



Tract  
Landscape Architects  
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*July 2014*

# Stamford Park



# Stamford Park redevelopment

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Stamford Park is a 52 ha site adjacent to Corhanwarrabul Creek in Rowville. The parkland is currently owned by Knox City Council, who are investigating the best strategy for development of the site to incorporate residential land uses to complement community parklands. The site is of regional bio-significance and of high cultural interest, having an existing heritage homestead on site and a lengthy frontage to Corhanwarrabul Creek. It has however been much modified and degraded due to past land management and agricultural practices, and is currently cleared floodplain use for grazing.

Within the site, adjacent the Stud Rd boundary sits a historic homestead built in 1882 by the Row family, whom the suburb of Rowville is named after.

The homestead and grounds present wonderful opportunities for conservation, preservation and re-use. Additional opportunities are provided by the cleared floodplain for the re-introduction of wetland habitat, and by the area identified as a potential residential development pad.

Knox City Council has engaged Tract Consultants in multi-disciplinary services of urban design and landscape architecture, to prepare a masterplan for the complementary development of the park, the community recreation facilities, the heritage homestead and the new residential precinct. The masterplan and report has been prepared by Tract in conjunction with Council's Strategic and Economic Development unit with inputs and support from:

- the Stamford Park Project Steering Committee.
- the Stamford Park Community Reference Group.
- the Stamford Park External Working Group.

For the purposes of the project, the Stamford Park site is divided into three precincts for consideration, analysis and design:

- *The Historic Precinct*
- *The Park*
- *The Residential Estate*



These precincts will be integrated together through this project, with design concepts weaving a 'vision' or 'story of country' throughout the whole of the Stamford Park masterplan. Core components of the proposed Master Plan include:

- 6.3 ha residential housing development comprising 80-150 dwelling units with a central community open space designed on best practice environmental and social principles.
- Central community gathering space such as a plaza or 'town square'
- 45 ha of parkland and floodplain.
- Rehabilitation and extension to create 30 ha of riparian vegetation and floodplain habitat.
- Wetland and wet meadow for storm water retention and water quality treatment.
- Water storage for irrigation, and permaculture
- Water reuse for recreation and ornamental purposes.
- Water storage for aquifer recharge water.
- Heritage "Stamford Park" Homestead and Gardens.
- Historic interpretation of indigenous heritage, post-european settlement, environment and culture.
- Cultural and recreational open space and facilities including adventure playground, 'village green', shared bicycle trail, boardwalks and nature trails.

There are also significant opportunities within the development of an integrated masterplan for the site, to incorporate and reinforce elements of environmental, cultural and social sustainability, environmental education as well as supporting social functions and events around the historic homestead.

In particular, the incorporation of sustainable and affordable housing as a 'pilot' style project for the wider municipality is a strong driver for the residential precinct.

The overall development of Stamford Park is to be funded by asset sales from the residential development pad within the masterplan, and also by the adjacent industrial development.



# Project Objectives

## 2.0



The design objectives for the Stamford Park Project are diverse and representative of the level of thought, analysis and design required to transform Stamford Park to be the premier natural habitat and recreational space in the municipality. These include:

- Create an overall 'vision' for Stamford Park which links all of its parts, precincts and elements.
- Create a masterplan that incorporates and integrates the elements of the landscape, the historic homestead and new housing seamlessly, intelligently and sensitively for the benefit of the Rowville, and wider community.
- Demonstrate innovation in residential masterplanning, and public recreational planning at every level and stage.
- Establish a design and procurement process that enables the landscape masterplan to be delivered from the net proceeds of the sale of the residential estate.
- Establish a balance of funds from the overall development of the park, to enable conservation and sensitive development of the historic homestead and surrounding gardens and on-going maintenance of this precinct.
- Demonstrate innovation in residential masterplanning at every level and stage to ensure the Stamford Park housing is innovative, sensitive and well designed to best-practice standards.
- Demonstrate innovation in landscape architecture for the design of the park, wetlands and historic homestead gardens at every level to ensure Stamford Park is an example of sensitive, community based public park and wetlands design.
- Establish Stamford Park as a benchmark 'pilot' project for the municipality, and illustrate through creative design, project planning and financial analysis that this is a replicable model for procurement of similar projects by Council in the future.



Looking across Stamford Park

The purpose of this study, and of the Stamford Park Masterplan, is to incorporate the vision for Stamford Park and broadly integrate the thinking for both the landscape masterplan and the residential masterplan into a single process and design that reflects all of the project objectives and begins to layout the procurement and delivery process for whole of Stamford Park.

The key reasons for the study are:

- Develop a broad concept development plan for the site inclusive of the diverse components required in the project objectives.
- Prepare a concept landscape masterplan for consultation with the community and input from key stakeholders to the process.
- Provide informed advice to Council on its development options for the residential estate, and likely return on investment given contemporary market conditions.
- Creatively respond to Council's objectives for the residential component of the Stamford Park project and the design challenges posed by the site including access and infrastructure requirements.
- Guide the implementation of the preferred masterplan option
- Establish the broad principles for housing controls and interface guidelines for the residential development.

#### Stamford Park Vision\*

Stamford Park is to be a place of historical reflection, cultural immersion and connection to country, a place for all to just be yourself

\* Adopted by council in July 2014

# Purpose of the Masterplan

# 3.0



Existing courtyard to the heritage homestead

Entry from Stud Rd to the Stamford Park site



# Site Context

## 4.0



- Bus Route
- - - Bicycle Path
- Train Network
- Activity Centre
- Shopping
- School - Primary
- School - Secondary
- Programmed Recreation
- Park Reserve
- Local Park
- Streams and Lakes
- Golf Course

### Locality

Stamford Park is owned by the Knox City Council and is approximately 44 Hectares. It is located 28km south east of Melbourne's CBD.

Stamford Park is bounded by the east side of Corhanwarrabul Creek, Stud Road and business parks to the west and north and residential boundaries to the south.

The site has 3 principal activity centres within 7km of the site

- Glen Waverly Principle Activity Centre:
- Rowville/Stud Park Principle Activity Centre
- Knox Principal Activity Centre

There are also many Major Activity Centres within this boundary including one directly adjacent the site to the east of Stud road.

The site lies in the middle of the Scorsbey Rowville Employment Precinct which has been identified to be a future Major Activity Centre.

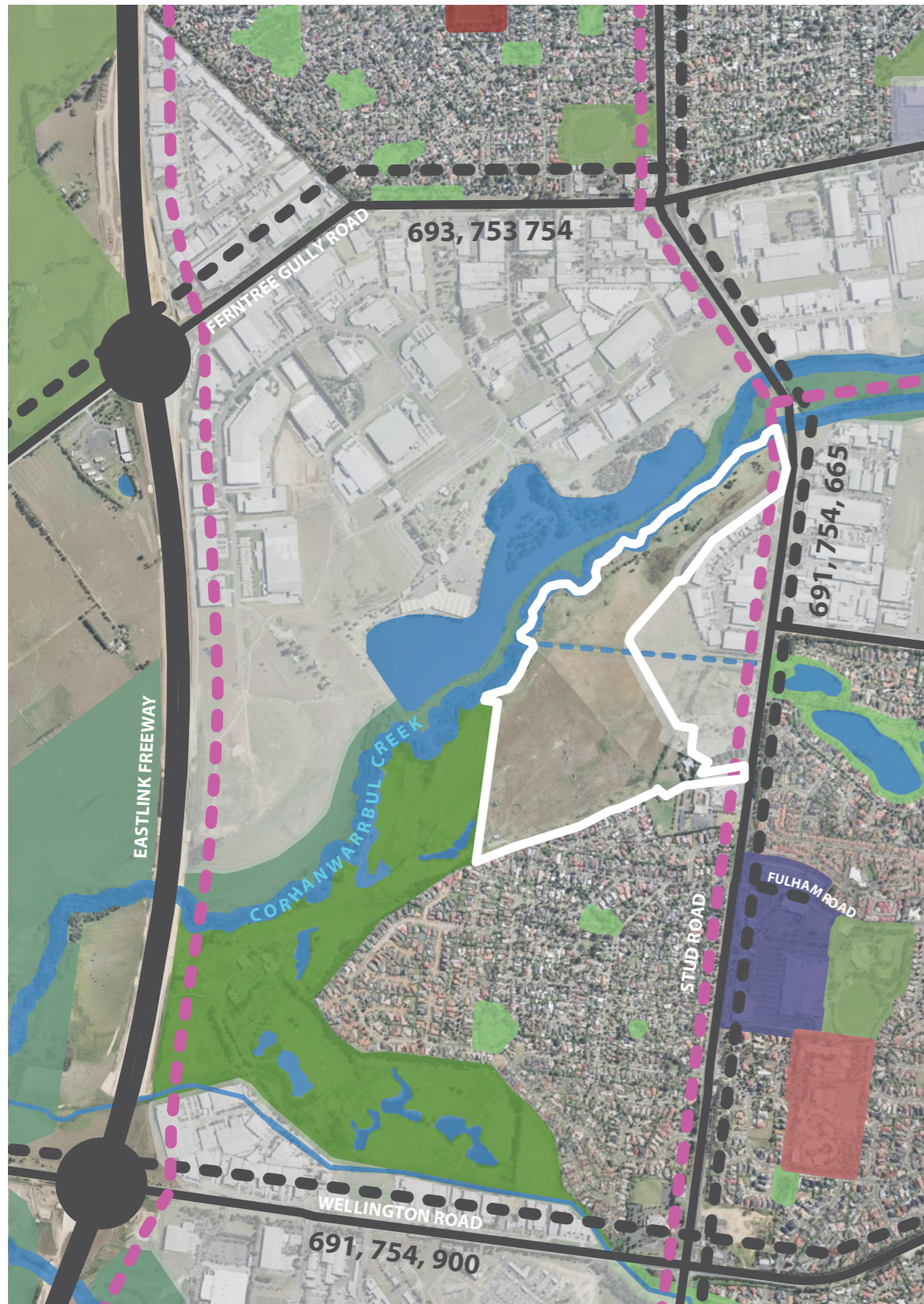
Private transport links to the CBD are provided via the Eastlink and Monash Freeways. The site sits approximately 7km from 2 rail lines and Ferntree Gully to the East and Glen Waverly to the West. Bus routes along Stud Road provide access to these stations; and to Monash University to the west. A bus to the CBD operates via the Eastlink Freeway.

Recreation reserves and bicycle networks along the Dandenong and Corhanwarrabul Creek corridors connect the site to the northeast, east and south. There is a high quality bicycle route to the CBD adjacent to the Eastlink Freeway.

Adjacent areas are well serviced by local parks and various types of sporting facilities.

A range of primary and secondary schools are located within cycling distance to Stamford Park.





**Site**

Stamford Park is mostly floodplain and is characterised by small patches of riparian vegetation and a broad expanse of open grazing land. The existing vegetation includes approximately 70 indigenous species and a broad range of naturalised pasture and weed species.

**Site Interface**

- Built up low density residential housing to the south
- Open space recreation areas of Corhanwarrbul Creek, Caribbean Lake and Gardens and Kingston Links Golf Course to the west
- Industrial and business areas to the north east
- Visual connections into the site are largely obscured by adjacent uses. The only significant sight lines into the site are at north eastern most corner via Stud Road.

The site incorporates 3 precincts:

**Historic Precinct**

- This part of the site is characterised by post-European contact including the new road leading into Stamford Park, the Homestead and its surrounding exotic garden.

**The Park**

- The largest part of the site and is prone to flood
- There are to be 3 wetlands in this area
  - Melbourne Water Wetland
  - ASR Wetland
  - Ephemeral Wetland

**The Residential Estate**

- This part of the site is 6.3 hectares and is bound by the park and the existing residential zone to the south
- Built up low density residential housing to the south
- Open space recreation areas of Corhanwarrbul Creek, Caribbean Lake and Gardens, and Kingston Links Golf Course to the west
- Visual connections into the site are largely obscured by adjacent uses.

**Site Context**  
**2.0**



# Opportunities and Constraints

## 5.0



South Entrance



Entry to Homestead and Residential Pad



Access Road to Site



### Entry and Access

#### Analysis

- There is limited public transport to the site
  - Train station is 7km away
  - Bus services available
- There is to be a new vehicular access from Stud Road into site through Enterprise Technology Park - the only access point for cars
- There is an access point from at the south of the site that was used by the Pony Club - Pedestrian and Cycling only
- There is an existing bike path along creek stopping at Stud Road and Stamford Park.

#### Opportunities

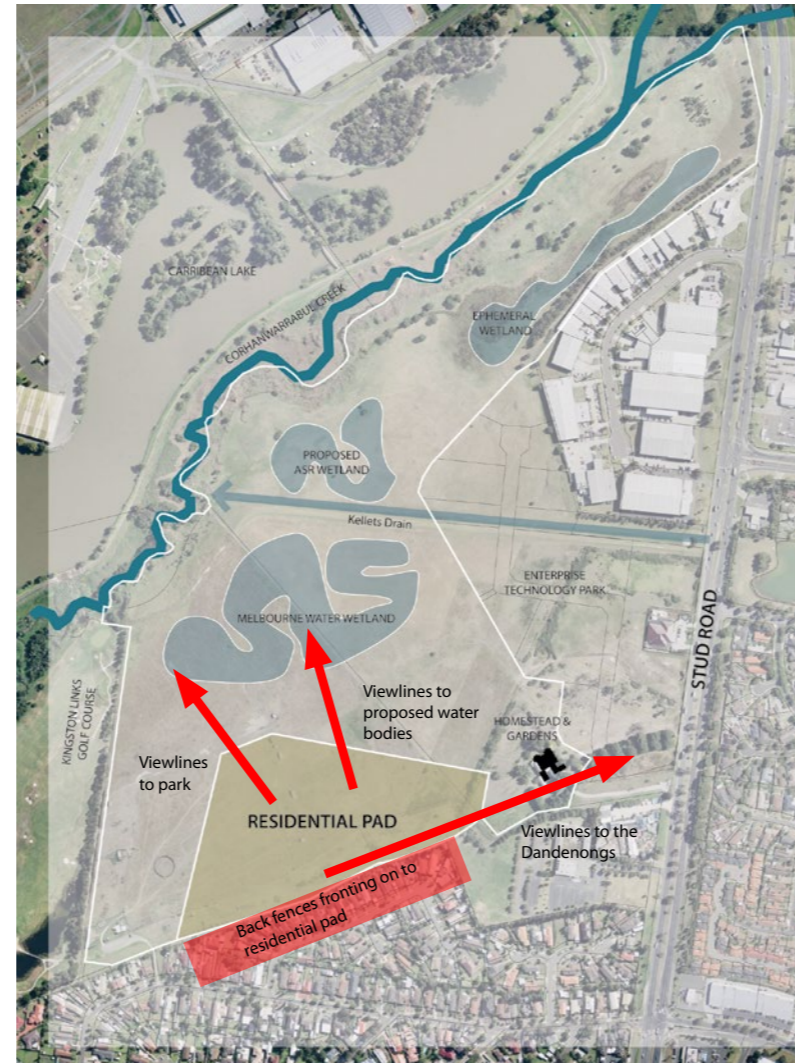
- Opportunities to create sense of arrival/approach to the residential development
- Opportunity to extend the bike path along the creek through the site.



Residential back fences



Views across Parkland toward the Dandenong's



## View Lines and Vistas

### Analysis

- The site has vistas of the Dandenong's
- There are no views from the main vehicular access point at Stud Road into site (through business park)
- There are existing views to back of business park to east and residential back fences to south
- Potential for residents along southern boundary to be upset at losing open space views

### Opportunities

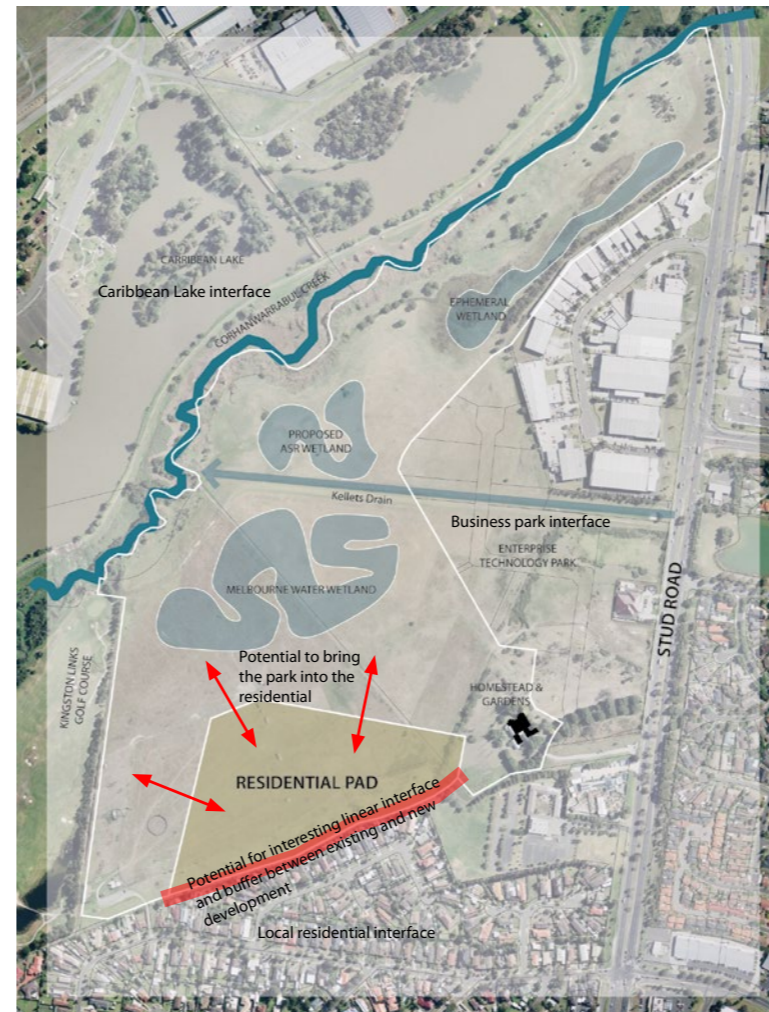
- There are opportunities to utilise the vistas towards Dandenong's from the parklands, wetlands and residential development
- There are opportunities for filtered views through proposed residential development through to parklands and wetlands along green corridors



Enterprise Technology Park interface



Residential Interface



## Site Edges and Interfaces

### Analysis

- The surrounding areas of Stamford Park are:
  - Industrial and Commercial to the West
  - Corhanwarrabul Creek, Caribbean Lake and a future Neighbourhood Activity Centre to the East
  - Residential to the South
- Caribbean Gardens to the East sites the potential new Neighbourhood Activity Centre.
- Enterprise Technology Park to the West (to be built)
  - Strict interface guidelines have been developed and approved by council
- There is a lack of a “sense of arrival” to the precinct through the only vehicular access
- Southern residential includes unsightly fences and an existing easement
- There is no direct road interface/edge to the site

### Opportunities

- There are opportunities to create an interesting interface and edge between the parklands and the residential development



Existing Pear Trees



Heritage significance



Existing heritage homestead



## Cultural Heritage

### Analysis

- The site has been marked as being of “potential cultural heritage interest”
- Homestead and garden is of local significance
- Homestead is classified by the National Trust (Victoria) and is registered on the Nation Estate (NRE)
- Any development should retain the setting, layout and traditional views of the complex and spatial relationships between main house and out buildings. The Heritage Precinct must comprise of formal plantings that maintain a European themed garden style of the 1880’s
- No development should detract from principle North West views of the Homestead. The garden should protect/ enhance views and comprise exotic/ European plants only
- There are trees of existing significance in the heritage precinct. The gardens should not reproduce the original Stamford Park Homestead garden, however, original elements should be incorporated where practical
- The site contains 70 indigenous species

### Opportunities

- There is opportunity to create an educational/interpretational experience throughout the wider site including the residential pad
- There is opportunity to form and locate gathering spaces and landforms symbolic to both prior indigenous culture and post European occupation



Position for Melbourne Water Wetland



Kellet's Road Drain



Ephemeral Wetlands



## Water Management

### Analysis

- Hydrological assessment concluded opportunities to reinstate wetlands
- Wetlands provide additional floodplain storage and water quality treatment for any new development and existing commercial/industrial uses
- Existing Kellet's Road Drain
- Melbourne water wetland had been designed - GHD detail
- Ephemeral wetland - existing to be reinstated
- ASR Wetland is required

### Opportunities

- There is opportunity for the treatment of storm water into creek catchment
- There is opportunity to stabilise the creek as a whole
- Water management - potential to manage storm water and waste water of proposed residential estate through a series of wetlands, and numerous other water recycling & treatment technologies.



Existing housing interface



Potential to open up onto new residential development



Existing housing interface



### Built Form

#### Analysis

- Medium density housing be encouraged along the principal public transport network where properties have direct frontage, particularly along the Stud Road Orbital Smart Bus Route.
- There is an existing easement along southern boundary
- The southern boundary residential interface has potential difficulty with existing residence losing "their parkland view"
- Difficult node at the junction between the residential area, the park and the Homestead.
- Limited to one road access point

#### Opportunities

- There is opportunity for medium density housing & other varied typologies and housing
- There is opportunity to explore ideas of "ageing in place"
- The site is situated to have good solar orientation
- There are view lines to the Dandenong Ranges
- There is opportunity to include central green space and green linear links through streets to the parklands



Masterplan  
Response  
6.0



**The Park**

Stamford Park is a 52 ha site adjacent to Corhanwarrabul Creek in Rowville. The site is of regional bio-significance and of high cultural interest. It has however been much modified and degraded due to past land management and agricultural practices.

Core components of the Master Plan include:

- 6.3 ha residential housing development comprising 80-150 dwelling units with a central community open space designed on best practice environmental and social principles.
- Plaza and Town Square
- 45 ha of parkland and floodplain.
- Rehabilitation and extension to create 30 ha of riparian vegetation and floodplain habitat.
- Wetland and wet meadow for storm water retention and water quality treatment.
- Water storage for irrigation and permaculture.
- Water reuse for recreation and ornamental purposes.
- Water storage for aquifer recharge water.
- Heritage "Stamford Park" Homestead and Gardens.
- Historic interpretation of indigenous heritage, post-european settlement, environment and culture.
- Cultural and recreational open space and facilities including adventure playground, 'village green', shared bicycle trail, boardwalks and nature trails.

**The Design Process**

The design process has been, along with conventional and proven best practice in urban design and landscape architecture, to adopt an ecological systems approach to planning, design and adaptive management. The vision emerges from an extension of this approach to water management, vegetation, economic, community and cultural components.

The plan boasts innovation in vegetation rehabilitation and 'soft' engineering by use of plants for their function and purpose, and cultural and biological relevance within the wider landscape and residential fabric. Vegetation is used for water quality treatment, to provide shade and shelter, and microclimate.

A water recycling and '**No Pits and Pipes**' approach to water management has been designed into the urban fabric and park to keep water on the surface where it can do its job. This approach extends into the landscape where bioswales spill water into wet meadows before it makes its way to the floodplain and ultimately the creek.





The plan provides for the park a diverse array of landscape and recreational areas that enable park visitors to participate in, enjoy, and interact with the park and its various components. A network of links, paths and trails connect all of the components together so that visitors may drive, walk or cycle to the park from surrounding locations and participate in events, functions, markets, relaxation or recreation.

The facilities provided within the park masterplan ensure educational and interpretive elements are seamlessly integrated with the recreational aspects of the park, and also provide for appropriate commercial uses such as the cafe, the produce markets and music/ theatre/ opera events to take place.

### The Housing

The residential estate precinct of Stamford Park has been designed to seamlessly integrate with the surrounding landscape of the park whilst providing a benchmark or 'pilot' project for sustainable and innovative housing.

#### Key Objectives

The key objectives for the residential portion of the Stamford Park project are:

- Establish a residential development that is a benchmark for future housing within the municipality, and that exhibits innovation and sustainability not currently on display in surrounding residential areas.
- Design housing and its associated public realm that integrates and complements seamlessly the adjacent park and community facilities.
- Balance the need for a development 'return on investment' with the objectives of a 'pilot' innovative and sustainable housing development.
- Establish a return from the residential development that helps fund the landscape masterplan for Stamford Park in terms of capital works and on-going maintenance.
- Incorporate and test different housing typologies for the municipality that may not otherwise be on offer to the market in the area.
- Incorporate a sense of localised community within the housing development that fosters a sense of community and placemaking not currently on offer in 'standard' residential areas.



The ramifications of this aspirational vision for the housing estate is that it places the new development as a 'counterpoint' to the adjacent residential neighbourhoods of Rowville. The design process has thus been a series of 'propose and test' reviews where the design principles for houses that incorporate innovative, socially and environmentally sustainable are established and then tested against the integration with surrounding neighbourhoods and wider Rowville community.

The design principles and objectives for the Stamford Park residential estate are described within this report, and are to be balanced against financial market analysis and development feasibility undertaken by Charter Keck Cramer. The results of this financial work will be reviewed in the next stage of the project, and some key decisions will be required in regards balancing the economic return with the social, environmental, cultural returns and the objectives of Knox City Council.

# Masterplan Response

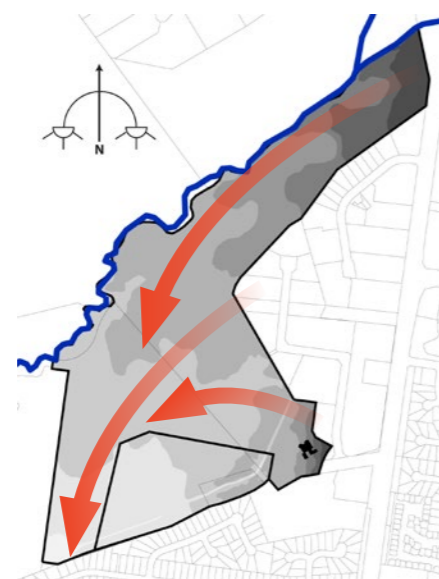
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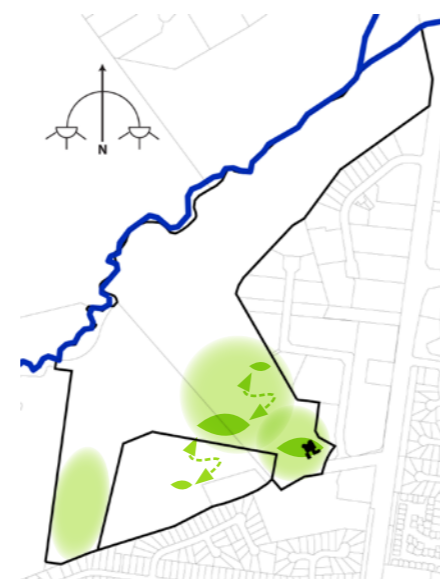
# Masterplan Response

# 7.0

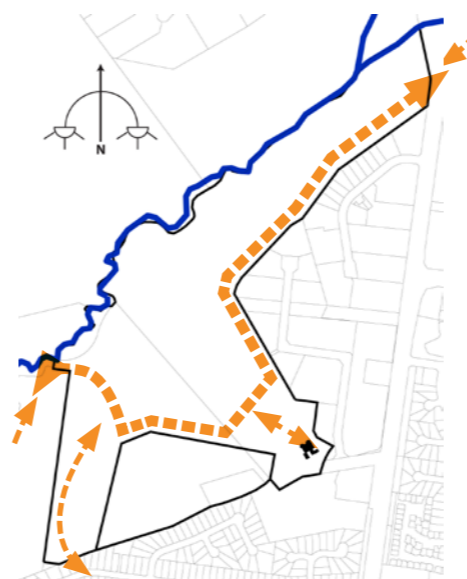
**Topography**



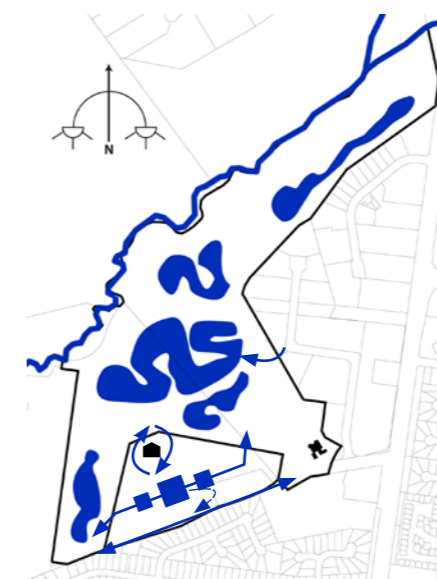
**Social and Cultural**



**Movement Patterns**



**Blue Infrastructure**



**Green Infrastructure**



**Integration**

Innovation and integration of social, economic and environmental issues within the wider landscape and residential fabric has been achieved through a rigorous and iterative landscape process. Intrinsic values associated with context, topography, hydrology, vegetation, natural environment, social and cultural values have been meshed into a cohesive whole.

**Urban Form**

The open space network within the urban areas specifically integrates 'blue' and 'green' infrastructure in a form which provides opportunities for improvements to other infrastructure elements.

- Residential streets become an integral part of the landscape rather than an intrusion.
- Elimination of kerb-gutter edges allows for the minimisation of impermeable pavements.
- A switch from a totally piped drainage system to a contiguous system of bioswales, channels, infiltration fields, permeable paved areas, fountains and rainwater gardens liberates the shape and form of the public realm; pavement design and the open space landscape in general.

**Social & Cultural Infrastructure**

The residential component of the plan boasts:

- Increased opportunities to combine varied lot sizes and housing types within the integrated street landscapes.

- A safer environment both day and night .
- Active urban open space with plaza and town square
- Innovative residential design opportunities.
- Affordable housing initiatives easily integrated.
- Views and vistas to surrounding parkland.
- Views and vistas within enhanced streetscapes
- Demonstration site for innovative housing typologies within the local context.

**Economic**

- Marketable amenity of landscape within the residential public realm.
- Affordable housing initiatives.
- Water management for landscape irrigation.
- A reduction in potable water use associated with the reclamation of rainfall runoff for re-use.
- A reduction in energy use consumption

**Movement Patterns – Pedestrian & Vehicle Access**

- Less rigid residential street forms associated with the integrated blue-green streetscape designs. More flexibility to design for people.
- Shared 2.5m bicycle/pedestrian trail provides key links

to connect the existing surrounding path networks – encouraging commuter travel through the site to nearby business/neighbourhood centres.

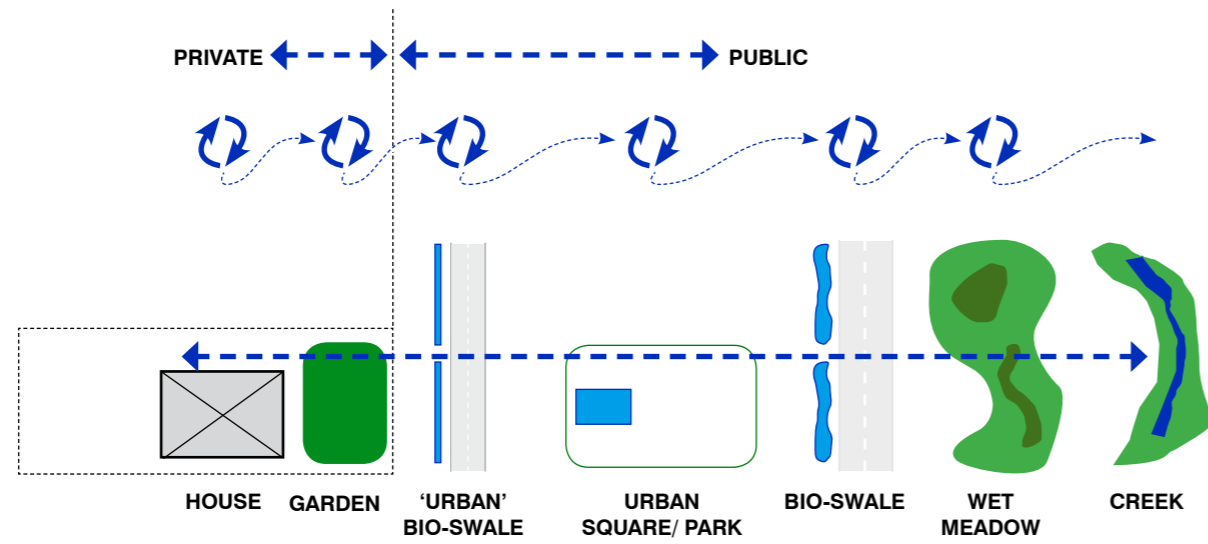
- Cycling/pedestrian paths, mountain bike tracks, fitness trails.
- Trail network, boardwalks, bird hides and viewing platforms.
- New venues and facilities will allow for interaction and community engagement with the landscape for existing residents, future residents and the wider community
- Park venues and facilities offer improved recreational opportunities for the community and associated social and health benefits of 'green' space.

Facilities include:

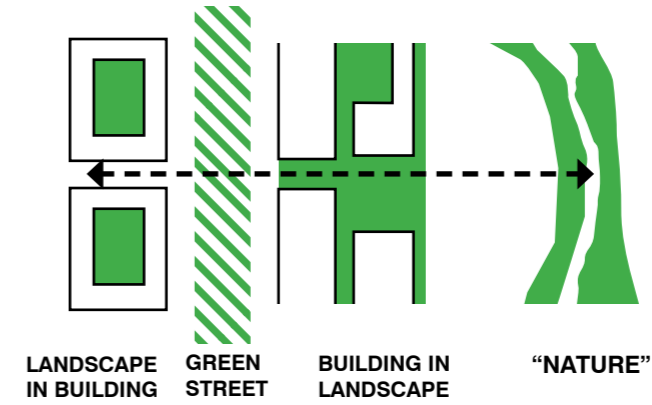
- Environment and community centre.
- Adventure playground.
- Open space venues for local activities such as the Village Green, farmers market and sale of local produce.
- Open space venues for entertainment & events such as "Cinema under the Stars".
- Open space for passive and active recreation.
- Indigenous heritage and interpretation.
- Stamford Park heritage homestead, community facility, historic and cultural resource.



**Blue Infrastructure**



**Green Infrastructure**



**Masterplan Principles**

**7.0**

**Blue Infrastructure - Water Management - Water Flows**

House ↔ Garden ↔ Lane ↔ Street ↔ Square ↔ Park ↔ Bioswale ↔ Wet Meadow ↔ Floodplain ↔ Creek

Considering rainfall to be a resource that can be utilised to benefit the local biospace rather than a drainage problem leads to many opportunities to enhance the local landscape. Water in the Landscape can take many forms, from playful to contemplative in fulfilling the simple functional roles:

- Collection
- Storage
- Retention
- Treatment (nutrient removal using reeds & grasses)
- Filtration
- Percolation
- Purification (open water, sunlight,)
- Aeration
- Recycle & reuse
- Irrigate

The end result is that rainfall runoff is used to nourish the landscape **“Parks - Not Pipes”**. A continuum of integrated water management practices is proposed at all catch points in the open space network of the urban catchment and beyond. These keep the rainfall runoff essentially at the surface to nourish the landscape.

Within the park there are a number of different wetlands for habitat, stormwater retention, education, water quality treatment, aquifer recharge, floodplain, recreation, irrigation and wastewater treatment.

The Park wetlands include:

- Melbourne Water Wetland - water quality treatment and habitat.
- The Wetland Meadow – west of the residential estate.
- Ephemeral Wetland for habitat.
- ASR- Aquifer Recharge.
- Ornamental Pond for Recreation.

**Green Infrastructure – Vegetation**

Creek ↔ Corridor ↔ Wetlands ↔ Bioswales ↔ Parks ↔ Streets ↔ Lanes ↔ Gardens ↔ House

**Trees as “Nature’s Air Conditioners”**

Planting throughout the parkland meshes with planting in residential ‘green’ streets to create a symbiotic relationship between parkland and urban fabric. Aside from the obvious ‘carbon friendly’ benefits associated with such extensive re-vegetation, planting has been used for:

- Habitat, rehabilitation, regeneration and expansion. Significant additional indigenous vegetation will provide for wildlife habitat. Locally collected seed stock is being grown for replenishing the riparian corridor.

- Water quality treatment and ‘soft’ engineering. Vegetation, grasses, reeds and sedges are to be used for their function and purpose in water quality treatment within the wider landscape and residential fabric.
- Microclimate to provide shade and shelter.

**Lessons Learned**

Wise water use informs and impacts on urban form, the layout of residential subdivisions and the design of our road systems.

A major objective for water management is recycling, and space for this needs to be allocated at the outset. That space can be put to good use as open space that enhances the livability of urban areas. It also provides the flexibility to reconfigure the urban form to accommodate a broad range of development densities and dwelling types.

With innovation and adaptive design comes the requirement to address site-specific solutions, especially relating topography hydrology and solar orientation to optimise long term economic benefits.

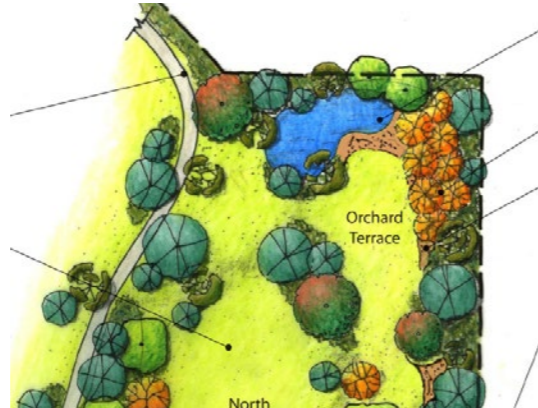
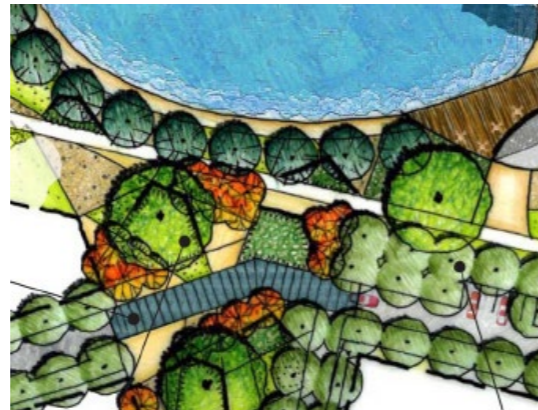
Re introduction of soft planting an recharging of the ecology means learning to design the correct land forms and an understanding of the appropriate selection and use of plants which are in sync with the natural systems on, over and under the country.

It also emphasises the need to ensure that landscape values are clearly measured and articulated in environmental social and economic terms.



# Sustainability

## 8.0



The Stamford project is intended to be a demonstration project for water reuse and community sustainability. As such the environmental and social benefits arising from the project are intended to be an integral part of the scheme. Furthermore, returns from residential sales will be directed towards funding restoration of the Heritage Homestead, recreation reserves, parklands and associated community and cultural facilities.

### Green Infrastructure and Public Realm

Ecological stormwater management solutions are potentially more effective than civil solutions based on environmental, social and economic parameters. While kerb and gutter pipe systems transport and concentrate runoff problems elsewhere, ecologically based solutions use the landscape to absorb and treat runoff in situ at less cost.

Ecological management solutions can enhance water quality beyond the minimum detention requirements, dissipate peak flooding and provide erosion and sediment control, while being less prone to failures in civil runoff catchment infrastructure. The 'value add' of ecological solutions include enhanced neighbourhood aesthetics, additional passive recreation assets, and provision for productive landscapes/community gardens/wildlife habitat offered by the north south Woodland Walk, the east west Water Walk with Community Gardens, Plaza and the Southern Orchard. Contrary to civil pipe and pit solutions that separate ecological and urban services, the street is integrated with the landscape to become part of a larger watershed solution.

Elimination of raised curbs, gutters, and pipes in conventional runoff catchment infrastructure allows for a contiguous system of water features, channel and bioswales along mews and local roads to absorb and treat runoff. Vegetated stormwater landscapes project a unique neighbourhood character and visually link house frontages to the public realm and offering opportunities for neighbourly interaction. Low impact residential development not only achieves affordability but also allows for creative project design that stewards first home buyers in all aspects of responsible home ownership. This also becomes a model for achieving high quality residential development in the City of Knox.

### Social Infrastructure

The residential component of the plan boasts:

- Increased opportunities to combine varied lot sizes and housing types within the integrated street landscapes.
- A safer environment both day and night .
- Active urban open space with plaza and town square
- Innovative residential design opportunities.
- Affordable housing initiatives easily integrated.
- Views and vistas to surrounding parkland.
- Views and vistas within enhanced streetscapes
- Demonstration site for innovative housing typologies within the local context.

### Outdoor Water Re Use

The outdoor reuse component of the project provides local social benefits by way of open space areas and a more visually appealing environment. At a larger regional scale there are indirect social and environmental benefits from water conservation by increasing the availability of locally grown food, a reduction in food miles and the health and wellbeing improvements that come with fresh organic produce.

Utilising stormwater for integrated urban reuse and irrigation of food gardens is an approach that will contribute to social and environmental sustainability. Socially, investing capital into the local community via integration of food trees and community gardens within the development allowing for knowledge building and healthy social interaction. Environmental benefits arise from direct substitution of the potable water supply reducing demand on regional water supplies; indirectly, the benefits arise from offsetting water use from other stressed resources (production of food crops), and indirect water use in the form of travel, processing and other factors related to conventional food production.

It is envisaged that the scheme would employ 2-4 people to operate and perform the function of "city farmers" for the organic orchard and organic market gardens, with significant additional assistance possible in the form of volunteer work, rehabilitation and other welfare employment schemes aimed at up skilling and community integration. It would also serve as a fantastic learning hub for schools, universities and other special interest groups.

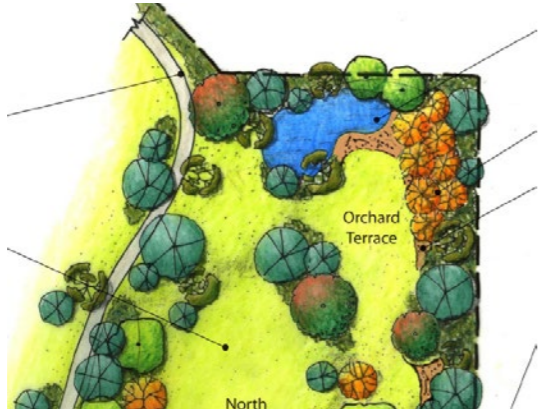
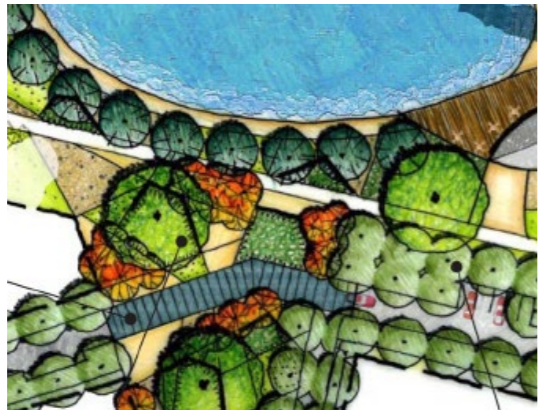
### Residential development – Design Intent

#### Green and Blue Community Infrastructure

The overall design reflects the surrounding landscape's topography, vegetation and hydrology, with the intent of raising community awareness and sensitivity to the surrounding environment.

The residential development incorporates a range of sustainability measures and conservation planning strategies supportive of unit clustering that preserves more than 1/3 of the site as public space. A wholistic design approach integrates urban, landscape and environmental design to create a departure from more typical greenfield residential design. The overarching aims of the residential component of the development will be achieved through the use of an ecological response to place-making offering integration of urban, landscape and natural hydrological processes.

Placemaking (creating centres of public open space) aims to encourage outdoor recreation, community interaction, fitness activities, and local interpretive activities. It will be integral not only to enhancing the sense of local community within the development but more importantly utilise water as a resource within the public realm. Hydrological design features including parks, community gardens and green streets traversed by water features, surface based canals and channels that will convey water to vegetation, treatment systems and storage systems for reuse. Features include the east-west Water Walk; the north-south Woodland Walk, Plaza and Southern Orchard.



These are described in more detail below.

As Stamford Park is a greenfield development it can take advantage of the lack of existing drainage infrastructure. This will enable the avoidance of traditional 'pit and pipe' stormwater drainage in favour of innovations in water-sensitive systems within the residential development area. Water-sensitive systems are strongly supported by local and state government policies and initiatives. Victorian government development provisions encourage best practice in WSUD – the ancillary use of part of the stormwater flow before discharge to the environment.

The provisions do not however stipulate that the treated stormwater be used specifically for irrigation or potable water or any other uses that could be sustained by recycling. The Stamford proposal goes well beyond best practice in WSUD by reusing water for broad scale irrigation within the urban fabric. The public realm space created becomes the biospace and focal point for community activity and interaction within a high density development.

The presence, use and integration of water throughout the development will be undertaken primarily through an integrated WSUD and will include bioretention systems (as sunken gardens, community gardens, water gardens, green corridors, plaza, rain gardens, biofiltration swales and tree pits), plus infiltration and collection via permeable paving on road and hardstand surfaces.

The integration of a constructed treatment landscape with open space and community garden substitutes and landscape offers an ecologically based stormwater management system for the expensive kerb, gutter pipe solution in civil infrastructure. Water is treated as a resource to be used insitu rather than a hazard and will provide a model for future development.

The WSUD systems will successfully reduce pollutants commonly found in stormwater, reducing impacts on local waterways and allowing for reuse within the community.

Passive irrigation of landscape features in the development would be achieved by directing surface stormwater to internal community gardens, orchards, habitat corridors, garden beds, tree pits and other areas. It also offers other key benefits by maximising ecological and urban services; energy conservation and heightened community awareness, enabling landscape water needs to be supplied without reliance on a power supply or potable water infrastructure. Additionally, as water management will be a highly visual part of the landscape and development, the water cycle from capture to reuse will be both informative and educational to the local community and visitors.

**The aim is to create an innovative 'city farm' development to grow and supply fruit and vegetables to the local community, create employment opportunities and provide an educational resource for sustainable urban food production.**

**Underlying philosophy**

The project relates to the ideas of water footprinting and imported water. Cities such as Melbourne import large volumes of water inherent in the food that is consumed within them. For example an apple consumed within the city typically requires 70 litres of water which would have been abstracted from a river system most likely in a highly stressed irrigation area such as the Murray Irrigation Area. This facet of the grant application aims to significantly reduce the water that is imported into the region by using stormwater runoff from the regional catchment to grow fruit and vegetables which will be consumed within the local area.

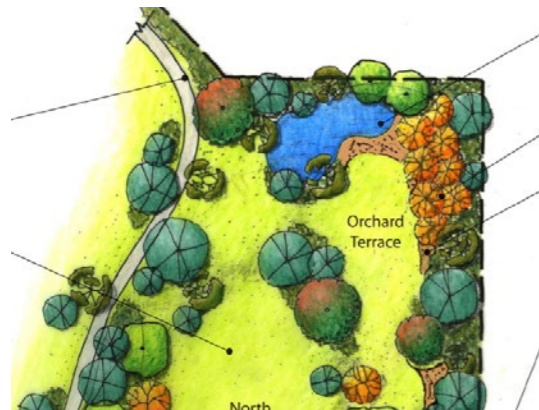
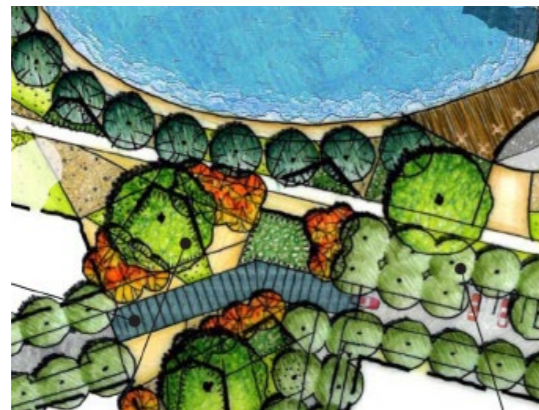
It has been estimated (United Nations Food and Agriculture Organisation) that up to thirty percent of global greenhouse gas emissions occur as a result of the heavily mechanised, oil dependent, food production system now in place across the globe. Typically our food production system now involves significant energy used to create fertilisers and pesticides, transporting, packaging (and disposal of waste packaging), refrigerating and cooking food grown using the current methods. This proposal will also therefore result in a significant reduction in green house gas emissions simply by virtue of the fact that the food will be grown and sold locally with negligible associated "food miles".

The Southern Orchard is 1.3Ha strip located between the existing residential area and the new development. This Orchard will be for use by residents to grow fruit and vegetables in a communal based "commons" setting. Garden plots are also sited within the new residential estate as part of the Water Walk and Woodland walk.

The plan however also proposes at a much larger scale an additional local sustainable orchard and market garden scheme capable of supplying all of the residents of Stamford Park and surrounds with the bulk of their annual fruit and vegetable needs (with significant negated CO2 omissions based on reduced food miles). The development would use recycled stormwater to irrigate the city farm plot to exclude the need for potable water for local food production.

This project will have significant social benefits as it will serve broadly to promote growing of local food using harvested stormwater and by selling subsidised fruit trees, fruit bushes and edible plants grown on the site. This will result in ever growing water savings to be achieved by this project. The project will also generate permanent employment for a number of "growers". Ideally employment will go to farmers who have been displaced by drought. Training and education opportunities will also be plentiful on this site.





### Design Guidelines

Given that the masterplan for Stamford Park incorporates a number of design elements within architecture, landscape architecture and public space that are both innovative and unique to the local market, delivery of the project 'vision' will rely heavily on a high level of design control throughout the project. The creation and careful use of design guidelines will be incorporated into the overall delivery of the development.

Design guidelines and controls ensure that design and implementation control remains with Knox City Council, which can then set the appropriate level of design 'finish' to each of the elements within the guidelines. Typically design guidelines will cover areas within the Stamford Park development such as housing and architecture, landscape to both public and private realm, engineering and infrastructure servicing, and any other materials and finishes within the development as required.

In relation to the Stamford Park residential precinct, the elements to be incorporated in Design Guidelines would include:

#### Housing

- Dwelling siting and orientation.
- Dwelling height and massing.
- Architectural articulation, detailing and style.
- Dwelling setbacks.
- Private and public open space.
- Car access and garaging.
- Pedestrian access, front doors, and connections.
- Dwelling materials and finishes.
- Front yards, streetscapes and fencing.
- Overlooking and overshadowing.
- Sustainability and passive design.
- Water, waste and power management.

#### Streetscapes

- Front setbacks, and housing interfaces.
- Viewlines and vistas to streets and mews.
- Street corner treatments and articulation.
- The framing of public and community space.

- Street tree species, location and surrounds.
- Street pavement materials, design and layout.
- Pedestrian path materials, design and layout.
- Public lighting design, location and power reticulation.
- Public seating, and street furniture design, materials and articulation.

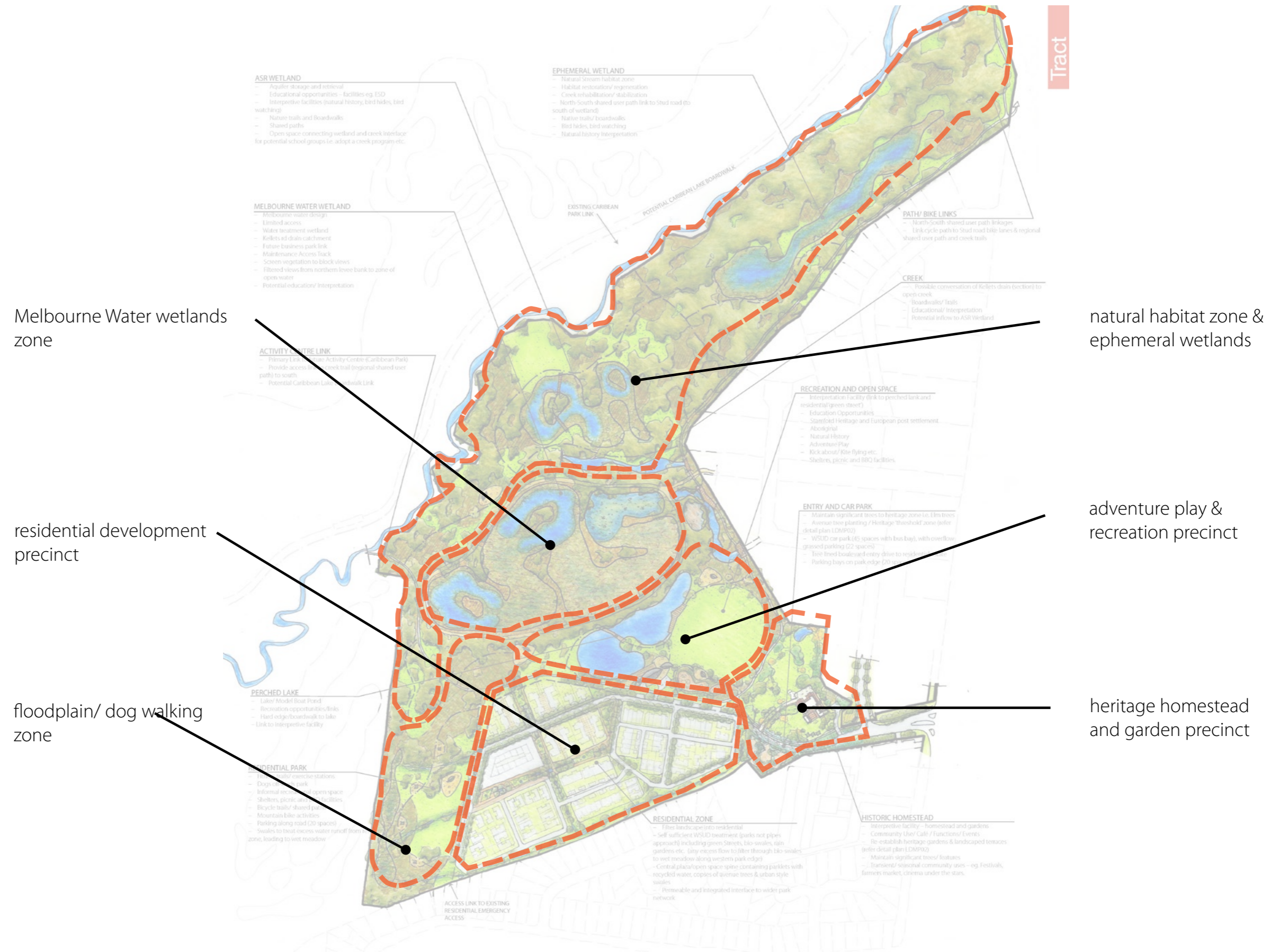
Visitor and resident carparking including on-street parking.

In general terms, the design guidelines will aim to deliver to the site a sustainable and well designed residential precinct, featuring a variety of one, two and three storey dwellings that are architecturally articulated for the orientation and streetscape and feature durable, and appropriate contemporary materials and finishes that match the design 'vision' for the development. Streetscapes will feature compact front setbacks to houses to allow passive and interactive surveillance with the street and community spaces, with fencing in appropriate local materials and finishes that allows a level of permeability to the street whilst retaining privacy to living areas. Corner houses will 'wrap' the corner to address both frontages, with effective and appropriate siting and fencing to accommodate this and public paths and landscaping that complements the streetscape and street corner.

The community spaces will feature a variety of street furniture, landscape, lighting and water elements to create both recreational and quiet, 'rest' spaces for both residents and the wider community. An integrated palette of local, sustainable and appropriate materials will be developed by the Design Guidelines and will be carried through as a visual element of consistency for the development whilst ensuring visual interest and difference occurs and is celebrated.



# 9.0 The Masterplan



Melbourne Water wetlands zone

residential development precinct

floodplain/ dog walking zone

natural habitat zone & ephemeral wetlands

adventure play & recreation precinct

heritage homestead and garden precinct





Tract



**Design Response**

Our process has been, along with conventional and proven best practice in urban design and landscape architecture, to adopt an ecological systems approach to planning, design and adaptive management. The vision emerges from an extension of this approach to water management, vegetation, economic, community and cultural components.

In particular, the design response approach seeks to integrate all of the thinking across the 3 key precincts within the park:

- The Historic Precinct
- The Park
- The Residential Estate

The plan boasts innovation in vegetation rehabilitation and 'soft' engineering by use of plants for their function and purpose, and cultural and biological relevance within the wider landscape and residential fabric. Vegetation is used for water quality treatment, to provide shade and shelter, and microclimate.

A water recycling and 'No Pits and Pipes' approach to water management has been designed into the urban fabric and park to keep water on the surface where it can do its job. This approach extends into the landscape where bioswales spill water into wet meadows before it makes its way to the floodplain and ultimately the creek.

The Masterplan

9.0

# 10.0 Design Elements



A central community space that reflects the 'urban nature' of the housing



A central community 'well' of water feature as a gathering point



Localised 'pause and reflect' spaces

## Community Space

- Establish a hierarchy of community spaces weaved throughout the housing, that contribute to the neighbourhood character and the sense of community
- Integrate these spaces with the wider network of spaces, places and events around the wetlands and creek, and the activities of Stamford Park
- Create spaces where people can gather, pause, reflect or relax both within the park itself and within the new residential neighbourhood
- Manage through design, the interface between public and private space so that the edges and interfaces are blurred, and that the wider community feel ownership of the community space as well as local residents
- Establish elements within the community spaces that reflect the cultural, social and historic heritage of the site and the area - such as the 'neighbourhood well', small 'urban forrests', surface water features and interpretive places with seating.
- In addition to the community spaces within the landscape, a strong sense of community space will come from the Heritage Homestead with its diverse public uses for functions and events as well as the public cafe. Community gardens within the homestead grounds and the terraced lawns and gardens will also contribute to the communities ownership of this area around the homestead.



### Urban Agriculture

- There is potential within the water and landscape management systems for Stamford Park to investigate the establishment of various forms of small scale, urban agriculture appropriate to the site.
- The water capture, storage and re-use systems can efficiently (sub-soil) irrigate proposed organic orchards and market gardens to create an organic “city farm”. The food produced from the city farm, irrigated with harvested stormwater, can be sold directly to the local community through farmers markets on the site within the ‘kickabout’ area or Heritage Homestead precinct, and also through the production of a fruit and vegetable box supply scheme and by supplying local restaurants directly.
- The aim is to create an innovative ‘city farm’ development to grow and supply fruit and vegetables to the local community, create employment opportunities and provide an educational resource for sustainable urban food production.
- This would provide a significant ‘pilot project’ of this type for both the Rowville community and Knox City Council, potentially attracting significant funding at a number of levels from State Govt Sustainability initiatives down to local community groups
- The educational aspect of the urban agriculture initiative would tie in seamlessly with the interpretive elements of the Stamford Park masterplan and provide a further layer of ‘working’ cultural and social sustainability on the site.

## Design Elements

# 10.0



# Design Elements 10.0



## Open Space Activity

The open space features are a wonderful opportunity for the community to interact with the parkland. These features include:

- Shared Pedestrian and Bicycle Path – Shared Bicycle and Pedestrian path is currently being constructed on the site. This path connects the park to the wider regional cycling network.
- Boardwalks – allowing people to circulate the parkland and have the opportunity to interact with the different features of the park such as habitat regeneration and wetlands.
- Education and Interpretation Features – whilst enjoying the aspects of the boardwalk and shared path, education and interpretation signage and features will be scattered throughout the site. This gives the opportunity for all users to understand all aspect of the park and what the landscape is trying to feature.
- Exercise Stations – Exercise stations have been included in the south west of the site. This will allow the wider community to come and enjoy the park for their daily exercise routines.
- Perched lake – The perched will enable model boat clubs to enjoy the park, people to have picnics by the water and encourage wildlife into the park.
- Kite Flying - The extensive kick 'a' bout area allows room with no utility lines for old past times such as kite flying.
- Dog walking park areas and trails.
- Wetlands and Wet Meadows



**Paths / Circulation**

- The Stamford Park masterplan features a hierarchy of connecting paths, trails and walks that allow park users, new residents and existing residents to move freely throughout the precinct whilst enjoying the varied experiences along the way. Particular preference has been given to creating paths and trails that reflect the surrounding environment and the context of the location, so there are looser, meandering trails around the ephemeral wetlands, more defined and 'cultured' paths within the heritage homestead and more urban links within the residential precinct.
- The network of paths and connections has been created to prioritise the pedestrian and cycling experience over car-based use of the park, in particular to give the main cycling shared path that connects north-south to the wider Knox community precedence and access past all of the main community and recreational elements within the masterplan.
- Nature trails are a key element of the wider landscape masterplan for the park, incorporating a number of landscape and bio-diversity experiences as they wind their way around the park and the various water bodies. In addition, a number of these trails incorporate small, discreet viewing platforms or bird hides that give pause and reflect spaces within the trail experience.
- Boardwalks and bridges also feature within the trails network, in particular incorporated within the perched lake design to enable universal access to all members of the community.
- A varied palette of materials are used with the paths network, including gravel and loose toppings, timber boardwalks, exposed aggregate concrete paths and stone pathways.



# Design Elements

## 10.0



### Water Sensitive Urban Design (WSUD)

- Use of biological systems such as bio-swales, wetlands and wet meadows, to improve stormwater quality.
- Use of water storage tanks, wetlands and ponds to harvest storm water. Once (biologically) treated, harvested storm water will be used to irrigate trees and gardens within the developments public open spaces. It will also be used to feed a 'third pipe system' into houses within the development for uses such flushing toilets, cleaning cars and irrigating domestic gardens.
- Aquifer water storage and retrieval
- Use of permeable paving to reduce storm water runoff
- Installation of Interpretation panels aid in educating residents about the natural WSUD systems throughout the site. Informing residents about these systems helps to create an enhanced sense of belonging, place and custodianship with their environment.



### Biodiversity

- Facilitation of increased biodiversity by reinstating indigenous wetland vegetation and creating habitat for indigenous fauna.





Using 'breaks' in levels to identify public and private - 'What's mine and what belongs to the public'



A central public space that incorporates movement and landscape



Landscaped mews rather than asphalt streets

## Community

- Establish a sense of a new local community weaved into the existing residential fabric of the area through a strong sense of 'place making' within the new housing and public realm areas. The issue of integration of new residents and dwellings with the adjacent existing residential streets and neighbourhoods is critical to the success of the masterplan, establishing strong links between new and old through spatial, visual and movement links.
- Create a departure from 'standard suburbia' and enable the new housing to reflect the location adjacent the Stamford Park and also at an interface with the local creek and adjacent golf course. The creation of housing that not only reflects this local context, but also responds to the community hub of the Heritage Homestead and nearby public park spaces will ensure the overall sustainability of the new masterplan over time.
- Enable and encourage movement of residents, visitors, cyclists and walkers through and around the housing precinct within a fluid network of paths and trails that give rise to a strong sense of community within the new residents but also within users of the park. It is critical to sensitively treat the interfaces between park and housing to ensure all members of the Knox and wider community feel a 'common' ownership of the park and open spaces.
- Establish varied housing types within the masterplan to provide styles of living not currently readily available within the area - whether they be smaller lot types, higher density townhouse living, less car-dependent housing, or highly environmentally responsive and sustainable methods of housing. This includes seeking to create a diversity of housing types and sizes within the masterplan as part of the declared Council 'pilot project' to ensure housing demographics can be tested and provided for.
- Creation of streets that prioritise public spaces rather than car movement - where car movement is allowed for with seamless efficiency but pedestrian movement and public use of the street space is prioritised. In addition, the streets are a 'skeleton' of permeable linear spaces rather than asphalt 'canyons', integrating and emphasising water management, storage and re-use as visual cues to the importance of the 'blue infrastructure' network.
- Design of the central public spaces to encourage and enable community gathering and exchange with incorporation of a combination of spaces such as plaza, square, 'urban forrest', 'village well' central path and landscape buffer. In addition these community spaces have been designed to be framed by visually 'dense' housing fronting onto these spaces to maximise passive surveillance, community interaction, and a sense of community that extends across each house boundary.

# Design Elements 10.0

# Design Elements 10.0



## Structures / Materials

The structures discussed in this section include:

- Fencing
- Interpretive signage
- Interpretation / information centre
- BBQ and picnic shelters
- Lake hard edge
- Boardwalks and bridges
- Viewing platforms / bird hides

Creating a strong design statement which in turn reinforces the sites 'sense of place, requires a common language of forms, materials and construction techniques to be applied to all structures throughout the site. The aesthetic of these structures will be sympathetic to the natural processes and semi-rural qualities of the parkland, whilst nonetheless maintaining a certain sophistication of style commanding of any new Melbourne development.

In addition, consideration of the following design treatments will be applied to all structures throughout the site:

- End product materials are to be in a natural/minimally processed state and will have natural finishes where applicable
- A range of textures are to be used which create visual interest and add an enhanced tactile experience
- Materials to be locally sourced where possible, to emphasise local distinctiveness and to reduce the embedded carbon footprint
- Materials to be durable and of a high quality
- Porus paving aids the irrigation of street trees/ garden beds and reduces storm water peak flow runoff and as such, will be used where appropriate.
- Typical materials include:
  - Rough cut and dressed timber
  - Site selected natural stone
  - Pebbles and sand of various grades
  - Lime chip
  - Cor-ten and stainless steel.
  - Bark mulch
  - Native grasses





### Heritage / Homestead

- The Heritage Homestead is an existing historic homestead building located on the site adjacent the entry to Stamford Park from Stud Road. It encapsulates significant historic, cultural and social heritage of the area, and as such is to become the central 'hub' for the new Stamford Park.
- The homestead is currently undergoing rejuvenation of the building itself, to restore the interior spaces and external features to its historic glory. This includes areas around the homestead and in the gardens where a number of historic sites and elements have been uncovered and retained. Museums/Interpretive elements will be integrated in the homestead but won't be the dominant activity.
- Once complete the homestead will play a central part in the ongoing character and role of the park, being used for functions and events such as weddings, community meeting spaces, social events and generally as a 'hub' for park users, but avoiding long term tenancies. There is potential for a commercial boutique Restaurant/Cafe or coffee destination to operate out of the homestead.
- In addition to events being held internally within the homestead, the homestead precinct will act as a focus for events and recreation within the surrounding gardens and park areas such as the community market gardens, events held on the adjacent terraced lawns, and local produce markets being held on the kickabout area.
- The homestead precinct forms a key part of the entry experience to both the park and the residential area, being the focal point of the entry off Stud Road once past Enterprise Drive. The masterplan includes retention of the significant elms near the homestead on the entry road, and the additional design of an entry experience featuring textured road treatments and an integrated shared path, as well as landscaped carparking areas and a formal entry driveway to the front of the homestead.
- Elements of interpretive and educational learning will be incorporated into the homestead precinct and not in a building, allowing community and school groups to visit the Heritage Homestead and experience the cultural and social history of the area through the historic gardens, uncovered historic sites and archaeological digs. These will tie in with the educational and learning elements of the Interpretive pavillion adjacent the perched lake and the wider interpretive trails network throughout the park. Dedicated indigenous cultural interpretive elements are to be incorporated throughout the parklands.
- Significant events within the homestead precinct such as produce markets, cinema under the stars, local fetes and fairs, and opera or theatre will enable this precinct to become a key community and neighbourhood hub for both residents of Rowville but also for a much wider Knox community.



# Design Elements

## 10.0



Using the interface between public and private for water management systems



Upper-end of the volume builder housing market - large detached house

### Housing Style

Orientation and siting are more important than the actual 'style', these will come out of architectural designs that respond to the 'vision' of the neighbourhood character and the wider Stamford Park vision

- Building elements such as eaves, articulated entries, sensitive rooflines and balconies are important as elements of integrated streetscapes
- Style can be contemporary whilst not ruling out residents taste, and will enable the establishment of some 'pilot housing' for the area that exhibit the benefits of sustainable, contemporary housing that responds to site, climate and orientation.
- Important to create the way the housing 'fronts' and 'addresses' the public realm as a key part of the streetscapes of the neighbourhood. All housing should contribute positively to the streetscape character through its architectural components, its siting and orientation, and its landscaping to the front yard as an integrated part of the landscape of the street
- Establishment of a small area within the neighbourhood as a 'pilot housing' display, that exhibits some examples of contemporary, responsive, sustainable housing within this context and enables other residents and the community to see how these houses work, and the way they relate to the area they are located within.



## Housing Density

One of the critical issues relating to the establishment of new housing within Stamford Park is that of housing density. This relates to the sizes of both houses and lots, and the visual concentration of built form within views and within the streetscape.

- This responds to State Government policies of achieving mixed and higher densities than areas of existing residential suburbia. More importantly it responds to a Knox City Council objective to provide more varied housing types to cater for a wider range of resident demographics.
- The masterplan design creates a flexible spatial layout that allows for a number of different densities to be sited as the market, the site and the project evolve.
- The design incorporates single detached dwellings, semi-attached duplexes, attached townhouses, cluster-housing and some low-rise integrated apartment living. These types are achieved within housing heights of between 1 and 3 storeys, with the bulk of the housing at 2 storey.
- Carparking and car access is often a sensitive issue within higher density housing models, and this has been treated in conjunction with the vision for 'green' and 'people orientated' streets and mews so that garages and car parking do not dominate the character of the neighbourhood.
- The 'vision' for the higher density housing models is to achieve good architectural outcomes that sit comfortably within the local streets, break up the massing, form and bulk to minimise the overall appearance, and contribute positively to the character of the neighbourhood.
- Good medium density housing models enable useful private and public space both within and around the buildings, and integrated seamlessly with the public realm areas, as well as walking and cycling networks.
- Higher density housing provides opportunities for smaller sized living options, and significant opportunities for more sustainable living.
- In addition, a diverse range of housing types and choices allows for elements of affordable housing to be incorporated into the neighbourhood seamlessly and without discrimination on housing size (ie. affordable should not mean small)

# Design Elements

# 10.0



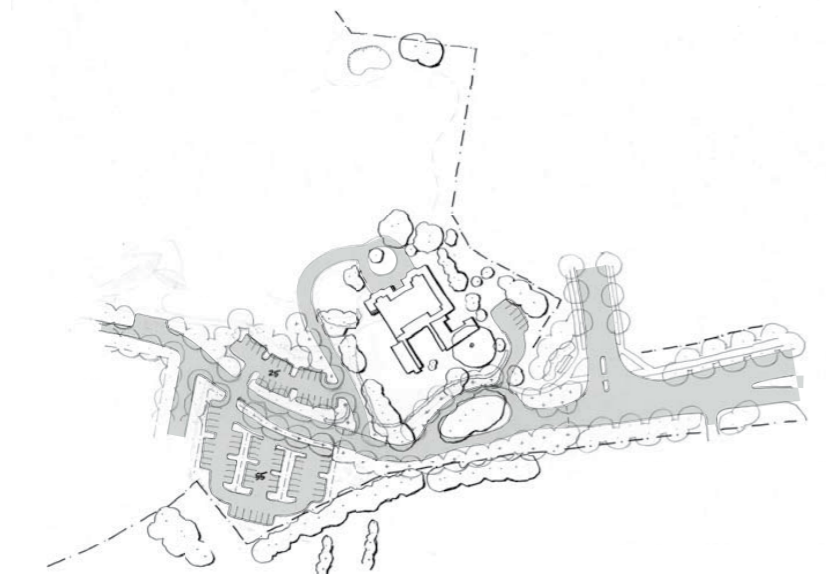


Tract



**OPTION 1**

- Entry & arrival through Heritage Precinct. Emphasis on creating a sense of entry & arrival to the parkland and homestead
- Tree lined avenue with distinctive threshold paving
- Views across parkland from Entry Road and Homestead Drive
- Car park south of entry road
- Car park adjacent to homestead garden to be integrated within the homestead garden landscape...grassed surface possible
- Service car park adjacent to Homestead



**OPTION 2**

- Entry & arrival through Heritage Precinct. Similar to option 1
- Tree lined Avenue with distinctive threshold paving
- Homestead Drive located east of car and closer to Homestead
- Reduced area around homestead garden
- Car park south of entry road
- Car park adjacent to homestead garden
- Service car park adjacent to Homestead



**OPTION 3**

- Straight alignment with turnaround at roundabout.
- Tree lined Avenue
- Distinctive threshold paving terminates at car park.
- Threshold paving repeated at entry to Homestead Drive
- Homestead Drive located east of car and closer to homestead
- Reduced area of homestead garden
- Bulk of car park north of entry road and adjacent to homestead garden
- Service car park adjacent to homestead

**Entrance**

**11.0**



# Heritage Precinct

## 12.0



**NORTH-SOUTH SHARED PATH**

- Proposed North-South shared path to align along road side through heritage zone to link Stud road with the park
- Provide filtered views (glimpses) of the homestead from shared path through tree and shrub planting

**TERRACED GARDENS**

- Use the natural grade of the homestead landscape to create three sweeping terraced lawns & garden areas for guests to meander/journey down through the heritage gardens, and connect to wider park network
- Diversity of open spaces to allow for smaller intimate zones & wide open spaces (allows for variety of simultaneous uses)
- Diversity of 'specimen' trees, evergreen & deciduous trees, eucalypts and low understory plantings

**EXISTING HERITAGE TREES**

- Maintain & protect existing significant Elm trees & heritage plantings throughout the homestead grounds

**HERITAGE FEATURES - WELL**

- Highlight & interpret remnant heritage well

**HOMESTEAD ENTRY DRIVE**

- Create ceremonial approach to homestead with a sweeping crushed rock (ie. quartz) drive to emphasise the sense of arrive (restricted use ie. weddings)
- Drive to curve through the existing remnant trees which formed part of the original homestead entry drive & provide sweeping view across the grassed terraces
- Paved path adjacent to drive for pedestrian access from car park

**OVERFLOW CAR PARK**

- Provide grassed overflow parking (22 spaces) off main entry drive for occasional use
- Provide screen planting to block views from homestead

**PROPOSED POND**

- Use existing drainage line to create a pond under the existing pear trees, with filtered & channelled views from/to Homestead
- Pond to be used for irrigation of heritage landscape

**PROPOSED ORCHARD**

- Emphasise the existing significant pear trees with the creation of an orchard row on the upper terrace

**PATH**

- Access for disabled

**HOMESTEAD**

- Use of homestead for community use, events, functions, weddings, cafe etc.
- Paved courtyard space for events/functions
- Re-instate kitchen garden to south of property for use by potential homestead cafe
- Provision of 'service vehicle only' access & parking
- Boutique restaurant / cafe

**HERITAGE FEATURES - COOL STORE**

- Highlight & interpret remnant heritage features/ruins

**STUD RD. ENTRY**

- Create an address along Stud Road - Tree Avenue planting Eg. Poplar
- Double avenue of tree planting
- Transition 'threshold' through homestead zone

**PATH**

- Access for disabled

**EMMELINE ROW**

- Avenue planting of columnar deciduous trees Eg. Poplar

**HERITAGE ENTRY 'THRESHOLD'**

- Highlight heritage zone with contrasting road pavement (colour/texture) & contrasting avenue tree planting through homestead zone as shown
- Proposed re-instatement of Hawthorn hedges throughout homestead. Road side hedge to south of property to block views to the rear/back of the homestead

**CAR PARK**

- Homestead / Park car parking (45 spaces with bus bay)
- Water Sensitive Urban design with permeable pavement & bio-swales
- Screened from view from main entry road

**AVENUE PLANTING**

- Eg. Tulip Tree (*Liriodendron tulipifera*) or Linden (*Tilia Cordata*)



### Heritage Precinct - Stamford Homestead and Environs

A heritage precinct has been defined incorporating the 'The Stamford Homestead', a refurbished and extended garden area, a ceremonial entrance and access via Emmeline Row. The plan builds on heritage themes and principles to strengthen and interpret the existing core 'heritage' assets to create a strong and sympathetic character to the precinct surrounding the Homestead.

Entry to the Stamford heritage homestead is via Emmeline Row off Stud Road. The plan proposes avenue planting of large columnar trees (Eg Poplars) to create a powerful visual statement; to build on heritage themes; to create an address and to announce entry to Stamford Park at the Stud Road Entry.

Emmeline Row is divided into a number of sub-spaces. Entry is via a wide 'funnel' serving both Stamford Park and the adjacent industrial estate via Enterprise Drive. The scale of Emmeline Row at the Stud Road entrance demands a continuation of the strong avenue planting theme that is, large columnar trees such as Poplars.

A secondary gateway signifies entrance into the Heritage Precinct proper. At this point the road narrows and a road threshold treatment incorporating change in surface material, colour and texture signifies entry into an important and calmer space. Avenue planting using canopy trees also changes at this point. The Tulip tree (liriodendron tulipifera or the Linden (tilia coradata) are proposed for this tree Avenue.

#### Car Parking

Appropriate and sympathetic siting and management of parking is an important component of the plan. Car parking is distributed in a number of locations throughout the site as follows.

#### Homestead Parking

Nominally onsite parking for 10 spaces. On site parking for delivery and service vehicles.

#### West Side Car Park

Nominally onsite parking for 45-50 spaces

Large car park serving both Stamford Homestead and the broader park environment. Potential for bus parking. Potential for expansion to double on site to the west.

#### Overflow Parking /Homestead Gardens.

Nominally car parks for 22 spaces

#### Park Perimeter Bays

Nominally car parks for 45 -50 spaces

Parking bays off the perimeter Boulevard serve the parkland area generally.

### Homestead Entry

A new tree lined ceremonial entry is proposed to serve the Homestead. The entry is to be lined with crushed quartz or similar.

A simple arrival space outside the Homestead allows for 'special' parking needs or serves as a flexible space for events marquee or Alfresco seating/dining.

### Homestead Gardens

The Homestead Gardens build on and extend existing garden infrastructure and heritage themes. Planting proposals maintain existing significant trees and heritage plantings through out the Homestead grounds. The extended gardens use a heritage palette and propose extended plantings of specimen trees and garden beds.

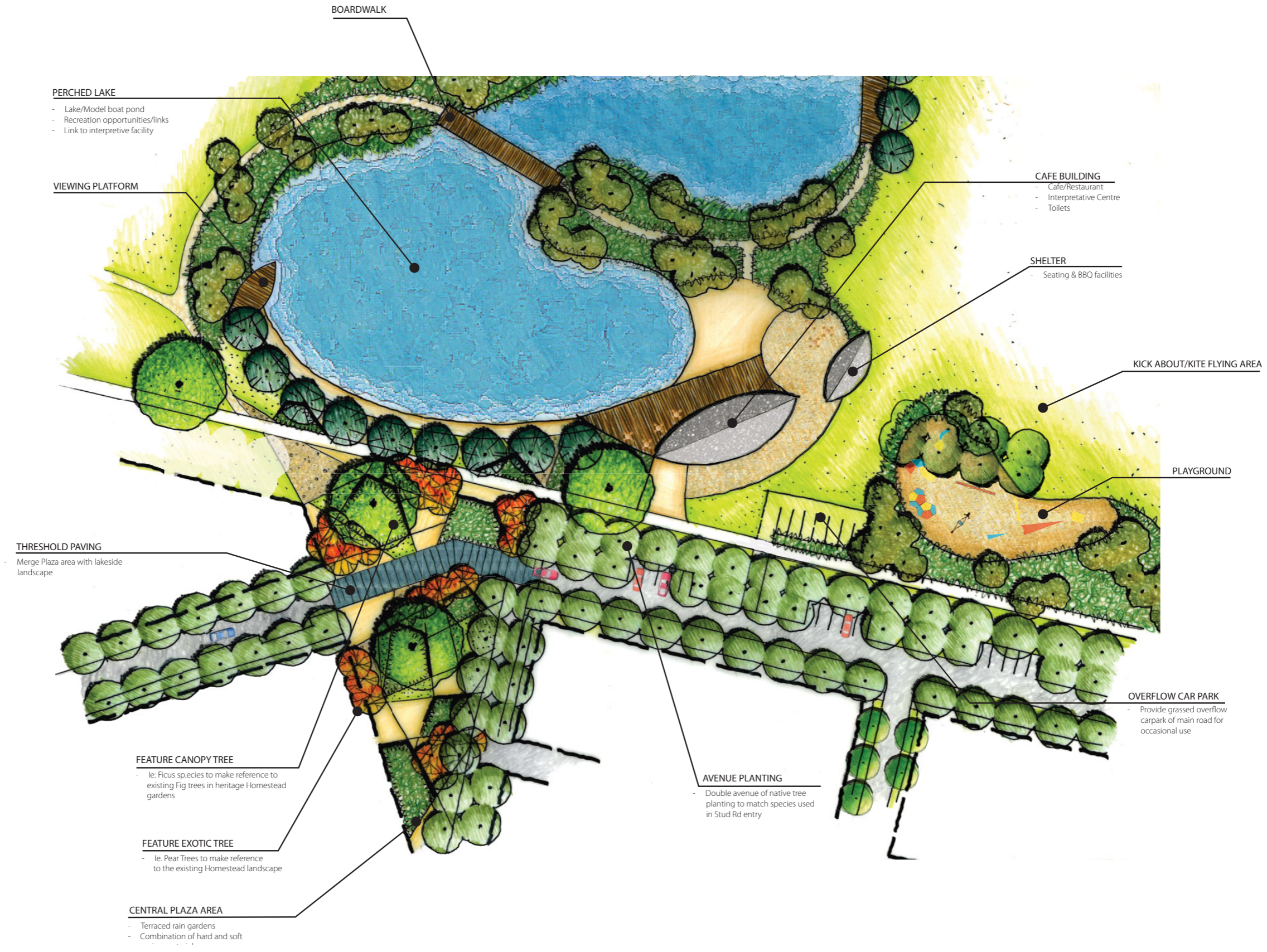
The terraced gardens are comprised of a number of spaces within spaces offering a diversity which allows for more intimate garden and gathering spaces and the more wide open areas. The natural grade of the land has informed the shape and form of the spaces to create sweeping terraced lawns and garden areas for visitors to meander through. Core garden areas include-

- Orchard Terrace
- North Lawn
- Garden of Memories
- Kitchen Garden



# Lakeside Boardwalk

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### Urban / Parkland Edge Interface

- Parkland and urban edge interface treatments vary from a fully public, road and carpark serviced promenade, to less public areas where the park, buffered by garden beds, avenue tree planting, walking paths and activity areas; abuts private residences.
- Terraced rain gardens, with a combination of hard and soft paving materials, fracture the built edge allowing the parkland and natural systems to enter the built environment and urbanised areas whilst merging the plaza with the lakeside landscape.
- Feature canopy trees, ie: Ficus species to make reference to existing Fig trees in heritage Homestead gardens
- Double row avenue of native tree planting to match species used in Stud Road entry
- Provide grassed overflow carpark of main road for occasional use

### Variety of Formal and Informal Spaces

- In formal kite flying and ball kick about areas
- Children's playground
- Informal interaction with the lake
- Viewing platform/ model boat launching wharf
- BBQ/ picnic seating and shelter
- Walkways and paths
- Intimate park spaces
- Wildlife habitat areas
- Environmental interpretation will be incorporated throughout the parklands

### Perched Lake

- Water harvesting
- Visual amenity
- Multiple opportunities for interaction with the lake to be facilitated by a variety of edge treatments including both hard structures such as boardwalks/ viewing structures; and softer, more natural treatments such as granular pebbles/ sand.
- Gentle fall/depth around accessible areas to allow safety compliant active uses such as water play and model boat sailing.

- Provision of inaccessible lake edge areas to promote habitat for wildlife.
- Interpretation boards to educate residents about the natural systems at work within their living environment. Through an understanding of their environment, a higher state of sense of belonging and custodianship can be achieved amongst residents.

### Cafe Building (Kiosk)

- Cafe/Restaurant
- Toilets

### Fruit Trees and Herb Gardens

- The provision of fruit trees and herb gardens in public spaces with the aim to create a productive urban-agricultural environment, fulfilling an array of benefits ranging from reduction of food costs, reduction of embedded carbon/ food miles, the promotion of healthy eating, promoting the benefits of back yard and allotment gardens and the reaffirmation of sense of place and community.

### Surfaces and Materials

- Elegant/ sophisticated forms
- Natural/ minimally processed finish
- Range of textures to create visual interest and an enhanced tactile experience
- Materials to be locally sourced where possible, to emphasise local distinctiveness and to reduce the embedded carbon footprint
- Durable
- Examples of material types:
  - rough and fine cut timber
  - ashlar stone
  - pebbles and sand of various grades
  - lime chip
  - cor-ten and stainless steel.
  - bark mulch
  - native grasses
- Porus paving to aid irrigation of street trees and garden beds and to reduce storm water peak flow runoff.



# Residential Precinct

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The dog off-lead area future design will take into account potential car parking issues in surrounding areas



## Residential

The residential estate precinct of Stamford Park has been designed to seamlessly integrate with the surrounding landscape of the park whilst providing a benchmark or 'pilot' project for sustainable and innovative housing.

### Key Objectives

The key objectives for the residential portion of the Stamford Park project are:

- Establish a residential development that is a benchmark for future housing within the municipality, and that exhibits innovation and sustainability not currently on display in surrounding residential areas.
- Design housing and its associated public realm that integrates and complements seamlessly the adjacent park and community facilities.
- Balance the need for a development 'return on investment' with the objectives of a 'pilot' innovative and sustainable housing development.
- Establish a return from the residential development that helps fund the landscape masterplan for Stamford Park in terms of capital works and on-going maintenance.
- Incorporate and test different housing typologies for the municipality that may not otherwise be on offer to the market in the area.
- Incorporate a sense of localised community within the housing development that fosters a sense of community and placemaking not currently on offer in 'standard' residential areas.

The ramifications of this aspirational vision for the housing estate is that it places the new development as a 'counterpoint' to the adjacent residential neighbourhoods of Rowville. The design process has thus been a series of 'propose and test' reviews where the design principles for houses that incorporate innovative, socially and environmentally sustainable are established and then tested against the integration with surrounding neighbourhoods and wider Rowville community.

The design principles and objectives for the Stamford Park residential estate are described within this report, and are to be balanced against financial market analysis and development feasibility undertaken by Charter Keck Cramer. The results of this financial work will be reviewed in the next stage of the project, and some key decisions will be required in regards balancing the

economic return with the social, environmental, cultural returns and the objectives of Knox City Council.

### Scenario Testing

A residential pad has been set aside from the wider landscape area of Stamford Park that resides within a flood-plain. In order to test the development 'sensitivities' of the area of land set aside, a number of options and scenarios were developed based on various levels of residential development and density.

From these scenarios, 3 design options were agreed to and developed further to represent a diversity of housing numbers, layout and interfaces with the park.

- Option 01
  - 'Standard Residential Approach'
  - Yield of approx. 100 dwellings
  - Residential typologies reasonably similar to those currently found within City of Knox.
  - Detached houses, semi-attached terraces, townhouses.
  - North-south street layout with circular boulevard fronting the park and green linear trail.
- Option 02
  - 'Medium Density Residential Approach'
  - Yield of approx. 120 dwellings
  - A mix of residential typologies with a number reasonably similar to those currently found within City of Knox, in addition to some smaller housing types probably considered 'innovative for the area.'
  - Detached houses, semi-attached terraces, townhouses, car-court villas, rear lane way townhouses.
  - Road layout that protects the green linear trail from car access, but promotes easy viewlines and access to surrounding green areas, and easy pedestrian movement across, through and around the site.
- Option 03
  - 'Benchmark Residential Approach'
  - Yield of approx. 150 dwellings
  - Residential typologies reasonably new and unfamiliar to the City of Knox.
  - Detached houses, semi-attached terraces, townhouses,

roof-terraces, apartments and villa units.

- Road layout based around a central public spine, water management swales and movement corridors.
- Target for 6 & 7 Star sustainable housing.
- Target for a range of community initiatives incorporate in the housing layout.
- Target for a range of environmental initiatives incorporated in the housing layout.

# Residential Precinct

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## Masterplan

The residential masterplan creates a new area of housing for the Rowville area, adjacent existing housing to the south. The design of this precinct brings elements of community and social sustainability together with significant environmental benefits from Stamford Park itself, to create a 'pilot project' of contemporary, sustainable housing for Rowville.

In particular, a feature of the masterplan is the provision of different housing densities, lots sizes and dwelling types, to provide forms of housing not necessarily available in other parts of the municipality. This in turn enables different demographics of residents to live within the area and choose from housing types other than a single detached house on a lot. Community space is featured with the masterplan as a central 'plaza' or 'green' through the middle of the housing, enabling residents to spill out of their houses into the public realm and rest, recreate, participate and interact with each other.

## Development Scope & Yield

The design for the residential precinct of Stamford Park has been tested against a number of residential development scenarios using density, orientation, park interface, housing types and public realm as key elements of the plan. The intention of the plan is to establish a 'pilot project' incorporating higher housing densities than surrounding neighbourhoods within Knox, and to test, display and locate different housing types and sizes.

The yield for the residential precinct has been tested for 80 - 160 dwellings and the plan included in this report outlines a design for 150 dwellings approx.

## Sustainability

The masterplan has a strong focus on all elements of sustainable living - from social and cultural sustainability to the emphasis on the landscape and environmental management and the infrastructure of water management. The site itself has robust and historic ties with the element of water - as both a creek based environment and also as a wider wetland and flood-plain. This character runs through all aspects of the new masterplan and underpins a sensitivity for the housing, the landscape and the public facilities.

The residential neighbourhood aims to locate well orientated and designed architectural homes of varying lot and house sizes, to best foster the sense of community and social sustainability whilst also exhibiting best practice water, waste and power management in design for the wider community.

A network of interpretive and educational elements within Stamford Park such as the Heritage Homestead and gardens, the Educational Centre adjacent the lake, interpretive trails and walks and elements within the residential neighbourhood will reinforce and build upon the cultural and social heritage of the site and the wider Rowville community.



## Neighbourhood Character

The masterplan aims to establish and encourage a strong sense of the local community and neighbourhood within the new housing and residents that builds on the existing neighbourhood character of the surrounding area. This is critical to the success of the residential precinct and will also incorporate significant benefits for both park users and other residents of Rowville.

The neighbourhood character will be one of an urban housing environment, featuring dwellings sited within the landscape - where Stamford Park reaches into the housing precinct and the housing reaches out into the park, so that the edges and interfaces are blurred. The streets and mews will feature water management systems such as bio-swales and filtration beds, local permeable footpaths and prioritise walking over driving, whilst still allowing for efficient and safe car access.

The housing will include a number of different residential typologies, from detached single houses to townhouses, duplexes, cluster housing and some low-rise apartment living. This will enable a diverse demographic to live within the precinct, enjoying a range of housing sizes and prices. The housing will be relatively 'denser' than surrounding parts of Rowville, and will be focused on fronting on to and addressing local streets and public spaces to interact with and activate the public realm. In this way, all parts of the neighbourhood from front yards, to streets, lanes, squares and footpaths will feel safe, local, active and inviting for both residents and the wider community.

## Streets & Mews

The masterplan has been designed with a network of local streets and mews that bring the scale of residential streets down to a more local and communal scale, whilst still maximising the efficiency of car access and movement. There is a balance between car access to homes and prioritising walking and cycling movements as well as encouraging the streets to become communal spaces.

The design encourages housing to front directly on to streets and plaza spaces, with reduced front setbacks and designs that feature passive surveillance to the street as well as many houses with front yards and gates that open out onto car-free neighbourhood spaces.

Where possible and appropriate to the housing types, car access to garages has been treating sensitively with siting and landscaping to minimise the impact of elements such as garage doors on the streetscapes, and create car-courts, and driveways not only for cars but equally for children to play and for people to use.

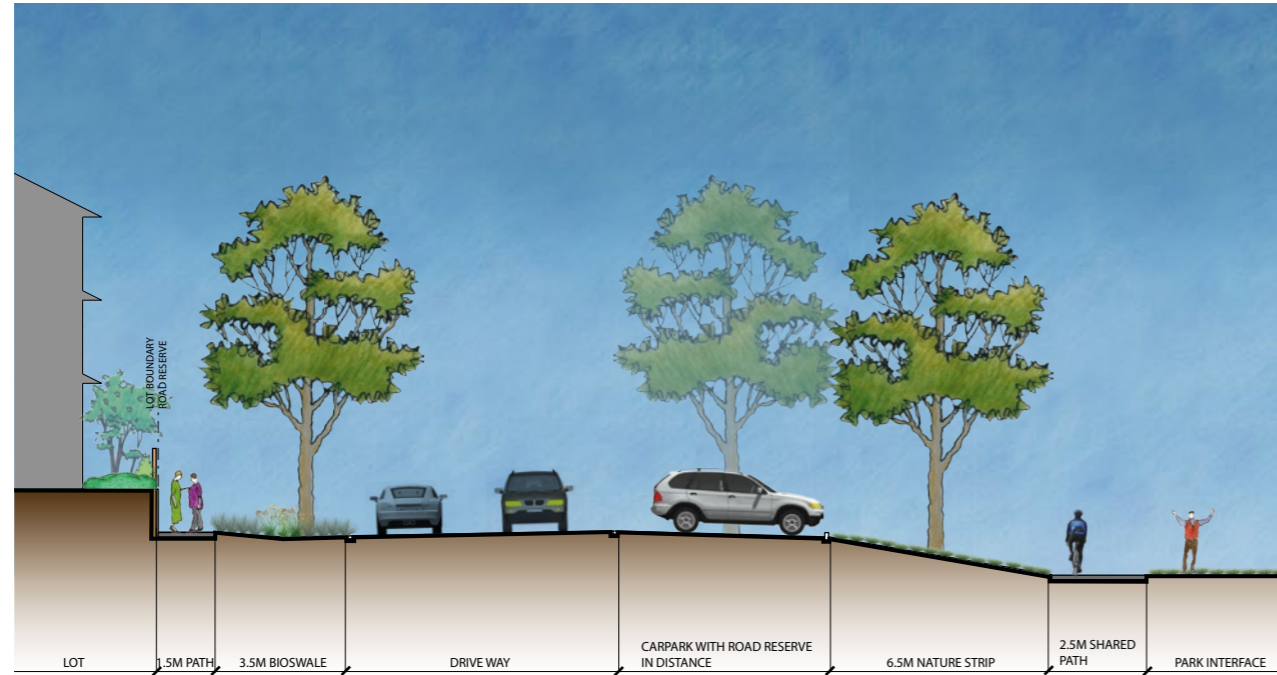
A feature of the streets and mews network are the multiple water management networks, that gather, manage, store and re-use water in visible ways within each street space, minimising the use of non-permeable surfaces such as asphalt and creating streets as green spaces rather than non-porous 'canyons'.

# Residential Precinct

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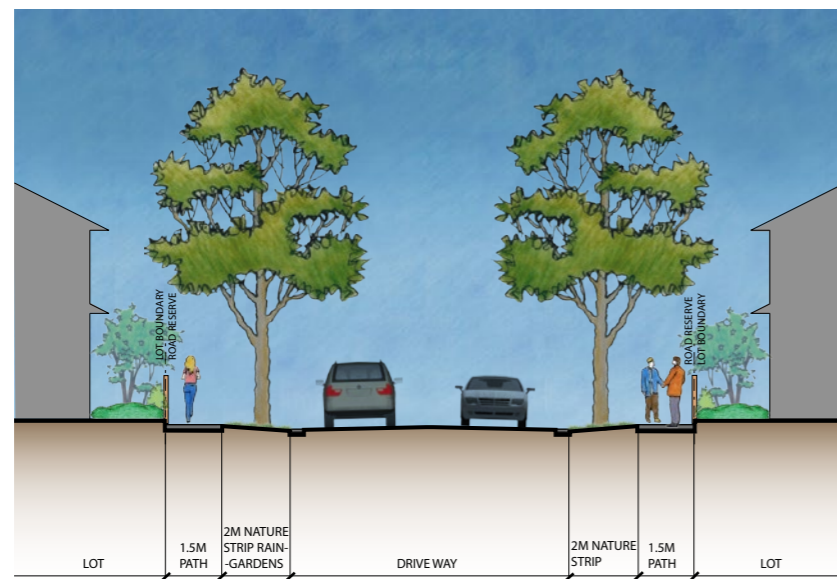


# Residential Precinct

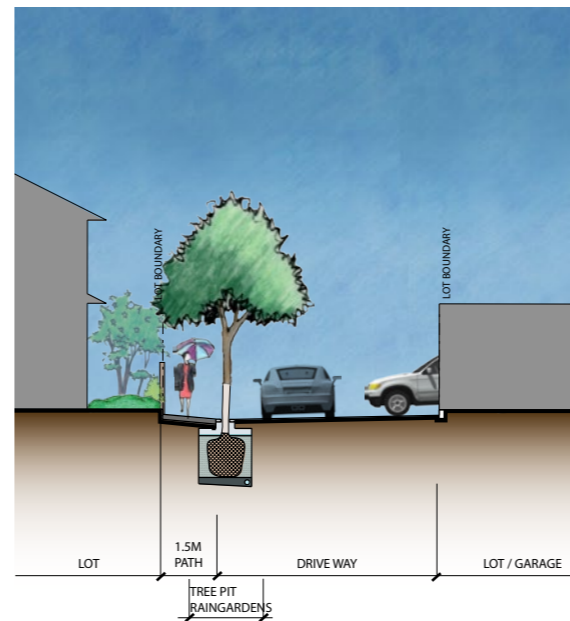


SECTION A-A PARK ROAD & RESIDENTIAL INTERFACE  
SCALE 1:100  
7m ROAD  
3.5m /12M ROAD RESERVE

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SECTION B-B TYPICAL LOCAL RESIDENTIAL STREET  
SCALE 1:100  
7m ROAD  
2m ROAD RESERVE



SECTION C-C TYPICAL MEWS / LANEWAY  
SCALE 1:100  
5.5m ROAD

## Housing Typologies

The masterplan design is a higher density option which incorporates a diverse range of housing types. The housing typologies are as follows:

- 12.5m frontage
  - 375sqm
  - 30m depth
  - 1-2 storey detached dwelling
  - Double garage
- Townhouses
  - 7.5m- 9m frontage
  - 225-270 sqm
  - 30m depth
  - 2-3 storey attached dwellings
  - Double garage loaded off rear lane
- Duplex 9.0m frontage
  - 225sqm
  - 30m depth
  - 2-3 storey attached dwellings
  - Double garage loaded of rear lane
- 4 packs
  - 420sqm
  - 2 Storey dwellings
  - Double garage accessed off a share car court
- Integrated Apartment Site
  - 3-4 Storeys
  - Average 55-75sqm
  - 1-2 bedrooms
  - Articulated built form to reduce visual massing
  - Basement/undercroft carparking (further investigation is required due to the flood zone)



### Public Realm

The sense of neighbourhood character and community that is incorporated within the masterplan design features a hierarchy of public realm spaces that create areas of rest, recreation, interaction and education for both residents and users of Stamford Park.

These spaces have been orientated to enable easy connections from adjacent residential areas through the new neighbourhood to the park, and the heritage homestead precinct.

The central 'plaza' public space will feature intensive housing at two and three storeys fronting onto the public realm, interacting with people walking past and using the public spaces.



### Walking & Cycling

The walking and cycling network established in the masterplan for Stamford Park integrates seamlessly with the design of the residential neighbourhood to allow easy, safe and efficient movement of pedestrians, cyclists, residents, dog-walkers and park users in, around and through the entire precinct. A pedestrian path connection to the south of the housing neighbourhood allows existing residents to the south to connect into the park, and the shared path links back to the creek to the north, and beyond the homestead to Stud Road to the east.

The street and public space network of the residential neighbourhood allows for local footpaths, trails and walking access to be integrated into these spaces along with the landscape elements, the water management systems and the local recreational elements such as seating areas, water features, small 'urban forrest' areas and community gathering areas.



### Housing & Architecture

The housing within the masterplan has been sited to allow for contemporary, sustainable and well designed dwellings to co-exist alongside the existing residential areas of Rowville so the south. Houses will be one, two and three storey in height depending on the location and type, and sited to maximise solar orientation, use of front and back yards, frontage to the street and contribution to the neighbourhood character of the area.

The range of housing typologies mean there are diverse options for house size, lot size, carparking options, dwelling outlook (park, street or plaza) and style of housing density. The incorporation of more 'dense' housing options such as townhouses, low-rise apartment living and cluster housing enhances the social, environmental and economic sustainability of the neighbourhood.



### 'Blue Infrastructure'

The network of 'blue infrastructure' is the management of water across the entire site, and this network ties into the wider water systems of the creek, and Rowville.

The incorporation of a series of systems to sensitively manage the capture, storage, filtration and re-use of the available potable water is critical to the ongoing sustainability of Stamford Park. Success with these elements will enable the park and the residential neighbourhood to become best practice benchmarks for the municipality, metro Melbourne and nationally.

This approach to water management requires and incorporates the inclusion of these elements at all scales and levels of decision making within design, procurement, development and construction of the masterplan.

The savings in potable water, both economically and environmentally, are potentially huge and form a key part of the character of Stamford Park as a benchmark project in water, waster and power management.

### 'Green Infrastructure'

The network of 'green infrastructure' refers to the significant landscape elements incorporated within the residential neighbourhood, which are seamless extensions of the park itself into the residential precinct, in a more urban form.

These establish the character of the streets and mews, the community spaces, and the neighbourhood character of the architecture through sensitive use of landscape spaces, mature vegetation and trees, permeable surfaces and 'green streets'.

The key landscape elements within the housing such as the central urban 'plaza', the linear buffer adjacent the existing residential, and the smaller scale landscape treatments to streets and mews create visual and ecological 'lungs' for the housing. The sense of a non-porous, urban 'jungle' of housing is gone, and the residents and wider community are encouraged to inhabit and use all of the public realm spaces that provide natural relief from the elements as well as natural community gathering spaces.

Residential Precinct

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# Residential Precinct

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## Density Scenario 01

93 dwellings (12.9 dwellings/ Ha)

- Lowest 'density' scenario for the residential pad.
- Reflects an approach similar to the surrounding residential areas - 'standard' lots.
- Incorporates 'loop' avenue that gives easy and efficient car access and egress. (Layout similar in all scenarios)
- Incorporates central community plaza giving an internal pedestrian access and incorporating central community spaces
- Provides built form tapering down towards the southern buffer to existing housing.
- Provides predominantly detached single houses on a lot, with the majority being two storey houses.





Density Scenario 02

125 dwellings (17.3 dwellings/ Ha)

- Median 'density' scenario for the residential pad.
- Reflects a hybrid approach of establishing a mixture of detached housing and attached or cluster housing.
- Incorporates 'loop' avenue that gives easy and efficient car access and egress. (Layout similar in all scenarios)
- Incorporates central community plaza giving an internal pedestrian access and incorporating central community spaces
- Provides built form tapering down towards the southern buffer to existing housing.
- Provides a variety of '4 pack' cluster housing based around a central driveway - allowing houses to front onto the community plaza
- Provides a variety of terraces to allow for smaller lot and house sizes.
- Provides for some single houses on a larger lot - particularly adjacent the existing residential areas..

Residential Precinct

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# Residential Precinct

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### Density Scenario 03

151 dwellings (20.9 dwellings/ Ha)

- Higher 'density' scenario for the residential pad.
- Reflects an approach to providing a variety of lot and house sizes and types, whilst promoting medium and higher density styles of housing to the area.
- Incorporates 'loop' avenue that gives easy and efficient car access and egress. (Layout similar in all scenarios)
- Incorporates central community plaza giving an internal pedestrian access and incorporating central community spaces with significant built form framing this space.
- Provides built form tapering down towards the southern buffer to existing housing.
- Provides a variety of '4 pack' cluster housing based around a central driveway - allowing houses to front onto the community plaza
- Allows for the development of a 3-4 storey apartment style building that is articulated, stepped and designed to reduce visual massing in the streetscape whilst maximising the amenity for residents and the interfaces with adjacent streets and community space.
- Provides for some single houses on a larger lot - particularly adjacent the existing residential areas..

Residential Precinct

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### Market and Economic Implications

As a result of the masterplan design work that has been undertaken for this stage of the project, a number of key questions have arisen in relation to the delivery of the overall masterplan.

These primarily relate to the costs of funding the landscape portion of the park, and hence the feasibility and return on the development of the residential precinct.

#### Key Market Implications

- Balancing the need to provide cost effective, housing to the Rowville housing market with the stated objective to create 'pilot project' sustainable housing.
- Balancing the current housing available in the area (predominantly detached houses on large lots) with the proposed provision of more medium density, smaller housing models.
- Balancing the objective for the provision of community facilities and well developed public spaces with the need to maximise the number of houses developed (in terms of a financial return).
- Balancing out the provision of the proposed new housing densities and models with the objective to create the precinct as a part of the wider Rowville character, and avoid creating an 'elitist' gated style of community not readily available to the local residents.
- Balancing out the provision of affordable living options, with the costs of providing these new housing models and facilities

### Implementation Issues

There are also a number of implementation challenges to the establishment of the proposed masterplan on the ground, relating

to staging, concurrent timelines and financial/ procurement models to be adopted for the development and construction of the masterplan.

#### Key Challenges in the Delivery of the Masterplan

- Ensuring close liaison with key stakeholders such as Melbourne Water to deliver the wetlands as per the masterplan.
- Development feasibility work to establish the critical costs/ returns for the residential development in order to inform the funding models of the park overall.
- Balancing the need for a profitable return on the housing, with the stated objective for 'benchmark' sustainable and contemporary housing that may carry a cost premium.
- Ensuring funding models for the Heritage Homestead are able to cover the proposed ongoing costs of the activities and facilities within the precinct.
- Ensuring funding models for the wider community facilities are able to cover the facilities as proposed in the masterplan.
- Establishing the critical timelines for residential development and funding in correlation with the construction of the landscape portion of the masterplan.

Next Steps

15.0