

SECTION B - NATURAL ELEMENTS



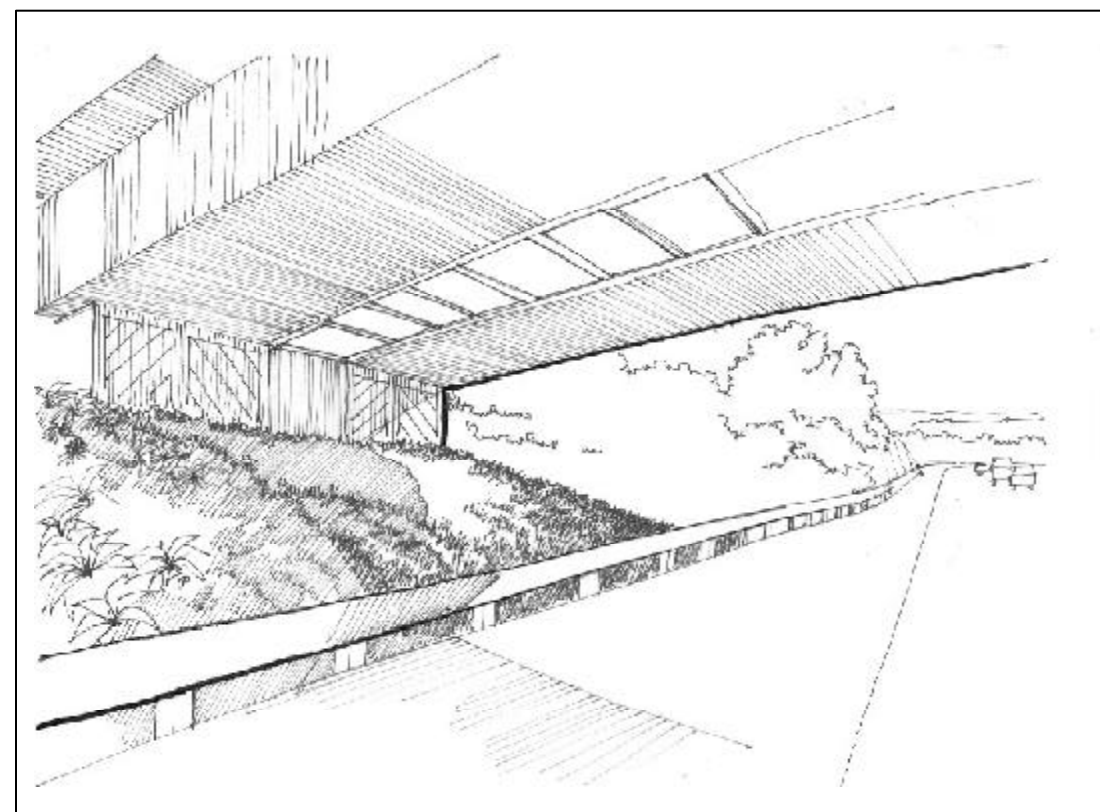
EMBANKMENTS AND CUTTINGS

AIM:

Where natural environments or soft edges are desired, design embankments and cuttings which, whilst achieving functional requirements, also contribute positively towards a consistent and coherent CMI design theme

KEY CONSIDERATIONS:

- embankments and cuttings should contribute to a consistent design theme and sense of place within the CMI
- consider long-term maintenance costs as a key consideration
- judicious selection of retaining walls may give a better outcome for land development opportunities
- variations in colour and form can be achieved with careful planting
- where appropriate, consider the use of sensitively designed earthworks in preference to retaining walls



GUIDELINES:

- batter slopes at a maximum of 3 H:1 V in order to sustain plant growth and allow maintenance
- grade earthworks to relate to the natural form of the surrounding topography
- fully landscape all batters

LANDSCAPE PLANTING

AIM:

Provide for landscaping which contributes to a consistent design theme and sense of place both within the nine separate precincts and the CMI overall

KEY CONSIDERATIONS:

- landscaping is a very important element of the CMI in terms of visual impact. Ensure views and vistas are retained and/or enhanced
- consider the use of appropriate planting themes that contribute to a consistent design theme and sense of place for the CMI overall
- existing planting is dominated by exotic species, particularly acacia longifolia, which is recognised as environmentally damaging. In addition, much of the planting is becoming over-mature, and there is likelihood of widespread disturbance during construction
- pohutukawa is strongly associated with Auckland and the northern coastal areas. It is also adapted to cope with the openness and poor soils often associated with urban conditions
- forest with a northern sub-tropical character formerly covered Grafton Gully. Canopy species included puriri, titoki, karaka, kohekohe and rewarewa
- the indigenous flora community could be abstracted by replanting rewarewa as the dominant species. Rewarewa has a particularly distinctive spire-like form. It is quick growing and hardy to the conditions associated with motorway fringes. There are a handful of young trees in the disturbed vegetation near the motorway
- the lava field forests on the slopes of Mt Eden are characterised by a lush, sub-tropical character and include typical species mahoe, karaka, kohekohe, titoki and an understory of astelia
- use accent planting (specimen trees) at key locations
- trees are one means of landmarking key locations such as exits, gateways or junction nodes
- most areas available for planting will be protected from carriageways by vehicle barriers. Planting will therefore be able to be planted relatively close. However, setbacks are still required from barriers. It is important this edge be planted with shrub species to limit weed infestation
- the techniques recommended to reduce maintenance include:
 - ▼ use of hardy species adapted to conditions
 - ▼ mass planting
 - ▼ planting with small grade plants, without irrigation
 - ▼ simplifying planting patterns
 - ▼ mulching
 - ▼ avoid planting batters of cuttings; plant batters of embankments or create recessed areas for planting
 - ▼ on-going maintenance programme
 - ▼ plant compositions which have relative longevity and have the ability to be self-sustaining
 - ▼ use hardy native nurse crop to establish rapid low canopy cover

GUIDELINES:

- use species adapted to growing conditions similar to those found within the CMI. All native species should be endemic to the Tamaki ecological district and eco-sourced where possible
- fill batters should be 1 in 3 maximum to facilitate planting
- all planting should have a minimum 250-300 mm of top soil
- avoid planting cut batters
- where cut batters are unavoidable, give consideration to the practicability of establishing planting versus grassing
- mass plant using appropriate techniques and performance based contracts
- irrigation is not envisaged
- plants will be mulched
- cultivate planting areas
- all planting areas are successfully established, canopy closure is achieved, and long-term growth and health is assured
- follow Transit NZ's Guidelines for Safety for Planting
- all compaction resulting from motorway construction should be alleviated by deep (min 400 mm) ripping prior to planting
- where mulch is unsuitable due to steep grades, bio/photo-degradable mats or geotextiles should be used

