Sustainability Strategy

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FCDS have been commissioned to assist with development and implementation of a sustainability strategy for the local retail development on Hammond Road in the City of Cockburn.

The project includes the development of five lots, housing six distinct service offerings for the community, including:

- 7-Eleven convenience and fuel
- Starbucks Restaurant
- Medical Centre
- Car Wash
- McDonalds Restaurant
- KFC Restaurant

The development planning has been undertaken considering the surrounding area and ecology. Works include provision of a 15m buffer to the wetland with a fence to protect it from public and vermin activity.

Overall, the sustainability strategy for the site involves three key themes:

- Carbon Footprint
    - Lower the carbon footprint for the site through reduced energy and water consumption, reduced waste to landfill and improved transport options.
- Ecology and Emissions
    - Reduce the impact of the development on the local ecology and surrounding environment
- Social Sustainability
    - Improved outcomes for the local community and users of the facility.

Many of the design features proposed with the design provide improved performance across multiple themes and, in addition, the proposed tenants have their own sustainable design features and policies which will improve local and global outcomes.

This note provides a summary of the project sustainability strategy, including overarching themes and the intended pathway to ensure the project delivers these outcomes.

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Design Inclusions:

Solar Panels

The project intends to include solar panels where appropriate on the roofs of various buildings.

Solar panel energy production will align well with energy demand in tenancies with daytime usage and/or air-conditioned internal areas. In particular, the medical centre and car wash are expected to utilise most of the energy generated on site.



Indicatively, the site would be expected to include around 30kW of peak solar generation, which would offset the impact of around 50 cars on the road.

Fossil Fuel Minimisation

At this stage heating and hot water is expected to use heat pump technology to avoid the use of gas on site. In addition, taps and appliances will target high energy and water efficient ratings – significantly reducing expected footprint.

Mc Donalds has committed to avoiding the use of gas within their new tenancies and the site electrical demand will consider the ability for gas to be removed from site in the future.

Energy Efficiency

The buildings have good solar passive design and should be able to exceed BCA minimum compliance requirements by at least 10% through the use of external shading, high performance roof insulation and efficient building services.

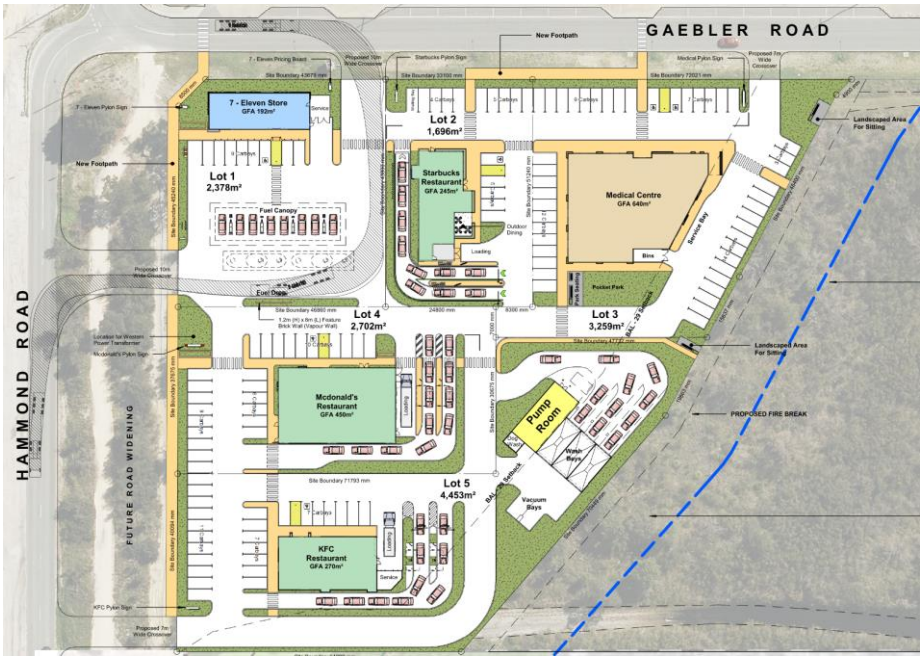
Low Toxicity Interiors

The design team intend to align with the Green Star Buildings benchmarks for low emissions interior elements, including paints, adhesives, sealants and composite wood products.

Landscaping

The project design has provided landscaping as suits the adjacency of bushfire zones. The design has multiple sustainable outcomes including:

- Providing shading to areas within the car park
- Buffer zone to protect adjacent wetland, including supplementation of the wetland with vegetation which respects its proximity but which does not compromise the site bushfire requirements.
- Pocket parks and seating areas with the development area to promote connection to nature
- Providing trees for shading and pedestrian protection along the site boundary, as well as reducing heat island effect.



The design also allows for infiltration of stormwater via the site drainage system in the event of a storm.

High WELS Fittings

Sanitary tapware and appliances – where provided – will target best practice WELS ratings, generally in accordance with the table below:

Fixture Type	Target WELS Rating	Maximum Flow Allowable
Taps	5 stars	4.5-6 L/min
Urinals	5 stars	1.0 L / Flush + Smart demand flush device
Toilets	4 stars	<3.5 L average flush <4.7L full flush and <3.2 half flush
Showers	3 stars	6.0 – 7.5 L/min

Acoustic Protection

The design has included noise limitation features to reduce the impact on surrounding areas.

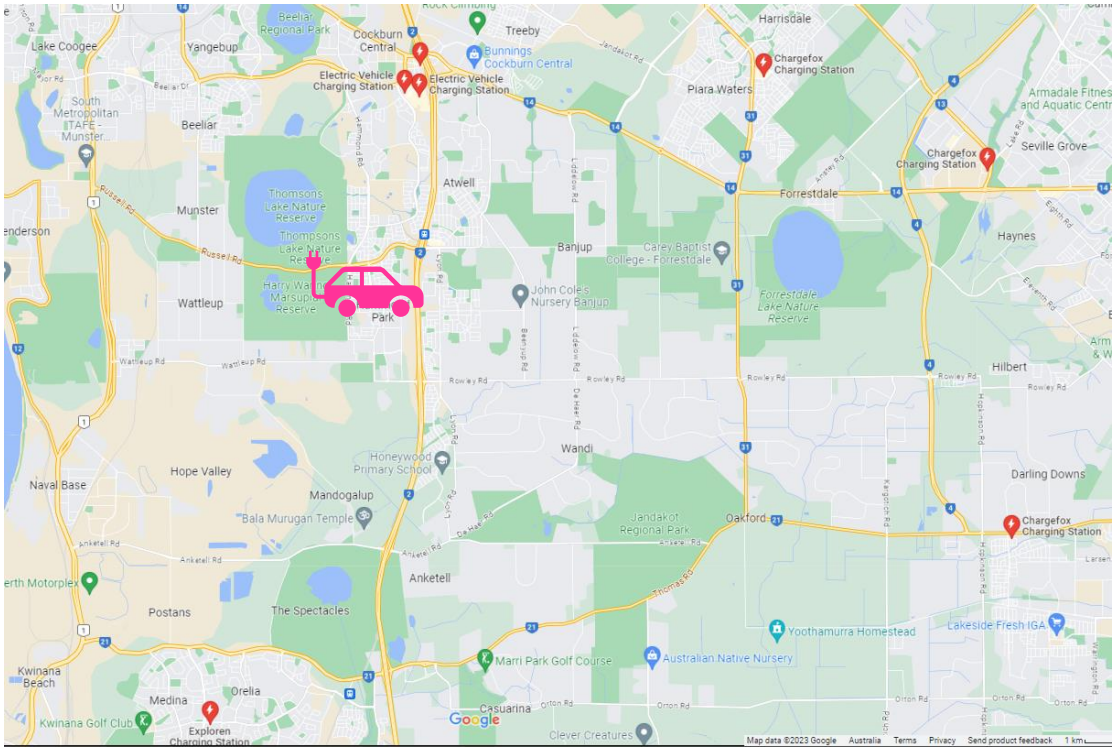
This includes enclosed refuse rooms for most lots and the car wash is to include:

- Low noise vacuums
- Roller doors on washing area to reduce noise spill

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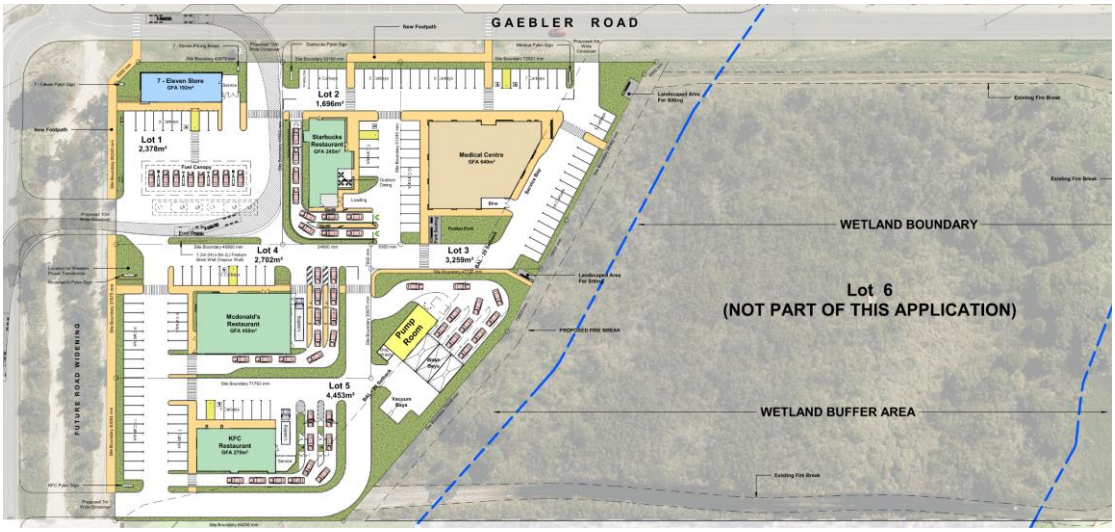
EV Charging

EV charging systems will be provided within the 7-Eleven tenancy. This chargers would be the closest for around 5km and would improve the network connection in the area.



Ecological Protection

The development has been planned to include a buffer zone and protection to the existing private wetland to the east. The landscape design includes a buffer zone in accordance with the PGV Wetland Buffer report. Design intent includes complementary planting, as well as a proposed fence for vermin and public protection:

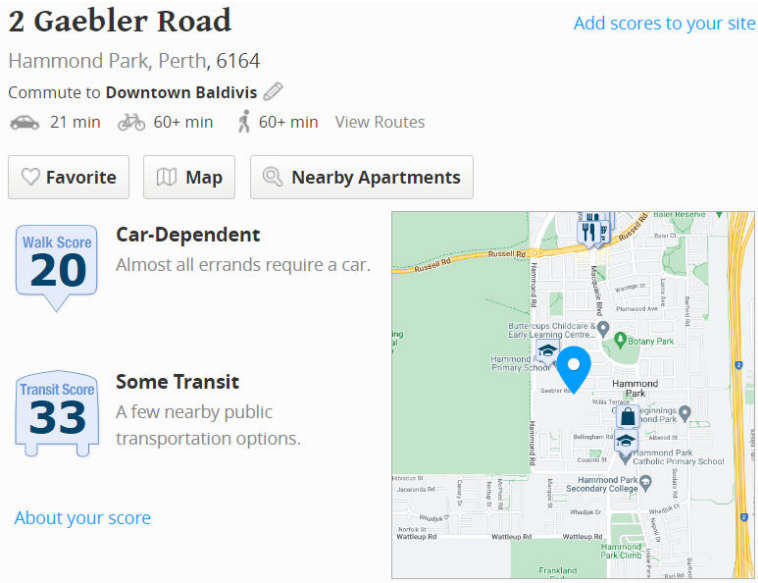


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Community Amenity

The development will improve the local walkability by improving local amenities.

Currently the site is classed as car-dependent, with only a few nearby public transport options.



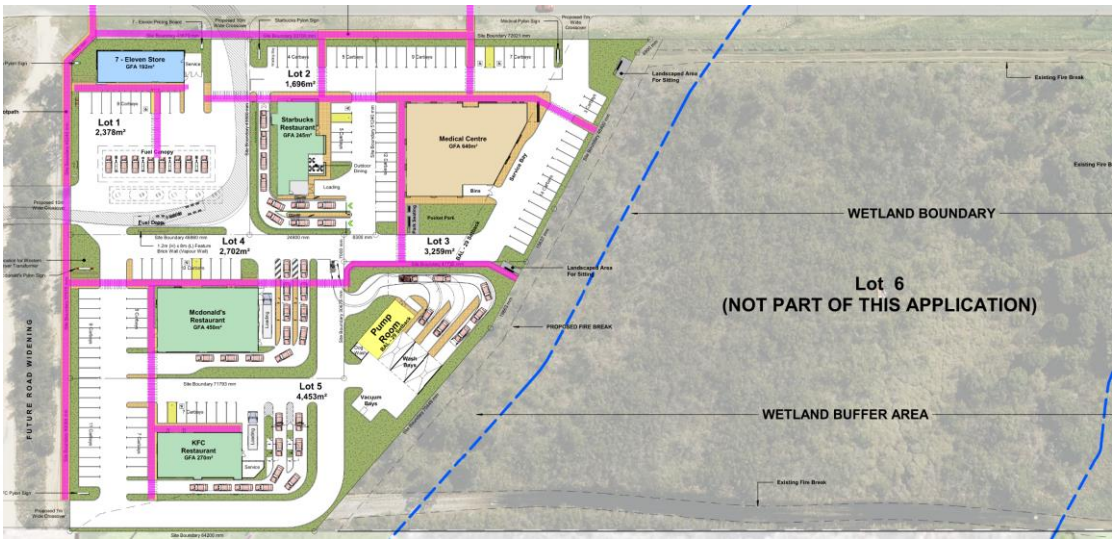
As part of the development, the local community will have local medical services, as well as food and beverage outlets and a local convenience within the 7-eleven.

The design also includes pocket parks and pedestrian infrastructure to allow transit across and around the site as well as to provide visual connection to the local wetlands.

The works will also provide local employment options as per the Pracsys Report for economic sustainability.

Bike Parking and Pedestrian Infrastructure

The design includes bike parking for public use, with strong pedestrian and bike connection from the site boundary into buildings, as well for paths along both Gaebler and Hammond Roads:



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Occupant Features

The major occupants have nominated the following performance elements:

- Car Wash
  - Water
    - Water collection and reuse
    - Triple interceptor tanks to remove major contaminants
    - Oil separator to remove free oils and hydrocarbons
  - Energy
    - Solar Provision
  - Ecology
    - EPA Certified soaps and detergents
    - Significantly lower water use and contamination than home washing
  - Noise
    - Low noise vacuums
    - Roller doors to reduce wash noise
- McDonalds
  - Avoidance of fossil fuels
  - High Efficiency Lighting
  - Water heat recovery
  - Support local produce
  - Waste and package management
- 7-Eleven
  - EV Bays
  - Sustainable packaging
  - Sustainably sourced coffee
- Starbucks
  - Sustainable produce sourcing
  - Sustainably sourced coffee
  - Reduced impact packaging
  - Green energy
- KFC
  - Reused / Upcycled furniture
  - Sustainable packaging

The above commitments provide a range of benefits across all key themes, in particular with respect waste management and landfill minimisation. Features also include investment in off-site carbon neutral electricity, water and energy efficiency measures and stormwater treatment.

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Performance Review

The proposed features align well the design strategy, as shown below:

	Operational Costs & Carbon Footprint	Water Efficiency	Health and Wellbeing – Community Benefits	Ecology and Emissions	Sustainable Transport
Solar Panels	X				
Fossil Fuel Minimisation	X		X	X	
Energy Efficiency	X				
Low Toxicity Interiors			X		
Native Landscaping		X	X		
High WELS Fittings	X	X			
Acoustic Protection			X	X	
EV Charging	X				X
Wetland Protection			X	X	
Community Amenity			X	X	X
Bike Parking and Pedestrian Infrastructure			X		X
Occupant Features	X	X	X	X	X

Overall, the design team are confident that the proposed approach represents a strong sustainable design outcome.