

8.0 Landscape Design

8.7 Weed Management

Design Philosophy

To decrease the dissemination and prevalence of weed species within the new and existing flora corridors.

Principles

- To decrease the existing amount of weed species and potential for further infestation;
- Increase the dissemination of endemic species by decreasing competition from weed species;
- Support and increase biodiversity by providing suitable habitat and fodder for endemic fauna species; and
- Increase the visual quality of the road corridor.

Strategy	Implementation
Weed Management Strategy and Survey.	To be carried out prior to construction commencement
Undertake regular weed control in habitat plantings, bushland rehabilitation works and landscaping activities.	Use approved, environmentally acceptable, weed eradication methods and over a sustained period of time, setting realistic performance evaluation measures.
Control aquatic weeds at disturbed sites adjacent to watercourses.	<p>Collect and dispose of weed infested topsoil in an environmentally sensitive manner. Separate weed infested topsoil from topsoil that is to be reused in landscaping.</p> <p>Reuse topsoil from cleared vegetation areas in close proximity to its original location.</p> <p>Cleared material is to be assessed and all weeds and undesirable species (ie species with vigorous germination habits) are to be separated and removed from the cleared material, prior to chipping.</p> <p>Use mulch in close proximity to where it was derived.</p> <p>Clean earthmoving machinery prior to being used in non-weed infested areas.</p>
Ensure a quick, continuous cover to reduce potential weed infestation.	Include a cover crop of sterile grass and ground cover species (Rye Grass or Japanese Millet) in all seed mixes.
Prior to revegetation, treat any weed infested areas with an approved herbicide. .	Use approved, environmentally acceptable, weed eradication methods.
Ensure stockpiles etc are not affected or infested by weeds and erosion.	Seed exposed earthworks, stockpiles etc with a sterile cover crop (Rye Grass or Japanese Millet) to reduce potential infestation by weeds and erosion.
Restrict weed growth, improve plant establishment conditions and minimise maintenance.	Place mulch around individual tree plantings and on mass planting in interchange areas.



Observatory Park

8.0 Landscape Design

8.8 Visual Impact

As part of the urban and landscape design, mitigation measures have been incorporated into the overall scheme, to reduce the potential visual impact of the roadway upon the community and road users.

Design Philosophy

To reduce the visual impact of the road on the environment and on the local community.

Principles

- Integrate road with the surrounding natural and cultural landscapes;
- Provide screening of road from highly viewable locations and individual properties; and
- Retain existing landscape character.

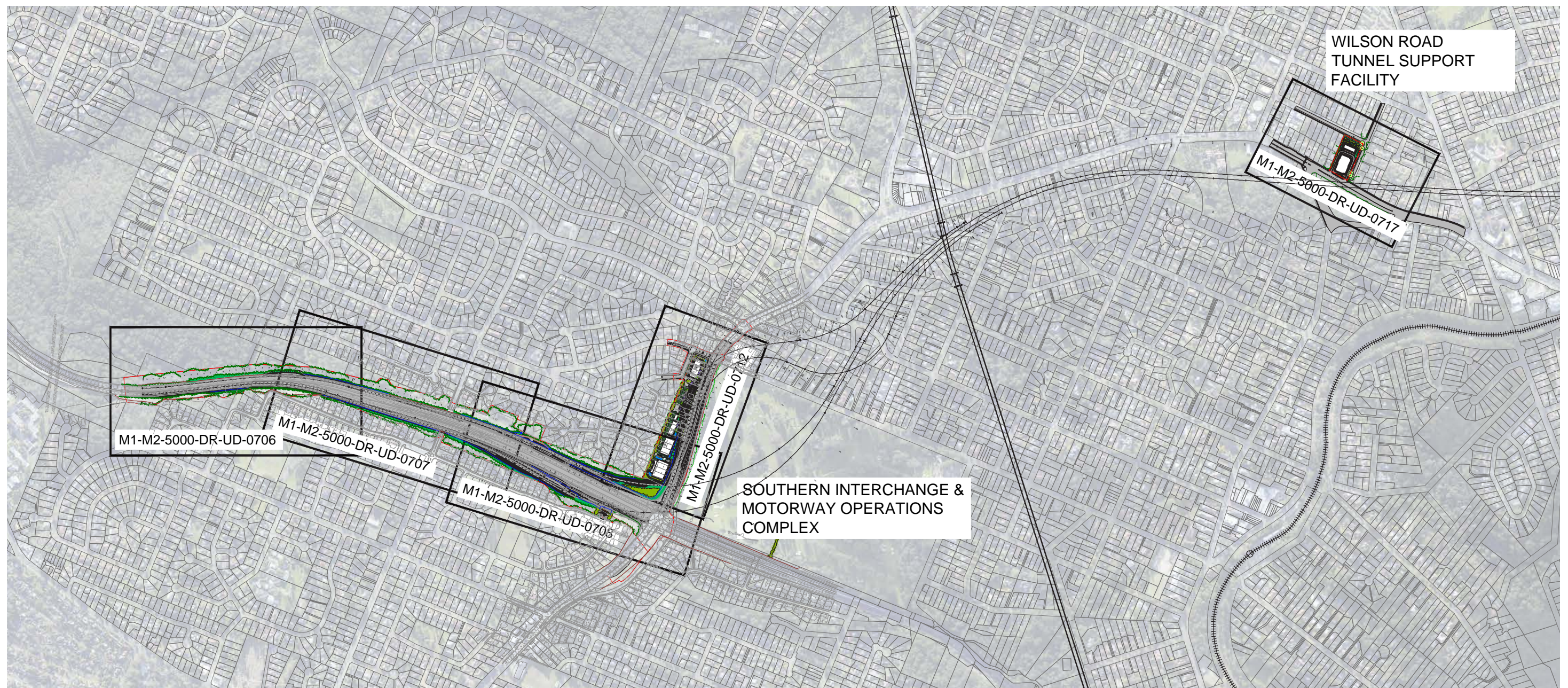
Strategy	Implementation
Use screen planting to reduce the visual impact of structures.	Implement suitable screen shrubs and trees along private property boundaries and against major built structures.
Reduce the visual impact of cut batters.	<div>Vegetate all batters and exposed earthworks with suitable endemic species.</div> <div>Rounding of edges of the cutting to sculpt the landform into the natural landscape.</div> <div>Laying back cutting batters at upper portions of the cutting to assist with landscape integration.</div>
Provide a unified design along the entire proposed highway route.	Carefully integrate all visible elements such as landscape, tunnel, embankments, abutments, barrier details, retaining walls, fencing, lighting, shared path, stairs, signposting structures and noise walls to form a unified design.
Screen local road users from noise walls.	Install appropriate screen planting/landscaping in front of the noise wall.
Where possible, minimise use of fencing.	Implement soft landscape barriers.



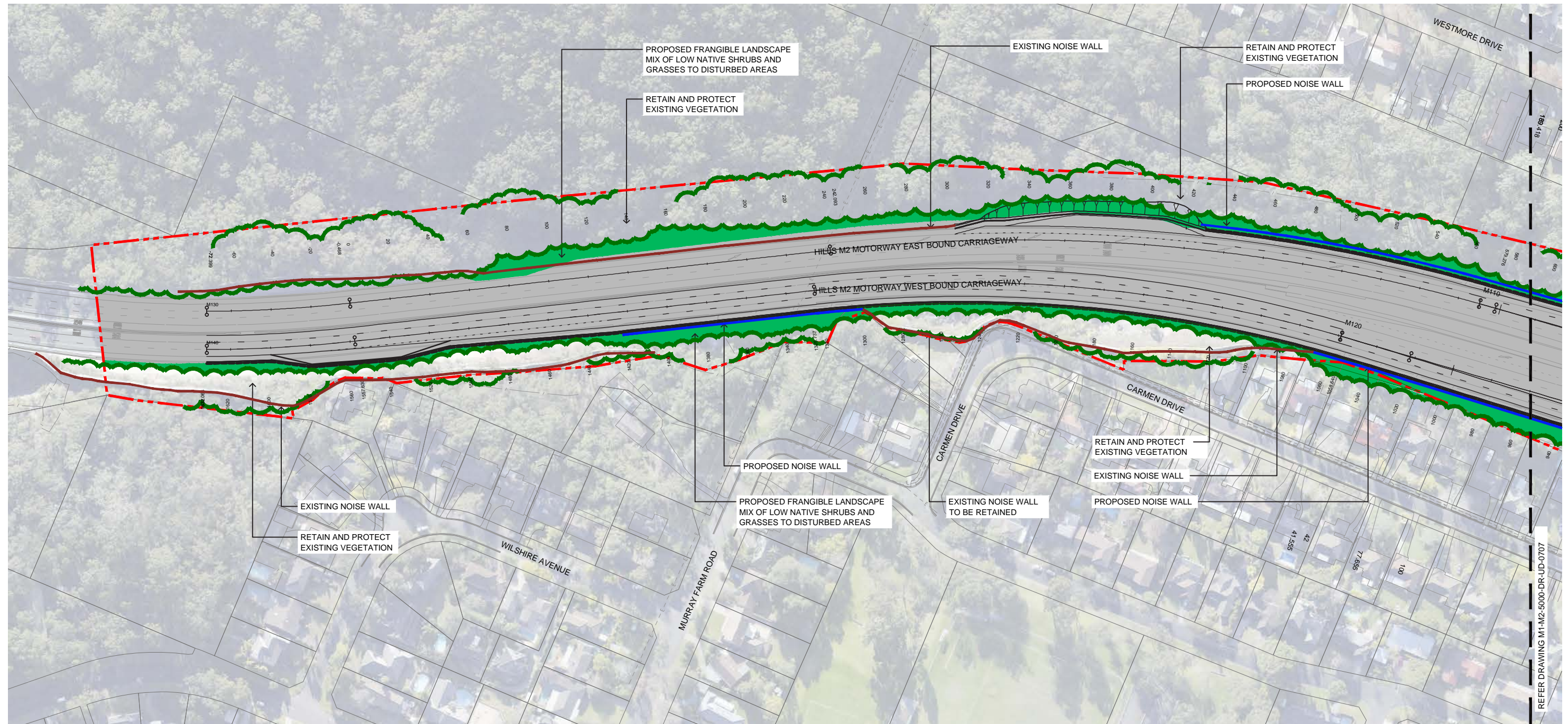
Screen Planting

8.0 Landscape Design

8.9 Landscape Concept Plans





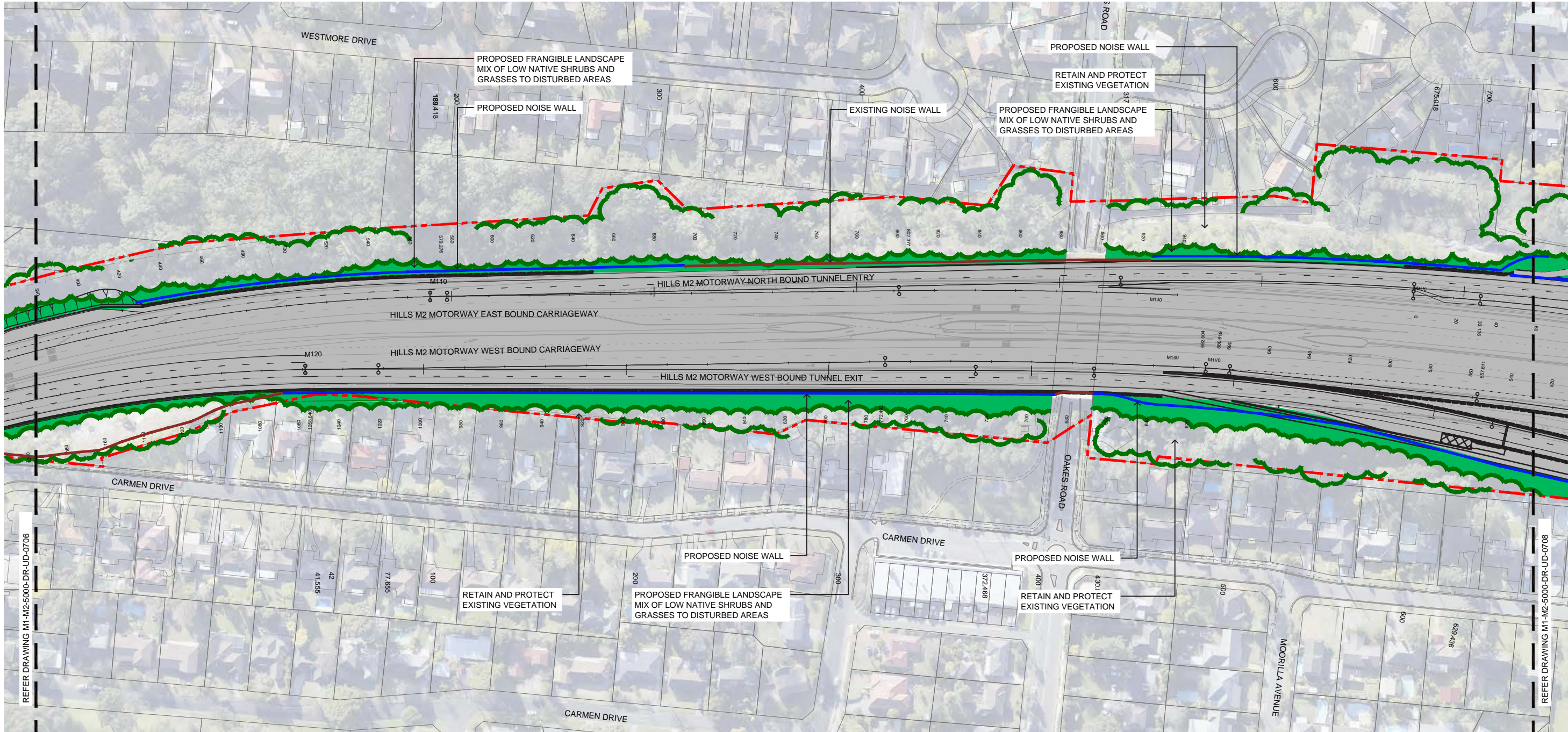


KEY

	PROJECT BOUNDARY		NATIVE MASS PLANTING OF SHRUBS AND GRASSES		STREET TREE
	PROPOSED NOISE WALL		LOW NATIVE GRASSES		FEATURE TREE
	EXISTING NOISE WALL		INFORMAL NATIVE TREE PLANTING		NATIVE FEATURE TREE
	PROPOSED RETAINING WALL		FEATURE MIXED SHRUBS		EXISTING TREE TO BE RETAINED & PROTECTED
	EXISTING VEGETATION				RAIN GARDENS WHERE NATURAL FLOWS ENTER COLLECTION SYSTEM

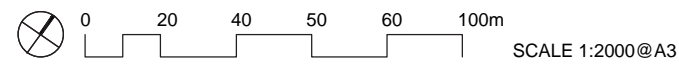


M1-M2-5000-DR-UD-0706
LANDSCAPE CONCEPT PLAN

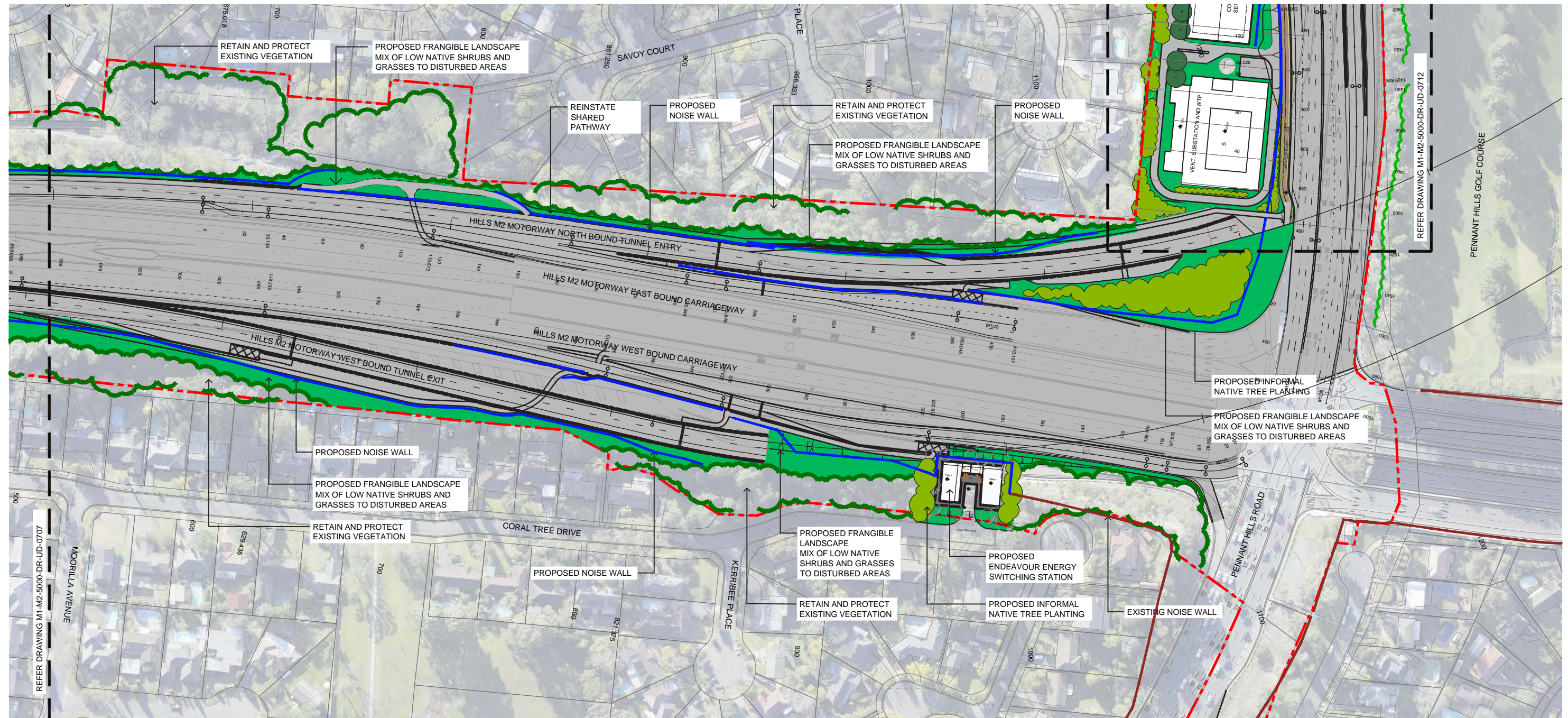


KEY

- | | | | | | |
|--|-------------------------|--|--|--|--|
| | PROJECT BOUNDARY | | NATIVE MASS PLANTING OF SHRUBS AND GRASSES | | STREET TREE |
| | PROPOSED NOISE WALL | | LOW NATIVE GRASSES | | FEATURE TREE |
| | EXISTING NOISE WALL | | INFORMAL NATIVE TREE PLANTING | | NATIVE FEATURE TREE |
| | PROPOSED RETAINING WALL | | FEATURE MIXED SHRUBS | | EXISTING TREE TO BE RETAINED & PROTECTED |
| | EXISTING VEGETATION | | | | RAIN GARDENS WHERE NATURAL FLOWS ENTER COLLECTION SYSTEM |



M1-M2-5000-DR-UD-0707
LANDSCAPE CONCEPT PLAN

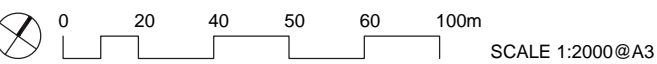
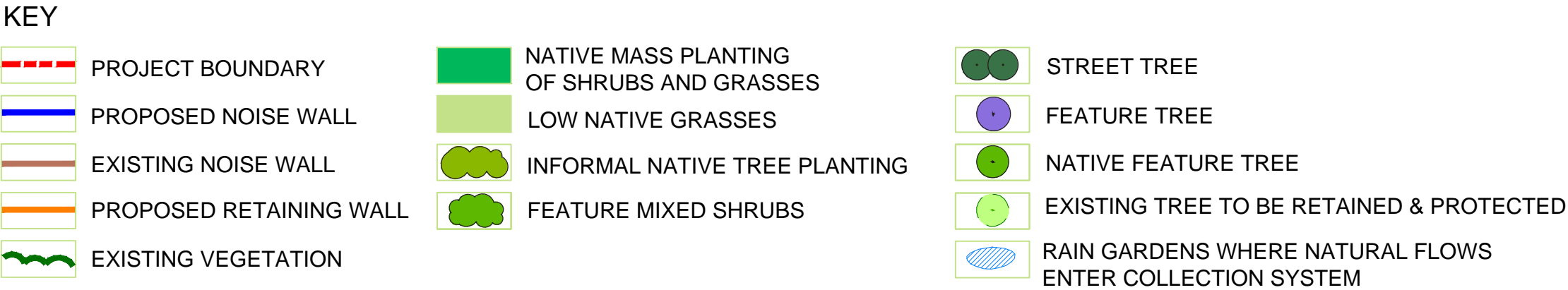
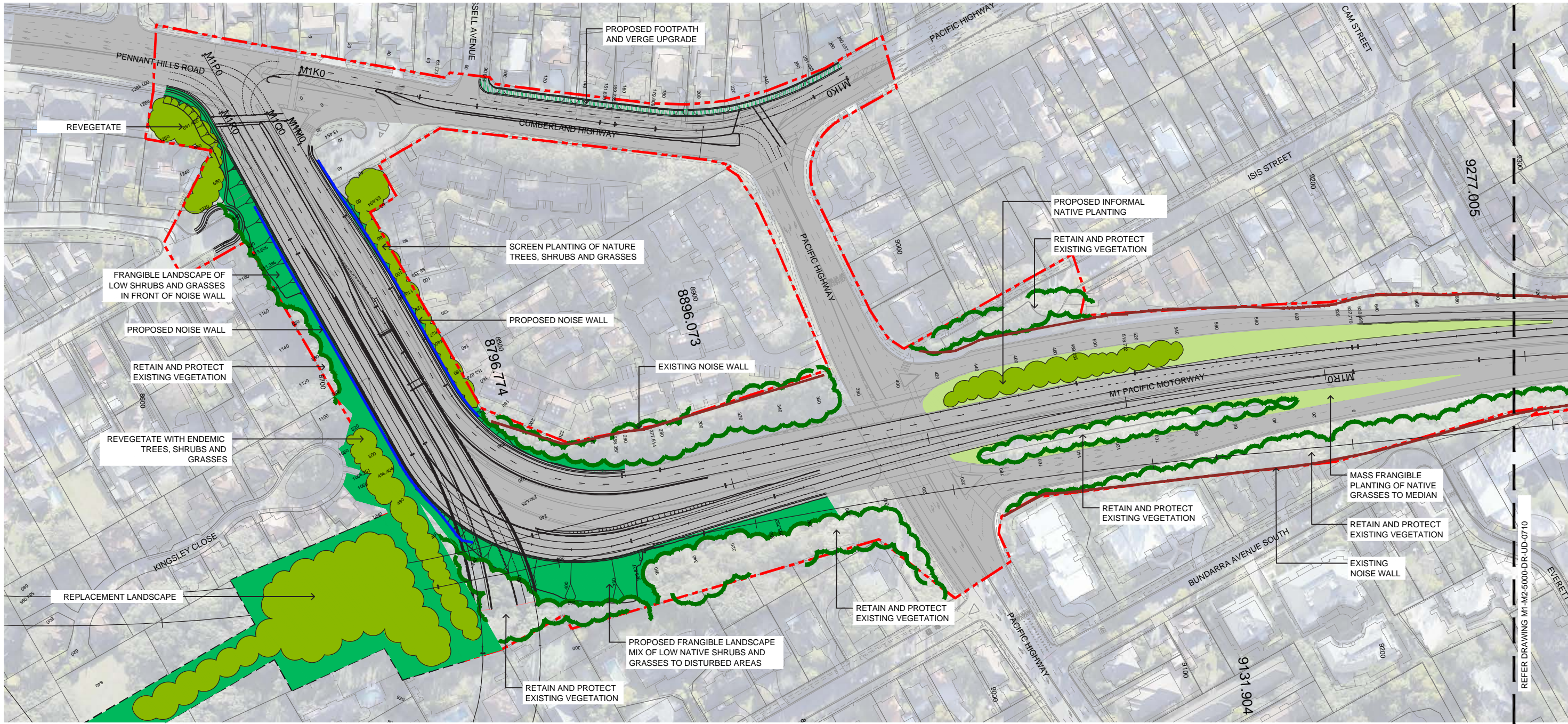


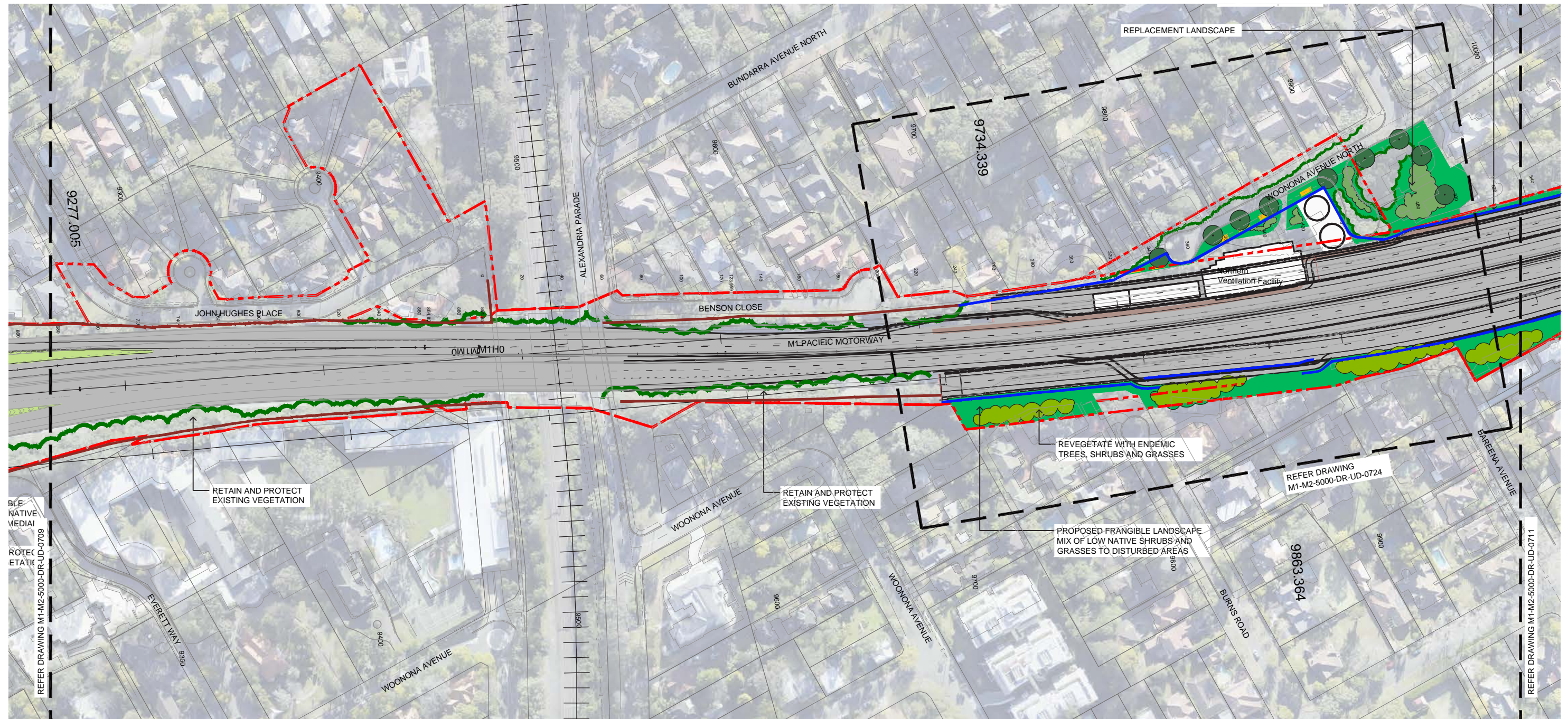
KEY

- | | | | | | |
|--|-------------------------|--|--|--|--|
| | PROJECT BOUNDARY | | NATIVE MASS PLANTING OF SHRUBS AND GRASSES | | STREET TREE |
| | PROPOSED NOISE WALL | | LOW NATIVE GRASSES | | FEATURE TREE |
| | EXISTING NOISE WALL | | INFORMAL NATIVE TREE PLANTING | | NATIVE FEATURE TREE |
| | PROPOSED RETAINING WALL | | FEATURE MIXED SHRUBS | | EXISTING TREE TO BE RETAINED & PROTECTED |
| | EXISTING VEGETATION | | | | RAIN GARDENS WHERE NATURAL FLOWS ENTER COLLECTION SYSTEM |



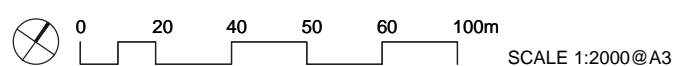
M1-M2-5000-DR-UD-0708
LANDSCAPE CONCEPT PLAN



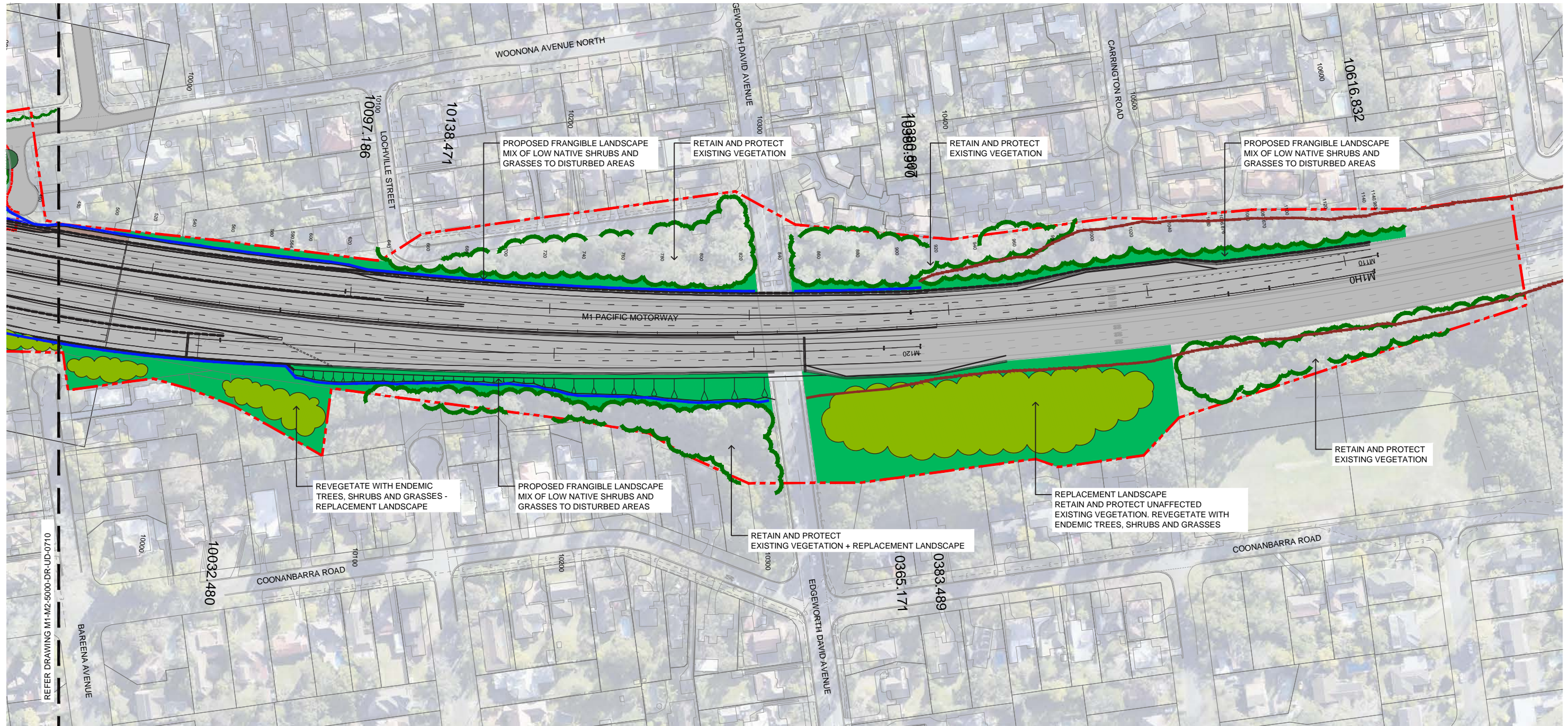


KEY

	PROJECT BOUNDARY		NATIVE MASS PLANTING OF SHRUBS AND GRASSES		STREET TREE
	PROPOSED NOISE WALL		LOW NATIVE GRASSES		FEATURE TREE
	EXISTING NOISE WALL		INFORMAL NATIVE TREE PLANTING		NATIVE FEATURE TREE
	PROPOSED RETAINING WALL		FEATURE MIXED SHRUBS		EXISTING TREE TO BE RETAINED & PROTECTED
	EXISTING VEGETATION				RAIN GARDENS WHERE NATURAL FLOWS ENTER COLLECTION SYSTEM



M1-M2-5000-DR-UD-0710
LANDSCAPE CONCEPT PLAN



KEY

	PROJECT BOUNDARY		NATIVE MASS PLANTING OF SHRUBS AND GRASSES		STREET TREE
	PROPOSED NOISE WALL		LOW NATIVE GRASSES		FEATURE TREE
	EXISTING NOISE WALL		INFORMAL NATIVE TREE PLANTING		NATIVE FEATURE TREE
	PROPOSED RETAINING WALL		FEATURE MIXED SHRUBS		EXISTING TREE TO BE RETAINED & PROTECTED
	EXISTING VEGETATION				RAIN GARDENS WHERE NATURAL FLOWS ENTER COLLECTION SYSTEM



M1-M2-5000-DR-UD-0711
LANDSCAPE CONCEPT PLAN