3.5.7 *Vehicular Access & Internal Road Hierarchy*

The indicative internal road hierarchy and streetscape character for different categories of roads within Claydon Park are shown in Figure 7. Sealed road widths and reservations vary in accordance with local access needs.

All streets will have verge trees, street lighting with underground wiring, and a footpath on one side for the major internal roads.

The development will be based on an internal private road network not requiring maintenance by Council.

There will be at least five (5) site access/egress points from adjacent streets that will allow connectivity with the local road network. The main vehicular access into Claydon Park will be from Croobyar Road, with secondary access from Wilfords Lane. Figure 13 shows the proposed road network and hierarchy within Claydon Park, as well as access to adjacent public streets.

The internal network includes four (4) minor crossings of the riparian zone (two of which already exist) and a series of short culs-de-sac to ensure good internal connectivity for residents, services vehicles and emergency service access.

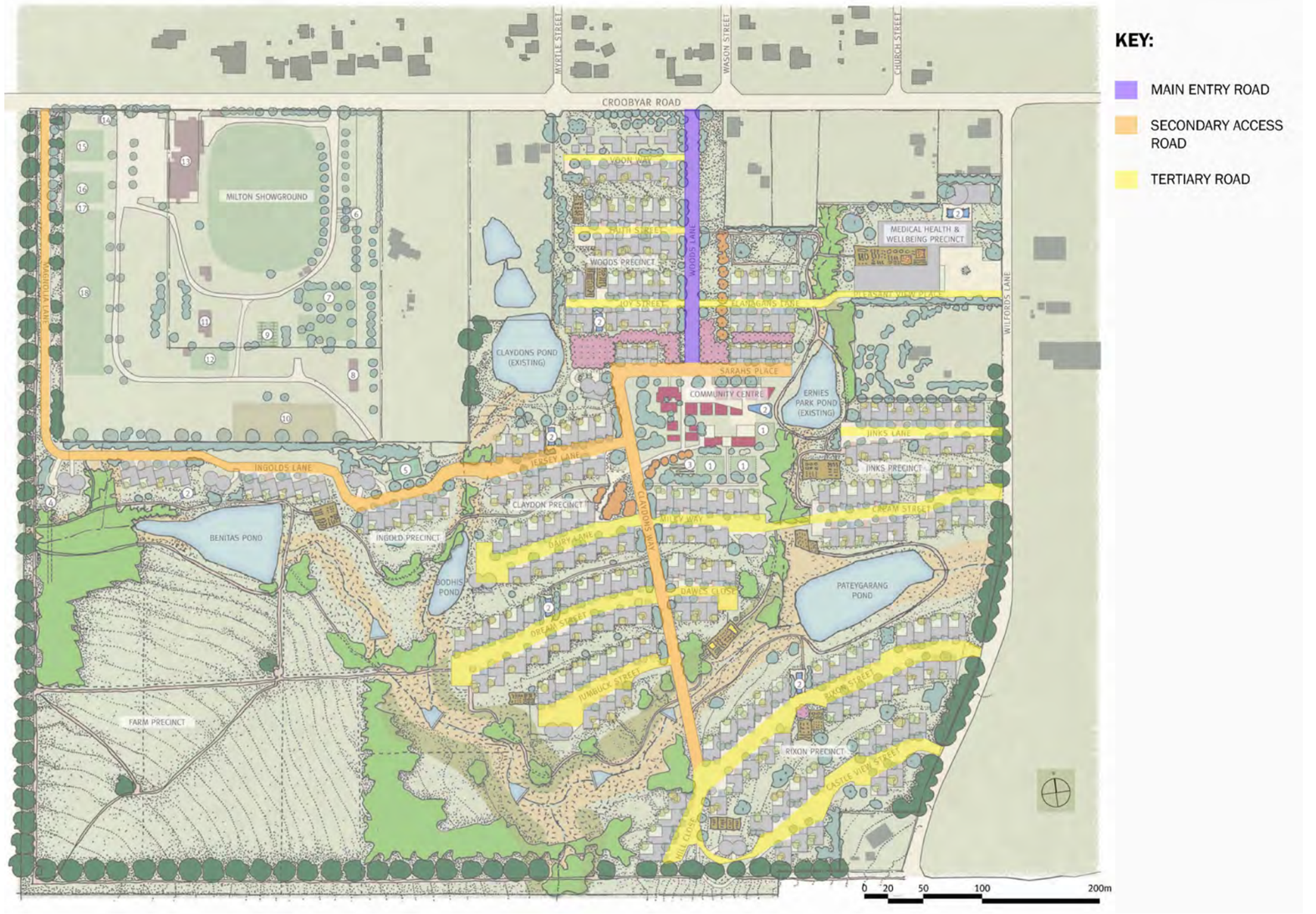
All roads would be two-way and constructed from asphalt paving. There would be a footpath along at least one side of each road to enable safe pedestrian (and buggy) movement.

Roads would be designed with swales to allow more natural drainage as well as retain the informal rural atmosphere.

The internal road network of Claydon Park will continue the grid road pattern of South Milton so as to maximise legibility and permeability and to reinforce connections to the existing urban area.

The detailed design of individual roads, as part of subsequent operational DAs will address specific engineering issues including the extent of 'friction' introduced into the system to provide local traffic safety management.

Figure 22: Proposed Internal Road Hierarchy



3.5.8 *Streetscapes*

Streetscape design and presentation is a significant element in establishing the character of Claydon Park.

Road widths and materials

Road and verge widths will vary according to the type of road within the road hierarchy. Figure 23 shows an indicative cross-section of the main entrance road with two vehicle lanes and pedestrian paths on either side in a landscaped setting. Swales rather than formal kerbs and gutters would be used to reinforce the rural theme of the development.

On-street Parking

Provision will be made for on-street visitor parking in local streets as well as at the community centre and future medical health, wellbeing and care precinct.

Lighting

All streets will have lighting to address movement and safety. At this stage it is intended to use solar powered lighting or similar energy conscious practices for sustainability and whole of life costing considerations.

Street trees

Street tree planting will be incorporated into all streets but vary by type of street to provide:

- visual definition and enhancement
- reinforcement of the street hierarchy
- shade, habitat and amenity.

Street trees will be located to minimise risk to infrastructure and utilities and to ensure clear lines of sight for vehicles, pedestrians and cyclists.

Footpaths

All main streets in Claydon Park will have a footpath along at least one side of the road to accommodate pedestrian and buggy movements.

A footpath connection suitable width for buggy vehicles will also be constructed in accordance with Council standards along Wason Street from Claydon Park to Milton town centre.

There will also be a network of sealed and gravel walking/cart tracks throughout the site to enhance health, enjoyment and residential amenity.

Building setbacks

Dwellings will be set back sufficiently from front boundaries to further reinforce the open character of the public domain.

Garages will not dominate the streetscape. Garages to detached dwellings and dual occupancies are to be recessed behind the as constructed building line and vehicular access to courtyard dwellings is to be from rear service yards.

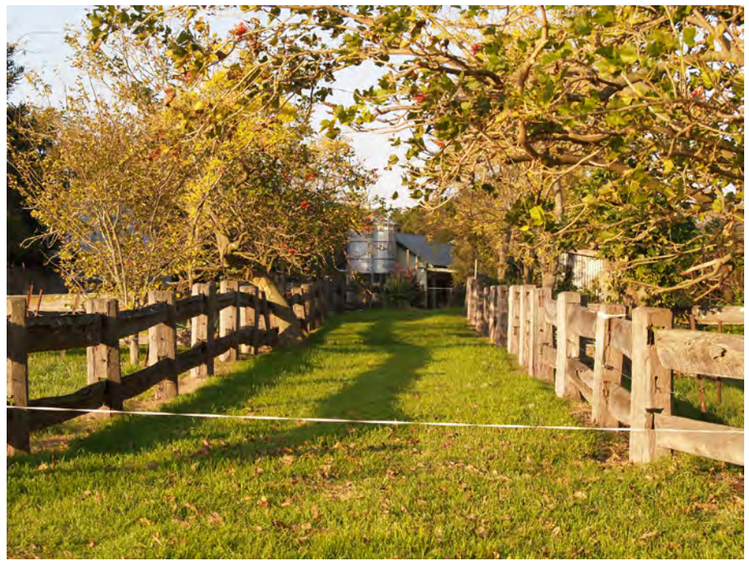
3.5.9 *Pedestrian, Bicycle and Personal Buggy Network*

The Concept Master Plan makes provision for an extensive network of pedestrian bicycle and personal buggy trails within the property and with links to other parts of Milton. This network comprises a combination of off-road paths and paths located adjacent to the verge.

The pedestrian/buggy/bicycle network will provide safe connections to the open spaces in Claydon Park and to other parts of Milton. The use of the central open space in the pedestrian network will increase connectivity between the eastern and western sections of Claydon Park.

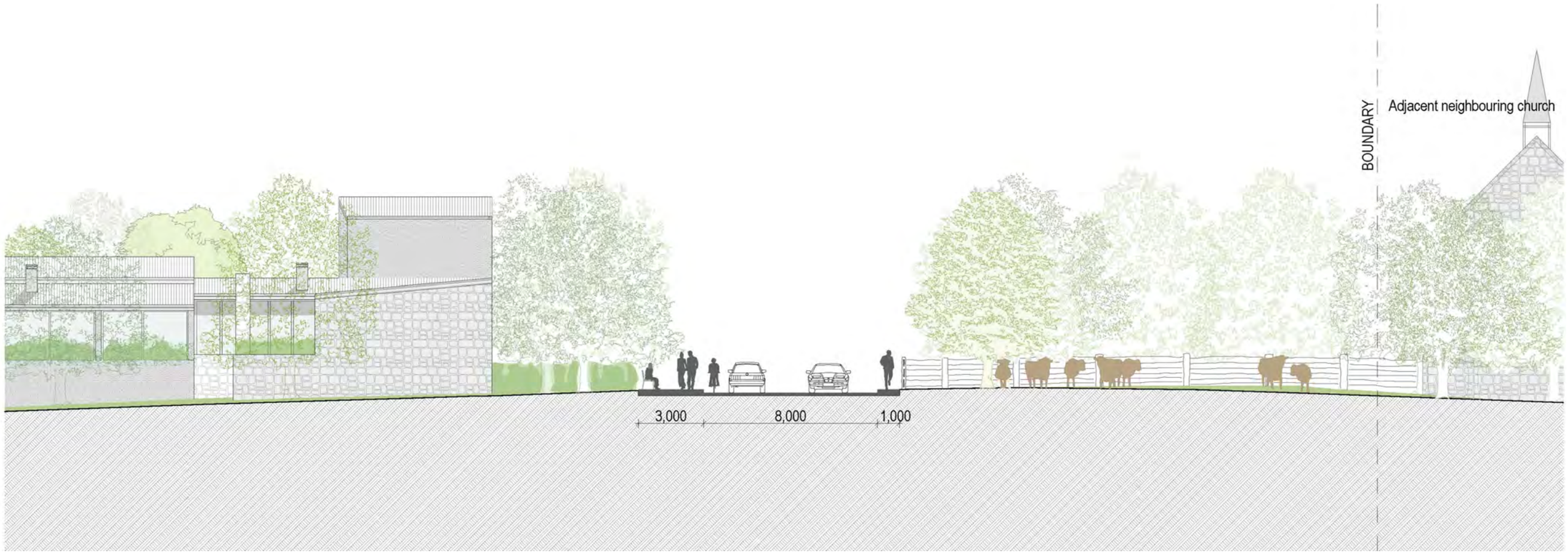
Pathways are to be shared ways for pedestrian, cart and bicycle traffic.

The local street network including footpaths will also add considerable distance and flexibility to the dedicated walking track network.



Existing Cattle Lane provides access to the dairy from South-West paddocks.

Figure 23: Main Entrance Road Section



3.5.10 *Infrastructure Services*

Figure 24 shows the proposed road network and main services on site. Hydraulic infrastructure will be developed generally in accordance with the hydraulic schematic plan.

Roads

A total of approximately 1.3kms of new road will be constructed on-site over the total development. This incorporates several existing access paths including the main entry road to the Claydon homestead and the western access track to/from Croobyar Road.

Water

Water supply will be provided from existing town mains to the site, and can be progressively extending to each stage of the development.

Sewer

The existing pumping station in the SE corner of the showground is of sufficient size to accommodate all sewage effluent generated by the development. All of stage 1 and most of stage 2 can be sewered by gravity fall to the existing pumping station. Other stages will require new pumping stations within Claydon Park to access the main Council pump site.

Internal sewer reticulation will be designed and constructed in accordance with Council requirements.

Stormwater

All dwellings will capture roof water for irrigation and toilet flushing. Rain water capture on streets will be diverted by roadside swales into the riparian zones via off-stream reed beds/filter ponds.

The placement of water storage ponds on the creek lines will act as further devices for water filtering and polishing before leaving the site.

Electricity

Electricity to the site will be provided by current town supply which has the capacity to meet the needs of the development.

Housing will also include PV cell roof panels to provide for carbon-free power generation, and solar hot water heating.
Other forms of energy management including geothermal heating/ cooling will be the subject of on-going consideration as these new technologies emerge.

Gas

Only bottled gas will be available to the site.

Telecommunications

The site has access to existing town telecommunication services. However, negotiations are proceeding with telecommunication providers to ensure the Claydon Park seniors living community has state-of-art technology services networking residents internally and externally. All residential dwellings will be wired for broadband and cable communications.

Claydon Park will retain strong links to its agricultural heritage.

3.5.11 *Agriculture and Horticulture*

The Concept Master Plan makes provision for retention of rural activities on the site that will help retain the agricultural character, as well as generate primary production and contribute to residents' interest and well-being.

The main elements in this approach include:

- retention of the south-west corner of the site for production of pasture, silage and hay
- continued use of the current dairy for milking
- a number of community gardens for vegetables and fruit trees
- processing of farm produce into a range of "home grown" product lines including gourmet ice cream, gelato & yoghurts, home brewery and vegetables/preserves.

3.5.12 *Social Infrastructure*

Social infrastructure within Claydon Park will include the open space network and associated informal recreation areas as well as the pedestrian and bicycle network.

A community facility based on the existing Claydon homestead will be made available from inception and will house a range of communal activities for residents and guests. This community "hub" will be gradually expanded over time in accordance with the approved plans and social/community needs.

All self care accommodation in the project will have access to health care, home meals and other services to be provided by the management company.

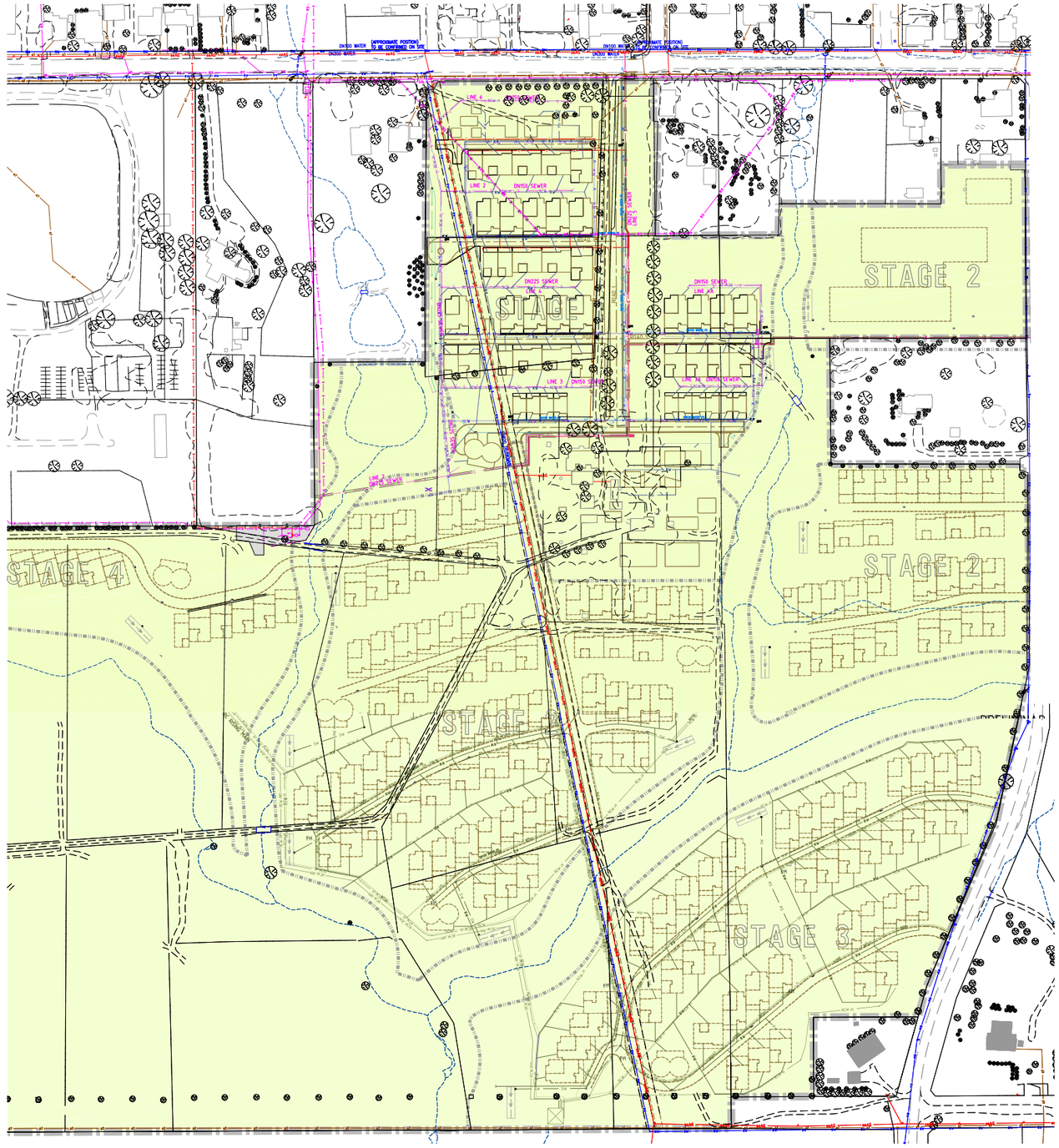


Figure 24: Indicative Services Plan

LEGEND:

- EX ELECTRIC (AG) CABLE – UNDERGROUND
- EX SEWER LINE
- EX SEWER RISING MAIN
- EX STORMWATER PIPE
- EX TELEPHONE CABLE – UNDERGROUND
- EX WATER LINE
- EX OPTICAL FIBRE
- SEWER RETAINED
- SEWER DEMOLISHED
- SEWER PROPOSED
- SEWER RISING MAIN
- RECYCLED WATER PROPOSED (HARVEST)
- RECYCLED WATER RISING MAIN
- RECYCLED WATER PROPOSED (SUPPLY)
- PROPOSED SEWER MH
- PROPOSED ROOFWATER
- EXISTING WATER
- PROPOSED WATER
- PROPOSED ELECTRICITY

20 10 0 20 40 60
Plan Scale 1:1000 @ A1

North

3.5.13 *Sustainable Development*

The Claydon Park Master Plan has been derived from a good understanding of the natural qualities of the site and adjacent areas, as is based on a design approach that embraces a number of sustainable development principles as outlined below.

Water Sensitive Urban Design

Water sensitive urban design is a key element in delivering good quality environmental outcomes for the site. The Master Plan includes a number of water sensitive urban design initiatives to maximise the quality of water leaving the site. The proposed measures include:

- ponds
- swales
- retained creek lines for water
- rainwater roof capture and retention
- greywater re-use.

These measures improve quality control by flow management and nutrient stripping, and include bio-filters, groundwater recharge and landscaping combining to offer environmental function, habitat and visual appeal.

Post-development stormwater flows in each sub-catchment are to be restricted to pre-development flow rates.

There are no roadworks in riparian zones except for the nominated creek crossings two of which currently exist. These crossings will be designed with the assistance of the NSW Soil Conservation Service but may be subject to inundation during peak flood events. However, the Concept Master Plan makes provision for safe alternative access arrangements for each precinct in Claydon Park.

Other Environmental Design Features

The proposed development will make provision for the following ESD features:

- north facing living areas for winter sun
- north facing outdoor areas
- flow-through house ventilation
- protection from wind with use of courtyards
- rainwater tanks for garden irrigation
- water-wise tap fittings, including dual flush toilet
- energy saving electrical fittings
- roof and wall insulation
- thermal mass (check with TZG)
- proposed use of geothermal heating and cooling
- low embodied-energy construction materials
- solar powered hot water systems for individual dwellings and for street lights within the multi-unit site
- landscaped areas including footpaths and bicycle paths
- community vegetable gardens
- community fruit and nut groves.

Existing dairy infrastructure will be used as part of an on site boutique dairy factory.

Existing farm sheds will be retained. Several being used for Claydon Park's craft groups.

Figure 25: ESD Principles