WHITE GUM VALLEY
former Kim Beazley school site
local structure plan - Part 1

July 2013
urbis.com.au
CERTIFIED THAT THE WHITE GUM VALLEY LOCAL STRUCTURE PLAN WAS ADOPTED BY RESOLUTION OF THE WESTERN AUSTRALIAN PLANNING COMMISSION ON

_____________________________ (DATE)

SIGNED FOR AND ON BEHALF OF THE WESTERN AUSTRALIAN PLANNING COMMISSION

________________________________

(AN OFFICER OF THE WESTERN AUSTRALIAN PLANNING COMMISSION DULY AUTHORISED BY THE COMMISSION PURSUANT TO SECTION 24 OF THE PLANNING AND DEVELOPMENT ACT (2005) (AS AMENDED) FOR THAT PURPOSE)

IN THE PRESENCE OF:

_____________________________ (WITNESS)

_____________________________ (DATE)

AND BY RESOLUTION OF CITY OF FREMANTLE COUNCIL ON

_____________________________ (DATE)

PURSUANT TO THE RESOLUTION OF CITY OF FREMANTLE COUNCIL, THE SEAL OF THE CITY OF FREMANTLE WAS AFFIXED IN THE PRESENCE OF

_____________________________

(MAYOR, CITY OF FREMANTLE)

_____________________________

(CHIEF EXECUTIVE OFFICER, CITY OF FREMANTLE)

_____________________________ (DATE)

_____________________________

(CITY OF FREMANTLE SEAL)
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Executive Summary

This Local Structure Plan (LSP) applies to the former Kim Beazley School Site and the adjoining drainage reserve (Lot 2089 Stevens Street and Lot 2065 Hope Street) located in White Gum Valley, in the City of Fremantle. The subject site is approximately 2.29ha in area, positioned between the Royal Fremantle Golf Course and low density residential development.

The site is zoned ‘Development’ under the City of Fremantle Local Planning Scheme No.4 (LPS4). In accordance with the requirements of the ‘Development’ zone under LPS4, this Local Structure Plan has been prepared to guide and facilitate the subdivision and development of the former Kim Beazley School site.

An integrated approach to sustainable development has been taken that includes provisions for built form and urban design as well as environmental and community benefits. The planning of the site has been heavily influenced by the contemporary urban design principles of integration and permeability, with a strong focus on the provision of amenity for the residents and the surrounding community.

The White Gum Valley project team has sought to balance the many interests and objectives of the City of Fremantle, State Government and the local community, including the following:

- Respecting the existing urban context, but facilitating transition to contemporary urban form, diversity and density.
- Identifying with the community and existing sense of place through the retention and preservation of the historical buildings (Sullivan Hall and the former Fremantle Pigeon Racing Club Hall (Mens Shed).
- Improve and enhance the local landscape and provide good and visible pedestrian access.

Part 1 of this report is the statutory section which provides the appropriate mechanics of land use and development control. It is these components which will be binding upon parties through the powers of the Scheme under the Planning and Development Act 2005.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DATA</th>
<th>SECTION NUMBER REFERENCED WITHIN THE STRUCTURE PLAN REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total area covered by the structure plan:</td>
<td>2.29ha</td>
<td>Part 2, section 2</td>
</tr>
<tr>
<td>Area of specific land uses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Residential</td>
<td>1.66 ha</td>
<td>Part 2, section 8.2</td>
</tr>
<tr>
<td>Estimated lot yield:</td>
<td>28 lots</td>
<td>Part 2, section 8.2.4</td>
</tr>
<tr>
<td>Estimated number of dwellings:</td>
<td>70 dwellings</td>
<td>Part 2, section 3.2</td>
</tr>
<tr>
<td>Estimated population:</td>
<td>70 x 2.75 = 192 people</td>
<td>Part 2, section 3.2</td>
</tr>
<tr>
<td>Number and area of public open space:</td>
<td>0.25ha</td>
<td>Part 1, section 8.3</td>
</tr>
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</table>
TABLE 2 – PRELIMINARY CONSULTATION

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>DATE OF CONSULTATION</th>
<th>METHOD OF CONSULTATION</th>
<th>SUMMARY OF OUTCOME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landowners within and adjacent to the structure plan area</td>
<td>19 October 2011 5 November 2011</td>
<td>Stakeholder Workshop</td>
<td>Identified and confirmed community aspirations for the redevelopment site</td>
</tr>
<tr>
<td>Local Government</td>
<td>17th December 2012</td>
<td>Briefing session</td>
<td>Request by the City to look at an alternative concept plan, looking at an additional central POS area in lieu of some POS on Nannine Ave.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Presentation of Concept plans to elected members and technical staff</td>
<td></td>
</tr>
<tr>
<td></td>
<td>27 June 2013</td>
<td>Email correspondence</td>
<td>Confirmation that no LWMS is required for the site.</td>
</tr>
<tr>
<td>Department of Water</td>
<td>24 May 2013</td>
<td>Email correspondence</td>
<td>Confirmation that no LWMS or water monitoring is required for the Structure Plan.</td>
</tr>
<tr>
<td>Heritage Council</td>
<td>5 August 2010</td>
<td>Written correspondence</td>
<td>Advice that the Register Committee does not have sufficient cultural heritage significance at the State level for inclusion onto the State Register of Heritage Places.</td>
</tr>
<tr>
<td>White Gum Valley Precinct Group</td>
<td>14 May 2013</td>
<td>Community Consultation</td>
<td>Endorsement of preferred concept plan by Precinct Group</td>
</tr>
</tbody>
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1. **Structure Plan Area**

This Structure Plan (LSP) applies to the former Kim Beazley School site, being the land contained within Lot 2089 Stevens Street and the Drainage Reserve contained in Lot 2085 Hope Street, White Gum Valley, being the land identified on the Structure Plan Map (Figure 1).

2. **Structure Plan Content**

The Structure Plan comprises:

- **Part 1 (Statutory Section) -**

  Contains the provisions, requirements and standards that have the effect as if included in the City of Fremantle Local Planning Scheme No.4 (the Scheme).

- **Part 2 (Explanatory Section) -**

  Providing justification and clarification of the provisions contained within Part One. Part Two shall not have any statutory effect.

- **Part 3 (Appendices)**

  Containing all additional studies, investigations and technical reports that are required to inform the Structure Plan.

Due regard shall be paid to Part Two and Part Three.

3. **Interpretation and Scheme Relationship**

- Unless otherwise specified in this part, the terms used in this Structure Plan have the respective meanings given to them in the City of Fremantle Local Planning Scheme No.4 (the Scheme), or where not defined in the Scheme, as set out in this Structure Plan.

- The provisions, standards and requirements specified under Part 1 of this Structure Plan shall have the same force and effect as if it were a provision, standard or requirement of the Scheme. Consistent with clause 6.2.12.2 of the Scheme, where the Structure Plan is inconsistent with a provision of the Scheme, then the provision of the Scheme prevails to the extent of the inconsistency.

- The structure plan map (Figure 1) outlines land use, zones and reserves applicable within the structure plan area. The zones and reserves designated under this Structure Plan apply to the land within it as if the zones and reserves were incorporated into the Scheme.

- The use class permissibility for each zone within the Structure Plan is outlined within Table 2 – Zoning of the Scheme.

- Part 2 of the Structure Plan includes justification for the proposed development and the regulatory and implementation framework; and provides a detailed analysis of the provisions contained in Part 1. Part 2 should be used as a reference guide to assist in the interpretation of the statutory provisions contained in Part 1.
4. **White Gum Valley Local Structure Plan**

The White Gum Valley Local Structure Plan Map (Figure 1) indicates:

- The extent and boundary of the structure plan area;
- Land use zones that apply to each block;
- Indicative road layout and primary access points; and
- Locality of public open space and drainage.

5. **Operation date**

The Structure Plan comes into effect the date of which it is endorsed by the Western Australian Planning Commission (WAPC), pursuant to clause 6.2.10.2 of the City of Fremantle's Local Planning Scheme No.4.

The provisions contained within Part 1 of the Structure Plan shall be administered by the WAPC and the City of Fremantle.
Figure 1: LOCAL STRUCTURE PLAN
KIM BEAZLEY PRIMARY SCHOOL SITE
LOT 2089 STEVENS STREET, WHITE GUM VALLEY
6. General Planning Requirements

This Structure Plan is prepared in accordance with the requirements of the City of Fremantle’s Local Planning Scheme No.4 (the Scheme). The Structure Plan Map (Figure 1) outlines the zones, reserves and indicative road layout applicable within the structure plan area.

The below table stipulates the applicable land use, development and subdivision requirements for the structure plan area.

<table>
<thead>
<tr>
<th>TABLE 3 – GENERAL PLANNING REQUIREMENTS FOR STRUCTURE PLAN AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Land Use Permissibility</strong></td>
</tr>
</tbody>
</table>
| **2. Residential Density** | a) Figure 1 (Local Structure Plan) and Figure 2 (Residential Density Plan) defines the residential density that apply to specific areas within the Structure Plan.  
   b) Subdivision and development within the Structure Plan Area shall be in accordance with a Residential Code Plan endorsed by the Western Australian Planning Commission.  
   c) A Residential Code Plan (three copies) shall be lodged with the Western Australian Planning Commission for its endorsement, prior to or in conjunction with any application for subdivision. The plan is to indicate the R-Code applicable to each lot within the subdivision and shall be consistent with the Structure Plan (Figure 1), and the Residential Density Plan (Figure 2).  
   d) Approval of the Residential Code Plan shall be undertaken at the time of determination of the subdivision application by the WAPC. The approved Residential Code Plan shall then form part of the Part 1 Statutory Provisions of this Structure Plan and be used for the determination of future subdivision applications. An amendment to the Residential Code Plan shall require an amendment to the Agreed Structure Plan and further approval of the WAPC.  
   e) Residential Code Plans are not required if the WAPC considers that the subdivision is for one or more of the following:  
      i. The amalgamation of lots;  
      ii. Consolidation of land for “super lot” purposes to facilitate land assembly for future development;  
      iii. The purposes of facilitating the provision of access, services or infrastructure; or  
      iv. Land which by virtue of its zoning or reservation under the Structure Plan cannot be developed for residential purposes. |
### 3. Public Open Space

<table>
<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>a) The provision of a minimum of 10 per cent public open space (POS) being provided in accordance with the WAPC's Liveable Neighbourhoods.</td>
</tr>
<tr>
<td>b) Public open space is to be provided generally in accordance with Figure 19 and Table 7 of Part 2. There is a total of 0.25ha of POS provided within one POS site.</td>
</tr>
<tr>
<td>c) An updated public open space schedule is to be provided at the time of subdivision for the determination by the WAPC, and upon advice of the City of Fremantle.</td>
</tr>
</tbody>
</table>

### 4. Development

<table>
<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>a) Residential development within the Structure Plan area shall be assessed, implemented and enforced in accordance with the standards and requirements of the City of Fremantle’s Scheme and Residential Design Codes and any adopted Local Planning Policy.</td>
</tr>
<tr>
<td>b) Prior to development Design Guidelines in the form of a Local Planning Policy are required to be prepared by the proponent in conjunction with the City of Fremantle and adopted as Local Planning Policy in accordance with Clause 2.4 of Local Planning Scheme No.4 provisions.</td>
</tr>
</tbody>
</table>

### 5. Subdivision

<table>
<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>a) Subdivision of land shall be in accordance with the Structure Plan and the Residential Code Plan identified in Figure 2.</td>
</tr>
<tr>
<td>b) Prior to any subdivision or development being supported, the City will require:</td>
</tr>
<tr>
<td>i. The preparation and approval of the reports, surveys, strategies and local planning policies listed in Table 4 at the stage specified in that table; and</td>
</tr>
<tr>
<td>ii. A report accompanying any application for subdivision or development that outlines the manner in which the findings and recommendations of the plans and strategies listed in Table 4 and appended to this Structure Plan will be incorporated into or addressed by the proposed subdivision or development.</td>
</tr>
</tbody>
</table>
Figure 2: RESIDENTIAL DENSITY PLAN

KIM BEAZLEY PRIMARY SCHOOL SITE
LOT 2089 STEVENS STREET, WHITE GUM VALLEY
7. Requirements for Subdivision / Development

The following table details the required strategies and plans that may be required prior to the lodgement and approval of a subdivision or alternatively required as a condition of any subdivision approval. Such strategies and plans shall be prepared to the satisfaction of the relevant authority as detailed in the table.

<table>
<thead>
<tr>
<th>DOCUMENTATION</th>
<th>SUBMISSION STAGE</th>
<th>APPROVING AUTHORITY</th>
</tr>
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<tbody>
<tr>
<td>Flora and Vegetation Management Plan</td>
<td>Condition of subdivision</td>
<td>CoF</td>
</tr>
<tr>
<td>Local Water Management Strategy</td>
<td>Not required.</td>
<td>DOW</td>
</tr>
<tr>
<td>Urban Water Management Plan</td>
<td>Condition of subdivision</td>
<td>WAPC, CoF, DoW</td>
</tr>
<tr>
<td>Landscape Master Plan</td>
<td>Condition of subdivision</td>
<td>WAPC, CoF</td>
</tr>
<tr>
<td>Public Open Space Schedule in Accordance with Liveable Neighbourhoods</td>
<td>Subdivision application</td>
<td>WAPC, CoF</td>
</tr>
<tr>
<td>Heritage Assessment</td>
<td>Documented in LSP</td>
<td>WAPC, CoF, Dept. Heritage</td>
</tr>
<tr>
<td>Local Road Network Plan</td>
<td>Documented in LSP, to be further refined in conjunction with subdivision</td>
<td>WAPC, CoF</td>
</tr>
<tr>
<td>Local Planning Policy – Design Guidelines</td>
<td>To be prepared and submitted to the City of Fremantle prior to development.</td>
<td>CoF</td>
</tr>
<tr>
<td>Servicing Plan</td>
<td>Discussed in LSP, condition of subdivision</td>
<td>WAPC, CoF</td>
</tr>
<tr>
<td>Residential Design Code Plan</td>
<td>In conjunction with subdivision</td>
<td>WAPC, CoF</td>
</tr>
<tr>
<td>POS Management Plan</td>
<td>Condition of subdivision</td>
<td>CoF</td>
</tr>
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1 Introduction

1.1 INTRODUCTION AND PURPOSE

The Local Structure Plan (LSP) for the former Kim Beazley School Site (the subject site), in White Gum Valley, has been prepared to guide and facilitate the subdivision and development of Lot 2089 Stevens Street for residential purposes. The drainage reserve (Lot 2065 Hope Street) has been included within the LSP area for the purposes of consistency given that the land is located within the City of Fremantle’s ‘Development Area 12’ which requires a structure plan to be prepared.

The Local Structure Plan fulfils the requirements of the City of Fremantle Local Planning Scheme No.4 for the preparation and approval of a structure plan prior to the subdivision and/or development of land in a ‘Development’ zone.

1.2 PROJECT VISION

LandCorp’s development at White Gum Valley will promote a sustainable approach to infill development, demonstrating affordable living opportunities through compact, climate responsive design with a high level of energy and water efficiency. The concept for the development draws heavily on the eclectic character of the surrounding area to provide a contemporary development in line with the objectives of Directions 2031. The vision for the project is:

‘To create a high quality infill development that is highly site responsive and is built upon the context of the surrounding locality, seeking to leverage upon the site’s strong attributes to enable the development to benefit the future community on the site as well as the existing community that surrounds it’.

1.3 HISTORY

The Kim Beazley School closed in December 2008. Prior to the closure of the school, the Department of Education conducted a series of community workshops and focus group meetings to develop a plan for the site. Various specialist reports were prepared on aspects of the site as part of this process including a tree survey, options for the drainage sump, structural condition of Sullivan Hall and the former Fremantle Pigeon Racing Club Hall and a heritage assessment of the school. All were made available during the public comment process. A structure plan and concept subdivision plan was prepared but was neither formally submitted nor adopted by the City of Fremantle.

Since 2008 LandCorp has undertaken further studies on the site including a preliminary site and context analysis undertaken in 2008 which identified the unique qualities of the location and the opportunity for an innovative approach to urban and built form. LandCorp’s project team has also undertaken further due diligence including environmental Preliminary and Detailed Site Investigations, a hazardous material survey and remediation action plan were also prepared to guide the demolition and remediation. Post remediation a validation report was prepared which confirms that the site tested free of contaminants. As the site was never a “contaminated site” LandCorp has elected to send the validation report to a Contaminated Sites Auditor for a Voluntary Auditor’s Report which mirrors the Mandatory Auditor’s Report that is required in order for a contaminated site to be recommended to the Department of Environment and Conservation for reclassification. The validation report is provided as part of the structure plan and LandCorp will provide the Voluntary Auditor’s Report as soon as it available and prior to subdivision application.

Several concept options have been explored and tested through Project Design Reviews as well as a number of internal workshops. The aim was to develop a structure plan that would enable the development of a diverse creative community and a range of sustainable living opportunities.
Throughout the preparation of this LSP, a series of community consultation processes were undertaken to explore the community development aspirations and vision for the site. The consultation process utilised a number of approaches to ensure a wide variety of community members were informed of the project.

To assist in providing a clear strategic direction for the future development of the site, a series of community workshops were conducted at the end of 2011. The workshops reconfirmed the outcomes of previous community engagement held in 2003. However, there was a feeling within both the Community and LandCorp that the plan which was drawn up after 2003 had lost its relevance. The plan produced was perceived generic and was not considered to reinforce the “essence” or contribute to the unique character of White Gum Valley.

The 2011 workshops included a series of briefing sessions and ‘hands-on’ group workshops. The outcomes of the workshops (Appendix A) were endorsed in the project vision and objectives. These have ultimately informed the planning and urban design principles outlined in this LSP.

Throughout the structure planning process, LandCorp frequently updated the Local Community Precinct Group on progress. Feedback was sought from both the City and the Precinct Group. A briefing session was held with the City in December 2012. The City suggested to explore alternative Public Open Space arrangements, looking to create an additional central Public Open Space (to maximise tree retention opportunities), whilst looking at redeveloping the site currently occupied by the Fremantle Men-Shed.

Both the original and alternative concept plans were presented to the Precinct Group in May 2013. During this meeting, the original concept plan was endorsed by the community as the preferred option. This concept plan forms the basis of the LSP.

1.4 PROJECT TEAM

The Structure Plan has been developed by LandCorp.

Other members of the Project Team include:

- Urbis
  - Statutory Planning + Urban Design
- TABEC
  - Civil Engineering
- Shawmac
  - Traffic
- Wood & Grieve Engineers
  - Preliminary drainage
- Parsons Brinckerhoff
  - Environmental
- Abor Logic &Paperbark Technologies
  - Arboriculture
- Coterra
  - Water Management
- Douglas Partners
  - Geotechnical
- Kirsa Environmental
  - Contaminated Sites Auditor
2 Land Description

2.1 LOCATION

The White Gum Valley LSP relates to an area of approximately 2.29 hectares in the south western metropolitan corridor (refer to Figure 3). The land is located in the suburb of White Gum Valley of the Perth metropolitan region, approximately 14 kilometres south-west of the Perth central business district.

The structure plan area comprises Lot 2089 Stevens Street and Lot 2065 Hope Street in White Gum Valley. The structure plan area is bound by the Royal Fremantle Golf Course to the north and urban land to the east, west and south. Lot 2065 is land reserved for public open space for the purposes of drainage.

2.2 OWNERSHIP

The lot and ownership details for the subject site are described in Table 5. The Certificate of Title and Sketch for the subject site are provided at Appendix B.

<table>
<thead>
<tr>
<th>LOT</th>
<th>RESERVE</th>
<th>STREET</th>
<th>PLAN/DIAGRAM</th>
<th>LOT AREA</th>
<th>PRIMARY INTEREST HOLDER</th>
</tr>
</thead>
<tbody>
<tr>
<td>2089</td>
<td>38088</td>
<td>Stevens Street</td>
<td>191215</td>
<td>2.1254 ha</td>
<td>State of Western Australia</td>
</tr>
<tr>
<td>2065</td>
<td>42029</td>
<td>Hope Street</td>
<td>190395</td>
<td>0.16 ha</td>
<td>City of Fremantle</td>
</tr>
</tbody>
</table>

The site is currently a Reserve vested with the Department of Education except for the sump area (Lot 2065) which is a Reserve managed by the City of Fremantle. It is proposed that only the former school site (Lot 2089) will be transferred to LandCorp for redevelopment purposes.
3  Regional, District, Local + Site Context

3.1  REGIONAL CONTEXT

The former Kim Beazley School Site is located within the suburb of White Gum Valley, in the City of Fremantle. The site is adjacent to the Royal Fremantle Golf Course and is located approximately 2.5 kilometres east of Fremantle Strategic Regional Centre (refer Figure 4).

3.2  DISTRICT CONTEXT

The land subject of this LSP is located within the White Gum Valley area. The LSP has been prepared to guide development of this 2.29ha site which is proposed to create over 70 dwellings and house a population of 192 residents.

There is no district structure plan affecting the site. The LSP is required to be prepared in accordance with the City of Fremantle’s Local Planning Scheme No.4 ‘Development’ zone provisions.

The structure plan area has frontage to Stevens Street to the north, Yalgoo Avenue to the east, Hope Street to the south and Nannine Avenue to the west (refer to Figure 3). There is a drainage sump located on the south west corner of the site that is managed by the City of Fremantle.

3.3  SUBJECT SITE

The site is 2.29ha in size, and is rectangular in shape. The site is predominately vacant with sporadic mature trees excluding the two community facilities (Sullivan Hall and the former Fremantle Pigeon Racing Club Hall), which are located within the western portion of the site.

Current land use within the proposed boundary is predominately open spaces and ‘community purpose’ buildings, represented by the Sullivan Hall and the former Fremantle Pigeon Racing Club Hall to the western edge of the site. The site’s land uses have altered over time with the former Kim Beazley School being located on the eastern half of the site consisting of a small complex of classrooms, ancillary buildings, sealed open car parks and play areas.

Closure of the school was announced in 2005, after the school was closed LandCorp were able to undertake the necessary Preliminary Site Investigation, the Detailed Site Investigation, ground water monitoring, and prepare the remediation action plan prior to seeking approval from the City of Fremantle to demolish the school, playgroup building and ancillary buildings. The former school site was further remediated by the removal of a small quantity of contaminated soil and through natural attenuation (which occurs once the buildings and footing are removed and the soil is exposed to the elements). All works were undertaken under the supervision of the environmental consultant and reviewed by the contaminated sites auditor. Demolition work was undertaken by a licenced contractor in accordance with the approval granted by the City of Fremantle.
The surrounding area is predominately characterised by low density residential development. The Royal Fremantle Golf Course is located directly to the north of Stevens Street. Further to the east of the structure plan area a large industrial park is located encompassing a number of manufacturing, service and storage businesses. There are several small neighbourhood centres located to the southeast and southwest of the site with the nearest significantly sized centre being located at the intersection of South and Carrington Streets to the southeast of the subject site.
Figure 5: LOCAL CONTEXT PLAN - LAND USE

LEGEND:
- Light/Service Industry
- Retail/Commercial
- Fremantle Activity Centre
- Area in Transition
- Public Purpose
  1. Primary School
  2. High School
  3. TAFE
- Public Open Space
- Private Open Space
- Railway

APPROX. 2 KM TO FREMANTLE CBD
APPROX. 3 KM TO SOUTH BEACH (Swimming & Dog Beach)

SUBJECT SITE

Optimal Position for Urban Development

Booyeembara Park

Fremantle Train Station

Fremantle Fishing Boat Harbour

Gibson Park

Cemetery

North Perth CBD

Fremantle Public Golf Course

Bodyeembara Park

Royal Fremantle Golf Course (Private)

Fremantle CBD Strategic Metropolitan Centre

Hospital

Bruce Lee Reserve

APPROX. 2 KM TO FREMANTLE CBD

Figure 5: LOCAL CONTEXT PLAN - LAND USE
WHITE GUM VALLEY - KIM BEAZLEY SCHOOL SITE

DATE 02.07.2013
DWG NO.001
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SCALE 1:15,000 @ A3
4 Planning Framework

4.1 METROPOLITAN REGION SCHEME

The subject site is zoned ‘Urban’ under the Metropolitan Region Scheme.

Areas zoned Urban provide for a range of activities, including residential, commercial, recreational and light industry. The proposed LSP will need to ensure it is aligned with the intent of the ‘Urban’ zone.

FIGURE 6 – METROPOLITAN REGION SCHEME

Source: WAPC
4.2 CITY OF FREMANTLE LOCAL PLANNING SCHEME NO.4 (LPS 4)

This subject site is zoned ‘Development’ under the City of Fremantle’s Local Planning Scheme No. 4 (LPS 4), as shown in Figure 7.

The objective of the Development Zone is as follows:

‘to provide for future residential, industrial, commercial or other uses in accordance with a comprehensive structure plan or detailed area plan prepared in accordance with the provisions of the Scheme’.

A structure plan is a form of land use and development plan. Structure plans are often used to guide and facilitate the development of new residential areas, including redevelopment sites such as White Gum Valley. They often identify residential areas, parks, roads and other proposals for a site.

Development zoned land is often subject to a “special control area”, which is identified in the local planning scheme. Special control areas usually include guidance regarding the type of land use and development envisaged for a site, as well as identifying matters which need to be addressed through the preparation of a structure plan.

4.2.1 DEVELOPMENT AREA 12

The former Kim Beazley School site is subject to a special control area under the City of Fremantle LPS 4. The provisions of the control area are set out under Schedule 11 of the Scheme, “Development Area 12”. These provisions consist of the following:

– A Structure Plan is to be adopted to guide subdivision, land use and development prior to the approval of development applications.

– Investigations of potential site contamination to the satisfaction of the Department of Environment and Conservation.

This current structure planning process will satisfy the first provision.

A Detailed Site Investigation report has been prepared over the site to determine if any potential sources of contamination to soil and groundwater are present due to current or former land uses, and due to proximity to the former landfill site at Booyeembara Park. This report is reviewed in subsequent sections.

Clause 6.2.6 of the Scheme provides guidance on the detail required to be submitted as part of a structure plan application within a Development Area.
4.2.2 LOCAL PLANNING AREA NO.6 – WHITE GUM VALLEY

The City of Fremantle LPS 4 also sets out several ‘local planning areas’, which apply to larger areas and seek to enhance locally desired character. The subject site is included with Local Planning Area No.6 – White Gum Valley.

The following provides a summary of the requirements of Local Planning Area No.6:

- Height Requirements – Local Centre - 5.5m, Neighbourhood Centre - 5.5m, Residential – as per the R-Codes.

- Matters to be considered in applying specific and general height requirements –
  - The proposal is consistent with predominant height patterns of adjoining properties and the locality generally.
  - The proposal would not be detrimental to the amenity of the area.
  - The proposal would be consistent with conservation objectives for the site and locality (if applicable).
  - Any other matter outlined in Council’s local planning policies.

- Council may impose a lesser height in the event that the proposal does not satisfy any of the above requirements.

Clause 6.4.2(e) of the Scheme states that where a Development Area is situated within a local planning area, appropriate development requirements applicable to the area shall be determined by Council through further comprehensive planning, including public consultation. This provision implies that the local planning area requirements for White Gum Valley may be varied for the Kim Beazley School site through the preparation of a structure plan.
5 Strategic Planning Framework

5.1 STATE PLANNING STRATEGIES + POLICIES

State Strategies

5.1.1 DIRECTIONS 2031 AND BEYOND (2010)

Directions 2031 - Spatial Framework for Perth and Peel was released by the Western Australian Planning Commission (WAPC) in August 2010. This is the highest level strategic spatial plan establishing a vision for the future expansion of the Perth and Peel area, which is expected to grow from 1.65 million people to 2.2 million people by 2031.

The LSP falls within the Central sub-region, which includes 19 local government areas, including Fremantle, City of Perth, Subiaco and Victoria Park. A key characteristic of this sub-region is the dominance of the traditional grid form of subdivision, like that of White Gum Valley which provides opportunities for targeted infill development and redevelopment.

Based on WA Tomorrow population forecasts and demographic change, Directions 2031 has developed a set of housing targets for both greenfield and infill development. The connected city scenario seeks a 50 per cent improvement on current trends and has set a target of 46 per cent of 154,000 of the required 328,000 dwelling being infill development. Directions 2031 further stipulates that perpetuating existing density under provisions of town planning schemes will not deliver the required infill housing supply and reaffirms the importance of density being increased when the opportunity arises and within appropriate locations such as those well serviced by public transport and existing amenities.

The proposed structure plan represents a logical infill development in line with key State aspirations and objectives.

5.1.2 STATE PLANNING STRATEGY (1997)

The State Planning Strategy (1997) was prepared by the WAPC as a whole of Government approach to guide sustainable land use planning throughout the State up until 2029. The Strategy is aimed at developing a land use planning system to help the State achieve a number of key goals. These include wealth, protection of environment and building and maintain lively and safe communities for the enjoyment of future generations of Western Australians. The Strategy was last audited in 2000-2001.

Source: WAPC
5.1.3 DRAFT CENTRAL METROPOLITAN PERTH SUB-REGIONAL STRATEGY (2010)

The Central Metropolitan Perth Sub-Regional Strategy (Draft) encompasses all land within the inner and middle sectors of metropolitan Perth. The Strategy identifies eight strategic priorities to deliver the outcomes sought by Directions 2031.

Within the context of the LSP, the key focus of the Strategy is the appropriate and effective delivery of infill housing to contribute towards targets outlined under Directions 2031. The Central Metropolitan Sub-Region is the most established urban area within the metropolitan context with no ability for greenfield development. Therefore, all development within the sub-region will need to be accommodated in infill areas. The target infill is intended to make more effective use of existing developed areas and their services and amenities to reduce the current pressure for new land to be released in the outer sub-regions and to reduce subsequent costs and delivery of infrastructure on the urban fringe.

There are many challenges associated with infill development, often largely due to fragmented land ownership patterns resulting in the inability to establish an integrated and timely approach to redevelopment. As highlighted in the Strategy, it is important that key decision making authorities advocate for and develop realistic, market-oriented plans and strategies in support of innovative infill development. The LSP provides a rare opportunity for infill development to occur without associated land ownership challenges.

The subject LSP has due consideration to the strategic priorities identified in the Strategy for the land ensuring that infill development contributes towards identified dwelling targets and achieves the overall intent of the Strategy, specifically in regards to the delivery of a diverse mix of dwellings, affordable living, amenity, housing type and enhancing the existing natural environment.
State/Operational Policies

5.1.4 LIVEABLE NEIGHBOURHOODS (2009)
Where possible and practical, the Structure Plan has had regard to the objectives and requirements of Liveable Neighbourhoods, whilst responding to the context of the subject site and the White Gum Valley broadly.

5.1.5 SPP 3.1 RESIDENTIAL DESIGN CODES (2013)
In accordance with Part 1 of this structure plan report, the land bound within the LSP area will be subject to the requirements of the Residential Design Codes, with the exception of those development standards detailed in Schedule 1 – Development Standards table of Part 1 which prescribes variations to the R-Codes.

5.1.6 SPP 2 – ENVIRONMENT AND NATURAL RESOURCES
The policy sets out a planning response to environmental and natural resource management issues within the framework of the State Planning Strategy.

Specific policy areas of relevance include those relating to water resource management, air quality, soil and land quality, biodiversity, marine resources, landscapes, and greenhouse gas emissions and energy efficiency.

5.1.7 SPP 4.2 ACTIVITY CENTRES FOR PERTH AND PEEL
This Western Australian Planning Commission (WAPC) policy guides development within activity centres across the Metropolitan and Peel regions. Fremantle is designated as a Strategic Metropolitan Centre (SMC), secondary to the Perth Capital City. SMCs are multipurpose centres providing a full range of economic and community services necessary for the communities in their catchments. They should have major offices and have a desirable target of 45 dwellings per gross hectare.

The structure plan area is not located within an activity centre; however it is located within close proximity to the Fremantle Strategic Metropolitan Centre. The proposal is at a density of almost 30 dwellings/ha, assisting in achieving the desirable 45 dwellings per gross hectare promoted in Strategic Metropolitan Centres.
5.1.8 DEVELOPMENT CONTROL POLICIES

The Structure Plan complies with the following relevant Development Control Policies (DCP’s):

<table>
<thead>
<tr>
<th>POLICY</th>
<th>COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>DCP 1.1 – subdivision of land – general principles</td>
<td>The subdivision and development of the site is to be in accordance with a structure plan, consistent with comprehensive, orderly and proper planning espoused by DCP 1.1.</td>
</tr>
<tr>
<td>DCP 1.3 – Strata Titles</td>
<td>Any strata subdivision undertaken in accordance with the LSP will need to have regard to the processes and requirements of DCP 1.3.</td>
</tr>
<tr>
<td>DCP 1.4 – Functional Road Classification For Planning</td>
<td>The LSP has been prepared based on a hierarchy of local distributors and access roads.</td>
</tr>
<tr>
<td>DCP 1.5 – Bicycle Planning</td>
<td>The proposed road and path network will cater for bicycle movements.</td>
</tr>
<tr>
<td>DCP 1.7 – General Road Planning</td>
<td>Road construction and upgrading will be undertaken in accordance with the Policy requirements.</td>
</tr>
<tr>
<td>DCP 2.2 – Residential Subdivision</td>
<td>Design of the LSP has given due regard to the residential design and planning principles of DCP 2.2, and the future subdivision of land will be in accordance with the Policy</td>
</tr>
<tr>
<td>DCP 2.3 – Public Open Space In Residential Areas</td>
<td>The proposed LSP provides in excess of 10 per cent open space as required under the provisions of the policy.</td>
</tr>
<tr>
<td>DCP 2.6 – Residential Road Planning</td>
<td>The provisions of DCP 2.6 have been given due regard in the preparation of the LSP, as well as achieving a site specific design response. The detailed design of roads will be further dealt with at the subdivision stage.</td>
</tr>
</tbody>
</table>
5.2 LOCAL STRATEGIES + POLICIES

Strategies

5.2.1 CITY OF FREMANTLE STRATEGIC PLAN 2010-2015

The City of Fremantle Strategic Plan is the principal corporate document that will define the City’s direction and guide all decision making for the next five years. The plan outlines a series of strategic imperatives based around seven key sectors; economic development, urban renewal and integration, climate change and environmental protection, transport, character, community and safety and capability. These include the following:

- Strengthen Fremantle’s economic capacity.
- Provide a great place to live, work and play through growth and renewal.
- Lead in the provision of environmentally sustainable solutions for the benefit of current and future generations.
- Lead in the provision of environmentally and economically sustainable transport solutions.
- Sustain and grow arts and culture and preserve the importance of our social capital, built heritage and history.
- Create a community where people feel safe in both public and private spaces.
- Deliver on the achievement of our strategic imperative through good governance, strong leadership, effective communication and excellence in delivery.

Based on these strategic imperatives, the following outcomes and actions have been identified and implemented throughout the development and refinement of the design concept for the LSP area:

- Provision of more affordable and diverse (mixed use) living for a changing and growing population
- Expand and improve the amount of shared recreational space in proportion to increasing suburban infill housing
- Innovative and renewing of suburban areas
- Encouragement and support of pedestrian and cycle-friendly city
- Clear understanding of how and when to engage with stakeholders and the community
5.2.2 FREMANTLE ECONOMIC DEVELOPMENT STRATEGY 2011-2015

In adopting the City of Fremantle Strategic Plan 2010–2015, the City made a commitment to the revitalisation of Fremantle in partnership with the community. The City’s Economic Development Strategy (‘the Strategy’) furthers this commitment, through the promotion of growth and the revitalisation of Fremantle, in accordance with Directions 2031. The Strategic is guided by the following guiding principles:

- Ensure that activities to encourage economic development always contribute to and enhance Fremantle’s valuable lifestyle attributes and community assets.
- Support innovation, research and development initiatives, particularly those that built Fremantle’s established competitive advantages.
- Support and promote the development of both existing ‘driver’ industries and emerging industry sectors, to encourage a diversity of opportunity and growth.
- Focus on activities likely to achieve positive measurable outcomes and long term strategic economic benefits for the community at large.

5.2.3 GREEN PLAN 2001

The City’s Green Plan, prepared in 2001, provides a Strategy for the enhancement and management of existing vegetation within the City. An important component of the Green Plan is the identification of future sites for greening within Fremantle and setting in place mechanisms (e.g. land use policy) to ensure the environmental attributes of these sites are recognised and the objectives of the Green Plan are achieved.

The former Kim Beazley School subject site is identified in the Plan as a key local cultural and recreational asset in the City, and is adjacent to a key green link, focused around the Royal Fremantle Golf Course and Booyeembara Park (See Figure 9 & 10). The green link shown to the east of the subject site (although within the road reserve and located outside of the property boundary) will be retained and promoted through this process.

In accordance with the City’s Green Plan, the proposed LSP should give due regard to the maintenance and enhancement of surrounding green spaces and improve linkages to these existing spaces, particularly Booyeembara Park and the Golf Course. This should be achieved through retention of significance specimens on site, as well as the considering the location of public open space.
Figure 10: LOCAL CONTEXT PLAN - GREEN LINKAGES

LEGEND:

- Preliminary Green Link in accordance with the 2001 Green Plan Policy. Green linkages to provide shaded green corridors for pedestrians and cyclists as well as providing ecological corridors.
Policies

5.2.4  LOCAL PLANNING POLICY 2.13 – SUSTAINABLE BUILDING DESIGN REQUIREMENTS.

The purpose of LPP 2.13 is to create sustainable building design requirements for new commercial, mixed use and multi-residential developments. A variety of residential development outcomes are envisaged for this site and therefore, this Policy will be applicable.

The subject site has potential to create a unique and innovative design response consistent with the objectives and intentions of this policy.

The policy does not apply to single houses or grouped dwellings and will therefore only be applicable to any multiple dwellings proposed within the structure plan area with a Gross Lettable Area (GLA) exceeding 1000m². Multiple dwellings within the structure plan area will be required to adopt sustainable building design elements to achieve a construction standard of not less than a 4 Star Green Star rating using the relevant Green Building Council of Australian Green Star rating tool. Design and built form measures that assist in achieving the required Green Star rating should be considered during the formulation of any future Design Guidelines/Local Planning Policy for the site.

5.2.5  D.B.H12 - ENERGY EFFICIENT BUILDING DESIGN

This Policy was prepared to provide guidance on the principles of energy efficient building design to improve comfort levels to occupants and reduce energy consumption. The Policy also aims to ensure buildings are well designed to achieve the efficient use of energy and to ensure that design for good environmental performance and amenity is considered in conjunction with other design and amenity considerations in the Fremantle context.

Given that the community has expressed strong support for an innovative and sustainable development at the Kim Beazley School site, the final LSP design will need to consider energy efficient design considerations, in relation to lot and building orientation, cross ventilation, landscaping and so on. Building design will also need to be informed by these energy efficient principles.

5.2.6  DESIGN GUIDELINES – WHITE GUM VALLEY

A series of Design Guidelines have been prepared over five local areas within the White Gum Valley area:

- Samson and Watkins Streets, Nannine & Wiluna Avenues Local Area (D.G.W1)
- Watkins and Hope Streets, Nannine and Yalgoo Avenues Local Area (D.G.W2)
- South Street Local Centre Local Area (D.G.W3)
- Carrington, Hope and Watkins Street and Minilya Avenue Local Area (D.G.W4)
- Watkins and Samson Streets, Minilya and Wongan Avenues Local Area (D.G.W5)

The area bound by the LSP is not located within any of the above Design Guidelines.
6 Site Conditions

6.1 EXISTING SITE CONDITIONS

The subject site is covered by remnant vegetation and trees. Urban development surrounds the site to the east, south and west, with the Royal Fremantle Golf Course adjacent to the site to the north.

There are two community facilities (Sullivan Hall and the former Fremantle Pigeon Racing Club Hall) are located within the western portion of the site. It is understood Sullivan Hall is used on a daily basis for a range of uses including dance classes, and the Fremantle Pigeon Racing Club Hall is used on a daily basis as a Men’s Shed. The Men’s Shed provides a venue for men to learn manual labour techniques such as wood work and metal work, and further provides social opportunities. Community consultation undertaken to date reveals that these facilities are significantly valued by the local community.

Through various meetings with the City of Fremantle, key stakeholders and the community it has been identified that the community wishes to retain both buildings in their current location, and that the buildings can be included in an area of POS.

This is considered to be the best outcome in terms of future planning and respecting the existing cultural heritage of the site. The community facilities are discussed further in Section 8.3.

6.2 TOPOGRAPHY

White Gum Valley incorporates a significant valley depression running southwest to northeast. The lowest point of the valley is located to the southwest of the subject site with levels between 18-19m AHD along Yalgoo Avenue toward the south-west corner of the site, where the drainage sump is located. Levels around the drainage sump vary between approximately 12-12.8m AHD.

There are two predominate batters running along the north-south across the eastern portion of the site, each approximately 2m in height stepping down from Yalgoo toward the central area of Lot 2089 where levels of about 13m AHD exist.

The levels on the site rise again toward the western boundary where the Men’s Shed is located. Nannine Avenue falls between 20m AHD at the Stevens Street intersection to 13m AHD at the drainage sump. The LSP responds by designing streets and lot layouts to capture these views to the north and by locating larger lots on the ridgelines to preserve this terrain.
Figure 11: SITE ANALYSIS - EXISTING CONDITIONS

LEGEND:

Existing Vegetation

Booyeembara Park

Figure 11: SITE ANALYSIS - EXISTING CONDITIONS

WHITE GUM VALLEY - KIM BEAZLEY SCHOOL SITE

DATE 02.07.2013

DWG NO.006

REV C

SCALE 1:1,000 @ A3
6.3 GEOLOGY

Soil testing has indicated that the regional surface geology is predominately Quaternary Aged, Pleistocene sands derived from Tamala limestone overlying Tamala Limestone and Safety Bay Sands.

The soil profile is relatively consistent across the site. The site is underlain by a uniform limestone layer. Generally, the native soil at the site comprises of brown/dark grey silty sand and is predominately observed in the external areas and generally extends to approximately 1 metre in depth below the natural ground surface.

Within the footprint of the community buildings (underneath the concrete slab), yellow sand fill was observed to extend to approximately 0.75 metres in depth. Beneath the fill, the brown coloured, native silty sand was intercepted.

A detailed investigation for the former school site identified that the site lies within an area of no known acid sulphate soils. Department of Environment and Conservations Acid Sulfate Soil Risk maps confirm this finding. There is therefore no requirement for further investigations into risk of acid sulphate soils at the subdivision stage.

The sandy soils located across the site are highly suitable to stormwater management by infiltration.

6.4 NATURAL ASSETS

The structure plan area does not contain any identified regionally significant areas of vegetation or flora and as such is well suited to urban development nor does the site contain any vegetation complexes defined as Threatened Ecological Communities. Given the sites previous use and the demolition of the buildings associated with the school, the vegetation within the LSP area is now scarce and sporadic with little suitable habitat for conservation of significant fauna species. Since the closure of the school site the maintenance of the trees has ceased, which has impacted on the health and condition of the trees within the LSP area.

At the preliminary planning stage, Arbor Logic consultants undertook an inspection of the site to identify any trees that were worthy of retention and to provide purposeful and practical recommendations for any design and construction implications that may apply for any trees selected for retention (Appendix C). As the design was refined, further site inspections were undertaken by Paperbark Technologies to provide an update on the status of the trees and to examine the verge trees surrounding the property in the context of future installation of services and the potential for relocation of trees from within the LSP area to the verge and future public realm areas.

6.4.1 VERGE TREE SURVEY

Although outside of the LSP area, it is important to consider the impact of the development of the site on the adjoining verges and their trees.

Paperbark Technologies undertook a site inspection of the verge trees in November 2012. In addition a specific verge tree site visit was undertaken with LandCorp, Urbis and Tabec to determine the likely impact of the development (specifically in terms of servicing) on the verge trees. The report provided by Paperbark Technologies indicates that there are a number of trees that will need to be removed or may be able to be transplanted depending on service locations and their age. The report specifies that the trees tolerance to the redevelopment and site alteration impacts is conditional upon the location and extent of works carried out within the root zone of the tree and therefore those trees itemised to be retained or re-located cannot be confirmed until the detail design stage of the project.
Due to the re-development of the LSP area, the location of lots along the verge and the servicing required for the area, it is likely that a number of trees will be required to be removed as part of the site works. In keeping with the design philosophy in delivering an integrated approach to environmental sustainability and maintaining a vibrant community with high quality amenity provided to residents, trees proposed to be removed as part of the re-development of the LSP area will be relocated where possible to enhance the development or public realm to local residents.

6.4.2 SITE TREE SURVEY

As discussed above, Abor Logic consultants undertook a site inspection prior to the preliminary planning phase, identifying a number of trees worthy for retention or removal. Paperbark Technologies undertook a further site survey in 2013 to review the health of the trees and provide an update on their status. The report notes that many trees which were previously noted as suitable to transplant are now considered unsuitable due to a number of factors. A number of trees however were identified within the structure planning area to be retained. These include Ficus, Ulmus, Melaleuca and Agonis specimens, Palm and various Eucalyptus. Details of the trees on the site are included in Appendix C. The tree survey indicates that out of the 120 trees within the boundary of the site, there are 11 trees that are suitable to retain.

The tree survey undertaken for the land bound within the LSP area identifies a number of trees that are located within the future lot boundaries. It is proposed that trees will be relocated where possible from the private realm to the public open space and verges adjacent to the LSP area. This will ensure a cohesive transition of the LSP area, ensuring that a high quality and balanced urban and natural environment is provided to the future and existing residents.

Those trees recommended for retention the Paperbark Technologies report dated 2013, include:

<table>
<thead>
<tr>
<th>TREE NO.</th>
<th>TREE TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Eucalyptus rudis</td>
</tr>
<tr>
<td>18</td>
<td>Agonis flexuosa</td>
</tr>
<tr>
<td>20</td>
<td>Eucalyptus camaldulensis</td>
</tr>
<tr>
<td>21</td>
<td>Eucalyptus cladocalyx</td>
</tr>
<tr>
<td>22</td>
<td>Eucalyptus cladocalyx</td>
</tr>
<tr>
<td>61</td>
<td>Ulmus parvifolia</td>
</tr>
<tr>
<td>62</td>
<td>Ulmus parvifolia</td>
</tr>
<tr>
<td>64</td>
<td>Eucalyptus camaldulensis</td>
</tr>
<tr>
<td>75</td>
<td>Eucalyptus gomphocephala</td>
</tr>
<tr>
<td>77</td>
<td>Eucalyptus gomphocephala</td>
</tr>
<tr>
<td>320</td>
<td>Corymbia citriodora</td>
</tr>
</tbody>
</table>

Note: Tree number has been taken from the study undertaken by Paperbark Technologies (2013), included in Appendix C.
6.4.3 MAINTENANCE

It has been recommended from the arboriculture study undertaken by Paperbark Technologies that suitable forms of protection to ensure that the health of the trees for retention be upheld and managed throughout the development phase of the structure plan area and as part of the subdivision process.

The proposed landscaping and public open space concept plans ensure the retention of the trees within the verge strips and the public open space. The retention of such trees will be determined at the detailed design stage, informed by the technical reports provided in Appendix C and implemented through any relevant Management Plan.

The applicant will embellish the public open space area and the Green Link as part of any future subdivision for the LSP area. The POS will then be handed over to the City of Fremantle for maintenance. Measures to ensure the maintenance of the trees will be included in relevant Management Plans which will include recommendations made in the technical reports provided in Appendix C. These management plans will be required as conditions of subdivision and will be to the satisfaction of the City of Fremantle.
Figure 13: EXISTING TREES

WHITE GUM VALLEY - KIM BEAZLEY SCHOOL SITE

LEGEND:
- Existing trees
Figure 14: UNSUITABLE FOR RETENTION (PHYSICAL CONDITION AND HEALTH)

Legend:

- Existing tree unsuitable for retention due physical condition/health

Note: Tree information sourced from arboricultural assessment by Arbor Logic conducted on 3rd April 2009 and tree survey assessment by Paperbark Technologies conducted in November 2012 & January 2013.
Figure 15: UNSUITABLE FOR RETENTION (PROPOSED LEVELS)

LEGEND:

Existing trees unsuitable for transplant and unsuitable for retention due to proposed levels and lot layout

Note: Tree information sourced from aboricultural assessment by Arbor Logic conducted on 3rd April 2009 and tree survey assessment by Paperbark Technologies conducted in November 2012 & January 2013.
LEGEND:
- Existing tree to be retained public realm
- Existing tree likely to be retained within lot.

Note: Trees retained within lots will be subject to detailed design process.

Note: Tree information sourced from arboricultural assessment by Arbor Logic conducted on 3rd April 2009 and tree survey assessment by Paperbark Technologies conducted in November 2012 & January 2013.
6.5 GROUNDWATER AND SURFACE WATER

The subject site overlays the Jandakot mound superficial aquifer, which is expected to flow in a westerly direction towards the Indian Ocean (2.5km from subject site).

Investigation into the local hydrological context (refer Appendix D) demonstrates that the maximum groundwater level at the site is approximately at 1m AHD, which is approximately 11-18 metres below the existing ground level.

Site groundwater flow direction is estimated to the northeast with a relatively flat hydraulic gradient.

Groundwater quality is mildly acidic to near neutral with field results demonstrating that the pH ranges from 5.74 to 6.20. Groundwater quality is therefore classified as moderate brackish and could be considered for irrigation purposes only.

There are no wetlands, waterways, floodways or associated buffers and reserves affecting the subject site or the adjoining land.

6.6 BUSHFIRE HAZARD

The structure plan area is not considered to be affected by bush fire hazard given that the site is located within an inner urban/suburban area with maintained gardens and very limited native vegetation. Further, the site will be largely cleared for residential development resulting in a bush fire hazard level of low under the Planning for Bush Fire Protection Guidelines 2010. A Bushfire Management Plan is therefore not deemed necessary for the implementation of the LSP or any future subdivision applications.

6.7 HERITAGE

A review of the Town of Fremantle online database reveals that the structure plan area is not listed under the Town of Fremantle Municipal Heritage Inventory, nor is any surrounding residential buildings. In addition, it is understood Booyeembara Park has not been heritage listed, and no Aboriginal Heritage Sites have been identified within the vicinity of the site (Booyeembara Park Site Management Plan – City of Fremantle 2010).

Investigation and review of previous heritage studies undertaken at the site indicate the following:

- The mature plantings on the site have some significance for their contribution to the natural and introduced landscaping of the area that includes tree-lined streets and canopies of mature trees in residential back yards.
- The former Kim Beazley School has a moderate degree of authenticity externally with its original streetscape presentation remaining apparently intact, however a low degree of integrity as a group of educational and ancillary buildings.
- Although the buildings on site are not of a specific design or period as having cultural heritage significance, there are a substantial number of mature trees and plants that contribute to the values of the place.

Liaison with the Heritage Council of WA was also undertaken during the preliminary stages of the structure planning process. Correspondence from the Heritage Council, included in Appendix E confirms that the LSP area does not have sufficient cultural heritage significance at the State level for inclusion onto the State Register of Heritage Places.

The LSP design responds to the outcomes of the Heritage Assessment by accommodating the retention and protection of the community facilities and the incorporation of these facilities into the POS.
6.8 CONTAMINATED SITES

Detailed site investigations including ground water monitoring and landfill gas investigations were undertaken into the potential contamination of the site; in accordance with the City of Fremantle’s Development Area 12 provisions (refer Appendix F).

The PSI and DSI and hazardous material survey informed the demolition and remediation works. Following the remediation the site was inspected and samples taken in order to validate the remediation works, resulting in the preparation of the Validation Report provided as Appendix F.

The investigation was conducted to quantify and characterise any environmental impacts within the site as a result of historical and current land use activities with regard to the potential environmental liabilities associated with the site.

The soils were analysed for Organochlorine (OC) pesticides and concentrations of Arsenic (As). The results of the OC pesticides analyses were below laboratory practical quantification limits. The results of the ‘As’ analysis showed that all samples were below the adopted criteria.

The former school site was not classified as a contaminated site however the investigation including PSI and DSI through to demolition, remediation and validation report followed the same process as a contaminated site including the appointment of a Contaminated Sites Auditor to oversee the work of the environmental consultant. The auditor was further commissioned to prepare a Voluntary Auditor’s Report which will be finalised prior to subdivision application.
Figure 17: SITE ANALYSIS - LANDFORM & DRAINAGE
7 White Gum Valley Design

7.1 DESIGN PHILOSOPHY

White Gum Valley is a vibrant suburb that boasts a creative community and intricate mix of housing stock proving increasingly popular with home buyers wishing to take advantage of the close proximity to the Fremantle City Centre and associated amenities. The local area has a strong sense of place, characterised by a sheltered environment (behind the main ridge of East Fremantle), strong spatial grid and relaxed and communal atmosphere.

The site’s enviable location and golf course outlook will naturally lend itself to the delivery of a variety of housing typologies ranging from traditional apartments to townhouses that will in turn serve a diverse range of households.

7.2 DESIGN VISION

The overarching vision for the Structure Plan area is to:

‘create a high quality infill development that is highly site responsive and is built upon the context of the surrounding locality, seeking to leverage upon the site’s strong attributes to enable the development to benefit the future community on the site as well as the existing community that surrounds it’.

The vision for the redevelopment of the site has been developed by the project team after extensive site investigations, team workshops and community/stakeholder consultation. This project further confirms the State Government’s commitment to the delivery of Directions 2031 and Beyond, and the City of Fremantle’s desire to continuously cater for an active and vibrant living environment.

This vision is underpinned by a set of objectives for the site as follows:

- To create a unique and eclectic development that responds to the context and the climate
- To provide a benchmark for innovative and sustainable infill development
- To introduce a range of alternative housing typologies to the market
- To provide high quality urban and built form solutions
- To demonstrate affordable living options
- To demonstrate an integrated approach to sustainability including
  - Environmental Leadership
  - Community Wellbeing
  - Economic Health
  - Design Excellence
7.3 DESIGN EVOLUTION

The design evolution has been an iterative process focused on bridging the requirements of the local community, the WAPC’s targets for greater densities for infill developments site, the design team’s vision and objectives, and achieving a viable development model.

Following an initial site visit, review of background documents and a rigorous site analysis, the project team undertook two community workshops attended by the design team members (LandCorp project managers, designers, planners, civil engineers and traffic engineers), local residents, artist groups and elected members.

The outcomes of community workshops and background analysis formed the key basis and evolutionary testing ground for the development concept plan. A variety of design concepts were tested and debated by the design team.

Concepts options were reviewed by an independent design review panel and the preferred option was selected following discussion with LandCorp’s project team.

The preferred option was presented to senior staff and elected members at the City of Fremantle to ensure that the design direction was consistent with the intentions of the City.

The outcome of this design testing process is the Structure Plan map and supporting plans presented in this document.
Figure 18: OPPORTUNITIES AND CONSTRAINTS
8 Land Use and Subdivision Requirements

8.1 RESPONDING TO THE SITE

The concept design for White Gum Valley development includes a variety of sites that are suitable for apartments, maisonettes and single houses. A range of housing typologies have been explored and integrated into the site planning from the outset, ensuring that the structure plan provides the right orientation and lot configuration to support climate responsive built form outcomes in a high quality urban environment.

Lots will be positioned to accommodate the preservation of the on-site ridgelines, and roads will be designed to retain vegetation and trees of significance within the verges and dedicated POS to ensure a balance between the built and natural environment and a cohesive transition from the surrounding residential land uses and the LSP area.

The response to these landform elements and the preservation of the valued community buildings will make a significant contribution to the sense of place existing within the local community.

All land uses within the structure plan area will be consistent with the corresponding zone or reserve under the City of Fremantle’s LPS 4

8.2 RESIDENTIAL

The LSP will provide 1.66ha of residential land with a range of dwelling density and typologies allowing both social and economic flexibility. The site’s enviable location and golf course outlook to the north will naturally lend itself to the delivery of a variety of housing typologies that will in cater for a diverse range of households. Importantly, the LSP is sufficiently flexible to allow for changes in demand and household types.

The site presents a number of factors that influence the configuration and orientation of the road network and the lot orientation. These include:

- Existing topography
- Drainage flow points
- Location of existing vegetation and significant trees
- Interface treatment to POS areas

The road network of the structure plan area will provide a robust development framework through the location of road networks, and for the delivery of lots with a long north-south or east-west axis to benefit from optimal solar passive design.

8.2.1 MIX, PRODUCT & DESIGN

The development provides opportunities for a full cross section of community. Along Stevens Street, provision is made for higher density residential uses, taking full advantage of the golf course views and the northern aspect. Along its northern edge, development is envisaged to accommodate walk up apartment developments ranging between 3-4 storeys to optimise development potential and amenity.

Internal laneways will accommodate a variety of two story townhouses and maisonettes. It is intended that these dwellings will address the public realm with limited setbacks to provide a safe and secure internal network linking residential buildings to the community facilities on Nannine Avenue. These dwelling may include artist residences/studios providing opportunities for activities to spill-over into the laneways and public open space.
8.2.2 LOCAL PLANNING POLICY – DESIGN GUIDELINES

In order to ensure quality, site responsive design, a set of Design Guidelines for the Structure Plan area are to be prepared by the proponent in conjunction with and adopted by the City of Fremantle as a Local Planning Policy. The Local Planning Policy will be required to be in a form which the City of Fremantle are prepared to apply and enforce under Local Planning Scheme No.4 and it is intended that the R-Codes will be maintained as the statutory vehicle for development. The Design Guidelines will provide further guidance on the built form and design response within the LSP, including consideration of the following:

- Lots directly abutting Public Open Space and the green link (Yalgoo Avenue)
- Lots affected by rear laneways
- Narrow front loaded lots that require special consideration
- Lots directly abutting land reserved for ‘Drainage’
- Grouped housing and multiple dwelling sites
- Lots adjacent to the internal spine road

Design Guidelines, in the form of a City of Fremantle Local Planning Policy will ensure appropriate and best practice development outcomes are achieved in the above circumstances. Residential development is to be considered and assessed in accordance with any endorsed Local Planning Policy and other relevant statutory planning framework to ensure high quality built form outcomes that contribute to the unique character of the development and to ensure activation of the public realm.

8.2.3 CLIMATE RESPONSIVE DESIGN

The block structure has been designed to optimise lot orientation and facilitate climate responsive building design. This will ensure that buildings can benefit from solar access in winter and capture cooling breezes in summer. The Design Guidelines adopted for the structure plan area will provide guidelines specifying appropriate building setback from northern property boundaries to enable access to sunlight.

8.2.4 HOUSING DENSITY

Housing density is designed to achieve a density average of 30 dwellings per gross urban hectare. The densities have been distributed based on their spatial location in the context of the structure plan area and the wider locality and shaped by the outcomes of extensive community consultation. Density distribution will ensure a sensitive transition and integration between adjoining residential areas and the new development is achieved.

The LSP proposes a density range of R35-R80 across the site resulting in an estimated yield of 28 lots. This is to allow flexibility at subdivision stage to achieve the best design outcome. Figure 2 of Part 1 indicates the density across the structure plan area. As per provisions of Part 1 of the LSP, any subdivision is required to be consistent with the indicative density and is to provide a Residential Density Plan (Figure 2) upon application for subdivision approval, to be approved by the WAPC.
Residential development within the structure plan area is to, in the first instance, adhere to any Local Planning Policy for the site, and the requirements of the City’s Local Planning Scheme No.4 (particularly provisions of Local Planning Area 6), and the provisions of the Residential Design Codes.

8.2.5 DELIVERING AFFORDABLE LIVING

A range of affordable living options through compact, flexible and adaptable climate responsive design with a high level of energy and water efficiency will be included in the subdivision planning. Central communal amenities will be integrated to cater for the needs of a wide range of households.

Affordable living opportunities will be provided through the implementation of the following initiatives:

- Residential densities that response to the local context
- Variety in housing size and typology
- Compact and efficient dwellings
- Climate responsive design
- High quality public realm and communal facilities
- Access to community facilities
8.3 OPEN SPACE

The LSP proposes 0.25ha of open space (Figure 19), comprising 11.74 per cent of the LSP area and 1.74 per cent in excess of the standard 10 per cent requirement of State Government policy.

Liveable Neighbourhoods requires that at least 10 per cent of the gross subdivisible residential area is provided as public open space. This may comprise a minimum of eight per cent for active and passive recreational purposes where the remaining two per cent comprises restricted use public open space uses (drainage lands, natural and cultural features etc.). The LSP proposes 0.25 ha unrestricted public open space with no restricted open space as shown in Table 7 below.

<table>
<thead>
<tr>
<th>TABLE 7 – PUBLIC OPEN SPACE CALCULATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Site Area</strong></td>
</tr>
<tr>
<td>Less</td>
</tr>
<tr>
<td>No areas of to be removed</td>
</tr>
<tr>
<td>Total Net Site Area</td>
</tr>
<tr>
<td>Deductions</td>
</tr>
<tr>
<td>Dedicated Drainage Reserves</td>
</tr>
<tr>
<td>Total Deductions</td>
</tr>
<tr>
<td>Gross Subdivisible Area (GSA)</td>
</tr>
<tr>
<td>Public Open Space Requirement @10% of GSA</td>
</tr>
<tr>
<td>Public Open Space Contribution</td>
</tr>
<tr>
<td>May comprise:</td>
</tr>
<tr>
<td>Minimum 80% Unrestricted Public Open Space</td>
</tr>
<tr>
<td>Maximum 20% Restricted Public Open Space (cannot exceed 2% of required 10%)</td>
</tr>
<tr>
<td>Unrestricted Public Open Space Site</td>
</tr>
<tr>
<td>Consolidated unrestricted POS area</td>
</tr>
<tr>
<td>Total Unrestricted POS</td>
</tr>
<tr>
<td>Restricted Public Open Space Site (detention/inundation more often than 1:1 year event, MUW, Buffers etc.)</td>
</tr>
<tr>
<td>Consolidated restricted POS area</td>
</tr>
<tr>
<td>Total Restricted POS</td>
</tr>
<tr>
<td>Total POS provided</td>
</tr>
<tr>
<td>Total Surplus Unrestricted POS</td>
</tr>
<tr>
<td>Total Surplus Restricted POS</td>
</tr>
</tbody>
</table>
It should be noted that the civil engineering report (Appendix D) recommends that up to two transformers will be required to be relocated to an approved site within the development or within an adjacent road reserve and existing lot connections will require replacement. Western Power has advised that a transformer could be located within the POS area; however they are unable to confirm the location until the detailed design/subdivision stage. Should a transformer be located within the POS area, the area required by the transformer will not result in any substantial impact on the total POS contribution and the overall public open space area will remain at or above 10 per cent in accordance with State planning policy.

It is recommended that a condition of subdivision approval to reflect the above would ensure that the minimum 10 per cent POS contribution is sustained whilst allowing a degree of flexibility in the location of the transformers at the detailed design stage.

8.3.1 FORM & FUNCTION

One key area is identified within the LSP for public open space. This area has been selected in response to strong community support for:

- The retention of Sullivan Hall and the Mens Shed
- Preservation of selected mature trees

The function of this POS is to provide a high amenity passive link between existing residential development and the proposed lots created as part of this Structure Plan. The public open space will enhance the existing amenity of the area as a major place defining element. The retention of the community buildings will provide a landmark element and relationship that assists in orientation and legibility; and the retention of significant trees will preserve the naturalistic presence of the space.

The open space area will incorporate features and facilities to encourage residential growth to provide amenities to residents and visitors alike.

8.3.2 MANAGEMENT

Sullivan Hall and the Mens Shed are owned by the City of Fremantle and are local community facilities. It is proposed as part of the LSP that the buildings be retained and left in situ on the proposed public open space area to be ceded to the Crown.

It is understood that the City of Fremantle will retain the buildings, at least in the medium term, for the continued use as community facilities which may or may not include the current use. As noted above, the City has expressed the option of such buildings being used for child playgroups or community meetings.

The LSP proposes to cede the public open space to the Crown with the buildings intact. The management plan required at subdivision stage for the public open space reserve will address the maintenance and management of the public open space and the community buildings which is to be the responsibility of the City of Fremantle.
Figure 19: OPEN SPACE PLAN

KIM BEAZLEY PRIMARY SCHOOL SITE
LOT 2089 STEVENS STREET, WHITE GUM VALLEY

Legend:
- STRUCTURE PLAN BOUNDARY
- PUBLIC OPEN SPACE
- DRAINAGE
- EXISTING CADASTRE

Figure 19: OPEN SPACE PLAN

KIM BEAZLEY PRIMARY SCHOOL SITE
LOT 2089 STEVENS STREET, WHITE GUM VALLEY
8.3.3 LANDSCAPING

The landscaping vision for the Structure Plan area seeks to:

- Encourage the retention of significant trees as identified in preliminary studies.
- Retain the existing landscape, vegetation and landform character where physically possible through careful site and POS planning.
- Promote the use of sustainable practices throughout.
- Provide distinct landscape character types, including natural areas to preserve existing vegetation.
- Provide a link between the existing built form and the proposed residential development.
- Designed for the ease of maintenance and longevity through robust and tested solutions.

A concept landscape plan has been provided in Figure 20.

Community Facilities – Public Open Space

The plan currently indicates the potential relocation of the Mens Shed to allow for a new community hall suitable for playgroups, mens shed and other community activities. The landscape treatment around the buildings includes amenity such as an outdoor play space, veggie gardens, toilets, car parking and gathering spaces for outdoor learning. The north facing aspect and mix of built form and garden spaces allows for use all year round and caters to a for a variety of user groups.

Shared Street

The shared streets provide an environment aimed at minimising demarcations between vehicle traffic and pedestrians, by removing features such as curbs and road surface markings. To facilitate the above, the design of the road includes a flush paved surface, tree and shrub planting, furniture and lighting. This provides flexibility and allows the adjoining residents to use the street for ‘spill out’ and gathering spaces. Parking area has been designed to minimise impact on public areas and to limit traffic through the heart of the development.

North/South Road

The alignment of the road considered the retention of significant trees through the provision of wider verges and retention of site grading. This is particularly evident at the southern end, towards Hope Street. The increased verge width has therefore allowed for a site response design solution that provides terraced walls, gardens and path connections, softening the interface between the road and residential.

Yalgoo Avenue

The width of the verge and existing trees has been retained along Yalgoo Avenue. The lots fronting this verge are proposed to be at grade with the landscape allowing for an informal treatment including a meandering path and native gardens. The shrub planting fronting the lots will blur the boundary between public and private, encouraging activation and engagement with the street.
8.3.4 TREE RETENTION

There are a number of trees that have been flagged for retention as part of initial site investigation and studies (refer to section 6.4).

The proposed landscaping treatment and public open space has been designed to ensure the retention of trees in accordance with the recommendations of the tree surveys and reports provided in Appendix C. Many of these trees contribute to the existing character and sense of place of White Gum Valley and the LSP proposes to incorporate the trees into the design to ensure the future residents are able to benefit from the natural elements.

Those trees proposed to be retained are indicated in Figure 16 of section 6.4 of this report. It should be noted that there are a number of trees that are proposed to be retained that are likely to fall within proposed residential lots. The retention of such trees will be subject to the outcomes of the detailed engineering design process undertaken at subdivision stage. Trees will be relocated from private lots into the public open space and verge wherever possible.

Various vegetation, POS and landscaping management plans will be required as conditions of any approval and will include various management strategies for those trees recommended for retention.
8.4 MOVEMENT NETWORK

8.4.1 EXISTING NETWORK

The Structure Plan area is surrounded by a robust road network, highly accessible to the regional road network. Stevens Street is a Local Distributor under the care and control of the City of Fremantle with a carriageway of approximately 8.0 metres wide with 2 lanes and a 1.5 metres wide footpath along the southern boundary.

Nannine Avenue, Hope Street and Yalgoo Avenue are local roads with carriageway widths varying from approximately 6.0 metres to 7.4 metres. All intersections are unchannelised with intersections onto Stevens Street operating under yield conditions, the Hope Street – Nannine Avenue intersection controlled by Stop signs and the Hope Street – Yalgoo Avenue intersection controlled by a roundabout.

All road reserve widths for the existing local road network are in excess of carriageway requirements and can therefore accommodate a significant amount of landscape.

8.4.2 IMPACT ON LOCAL ROAD NETWORK

A traffic and movement study has been undertaken for the LSP area (Appendix G) in accordance with the WAPC’s Transport Assessment Guidelines for Developments (2006)., addressing the following:

- Existing local road network
- Street types and cross sections
- Traffic forecasts
- Access, intersection control and traffic management
- Pedestrian and cyclist facilities

The potential impact of the proposed LSP on the local road network has been analysed in the Transport Statement (Appendix G). All surrounding roads are currently operating within their classification and the potential increase in flows from the site is to remain at similar levels as currently experienced and operational performance is expected to remain unchanged.

The predicted traffic increase, when distributed to the adjacent intersections does not adversely impact on intersection performance or safety. As a result the proposed LSP will not trigger the need for any intersection upgrades.

FIGURE 21 – POTENTIAL VEHICLE TRAFFIC
8.4.3 ACCESS

The locations of the proposed access and egress to the site are considered appropriate and are expected to operate safely.

The traffic generated by the LSP are expected to be low and the presence of a central median in Hope Street restricting movement to and from the site to left in – left out is considered to operate efficiently without any requirement for breaks in the median strip.

Similarly, the impact on traffic along Stevens Street will be minimal and the demand for right and left turns into and out of the site is expected to be low, negating any warrant for auxiliary lanes. Standard designed unchannelised intersections are adequate to cater for the predicted traffic flow.

The Shawmac Traffic Impact Statement (Appendix G) recommends that the internal intersections and the intersections of the internal road with Stevens Street and Hope Street be designed to ensure adequate sight distance in accordance with relevant standards. The connection of the internal shared zones to Stevens Street and Hope Street should also be designed as crossovers rather than intersections.

The proposed vehicle access and movement network is considered to be consistent with the principles of Liveable Neighbourhoods and will not result in any undue impact or the requirement for road or intersection upgrades to the existing road network.

Detailed engineering drawings and road network plans will be required as a condition of subdivision approval.
Figure 22: SITE ANALYSIS - MOVEMENT NETWORK

WHITE GUM VALLEY - KIM BEAZLEY SCHOOL SITE

LEGEND:
- Existing Site Access
- Informal Parking
- Cycle Network
- Pedestrian Network
- Restricted Vehicle Access

Drainage Sump

Existing Site Access
Informal Parking
Cycle Network
Pedestrian Network
Restricted Vehicle Access

DATE 02.07.2013
DWG NO. 008
REV C
SCALE 1:1,000 @ A3
Figure 23: MOVEMENT NETWORK PLAN
KIM BEAZLEY PRIMARY SCHOOL SITE
LOT 2089 STEVENS STREET, WHITE GUM VALLEY
8.4.4 CROSS SECTIONS

All streets within the development are predicted to carry relatively low traffic volumes. Roads within the LSP will generally cater for less than 300 vehicles per day. At the access intersections with Stevens Street and Hope Street, vehicle movements are expected to be the highest (between 180-250 vehicles per day). The forecast traffic movements included in Shawmac’s Traffic Statement provide for quiet residential streets.

Figure 24 below shows the three (3) road types proposed within the structure planning area. These road types have been classified as AA, BB, and CC, with detailed cross sections demonstrating road and landscape treatments provided in Figure 25.

**FIGURE 24 – INTERNAL ROAD CROSS SECTIONS**

*Section AA*

The width of the proposed internal carriageway will be 6.0 metres, consistent with the design traffic volumes and with the recommendations of Liveable Neighbourhoods. This road will provide a footpath along both sides of the carriageway and on-street parking, with the details of the location of on-street parking being determined at subdivision stage through detailed engineering design drawings.

*Section BB*

Section BB shows an internal shared zone access way which is envisaged to be brick paved, catering for pedestrians, cyclists and vehicles. The detail design of this road treatment will need to allow for site distances to be maintained and the turning paths of residents and service vehicles to be accommodated where necessary. Such details will be determined at the subdivision stage through detailed engineering drawings.

*Section CC*

A typical laneway section providing access to rear laneway lots abutting Stevens Street, Yalgoo Avenue and Hope Street.
Figure 25: LANDSCAPE CONCEPT SECTIONS
WHITE GUM VALLEY - KIM BEAZLEY SCHOOL SITE
8.4.6 PEDESTRIAN AND CYCLE ACCESS

Stevens Street is a designated route on the Perth Bicycle Network and provides connections between Fremantle and the Principal Shared paths in Carrington Street and Leach Highway.

The surrounding road network is conducive to pedestrians and cyclists given the provision of pedestrian paths and the low volumes of traffic. This existing infrastructure provides an appropriate environment for pedestrians and cyclists accessing nearby local amenities and neighbourhood services included the White Gum Valley Primary School, the golf course and nearby local and neighbourhood centres.

As discussed above, internal shared zones (lanes) will be incorporated into the network system within the western portion of the structure plan area (Section BB), to encourage shared space and private and public realm interaction.

8.4.7 PUBLIC TRANSPORT

The site is serviced by an existing bus route which runs along Watkins Street to the south of the site. Accessibility to the bus route varies between 250-350 metres from within the LSP. This bus route (#502) provides a connection between Fremantle and the Bull Creek train station where other frequent bus and train connections are available.

The LSP is considered to be appropriately serviced by public transport in the context of the locality.
LEGEND:

- Pedestrian Paths
- Shared Paths
- Good On-Road Cycling
- Cycle Way Network
- Bicycle Lane or Sealed Shoulder

Figure 26: LOCAL CONTEXT PLAN - CYCLE & PEDESTRIAN NETWORK

SUBJECT SITE

WHITE GUM VALLEY - KIM BEAZLEY SCHOOL SITE
Figure 27: LOCAL CONTEXT PLAN - TRANSPORT NETWORK

LEGEND:
- Major Road (Primary Regional)
- Neighbourhood Connector
- Bus Stop
8.5 WATER MANAGEMENT

The Department of Water has advised that a Local Water Management Strategy (LWMS) is not required to be prepared for the LSP area given that there is a significant separation distance to groundwater of 12-19m AHD and there are no surface water features on the site (refer Appendix D).

The site is reasonably small for a structure planning area allowing the undertaking of infill development with minimal anticipated nutrient loadings. It is therefore considered that water quality could effectively be managed through reasonable conditions of subdivision and development. It is recommended that as a condition of subdivision an Urban Water Management Plan be prepared.

8.6 STORMWATER MANAGEMENT

As a result of the proposed residential development within the LSP area, there is an increase in stormwater runoff due to the additional flows associated with drainage of rainwater from hard surfaces and the recharge component of household irrigation.

There is an existing drainage sump located on the south-west corner of the LSP area; however this sump is already at capacity and cannot be utilised for this development. It is also anticipated that from preliminary design proposals that there will not be enough area to provide an above ground storage system within the development.

Stormwater on site will therefore be required to be infiltrated and managed separately to the existing City of Fremantle drainage sump. Stormwater from frequent events such as 1 in 1 year ARI event will be infiltrated as close to source as possible with stormwater from larger events such as 10 and 100 year events being contained and infiltrated in the road reserve through a combination of swales and underground storage systems.

There is an existing piped system that runs across Lot 2089 and discharges into the existing Council sump. During subdivisional works, the existing pipe will need to be removed and relocated to the proposed road reserves to maintain current storm water flow conditions. The realigned pipe work would act as an independent system, separate to the internal drainage network required to facilitate infiltration of storm water collected on site.

Stormwater for any grouped housing lots shall be contained and infiltrated internally to the lot and drainage runoff from roads and lots less than 300m$^2$ is able to be connected to the stormwater system contained in the road reserves. Specific drainage details will be provided at subdivision and development stage.

As mentioned above, the Department of Water has advised that no Local Water Management Strategy is required at the structure planning stage, with detailed drainage design forming part of the Urban Water Management Strategy at subdivision level (refer Appendix D).
8.7 SERVICING AND INFRASTRUCTURE

TABEC Civil Engineering Consultants has undertaken a review of the existing and planned infrastructure for the LSP area. A comprehensive servicing report is provided in Appendix D.

8.7.1 POWER

The site is sufficiently surrounded by existing overhead property power connections and pole-top power transformers are also located on the central southern boundary along Hope Street and another in the existing golf course on the northern side of Stevens Street. Western Power policy requires aerial power lines that abut a development to potentially be undergrounded as part of any development. It is likely that aerials that border the LSP require undergrounding as the development proceeds. This includes crossings over the roads surrounding the site as poles are removed to a new practical termination point. The pole-top transformers will require relocation to an approved site within the development and existing lot connections will require replacement with power domes. There is therefore, significant power infrastructure likely to be relocated external to Lot 2089.

The details of the servicing of power will be investigated at the detail design stage.

8.7.2 SEWER

It is intended that the existing sewer main at the corner of Nannine and Hope Street to the south west of the site will be extended along Hope Street with the entire development being connected to this single line. The engineering report (Appendix D) indicates that there is sufficient cover to serve the entire LSP area in accordance with Water Corporation requirements.

The Water Corporation has confirmed the existing scheme network has the capacity to support the proposed development. Details will be provided at subdivision stage.

8.7.3 WATER

Water mains will be extended along the southern side of Stevens Street and along Hope Street between Yalgoo and Nannine Roads. This will provide a circular reticulated system and connections to supply the anticipated lots within the LSP area.

Excavation to the existing gas pipeline will be required and is a potential risk. It is therefore identified that water main construction along Stevens Street should be explored and the Water Corporation has recognised and supported alternative alignments being sought where possible (Appendix D).

8.7.4 GAS

It is expected that gas connections may be provided as there are existing low pressure mains at the northern and southern boundaries of the site. It is expected these existing mains may facilitate internal service reticulation.

Investigation should be given to the existing pipe levels where new road intersections are proposed as the existing assets may require relocation if they cannot be accommodated with existing levels.

Gas is not a WAPC requirement for subdivision.
8.7.5 TELECOMMUNICATIONS

Given however this subdivision is more likely to be less than 100 dwellings in total, NBN Co is not unlikely to take ownership of the asset nor would they install fibre connections to each home. Rather, Telstra or a private communications provider in this case would enter into a developer agreement and provide a communications connection three months prior to the first occupancy of the new development. Whether it is fibre or more likely copper due to the existing assets in the area would remain to be negotiated.

8.7.6 EARTHWORKS

Preliminary investigations have been undertaken in regards to the anticipated site works for the LSP area (refer Appendix D).

The preliminary earthworks model aims to achieve a balanced cut and fill scenario that respects the existing ground surfaces and ensures the desired retention of trees identified in section 6.4 of this report. This model will be refined at the detailed design stage during the subdivision or the LSP area to take into consideration development detail such as retention of existing vegetation and natural topography.

The POS areas that don’t have a drainage function are able to provide opportunities for landform retention however, a level of cutting and filling will be required throughout the site to achieve level building lots whilst minimising retaining wall heights. Retaining walls will generally be required where lots abut POS or there is a fall between lots.

Based on preliminary models the proposed alignment of the north/south road and Yalgoo Avenue is a 6 metre level difference. Retaining between lots will be required and this will be partially made up by a 2.5 metre split level proposed for lots that directly abut Yalgoo Avenue.
8.9 IMPLEMENTATION

Given the size of the LSP area, it is envisaged that the site will not be required to be developed in stages. As part of refining the LSP, an indicative subdivision design and layout (Figure 28) has been prepared to demonstrate how the details and content of the LSP will be reflected on the ground. This indicative subdivision layout will be refined throughout the detailed design stage within the context of the requirements of the LSP and will be finalised as part of any formal subdivision application.

Further, as referred to in previous sections, and reflected in Part 1 Statutory Section of the Structure Plan, the following actions/requirements will need to be undertaken at the subsequent stages of the planning process:

Management Plans / Strategies / Studies (subdivision stage)

- Urban Water Management Plan
- Landscape Management Plan
- Flora & Vegetation Management Plan
- Servicing Plan
- Local Road Network Plan
- POS Management Plan

Other Statutory Requirements (subdivision stage)

- Design Guidelines for the Structure Plan area (prior to development)
- Liveable Neighbourhoods Public Open Space Schedule
- R-Code Density Plan
Figure 28: CONCEPT SUBDIVISION PLAN
KIM BEAZLEY PRIMARY SCHOOL SITE
LOT 2089 STEVENS STREET, WHITE GUM VALLEY