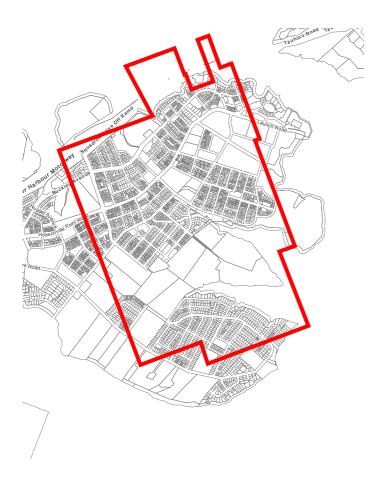
## section three -

## site analysis



## scale comparison

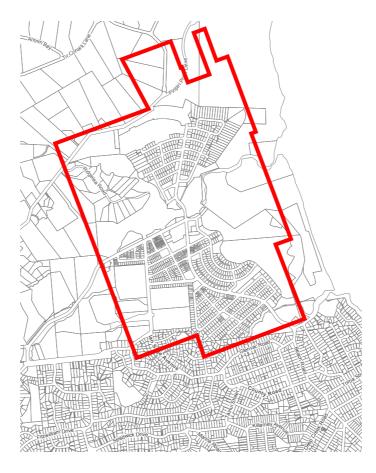
The ability of a project of the scale of Sunfield to provide for comprehensive approaches to land use, transport, services, and infrastructure is significant. The potential implications are major when compared to the impact of similar scaled comprehensive developments such as Hobsonville Point and Long Bay.



**Hobsonville Point** 

167 Ha

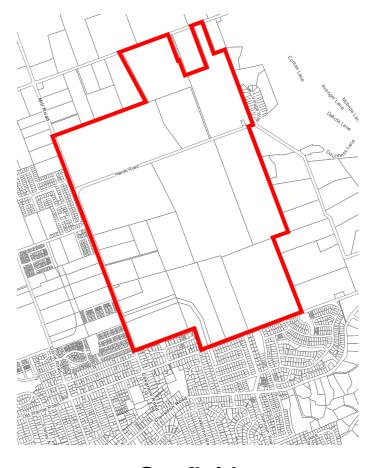
4,500



Long Bay

162 Ha

2,500



Sunfield

244.5 Ha

4,000

## aerial views

looking north-west Auckland CBD Manukau Shopping Centre Botany Town Centre Takanini Town Centre Sylvia Park Wiri Industrial Estate Half Moon Bay Marina

## aerial views

## looking south



## site photos

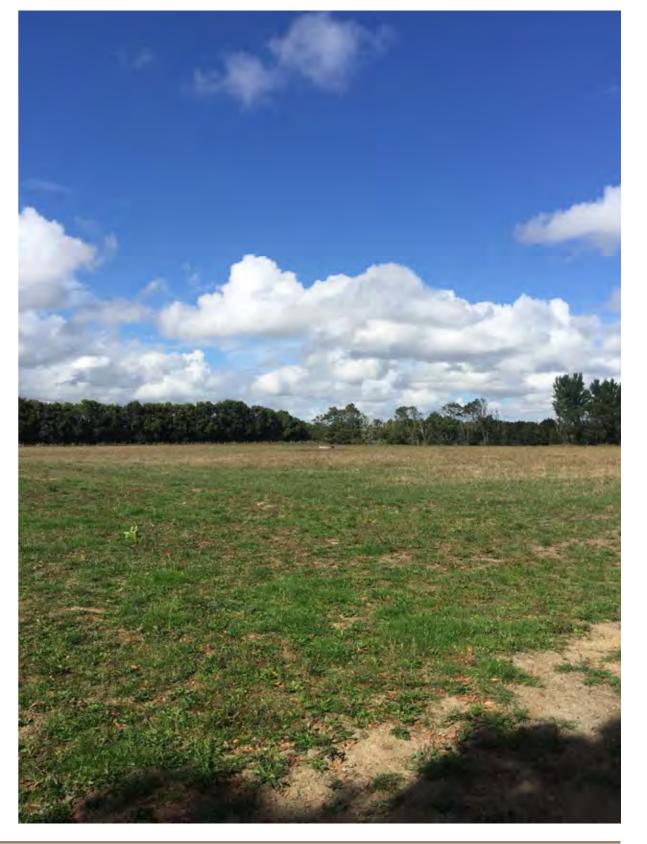
## characteristically flat ground











# **site photos** sloped land to southeast corner



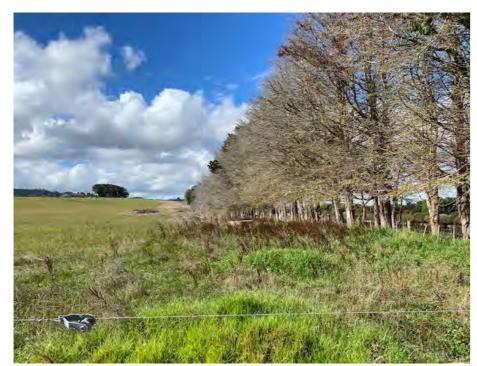








# **site photos** characteristic shelter belts













## aerial photograph + auckland unitary plan zoning

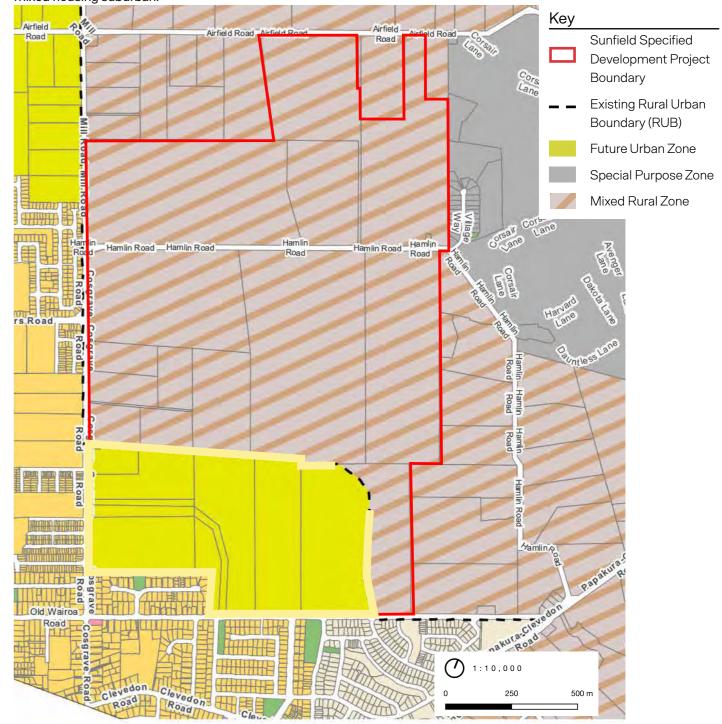
#### **Aerial**

The site currently comprises mostly grazed farmland with a pattern of north south shelter belts and farm drains



#### Auckland Unitary Plan – Zoning Layout

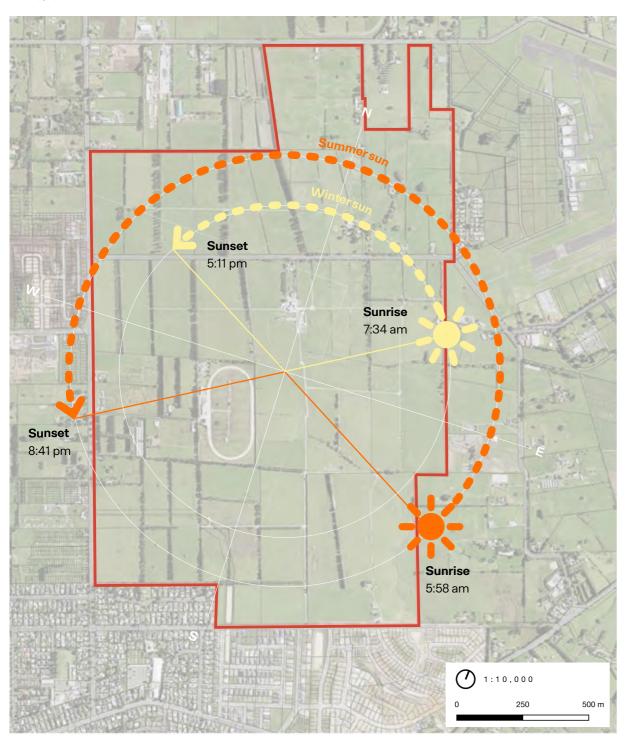
The southern portion of the site is currently zoned future urban and is within the current rural urban boundary. The remainder of the site is currently zoned mixed rural. Ardmore Airport to the east is zoned special purpose. Residential areas abutting the western and southern boundaries are zoned mixed housing suburban.



### environmental conditions

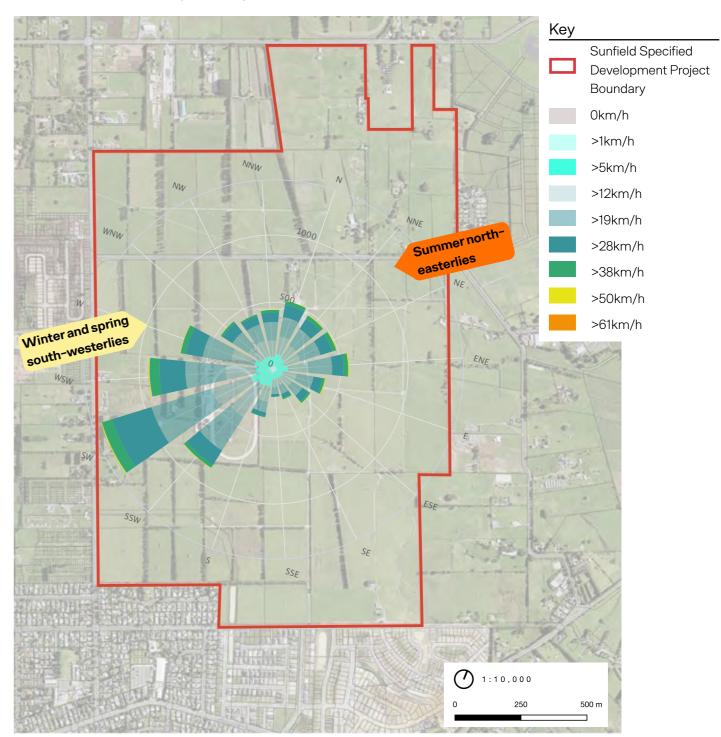
#### Sun

The region receives 1925-1950 median annual sunshine hours. Positioned in the base of a wide open valley and close to the coast the flat site is ideally suited to maximise solar gain for liveability and potential solar energy generation.



#### Wind

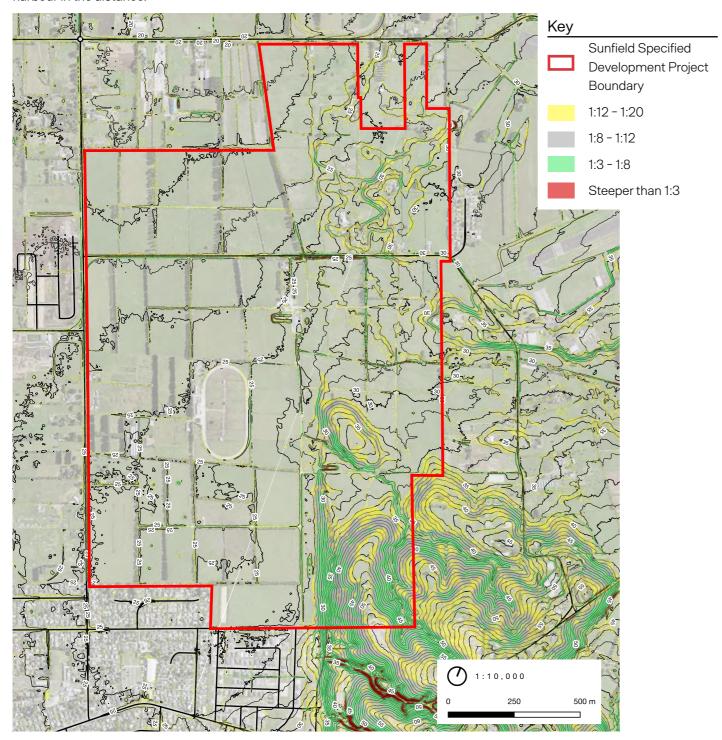
The predominant wind is from the south-west. It is stronger in the winter and spring months. There is also a slight increase in north-easterlies in the summer months. The predominant wind is reflected in the orientation of the adjacent airport runway and the orientation of the shelter belts on site.



## slope analysis

#### Slope Analysis

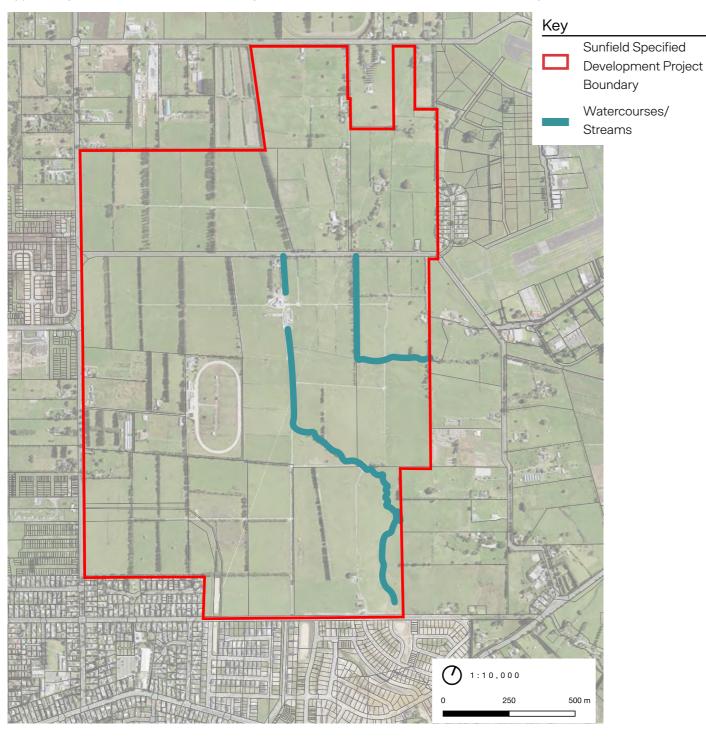
The site is predominantly flat with the topography rising in the south-east corner to a high point, which affords long views across the site and beyond, including Manakau harbour in the distance.



## existing streams + existing trees

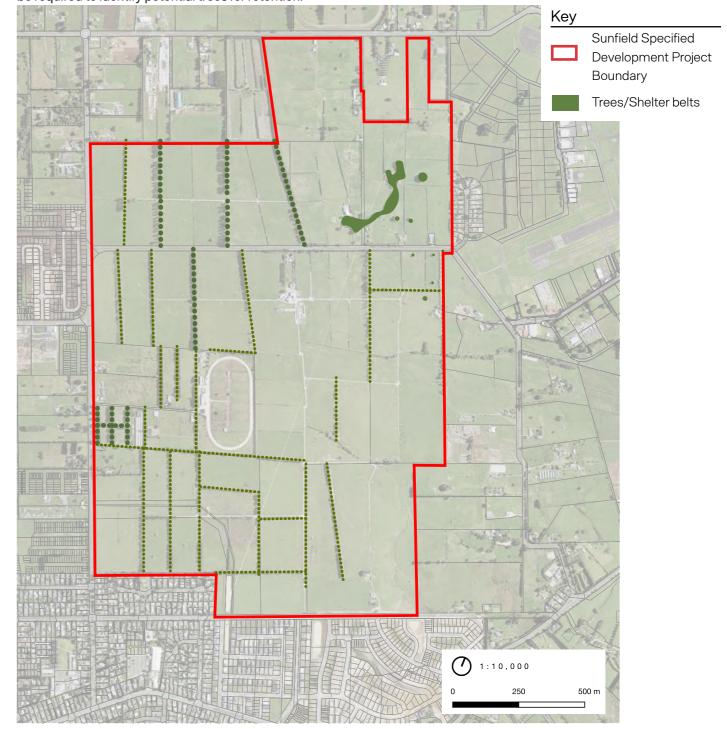
#### **Existing Streams**

Initial studies indicate two streams within Sunfield. Additional waterways are confined to farm drains along the edges of paddocks. The southern-most stream follows the topography of the local valley and presents the opportunity to restore as a natural waterway. NOTE: Status of streams subject to further analysis.



#### **Existing Trees + Shelter Belts**

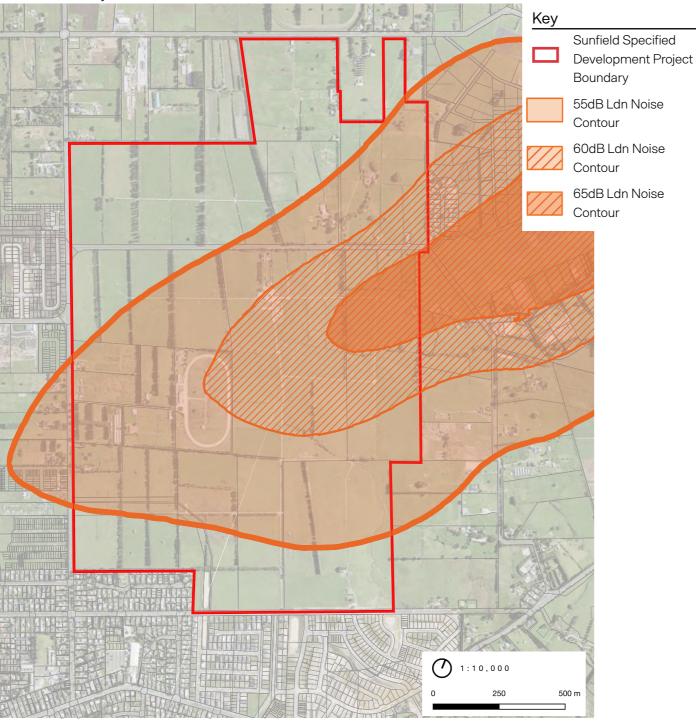
A range of predominately exotic shelter belts (some native) of variable age and quality run through the site. The potential exists to incorporate some existing trees (either as shelter belt remnants or individual specimens) within the development for a sense of scale and maturity. An arboricultural assessment will be required to identify potential trees for retention.



## noise contours + gas easement

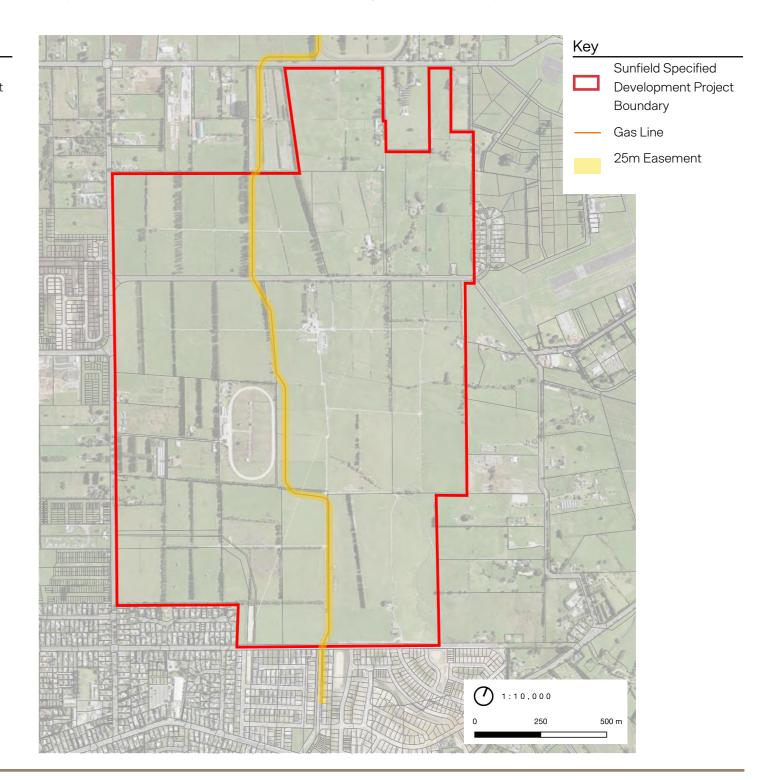
#### **Auckland Unitary Plan: Noise Contours**

Noise overlay contours from the adjacent Ardmore Airport will restrict residential properties from part of the site (within the inner noise contour). The Sunfield concept masterplan works within the existing constraints associated with the Ardmore Airport noise contours. Winton is not proposing any changes to these noise overlays.



#### **Gas Easement**

An existing gas line runs north south through the site within 25m easement. The intention is to maintain the gas line and easement in its current location and incorporate it into the design.



## section four -

# challenges and opportunities



## challenges



#### **Connectivity**

Connecting the site with nearby train stations will require upgrades for public transport and active modes.



#### **Stormwater**

The flat site and location in a flood plain will require a holistic approach to stormwater management.



#### **Ground Conditions**

Geotechnical ground conditions (including peat soils) will generally restrict building heights to two storeys.



## **Existing Transport Infrastructure**

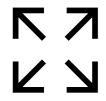
The development will require a new approach to vehicle traffic to reduce impact on existing roading network.



#### **Noise Contours**

Residential housing will be restricted within the inner airport noise contour.

## opportunities



#### Scale

The scale of the site at 244.5Ha provides the opportunity to plan holistically to address global issues outlined previously

- · Consolidated approach to stormwater management
- · Integration of employment
- Integration of education, community amenity and nonresidential uses
- Provision of a range of housing typologies
- Exploration of alternative energy system
- · Critical mass for community amenity and facilities
- · Sustainable approach to transportation



#### Location

- · Proximity to nearby rail connections
- Proximity to nearby employment and commercial centres
- · Adjacency to Ardmore airport for employment
- · Connection to open space opportunities.



### **Existing Features**

- Predominately flat site provides opportunity for easy cycling and walking connections through the site and to nearby centres and public transport.
- Opportunity to enhance and celebrate existing streams
- · Potential to retain some shelter belts or trees.

## section five -

# zoning and precinct plans



## zoning plan

#### Key (Indicative Locations Only)

Sunfield Specified Development Project Boundary

Mixed Living Walkable

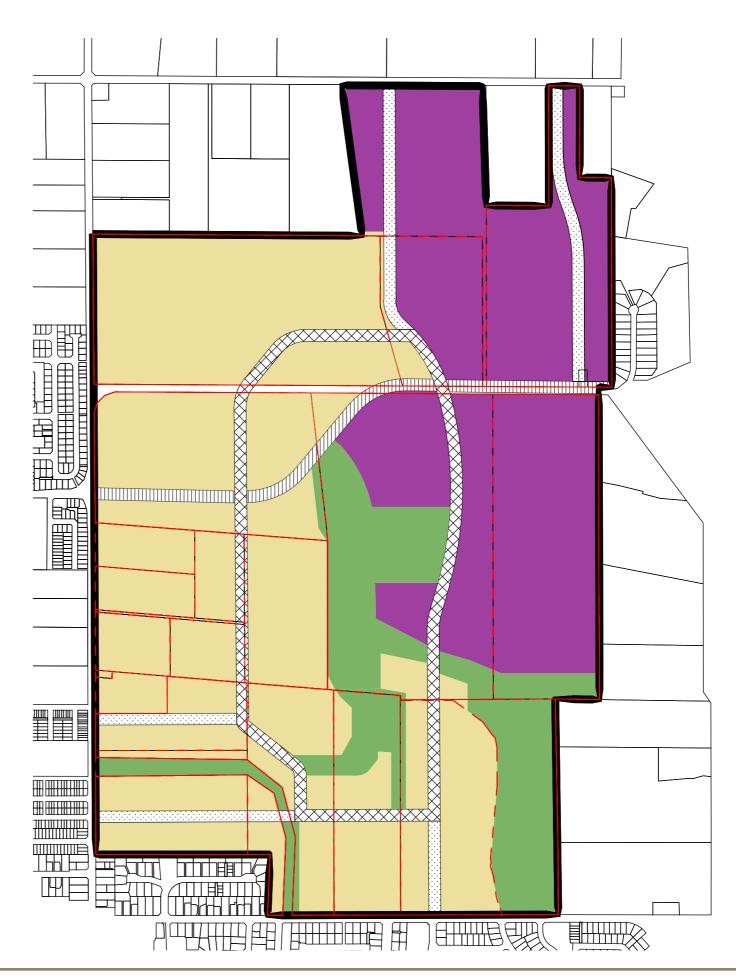
Open Space Informal Recreation

Mixed Employment Walkable

Indicative Location of Loop Road

Indicative Location of New Hamlin Road Alignment

Indicative Location local connector roads





## precinct plan

#### Key (Indicative Locations Only)

Sunfield Specified Development Project Boundary

Stormwater management channels and wetlands

Loop road (32m corridor)

Realigned Hamlin Road (32m corridor)

Local Connector Roads (32m corridor)

Existing gas line and set back area (25m corridor)

Open space parkland

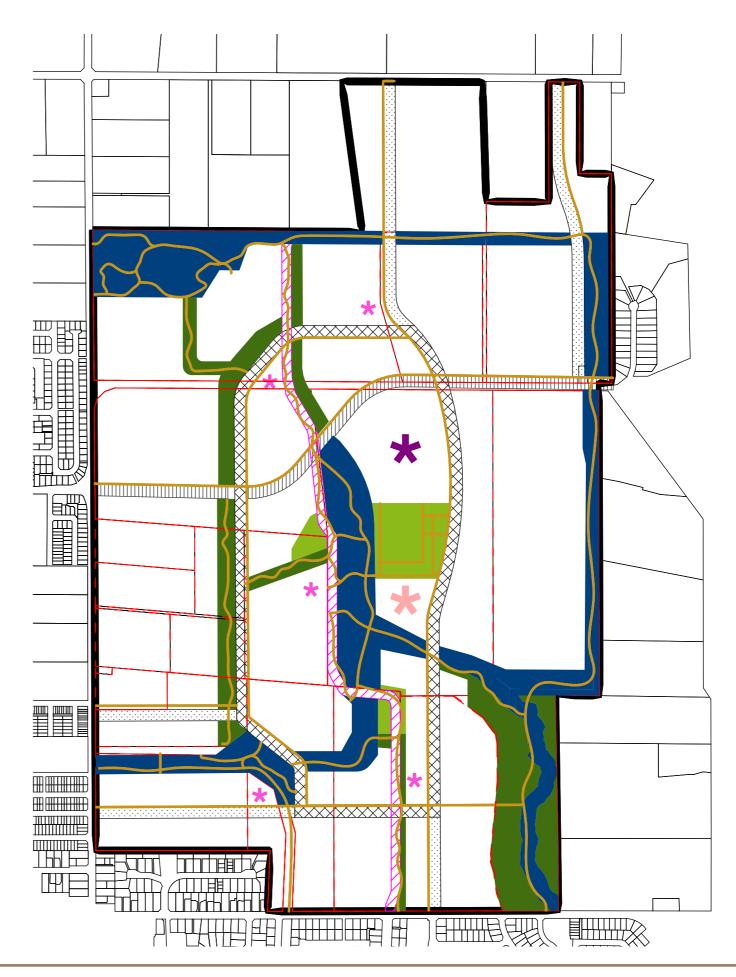
Primary cycleway network

Local retail/community hubs

Central retail/community hub

Neighbourhood reserves

Potential healthcare facility



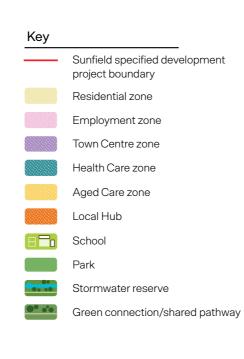


# Sunfield

## a community masterplanned around people, not cars.

Sunfield is a 15 minute sustainable neighbourhood across 244.5 hectares of contiguous land which upon completion will comprise:

- · a community designed to enable "car-less" living.
- 4,000 healthy homes, consisting of 3,400 individual homes and 3 retirement villages containing approximately 600 independent living units and care beds.
- · 460,000 sqm of employment, healthcare and education buildings.
- · a 7.5 hectare town centre.
- · a school.
- · a further 5 retail hubs located throughout the community.
- permanent jobs for over 11,000 people.
- · 25.6 hectares of open spaces, green links, recreation parks and reserves and ecological areas.
- · an extensive restoration and native planting of the core stream and wetland network.
- the establishment of the Sunfield renewable solar energy network for the community.
- · the Sunbus autonomous electric shuttle fleet.





#### Report prepared by:

Studio Pacific Architecture

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