

Oakdale

Concept Plan Appendix 2007



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0.0 Executive Summary

0.1 Executive Summary

Mackenzie Pronk Architects were engaged by Goodman following a two stage consultant selection process.

Mackenzie Pronk Architects were engaged to assist in the development of the concept plan for the Oakdale Industrial Estate.

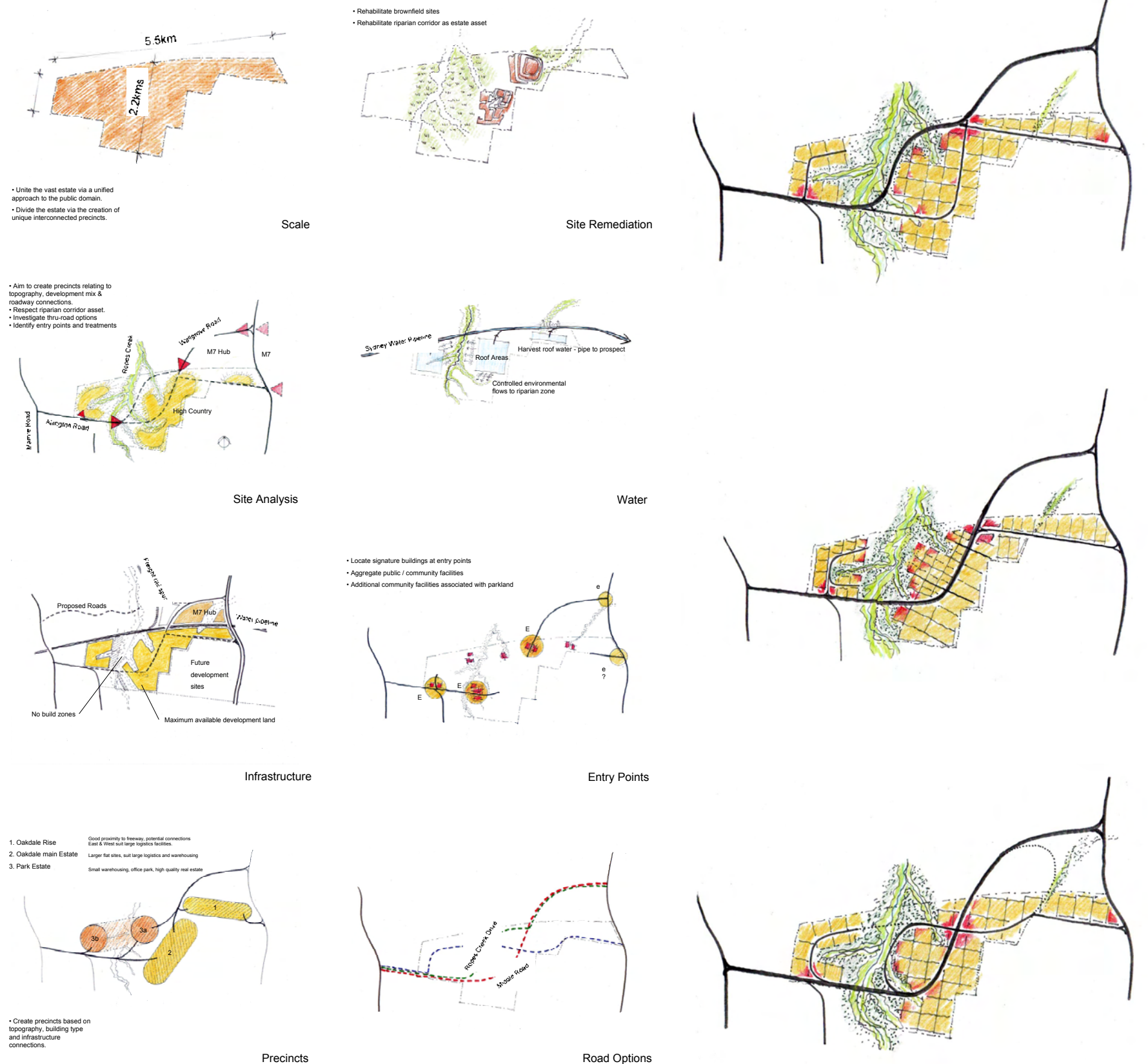
Mackenzie Pronk's assistance took the form of participation in workshops with Goodman's executive, planning and architectural staff and covered - precedent studies, masterplanning, individual building design, public domain elements and landscaping.

Mackenzie Pronk took part in a consultative design process over 10 weeks presenting options and developed concepts and facilitating a series of design workshops. This report has been prepared to document the principal features of Mackenzie Pronk's presentations and to some extent document aspects of the discussions and evaluations where agreement on design direction appeared to have been reached.

This report documents the principles guiding the development. Mackenzie Pronk had suggested that a preferred concept plan could be selected after preparing several options and evaluating each against an agreed set of criteria in a formal process. This is set out in Mackenzie Pronks initial report and workshop 1 report. The actual process followed involved progressive development over the period of the workshops of an initial concept plan agreed by Goodman and Mackenzie Pronk. This report therefore concentrates on the ideas developed in the workshop process and their elaboration over that period.

Goodman set out a vision for Oakdale in the July draft of the concept plan ; "Oakdale will become a world leading industrial and business park for the people of Western Sydney, built on the principle of integrating excellence in architecture + landscaping + functionality + environment + sustainability + open space"

Mackenzie Pronk's presentations were based on a set of principles which were developed to aid achievement of this vision. A summary of the key principles for each component of the plan is set out over.



0.0 Executive Summary

0.2 Planning Principles

the concept plan should;

- Allow development of the required mix of allotments in a flexible manner
- Ensure efficient traffic movement and ease of way-finding
- Suit site topography so that cost of roads and building platforms is kept to a practical minimum
- Establish distinct precincts
- Respect important natural features

0.3 Infrastructure Development

Roads

- The regional link road should be located to best serve the needs of the estate, adjacent land owners and the region in equal measure, and should be capable of staged construction to serve the development of the estate
- Internal collector roads should allow for controlled connection to adjacent and planned future developments

Power Supply

To supplement conventional power supply consideration should be given to

- Photovoltaic power generation
- District Energy Systems
- Energy Efficient buildings (ventilation, heating & lighting)

Water Supply & Drainage Systems

The principles of water sensitive urban design should be employed to protect the environment and reduce water demands of the estate. This should include harvesting and appropriate utilization of stormwater and roofwater



0.4 Urban Development and Built Form Controls

Building Types & Design

The architecture is to be characterised by

- A simple restricted palette
- Exaggeration of functional elements of office/dock/awning and entry
- separate buildings capable of working as a cohesive streetscape

Streetscapes

- Buildings along particular streets to be considered in groups - unified treatment / height and setbacks

Signature Buildings

- Sites will be nominated within the estate where built form must make a positive contribution to the estate. These buildings must be of distinctive design

Community Facilities

- Facilities to be located on visible and easily accessed sites adjacent green open spaces

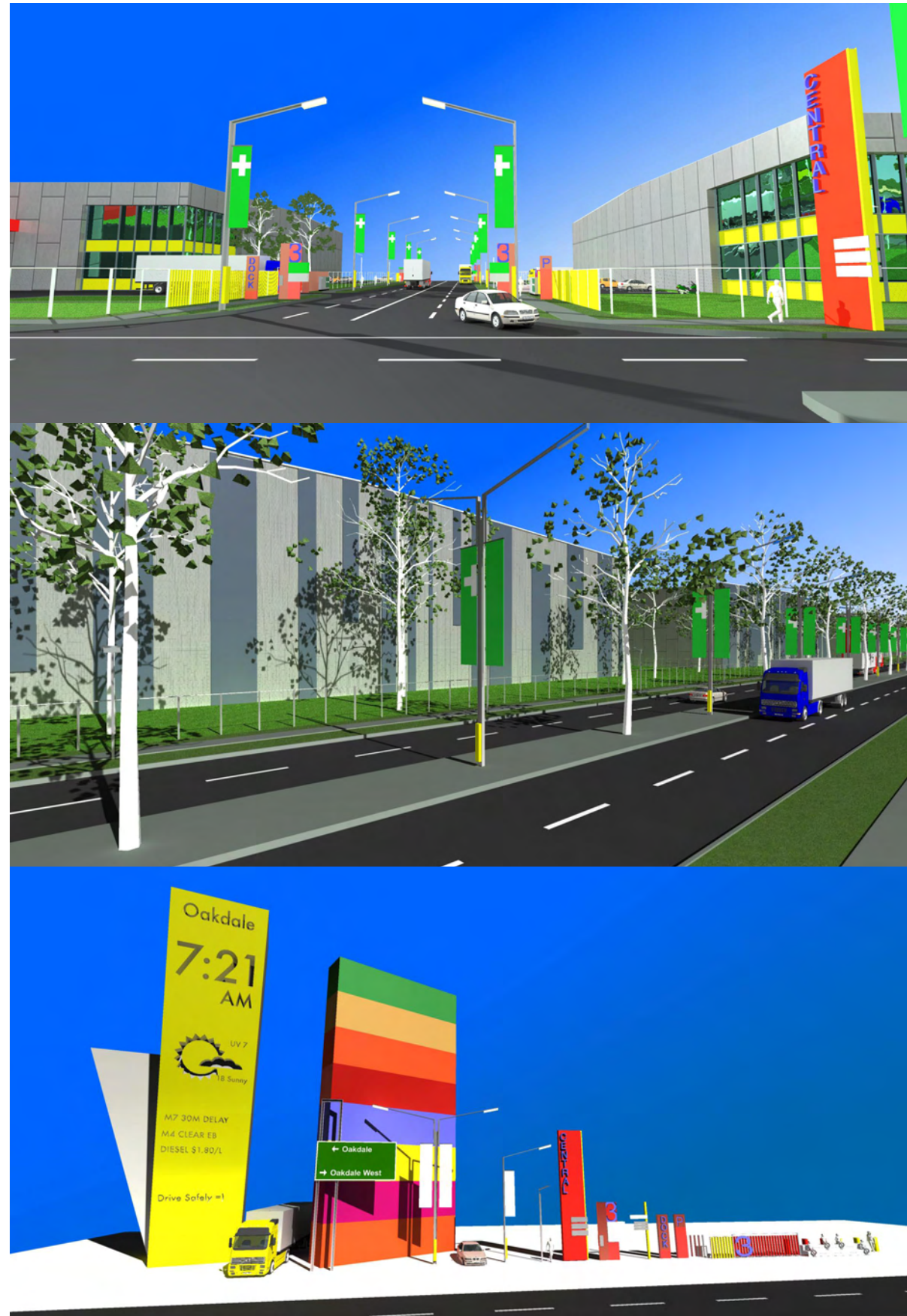
0.5 Public Domain Elements

A unique and appropriate set of urban elements should be developed for Oakdale to provide the highest amenity and differentiate it from other developments.

0.6 Landscaping

Landscaping should

- Respect and enhance the natural features on the site to create a regenerated green heart to the estate
- Create a strong landscape identity
- Achieve a balance between restoration of creeklines, water management systems and recreational spaces
- Reinforce precinct character, hierarchy of roads, precinct entries



1.0 Oakdale Masterplan Principles

1.1 Oakdale Masterplan Principles

The principles guiding the development of the Oakdale masterplan are;

1.2 Development Principles

- Create a world class efficient & sustainable industrial estate aiming to achieve maximal rental returns
- Create an estate with efficient traffic movements, an attractive appearance & good common facilities
- Create an estate with a strong uniform identity
- Create an estate layout that relates to the topography – (larger lots on flat areas, smaller lots on sloping sites)
- Provide connections to adjacent development sites, residential areas and recreation spaces.
- Create precincts according to site conditions and briefed lot sizes

1.3 Traffic Planning

- Locate the main thru road to best serve the estate and the interests of all adjacent land owners
- Employ a lot layout and street plan to enhance way-finding, improve traffic movements and ensure development flexibility
- Create an estate with a legible hierarchy of roads
- Define precincts in accordance with optimum traffic patterns
- Create connections to adjacent developments and future development sites

1.4 Architectural Themes

- Identify sites for signature buildings
- Identify sites for simple repeatable well proportioned buildings
- Identify sites for public facilities
- Group community facilities at key nodes on highly visible and accessible sites associated with green spaces
- Build flexibility into the planning layout to allow for progressive development
- Develop an architectural language from a simple bold palette executed with conviction

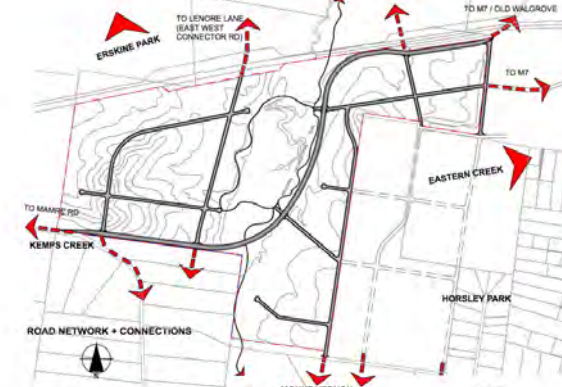
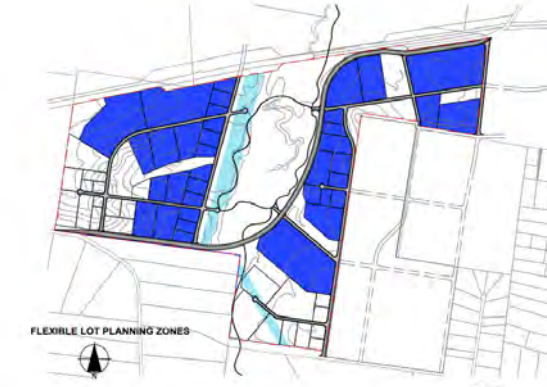
1.5 Landscape Principles

- Create a large high quality parkland at the core of the estate
- Respect and enhance natural features on the site
- Provide passive & active open space, as well as community recreation areas
- Create gateway statements at entry points
- Provide pedestrian and bicycle routes



1.6 Oakdale Masterplan Design Diagrams

- Landscape At Core
- Link Road and sites natural features
- Precincts
- Development Stages
- Flexible Lot Zones
- Road Network & Connections
- Lots
- Lots & Buildings
- Masterplan



2.0 Masterplan Assessment Criteria

2.1 Oakdale Masterplan Assessment Criteria

Criteria that should be employed in this analysis are:

2.2 Yield

- total area of land that can be developed and leased
- Base Cost
 - roads, drainage, services
 - cost of preparing building platforms
- Operational Efficiency
 - co-location of related industries into precincts
 - minimisation of truck traffic through estate
 - good access to common service areas - cafes, truck servicing etc

2.3 Aesthetics

- Attractive design of urban elements, street architecture, gateways etc
- Landscaping - retention and enhancement of natural features.
- In grossly disturbed areas, attractive and compatible landscaping
- Incorporation of attractive water features in stormwater management system
- Location and design guidelines for key developments

2.4 Sustainability

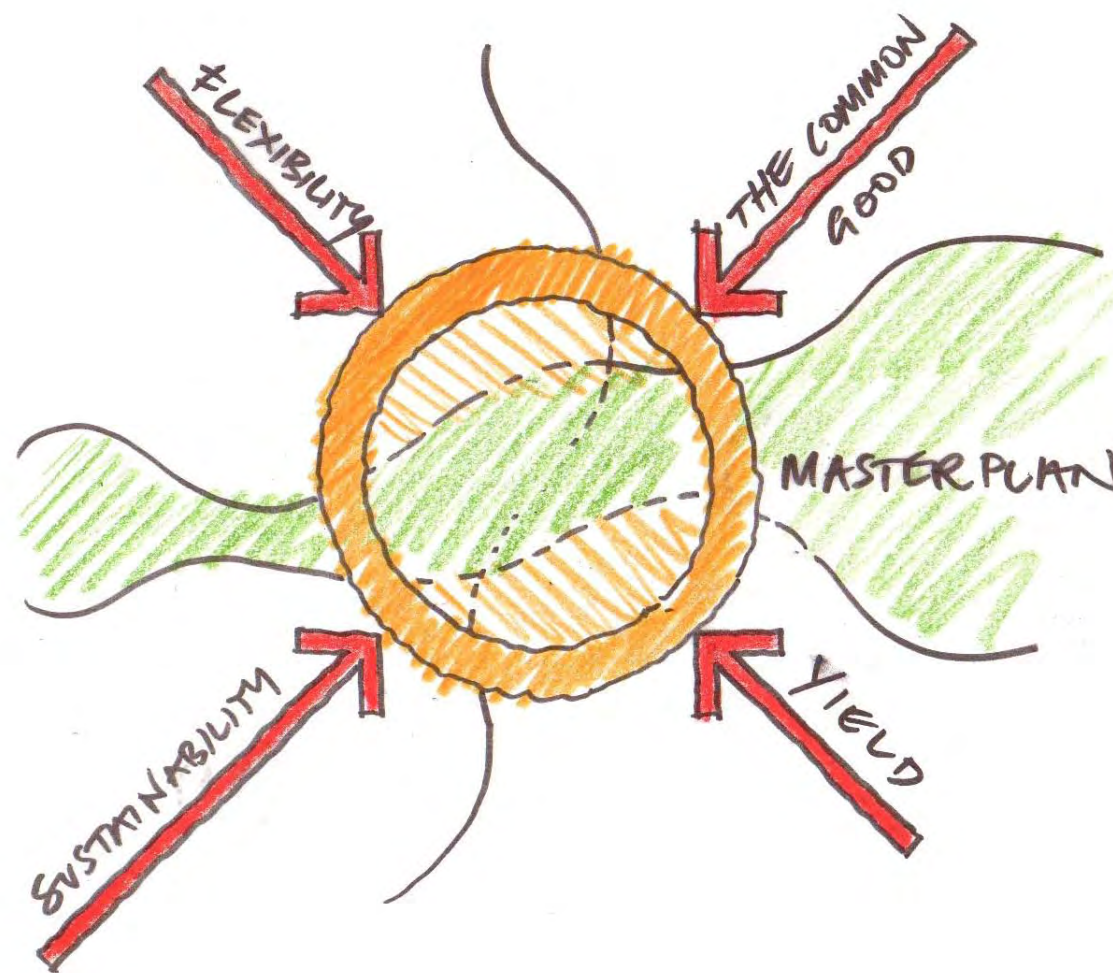
- Extent to which sustainability is built into development plan (as opposed to individual buildings)
- stormwater management including water recycling
- local power generator
- cycleways etc

2.5 Flexibility for Staged Development

- allow for other owners in estate
- allow for co-operative development of major through road with neighbouring development sites

2.6 The Common Good

- The masterplan must benefit the common good



3.0 Estate Design & Layout Principles

3.1 Estate Design & Building Layout

The principles guiding our approach to the development of building layouts are to;

- Maximize the efficiency of vehicle movements into and within lots
- To create high quality work environments
- To reinforce masterplan principles
- To enhance estate legibility and wayfinding
- To ensure the estate presents a considered, coherent and unified character
- To take advantage of parkland aspect where possible
- Orient office and work areas to the north where possible
- Establish uniform precinct setbacks and height controls for all buildings including separate controls for corner sites, signature buildings and special conditions



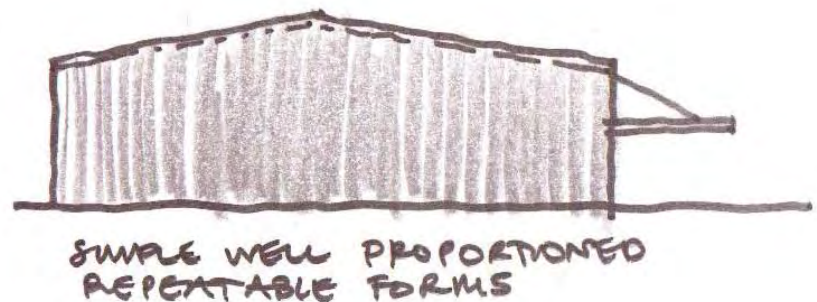
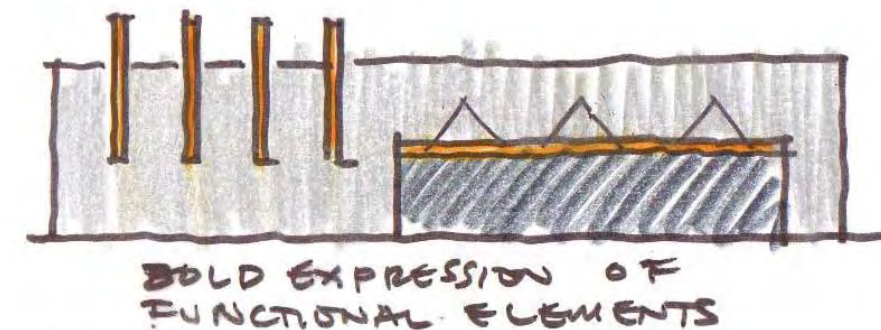
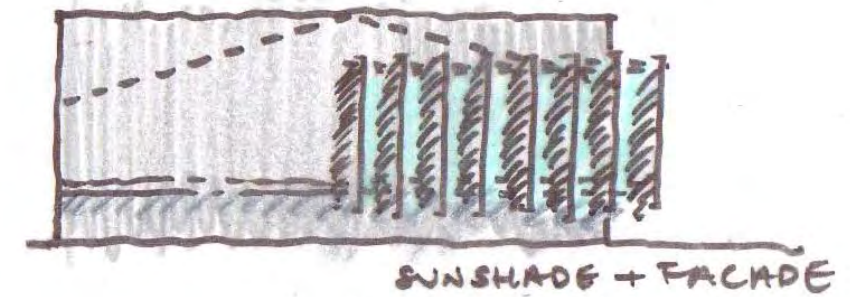
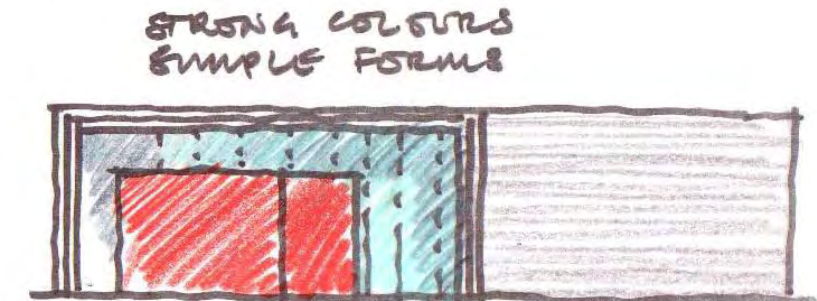
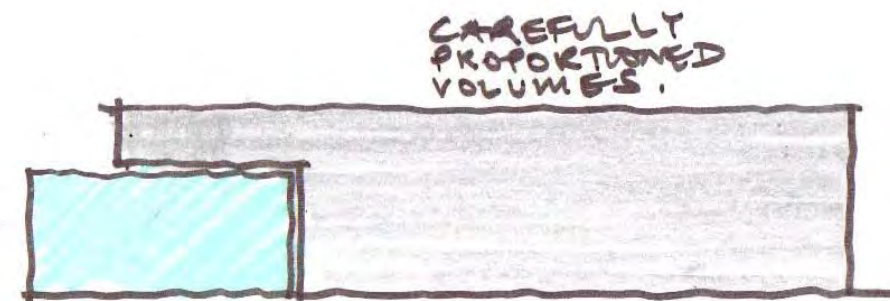
4.0 Precedents

4.1 Precedents

The design of buildings across the site will be informed by a detailed precedent study that will identify a range of industrial building typologies and their suitability for end users and the specifics of the Oakdale site

The following study has identified a range of Precedents to inform the development of a the architecture of the Oakdale Estate

- Strong Colours
- Simple Bold palette executed with conviction
- Simple Elemental forms
- Supergraphic
- Restricted palette
- Non rectilinear for signature sites
- Signature buildings
- Background Buildings
- Singular Material
- Elements - Office, Sun Shading, Loading Dock

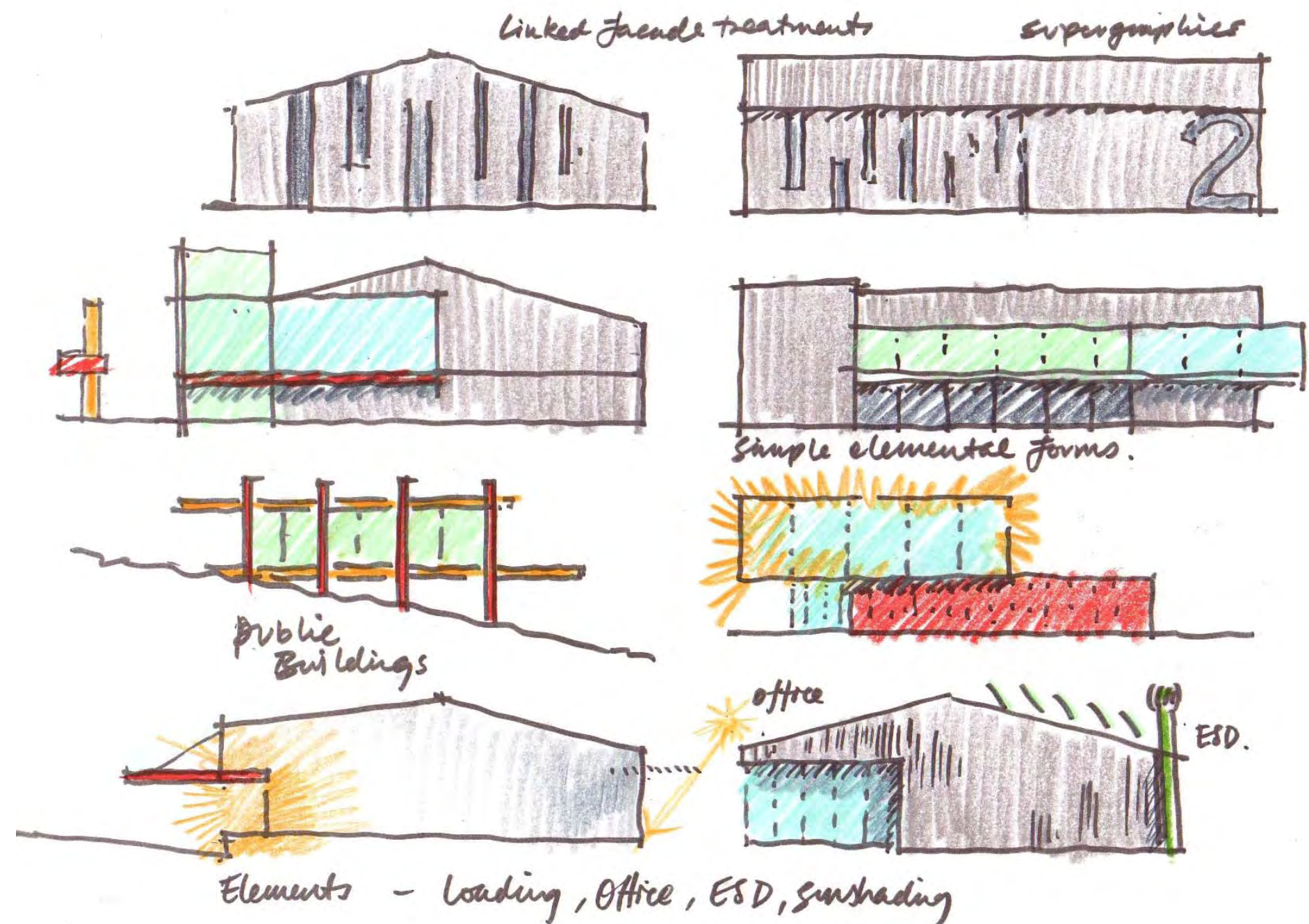


5.0 Architectural Themes

5.1 Architectural Themes

The design of buildings across the site will be led by the masterplan intent, sites have been identified in the masterplan as signature building sites - those sites that will be required to make a positive impact on the presentation of the estate. The signature sites are generally corner sites and could be marketed to high profile tenants seeking greater exposure or a unique presentation. Other buildings have been identified as capable of working as a group either via unified facade treatments relating to specific aspects of the Oakdale site or simply as background buildings.

The following Work has developed a range of possible building types and groupings for the Oakdale Estate. The architectural language utilizes a simple and restricted palette. The functional elements of Office, Dock, Awning and Entry have been exaggerated and celebrated whilst the structure and skin have been manipulated to achieve an appropriate cost effective and dynamic functional architecture for the Oakdale Estate.



6.0 Sustainability

6.1 Sustainability / ESD

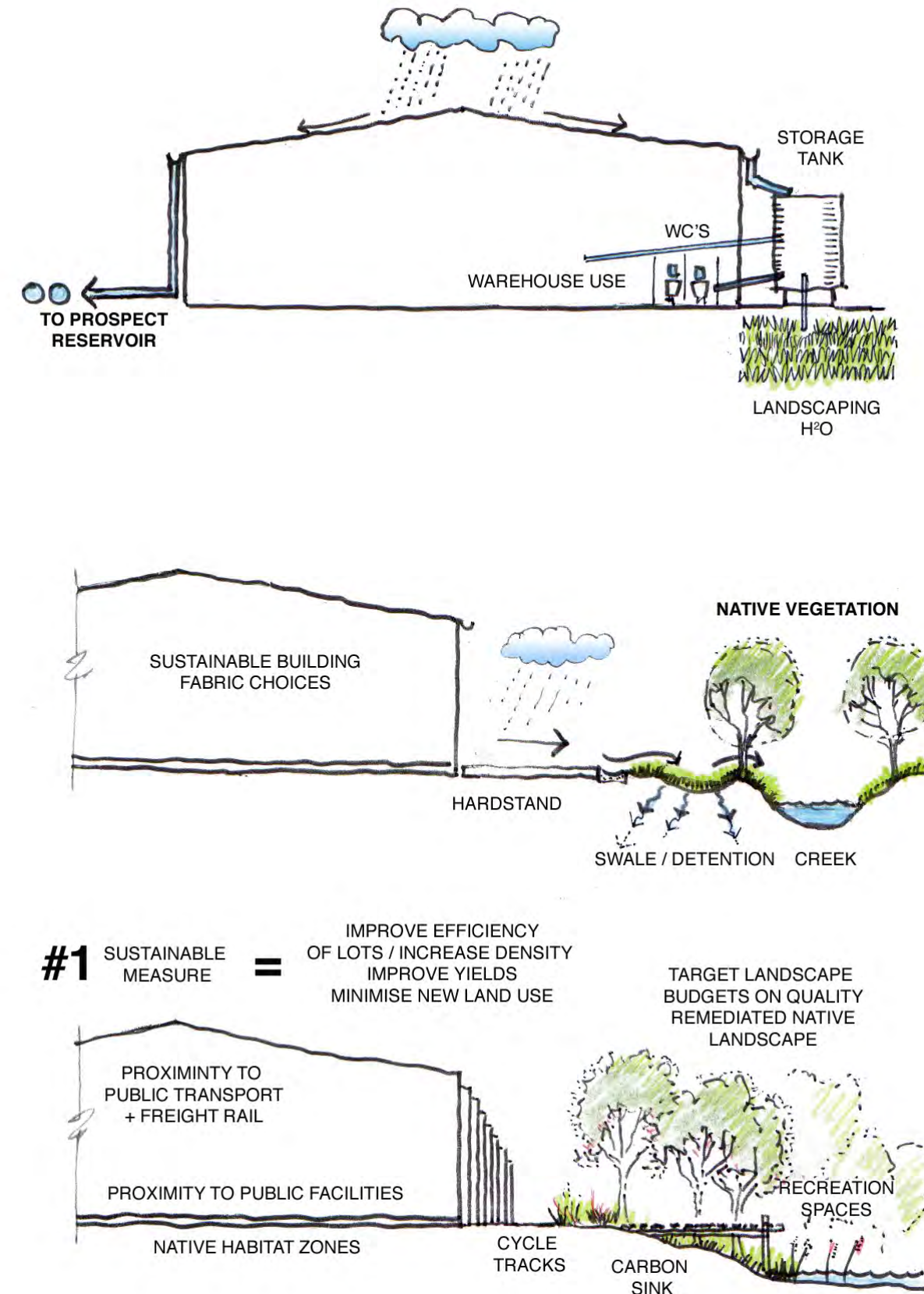
The master plan design for the Oakdale estate should aim to investigate the economic feasibility of a full range of sustainable measures. Full life cycle costing should be applied for such systems and initiatives.

6.2 Water Sensitive Design and Water Harvesting

Water sensitive urban design seeks greater compatibility between management of storm water and natural hydrological and ecological processes. The large extent of roofing and paved surfaces in the developed estate will generate larger peak storm flows and flow volumes than would occur naturally. It should be possible to mitigate the adverse effects of such increased flows on the environment of the creek systems leading from the site and to make use of the surplus stormwater using water sensitive design and storm water harvesting techniques. This may involve rainwater tanks, local temporary detention storages, grass swales and buffer strips and major filtration and retention basins. The feasibility of reticulating this stormwater after treatment within the estate for landscape irrigation, industrial use and toilet flushing would be investigated. Alternatively it may be feasible to pipe surplus stormwater to Prospect Reservoir. A key feature of stormwater management and overall landscaping would be the protection and enhancement of the natural creek systems with their associated aquatic and riparian ecosystems.

6.3 Efficiency of Development

The creation of a high level of efficiency within the estate is an important aspect of sustainability as such efficiency reduces the need to develop further natural areas. An efficient estate where there is an aggregation of facilities and increased density will lead to increases in the estate's yield. To achieve this estate planning modules may need to be developed to share hardstand, build to a denser urban pattern, build back to back and generally maximize the density and therefore land value. Landscape budgets can then be targeted to improve the shared open areas and streetscapes.

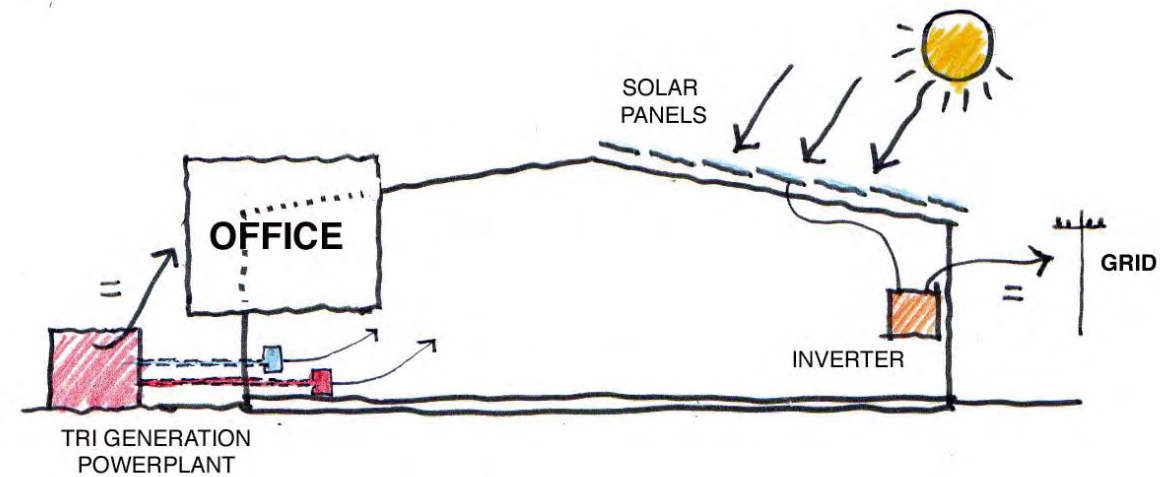


6.0 Sustainability

6.4 Power Generation

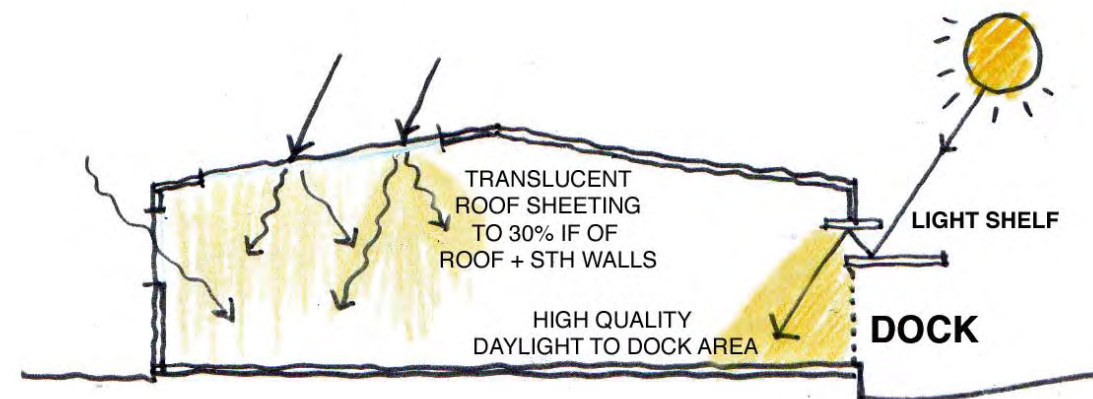
The opportunities for district energy systems on the site should be investigated – a series of trigeneration plants are capable of supplying power and hot and chilled water from a number of distributed small plants around the site. Such a facility allied with the PV grid outlined below could be provided as a Build Own Operate facility selling green power back to estate users and the grid.

It is anticipated that emergent “slither” technology will result in extremely efficient PV units many times more efficient than present panel systems. The large roof areas of the Oakdale estate would become a resource for utility companies that will see this area as a platform to set up PV grid power stations and sell the power back to the estate or grid. The concept that electricity generated by PV units provide power to at least equal energy consumption used in air conditioning office accommodation could be a realistic initial target. With technological advances and reductions in cost PV's may feasibly be spread over a large portion of the 2M msq of roof area.



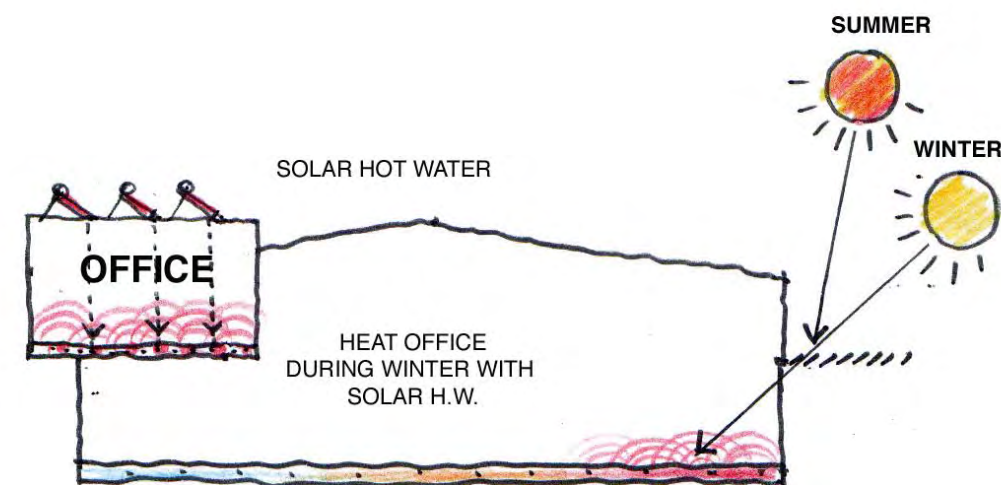
6.5 Daylighting

All new buildings on the site should aim to reduce the need for artificial lighting through a range of measures – rooftop monitors, skylights and translucent wall materials can all contribute to reducing the need for artificial light inside the buildings by about half on sunny days.



6.6 Heating

All new buildings on the site should aim to minimize the reliance on artificial heating and cooling



6.0 Sustainability

6.7 Ventilation

A range of measures to achieve user comfort and prevent extreme temperature stratification in larger logistics facilities from potentially damaging stock.

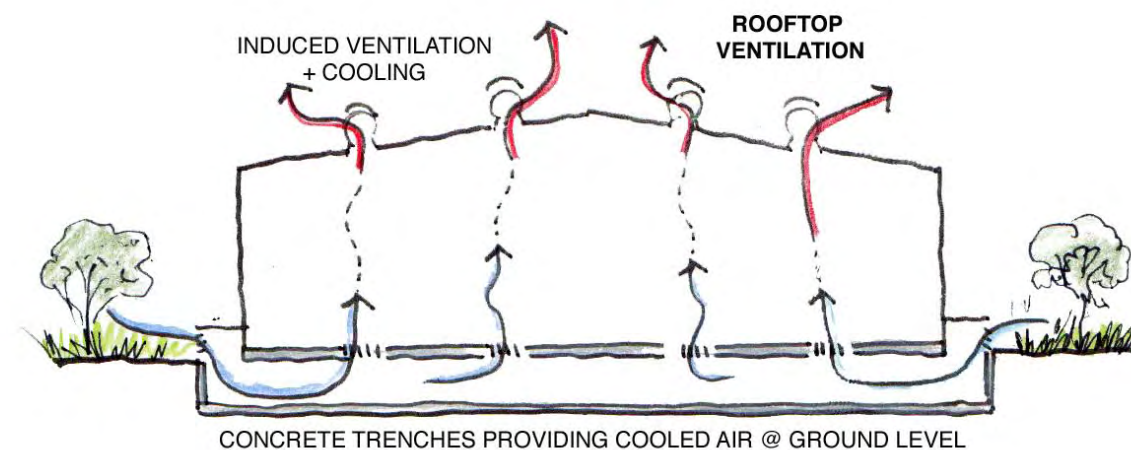
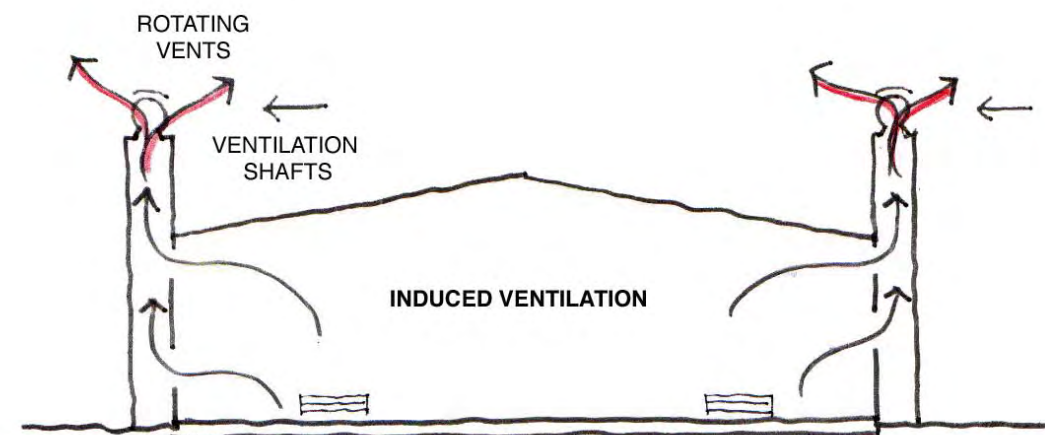
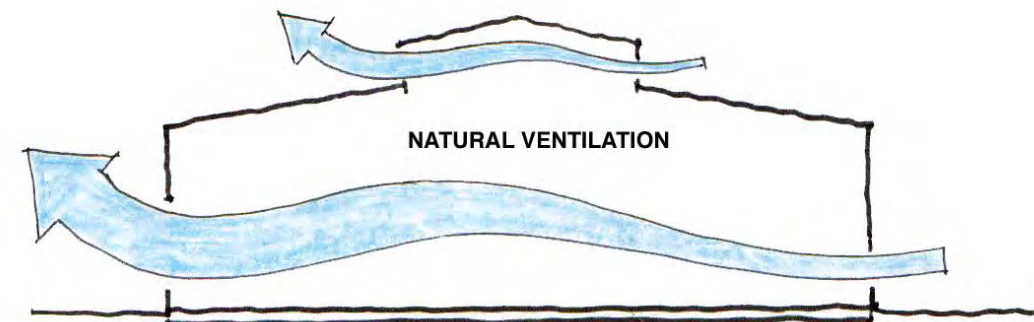
6.8 Urban Elements

Urban elements used throughout the development will together become an important identifying signature of the site. It is critical therefore that these elements are seen to promote the desired overall estate image of environmental sustainability.

In designing and selecting such elements particular attention should therefore be given to the sustainability of the operation of the element and of the processes and materials used in its construction.

For example, Solar powered pedestrian lights, endemic native grassland swales, precast concrete signage blades using recycled crushed concrete aggregate could all be incorporated with emphasis on their sustainable character.

Close consultation with Macquarie Goodman and specialist consultants will be undertaken to determine the appropriate extent of these measures. A rigorous assessment of these measures is required to determine those choices that make the most significant contribution to the achievement of ecologically sustainable development.

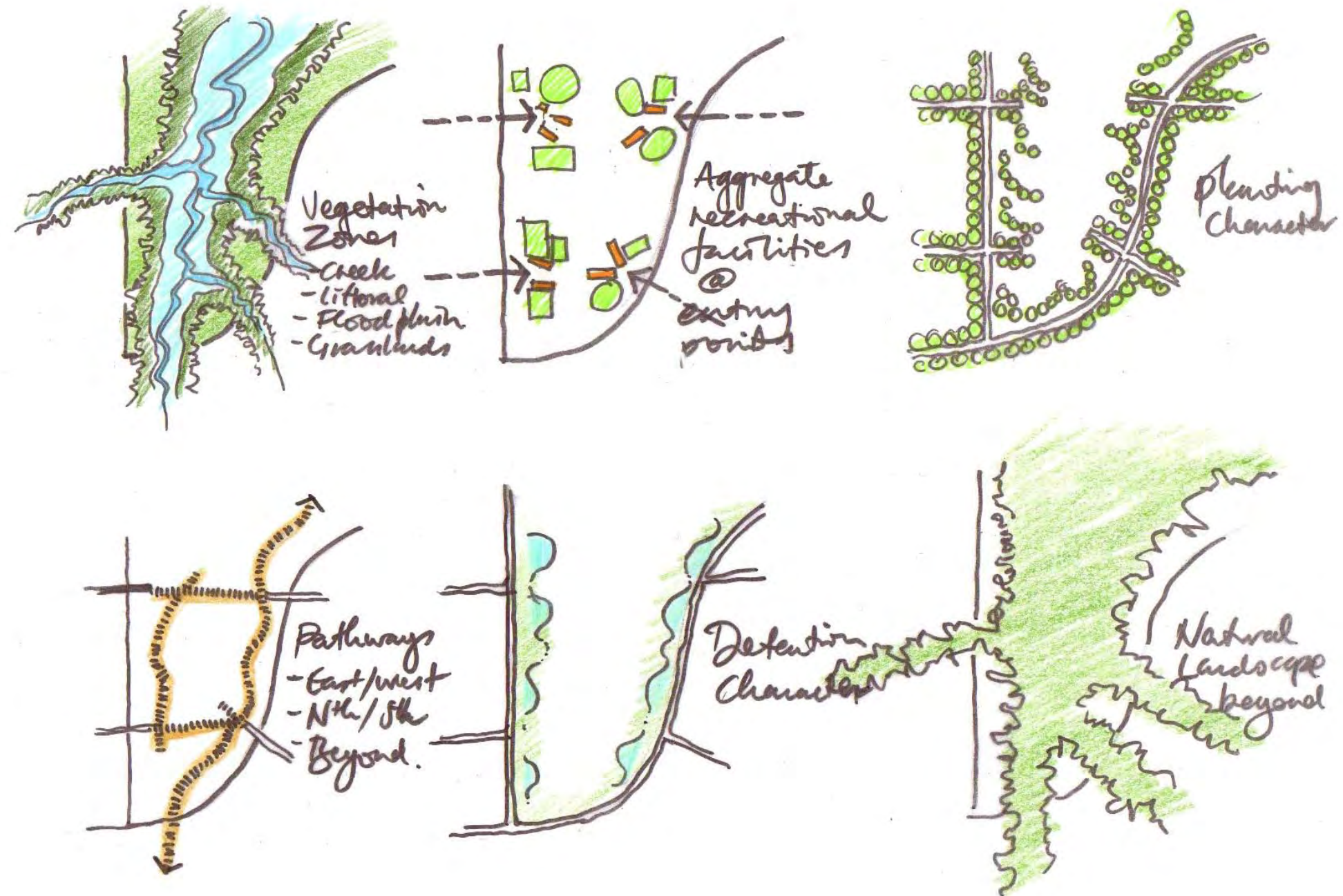


7.0 Landscape Design Principles

7.1 Landscape Design Principles

The key principles guiding the development of the landscape design are to;

- Create a regenerated green heart to the estate
- Achieve a balance between restoration of the creeklines endemic vegetation, water management systems and recreational spaces
- Create an estate with a strong, uniform landscape identity
- Create clear entry nodes into the parkland areas
- Aggregate recreation spaces around entry points
- Enhance vistas into the parklands
- Reinforce hierarchy of roads within the estate with planting
- Reinforce precinct character via landscape treatments
- Reinforce precincts entries with elements of landscape architecture
- Provide pedestrian and bicycle route as edge condition between natural landscape and man made
- Respect and enhance natural features on the site
- Provide passive & active open space, as well as community recreation areas



8.0 Public Domain Design

8.1 Public Domain Design

The Oakdale Estate should be developed with the aid of an estate design manual - The manual should serve two purposes:

- To reference the masterplan design intent and provide strategies for precincts, key sites and building envelopes. &
- Provide a list of urban elements with guidelines for their use, placement and co-ordination.

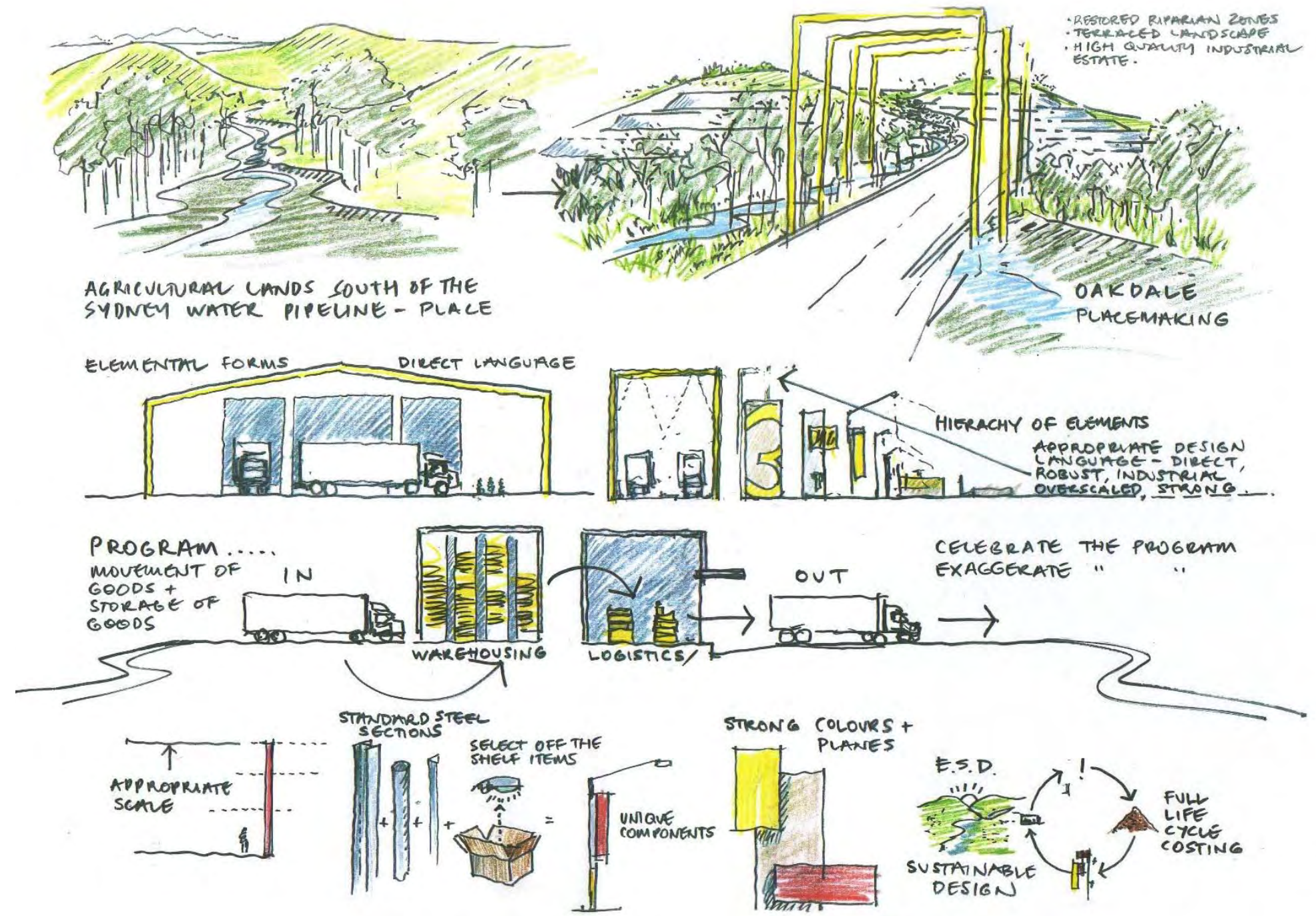
The manual should allow a degree of flexibility for a variety of tenant needs yet provide the implementing design team with a simple and consistent approach to key design criteria from broad concept level down to a shopping list of urban elements such as pavers, signage, lighting and fencing.

The manual will identify gateway and signature building sites and will be an invaluable document for external consultants, designers and tenants. The manual will identify street hierarchy and precinct character and will nominate an approach that will aim to achieve a design consistency across the site. The manual should allow for the co-ordinated development of the estate over time and will retain relevance as the estate undergoes progressive tenancy changes, possible expansion and alteration.

8.2 Unique To Oakdale – Development of a design language

Identify unique qualities of the Oakdale Estate aim to make these qualities assets of the estate.

- Terraced building platforms
- Restored generous recreation areas adjacent the riparian zone
- A series of signature bridges across parkland and creeklines
- Respond to the direct / elemental language of industrial warehouse buildings
- Celebrate the program / vehicle movements / scale of facilities
- Exaggerate the program / functional elements
- Develop an appropriate bold, robust language for architecture and urban elements
- Develop an 'over scaled' language using a mix of off the shelf elements and steel sections, industrial finishes, bold colours and simple forms and finishes

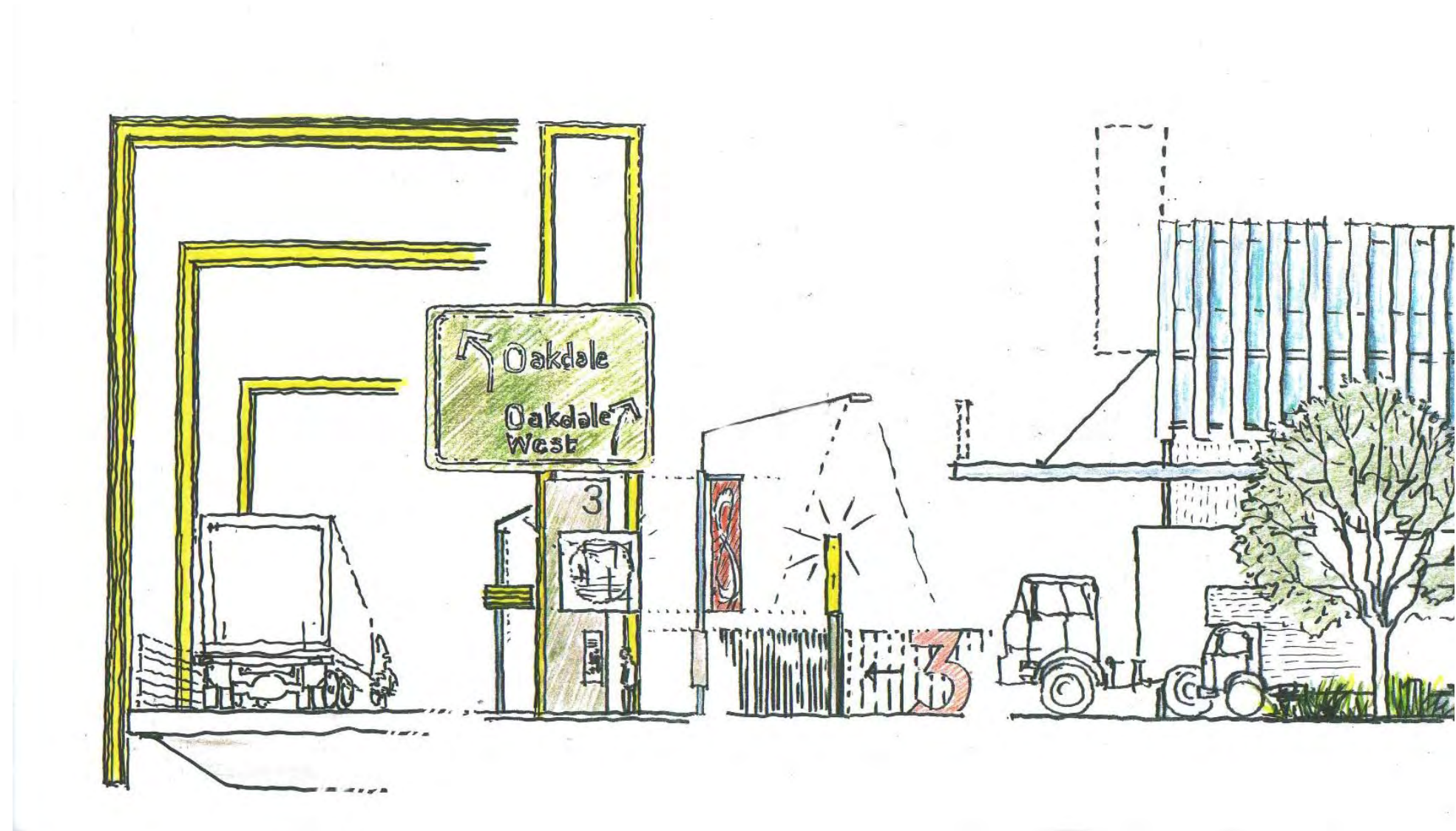


8.0 Public Domain Design

8.3 Urban Elements

Urban Elements – Development of a unique and appropriate set of urban elements for Oakdale.

- Bridges as the head of the suite of urban elements
- Major signage and unique gateway elements a controlled departure from the basic language
- Lot number signage blades
- Illuminated tenant identity signage blades
- Range of light standards and banners
- Fences – A range of fences types for different security needs and conditions across site
- Gateways and associated street frontage elements
- Range of unique street furniture
- Landscape elements



8.0 Public Domain Design

8.4 Major Entry Marker

Develop a unique twin faced electronic sign structure at the first intersection when traveling south to function as;

- clock tower
- traffic information
- special event information
- periodic advertising potential – tenant / Goodman+

8.5 Major Signage Blades

- lot number information
- Illuminated tenant identification
- Smaller scale estate information

8.6 Pedestrian Lighting

- develop a unique solar powered pedestrian light for use across the site

