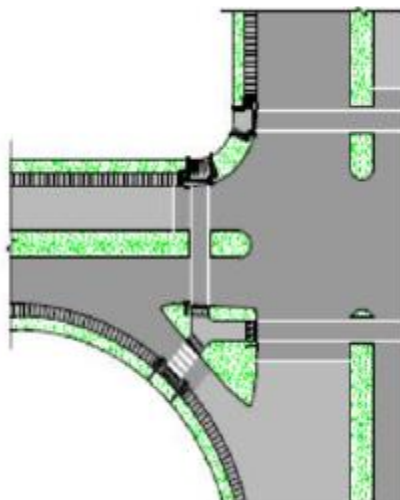
d) Type D

– Hoarding/ mesh fence/ concrete barrier with half height hoarding next to carriageway



e) Type E

– Centre median/ Traffic island



1.9. Site Specific Requirement

1.9.1. The Contractor shall refer to the indicative plans below and submit his proposed detailed noise barrier/hoarding plan with proposed greening treatment for the Engineer's acceptance.

1.9.2. Accesses shall be provided to adjacent stakeholders with noise barriers/hoardings turned around accordingly.

1.10. Submissions, Consultation and Approval Process

