

# ***Dennesig Transport Master Plan Implementation***

***Woonerf Proposal  
Stellenbosch***

***November 2023***

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## SUMMARY SHEET

|                  |  |
|------------------|--|
| Report Type      | Woonerf Proposal   |
| Title            | Dennesig Transport Master Plan Implementation  |
| Location         | Stellenbosch   |
| Client           | Stellenbosch Municipality  |
| Reference Number | ITS 4122.2   |
| Project Team     | Johan Brink (Pr. Eng)<br>Nick Platte<br>Samantha Terblanche  |
| Contact Details  | Tel: 021 914 6211  |
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## 1. Background and Introduction

The Stellenbosch Municipality approved Urban Design Guidelines and a Transport Master Plan for the Dennesig neighbourhood in 2019 after receiving multiple development proposals within the area. Most of these developments are for student accommodation. The objective of the two studies was to guide new developments in the area to change the character of the neighbourhood and the behaviour of motorists to create “living streets” that would prioritise pedestrians and cyclists. Both urban design and changing traffic patterns are necessary to achieve this outcome.

Any proposed or changed land use in the area should comply with the urban design guidelines and the transport master plan will be implemented as developments in the area are approved.

The urban design guidelines documentation can be found [here](#).

## 2. Urban Design Guidelines

The Urban Design Guidelines for Dennesig (*SM Dennesig Urban Design Guidelines Document, 2019*) adopted the following philosophy and objectives for the area.

### 2.1. Objectives

#### Places Matter Most

Creating appealing and engaging public spaces is more significant than focusing on individual buildings or traffic flow. The goal is to make these areas convenient, functional, and enjoyable for those who use them regularly and those who simply walk by. By considering the broader context of the site, it is necessary to identify important principles to guide designs and make the most of the location's potential. Ultimately, the aim is to enhance the physical experience of the development and create a positive impact on the surrounding community. We endeavour to create attractive and interesting places that are shaped by the human scale, qualitative and functional organisation of the site. The intention of which is to enliven the physical experience of the development by and for both its occupants and the passers-by. The rich potential of the broader site context is invaluable and already provides key qualitative principles from which to draw inferences.

#### Craft is King

To create appealing public spaces and cities, it's important to focus on both design and construction. Unfortunately, commercial developments often prioritise practical considerations over aesthetics. This can result in bland and uninviting spaces. It's important to pay attention to the details of construction, such as the materials used and their textures, to make both useful and attractive spaces.



## **People and Space Integration**

It is important to work with the existing features of a location and blend them in with the surrounding environment. This means creating a space that fits in with the local culture and reflects the character of the community that uses it. It is necessary to consider how people interact with the space and what activities are typically performed there. Ultimately, we want to create a space that feels like it belongs and is loved by the people who use it.

## **Community Over Time**

It is important to approach development with a long-term perspective and to consider how the space may evolve over time. All developments should be designed to be adaptable to changing needs in the future. This means planning for flexibility in the design to accommodate any changes to the space's purpose or function over time. This approach ensures that the development can evolve and grow with the community it serves.

To achieve the design philosophy and objectives to create a people-centric space, significant changes to the road and traffic environments are required. Transport forms an integral part of achieving these changing environments.

## **2.2. Principles**

The following principles are required to transform the Dennesig Area and to achieve the urban design objectives for the area.

- A pedestrian-focused environment
- Safe activated public realm
- Vibrant mixed-use opportunities
- A sustainable lifestyle community
- Multiplicity in scale
- Contemporary architectural approach

It is therefore proposed to change the neighbourhood spatial structure by converting Dennesig and Hofman Streets into a pedestrian-oriented woonerf street and transform these integral roads into living streets. Vehicles are slowed by creating an indirect route and maximise the opportunity to create interactive edges along both sides of the street that include building entrances and public uses. These changes will prioritise these streets for pedestrians and cyclists.

## 3. The Woonerf

### 3.1. Definition

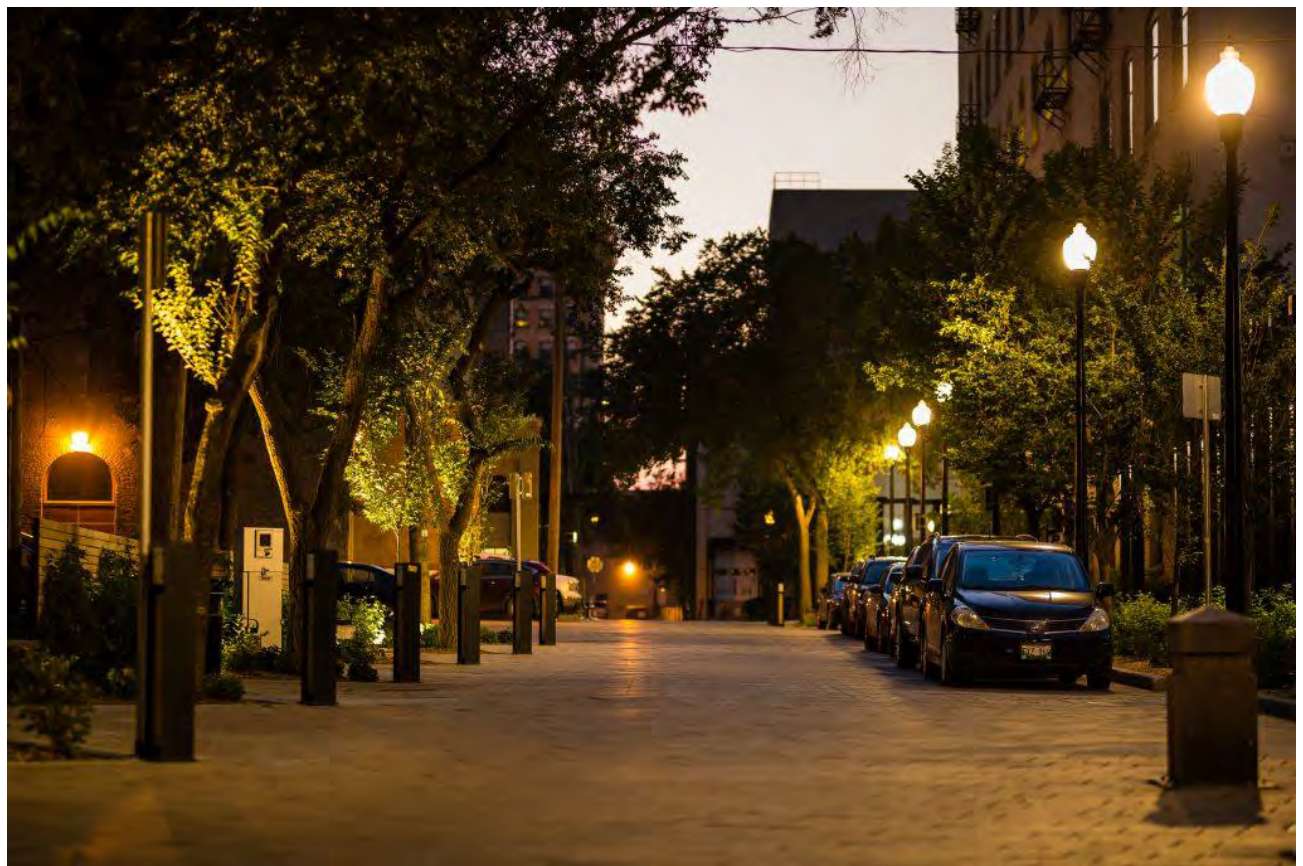
A woonerf is a street typology that subverts the movement of vehicles in favour of pedestrian movement and is often called a “living street”. The space is characterised by shared space between pedestrians and vehicles, slow vehicle speeds and traffic calming measures. The space is often well-landscaped which integrates planting into road calming measures.

### 3.2. Establishing the Woonerf

The establishment of the Woonerf includes the following measures:

- Remove kerbs and establish a level surface from building edge to building edge.
- Define the extent of the space for vehicles through changes in surface materials.
- Allow for the movement of vehicle routes to deviate through the course of the woonerf.
- Shift movement patterns to prioritise one side of the road reserve and make room for concession spaces.
- Establish interactive faces through the length of the woonerf with the corners accommodating retail use such as coffee shops, local grocers, or service relation retail such as laundromats.
- Use landscaping to direct changes in vehicular movement.
- Change the interface with existing multi-storey developments over time to respond to the woonerf.
- Create multiple entrances off the woonerf. Make provision for limited on-street parking for visitors and loading bay areas.

Examples of Woonerf streets around the world are illustrated in Figure 1.



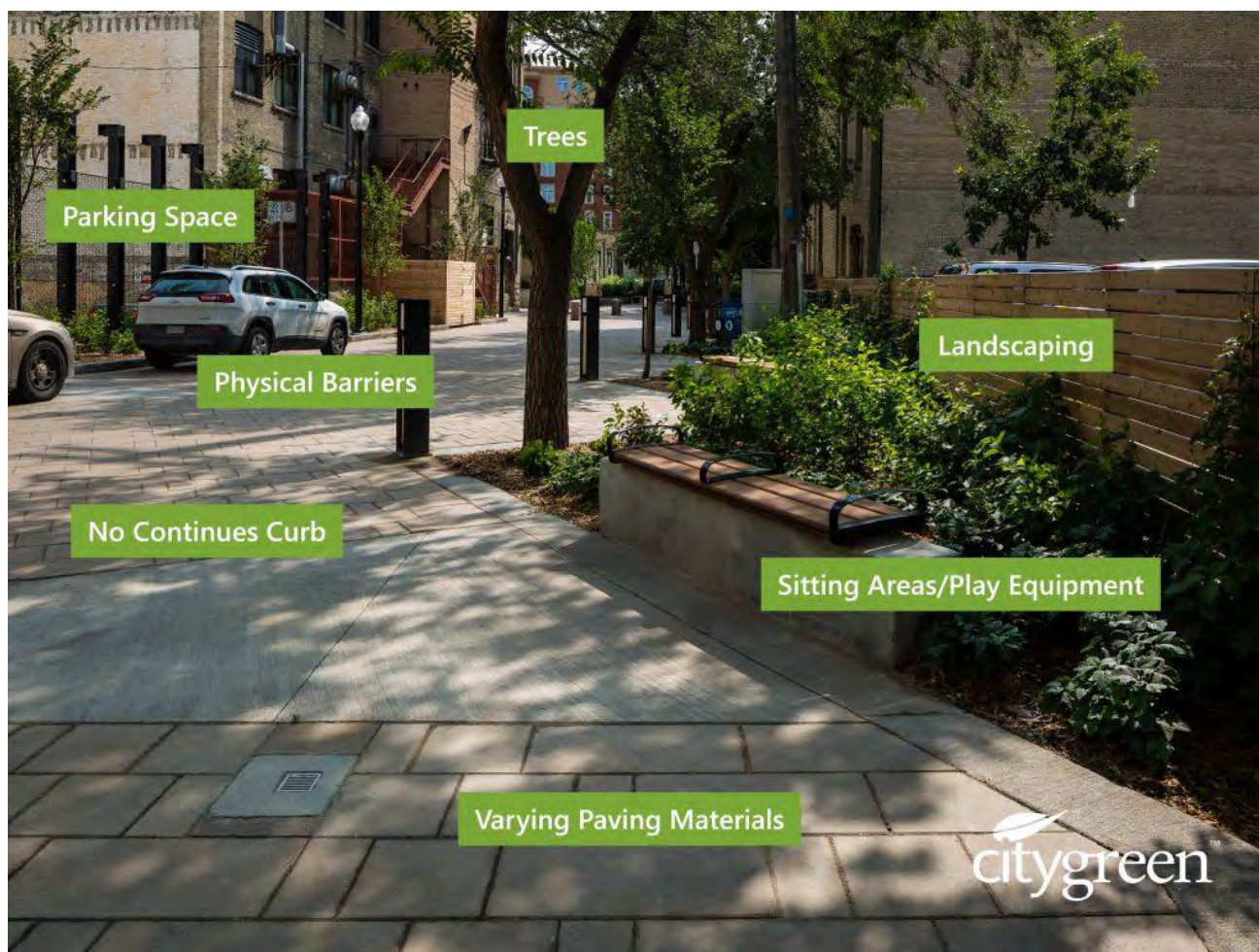
**Figure 1: Woonerf Examples (sources citygreen & Eit)**



#### 4. Woonerf for Dennesig

Dennesig hosts many student accommodation developments and is a well-established neighbourhood surrounded by public spaces and nature like the Krom River running just to the north of the neighbourhood. However, the surrounding high trafficked arterial roads like Adam Tas Road and Bird Street isolate it from the rest of the town and the Stellenbosch University.

The main transport objective is therefore to reduce vehicular demand especially for students and to link the Dennesig Neighbourhood with the Campus by introducing pedestrian walkways and cycle lanes/ways. The woonerf concept is ultimately proposed for all streets within the Dennesig area. This will be phased with the initial implementation proposed along Dennesig Road (between Bird and Hofman Streets), along Hofman Street (between Paul Kruger and Dennesig Roads). Future phases will be subject to further development within the precinct.



**Figure 2: Typical Woonerf Concepts (source citygreen)**

The most prominent woonerf is proposed along Dennesig Road where the street is to be converted into a pedestrian corridor for the people to use when walking or cycling to the Stellenbosch CBD or the University. To allow for more prominent non-motorised transport (NMT) and public transport facilities, it is proposed to change the direction of the road to a one-way also in the westbound

direction. It is furthermore proposed to extend the pedestrian corridor of Dennesig Road over Bird Street by means of a signalised pedestrian crossing, to prioritise NMT movement across Bird Street.

## **5. Implementation**

Innovative Transport Solutions is currently in the process of completing woonerf designs for Dennesig and Hofman Street for approval by the Stellenbosch Municipality. It is planned to start implementation in 2024 once the woonerf is approved by the public and the municipality.

Annexure A of this report contains the proposed conceptual engineering and landscape architects plans for the area. Areas where detail is not shown will be refined in future phases of the implementation. A public participation process will be followed whereby any comments or questions by the public will be addressed.

## Annexure A





FOR INFORMATION ONLY

| LEGEND  |                        |
|---|------------------------|
| <span style="display:inline-block; width:15px; height:10px; background-color:purple; border:1px solid black;"></span> | FUTURE WOONERF         |
| <span style="display:inline-block; width:15px; height:10px; background-color:blue; border:1px solid black;"></span>   | WOONERF AREA "PHASE 1" |

| NO | DATE       | FOR INFORMATION ONLY                        | REVISION |
|----|------------|---|----------|
| 2  | 2023/11/20 | UPDATED FUTURE WOONERF AREA ALONG DENNESSIG |          |
| 1  | 2023/10/06 | UPDATED FUTURE WOONERF AREA                 |          |
| 0  | 2023/09/20 | FOR INFORMATION ONLY                        |          |

|             |                    |
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| DESIGNED:   | SIGNED:            |
| NAME: _____ | SIGNATURE: _____   |
| REVIEWED:   | PR. NO.: _____     |
| NAME: _____ | DATE: _____        |
| DRAWN:      | COPYRIGHT RESERVED |

|                |                           |
|----------------|---------------------------|
| PROJECT:       | DENNESSIG DETAIL DESIGN   |
| DRAWING TITLE: | DRAFT WOONERF MASTER PLAN |

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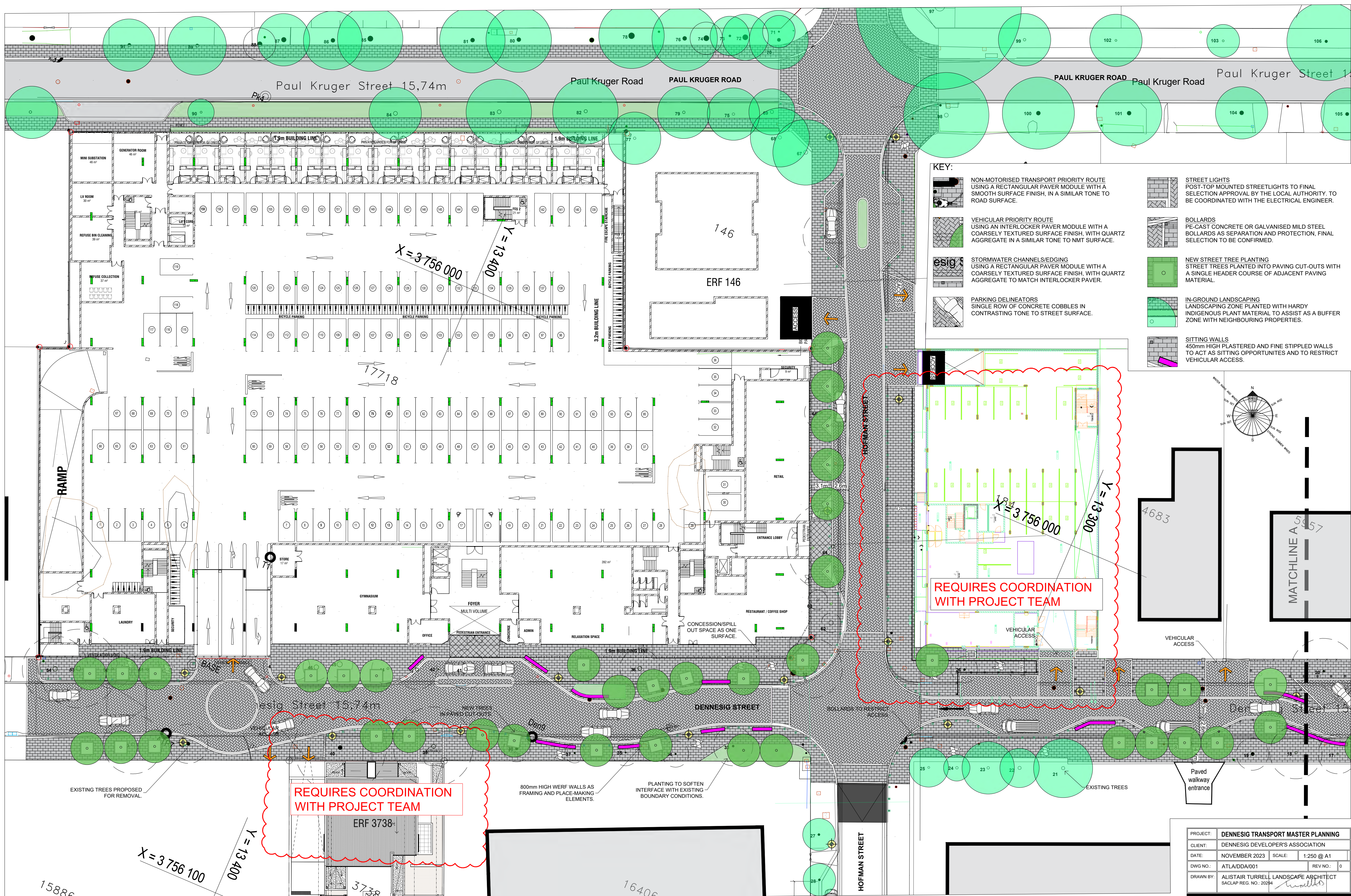
**DENNESIG NEIGHBOURHOOD UPGRADES**  
 CONCEPTUAL LANDSCAPING LAYOUT - OVERVIEW

FOR COORDINATION

|           |  |          |            |
|-----------|--|----------|------------|
| PROJECT:  | DENNESIG TRANSPORT MASTER PLANNING       |          |            |
| CLIENT:   | DENNESIG DEVELOPER'S ASSOCIATION         |          |            |
| DATE:     | SEPTEMBER 2023                           | SCALE:   | 1:250 @ A1 |
| DWG NO.:  | ATLA/DDA/004                             | REV NO.: | 0          |
| DRAWN BY: | ALISTAIR TURREL<br>SACLAP REG. NO.: 2021 |          | ECT        |







- KEY:**
- NON-MOTORISED TRANSPORT PRIORITY ROUTE USING A RECTANGULAR PAVER MODULE WITH A SMOOTH SURFACE FINISH, IN A SIMILAR TONE TO ROAD SURFACE.
  - VEHICULAR PRIORITY ROUTE USING AN INTERLOCKER PAVER MODULE WITH A COARSELY TEXTURED SURFACE FINISH, WITH QUARTZ AGGREGATE IN A SIMILAR TONE TO NMT SURFACE.
  - STORMWATER CHANNELS/EDGING USING A RECTANGULAR PAVER MODULE WITH A COARSELY TEXTURED SURFACE FINISH, WITH QUARTZ AGGREGATE TO MATCH INTERLOCKER PAVER.
  - PARKING DELINEATORS SINGLE ROW OF CONCRETE COBBLES IN CONTRASTING TONE TO STREET SURFACE.
  - STREET LIGHTS POST-TOP MOUNTED STREETLIGHTS TO FINAL SELECTION APPROVAL BY THE LOCAL AUTHORITY. TO BE COORDINATED WITH THE ELECTRICAL ENGINEER.
  - BOLLARDS PE-CAST CONCRETE OR GALVANISED MILD STEEL BOLLARDS AS SEPARATION AND PROTECTION, FINAL SELECTION TO BE CONFIRMED.
  - NEW STREET TREE PLANTING STREET TREES PLANTED INTO PAVING CUT-OUTS WITH A SINGLE HEADER COURSE OF ADJACENT PAVING MATERIAL.
  - IN-GROUND LANDSCAPING LANDSCAPING ZONE PLANTED WITH HARDY INDIGENOUS PLANT MATERIAL TO ASSIST AS A BUFFER ZONE WITH NEIGHBOURING PROPERTIES.
  - SITTING WALLS 450mm HIGH PLASTERED AND FINE STIPPLED WALLS TO ACT AS SITTING OPPORTUNITIES AND TO RESTRICT VEHICULAR ACCESS.

**REQUIRES COORDINATION WITH PROJECT TEAM**

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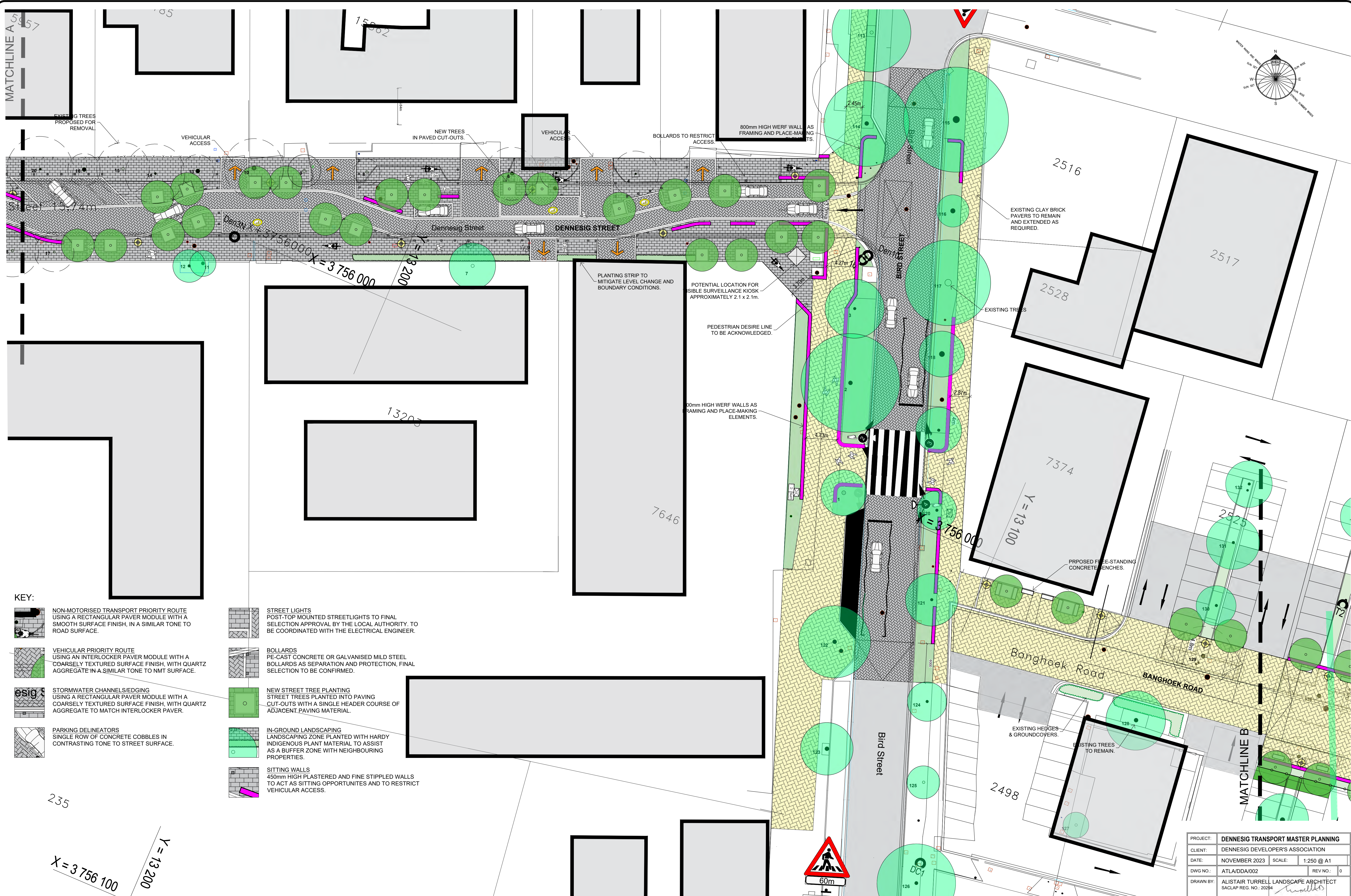
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|-----------|--|----------|------------|
| PROJECT:  | DENNESIG TRANSPORT MASTER PLANNING                             |          |            |
| CLIENT:   | DENNESIG DEVELOPER'S ASSOCIATION                               |          |            |
| DATE:     | NOVEMBER 2023  | SCALE:   | 1:250 @ A1 |
| DWG NO.:  | ATLA/DDA/001   | REV NO.: | 0          |
| DRAWN BY: | ALISTAIR TURRELL LANDSCAPE ARCHITECT<br>SACPLA REG. NO.: 20294 |          |            |

**DENNESIG NEIGHBOURHOOD UPGRADES**  
**DENNESIG/BIRD STREET CONCEPTUAL LANDSCAPING LAYOUTS - SHEET 1 of 3**

**FOR COORDINATION**







- KEY:**
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**DENNESIG NEIGHBOURHOOD UPGRADES**  
 DENNESIG/BIRD STREET CONCEPTUAL LANDSCAPING LAYOUTS - SHEET 2 of 3

FOR COORDINATION

|           |   |          |            |
|-----------|---|----------|------------|
| PROJECT:  | DENNESIG TRANSPORT MASTER PLANNING                              |          |            |
| CLIENT:   | DENNESIG DEVELOPER'S ASSOCIATION                                |          |            |
| DATE:     | NOVEMBER 2023   | SCALE:   | 1:250 @ A1 |
| DWG NO.:  | ATLA/DDA/002  | REV NO.: | 0          |
| DRAWN BY: | ALISTAIR TURRELL LANDSCAPE ARCHITECT<br>SACLAP REG. NO.: 202294 |          |            |

