wgv
white
gum
valley
we love freo
White Gum Valley, and Fremantle more broadly, has a proud history of utilitarian building tempered with whimsy and individuality. Brick and weatherboard cottages repeatedly appear behind the low front fences that define so many local streets. Our submission is directly influenced by this local domestic context whilst also presenting a bold form that is influenced by Fremantle's industrial buildings.
culture
context
community
character
design + planning
community + character
one planet living
living laboratory
design + planning
housing character
It is not the intent of these guidelines to be overly prescriptive but rather to encourage high quality and innovative climate responsive built form that contributes positively to the unique character and amenity of the area.

New residences built at WGV have the opportunity to contribute to a distinct architectural character relevant and identifiable to White Gum Valley.

‘Loom’ Apartments by Harris Architects is the current proposal for WGV lot 1.

WGV AIMS TO HAVE A DISTINCT ARCHITECTURAL CHARACTER
**DESIGN CHARACTER**

**RERAINT**

The Split Level House has a form which references a typical timber cottage evident in the White Gum Valley suburb. A rich mix of materials (face brick, timber cladding, rendered brick) provides visual interest through the defining of the key elements that make up the house. The privacy screening, balcony balustrades and shading devices add a new layer of material diversity juxtaposed to the composition of the main building.

**LEGIBILITY**

The design takes advantage of the site condition by using different materials to define each level. This strategy reduces the perceived building bulk facing Karak Lane and provides a variety of materials and textures contributing to the activation of the laneway.

The selected material for the undercroft/garage is rammed earth which references the ‘buried’ nature of the lower level.
IDENTITY

The light coloured cladding on the upper level and the rammed earth on the ground floor add to other feature elements, like the projecting shade devices and the ‘juliet’ balcony, to provide the house with a unique character and identity.

The building bulk is reduced through the separation of the garage block. This garage is finished with a different material (painted face brickwork), but through finer detail and landscaping forms part of the whole composition.

The use of a perforated ‘living wall’ front adds identity, promotes street surveillance while retaining privacy and natural ventilation of the outdoor area.

MULTIPLICITY

The house is characterised by double brick and render as a core building material.

Interest is created through the use of timber cladding, balustrade detailing and window boxes that define and frame views but also provide effective shading.

The proposal for WGV corner lot designed by Richard Hammond Architect

Visually permeable fencing to the courtyard

Tree planting within front setback provides added interest

Highbury Homes has designed concepts for house and land packages at WGV

A 3 bed. x 2 bath. Approx. 160 sqm.

From $300,000 to $350,000 (turn key)
ELEGANCE
This house has a clear and rational built form, with a restrained mix of materials and colours. The roof eave and the upper level projecting over the ground floor responds to passive solar design principles providing shade to the glazed frontage. The generous use of windows provides visual interaction between the house and the surrounding context. The landscape and boundary walls contribute to the fine grain of the ground level with the use of local native plants and recycled brick.

VIBRANCY
Light framed, with corrugated cladding walls references a distinct Fremantle house material vernacular. The light colour walls respond to minimising heat gain and transference during summer. Screens and fencing add a aesthetic fine grain interest with practical considerations of shading and passive surveillance. Permeable fencing/gates provide visual interest and security without the need of a garage door that results in a blank, inactive elevation.

Contempo Living has designed concepts for house and land packages at WGV
A 3 bed. x 2 bath. Approx. 160 sqm.
From $300,000 to $350,000 (turn key)
DESIGN CHARACTER

DIVERSITY

GEN Y STEP HOUSE: three individual single bedroom apartments that are designed as multiple dwellings under the R-codes. The Gen Y House will be easily identifiable by the curved shape addressing the corner of Hope Street and Mouquet Vista. The balconies and terraces on upper levels add interest to the built form and promote surveillance of the public realm.

The building makes use of a restraint mix of materials, with light coloured cladded walls and contrasting window frames, balustrades and screening devices. The house provides carports for single parking and garage doors are not visible from the street.

FLEXIBILITY

The Split Level House concept allows for several internal arrangements within the same footprint – the house changes with the owners needs.

The Split Level House is a concept designed by CODA Studio to demonstrate a possible design response for WGV Lots 17 to 21.

The Gen Y Step House was designed by David Barr Architect as part of a competition for young architects to demonstrate contemporary design solutions which match the needs of their generation.
design guidelines
local planning policy
These Design Guidelines are for all single residential lots within the WGV estate.

Please note: All dwellings must be two storey at the primary frontage.
Prior to commencing the formal approval process for the design of your new home, LandCorp has arranged for you to have one meeting with the WGV Estate Architect to discuss these Design Guidelines and the process that you, your Architect, or Builder should follow to ensure your design complies with the guidelines and that you receive design endorsement in a timely manner.

**DESIGN ENDORSEMENT:** The applicant must submit to the WGV Estate Architect:

- An Application for Design Guidelines Approval form; including completed checklist.
- Two (2) full hard copy sets of all appropriate drawings as outlined in the Application Form.

Once the Estate Architect has deemed the plans to achieve the Development Controls (as per the checklist), the plans will be endorsed and one stamped full set returned to the applicant.

**DEVELOPMENT APPLICATION:** Plans are then submitted to the City of Fremantle for Planning Approval. The City will assess, and may require additional changes to the plans once they have been endorsed by the Estate Architect.

**DETAIL DESIGN ENDORSEMENT:** The applicant is to submit detailed (Building Licence standard) drawings and specifications to the WGV Residential Estate Architect. The Estate Architect will review the plans to ensure the design intent has been maintained and that any conditions of approval are met. Detailed Design will be endorsed and a stamped set of documents returned to the applicant.

Should the Estate Architect consider that the plans do not substantially achieve the Development Controls, the applicant will need to amend the plans or provide additional justification for the variation. If a re-assessment is required after stamped endorsement, a $500 fee will apply to have the drawings re-assessed.

**BUILDING LICENCE:** Prior to any siteworks or construction commencing, the applicant must obtain a Building Licence from the City of Fremantle Building Services Department.

To ensure that buildings comply with these Design Guidelines, all lots will have a caveat registered on the title pertaining to the conditions of sale and it will be removed once all conditions are satisfied.

**BY ADHERING TO THESE GUIDELINES THE WGV RESIDENTIAL ESTATE WILL BE RECOGNISABLE FOR ITS CLIMATE APPROPRIATE AND SITE SENSITIVE HOMES.**

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**INITIAL CONCEPT MEETING WITH WGV ESTATE ARCHITECT ENCOURAGED**

**SUBMIT DETAILED DESIGN AND COMPLETED CHECKLIST TO WGV ESTATE ARCHITECT**

- IF NON-COMPLIANT COMMENTS PROVIDED TO GUIDE LOT OWNER
- IF COMPLIES WITH DESIGN GUIDELINES AND CHECKLIST WGV ESTATE ARCHITECT WILL STAMP DRAWINGS AS ENDORSED

**SUBMIT DRAWINGS TO CITY OF FREMANTLE FOR DEVELOPMENT APPLICATION (DA)**

**DEVELOPMENT APPLICATION APPROVED**

**SUBMIT DETAILED DESIGN AND COMPLETED CHECKLIST TO WGV ESTATE ARCHITECT**

- IF NON-COMPLIANT COMMENTS PROVIDED TO GUIDE LOT OWNER
- IF COMPLIES WITH DESIGN GUIDELINES AND CHECKLIST WGV ESTATE ARCHITECT WILL STAMP DRAWINGS AS ENDORSED

**SUBMIT DRAWINGS TO CITY OF FREMANTLE FOR BUILDING LICENCE (BL)**

**BUILDING LICENCE RECEIVED**

**COMMENCE CONSTRUCTION IN ACCORDANCE WITH DESIGN GUIDELINES AND ALL REGULATIONS**

**COMMENCE CONSTRUCTION**

**APPLY FOR SUSTAINABILITY PACKAGE**
LOCATION
The WGV development has an area of 2.13ha and is bounded by Stevens Street to the north, Yalgoo Avenue to the east, Hope Street to the south and Nanneine Avenue to the west.

LONGITUDE AND LATITUDE:
32°02’00” S 115°44’00” E
NEAREST CITY: FREMANTLE, APPROX. 3KM

SITE HERITAGE
The City of Fremantle sits within the Aboriginal cultural region of Beeliar. Its Nyongar name is Walyalup and local people are called Whadjuk. WGV Residential Estate (former Kim Beazley School) is not included in the State Register of Heritage Places and no Aboriginal Heritage Sites have been identified within the vicinity of the site.

The existing Pigeon Racing Club Hall (occupied by the Fremantle Men’s Shed) and Sullivan Hall are not heritage listed, but the local community supports their retention and continued public use. They will be integrated into the upgraded public open space. The public open space will be maintained and managed by the City of Fremantle who will also determine any changes to the use of the halls.

TOPOGRAPHY AND SOIL CONDITIONS
The site lies at the low point of a valley running north south behind the Beaconsfield ridge. A drainage sump, managed and maintained by the City of Fremantle, is located in the south west corner. The site was previously berthed and levelled for the special school buildings, which were demolished in 2011. The embankments for the school created two large, level terraces separated by a lower area. These levels create a natural view corridor towards the golf course green spaces, and the lot layouts capture these views to the north by locating larger lots on the embankments to preserve this terrain.

INFLUENTIAL SITE FEATURES
Booyembara Park is located to the north of the site along with two golf courses. Typified by manicured lawns and fringed by mature native trees, this green space filters and cools winds from the north and provides a habitat for birds.

The existing Fishing Boat Harbour (Fremantle sun path: Summer and Winter)

CLIMATIC ZONE
The winter months from June to August are mild, with average temperatures of 18 degrees Celsius during the day, and 10 degrees Celsius at night. The wettest month of the year is July. Average yearly rainfall is around 764.6mm.

Nights are considered comfortable most of the year and night purging of hot air can be used effectively to maintain comfortable internal temperatures.

PREVAILING WIND
The winds follow the typical west coast trend of morning easterlies and afternoon westerly breezes that blow in from the ocean replacing the hot air trapped above the Perth metropolitan area and the Darling Ranges.

In summer this wind pattern is more pronounced. Strong afternoon southwesterly breezes, typically 20-30km/h, buffet the coastal region, can be used to cool interiors and for night purging.

The winter wind pattern is less predictable because variations in land temperatures are less extreme, leading to variable winter afternoon wind patterns.

TEMPERATURE RANGE
The summer months from December to February have an average temperature of 27 degrees Celsius during the day, which can rise above 40 degrees in summer, and 18 degrees Celsius at night.

SUN ANGLES
Solar access plays an important part in enabling climate responsive design solutions. In White Gum Valley the solar path is described by the diagram presented below.
CITY OF FREMANTLE
LOCAL PLANNING POLICY 3.15
FORMER KIM BEAZLEY SCHOOL SITE - WHITE GUM VALLEY

ADOPTION DATE: Adopted by Council 17 December 2014
AUTHORITY: LOCAL PLANNING SCHEME NO.4

STATUTORY BACKGROUND

Clause 5.2.2 of the City’s Local Planning Scheme No. 4 states that unless otherwise provided for in the Scheme, the development of land for any of the residential purposes dealt with by the Residential Design Codes (R-codes) is to conform to the provisions of the R-codes.

Part 7 of the Residential Design Codes 2013 states that a Local Planning Policy may contain provisions that amend or replace deemed-to-comply provisions.

Those deemed-to-comply provisions of the Residential Design Codes that are varied or replaced by this policy are as follows:

- 5.1.2 C2.1 – Street setback
- 5.1.3 C3.1 – Lot boundary setback
- 5.1.4 C4 – Open space
- 5.1.6 C6 – Building height
- 5.2.1 C1.1-C1.5 – Setback of garages and carports
- 5.2.2 C2 – Garage width
- 5.3.1 C1.1 and C1.2 – Outdoor living areas
- 5.3.5 C5.1 – C5.3 – Vehicular access
- 5.4.1 C1.1 – Visual privacy
- 5.4.2 C2.1 and C2.2 – Solar access for adjoining sites
- 6.3.1 C1 – Outdoor living areas
- 6.3.3 C3.1 – Parking

Variations to this policy may be approved where the City is satisfied that the development application meets the design intent of this policy and the Design Principles of the R-Codes.

Clause 10.2 of the Scheme empowers the Council to consider a broad range of considerations and impose conditions relating to these in dealing with an application for planning approval.

The White Gum Valley Former Kim Beazley School Site Local Structure Plan also requires a Local Planning Policy to be adopted for the area prior to an application for development being approved.

APPLICATION

This policy applies to the land bound by Stevens Street, Yalgoo Avenue, Hope Street and Nannine Avenue (the former Kim Beazley Primary School site).

This policy is divided into three areas and specific provisions are provided for each. These policy areas are:
- Lots 4-10 & 12-28 - R35 and R40 density coding
- Lots 1, 2, 3 and 11 - R60 and R80 density coding
- Lot 7 - R40 density coding

Figure 1 – Location and Residential Density Plan

The provisions of this policy apply to residential development assessed under Part 5 and Part 6 of the Residential Design Codes. In the event there is a conflict between this policy, and a provision contained within another Local Planning Policy, the more specific policy provision shall prevail.

DEFINITIONS

Habitable Living Area: has the same definition as “Habitable Room” in the R-codes but does not include bedrooms.

All other definitions are as defined in the R-codes and the City’s Local Planning Scheme No.4.

POLICY

Lots 4-10 and 12-28 (R35 & R40)

1. Street Setbacks

1.1 Dwellings shall be setback from the Primary Street and secondary street(s) in accordance with Figures 2 and 3.
COMPREHENSIVE GUIDE FOR RESIDENTS

WGV IS WA'S FIRST ONE PLANET COMMUNITY. IT WILL DEMONSTRATE THE VERY BEST IN MODERN, SUSTAINABLE DESIGN AND CREATE A COMMUNITY WHERE IT IS EASY AND AFFORDABLE FOR PEOPLE TO LIVE IN A WAY THAT MAKES SMART USE OF THE EARTH'S RESOURCES.

Realising WA's Potential.

LANDCORP
1.3. WHAT YOU CAN DO

Communities develop and grow over time. WGV has been designed to promote community interaction, and post-construction this will be supported by the City of Fremantle’s Engagement Officer as well as the existing services and amenities. Nonetheless the community will depend on the activity of the residents, and you can support this in a number of ways.

**Design and construction**
- Choose healthy construction materials, such as those that are low in toxic VOCs¹.
- Consider design opportunities to engage with the community, such as: linking your front garden to public space; making sure your home design is in harmony with the street and shows some design flair; designing quick and easy access to your bike for getting around your local area.
- When using treated wood in your garden, choose arsenic-free.

**Operations**
- Future opportunities will be explored for the public open space reserve to include a community garden, a multipurpose building, or a flexible covered trading area.
- Participate in local community events.
- Join the neighbourhood community group.
- Get a bike and benefit from the new cycle links.
- Welcome new residents.

**LOCAL INFORMATION**

**Healthy materials**
- The International Living Future Institute maintains a list of materials to be avoided in modern construction, The Red List: living-future.org/redlist
- Good Environmental Choice Australia (GECA) is a not-for-profit organisation that maintains a database of eco-labelled materials in Australia: www.geca.org.au

**Fitness and health**
- City of Fremantle’s Health and Wellbeing website www.fremantle.wa.gov.au/environmentalhealth
- Fremantle Public Golf Course - Montreal St, Fremantle www.fremantlepublicgolfcourse.com
- Royal Fremantle Golf Club (memberships required) www.royalfremantlegc.com.au
- “Step into Life” Outdoor Fitness Group (yoga, outdoor fitness) - Frank Gibson Park, Fremantle www.stepintolife.com.au
- Spanda School (yoga, meditation) - 19 Elcan St, Fremantle www.spandaschool.com
- Hilton Park Bowling and Recreation Club (bowls bowls, social) - Shepherd St, Beaconsfield
- ATOM Stadium (Australian football) - Cnr Moss and Marmion St, East Fremantle
- Burridge Martial Arts (martial arts) – 307 Stock Rd, O’Connor www.burridgemartialarts.com
- Jett’s 24 Fitness (gym) - Corner Stock Rd and South St, O’Connor www.jettsoftsv.com/club/evonner
- Anytime Fitness (gym) - 298 South St, O’Connor www.anytimefitness.com.au
- Fremantle Leisure Centre (gym) - 10 Shuffrey St, Fremantle www.fremantle.wa.gov.au/flc

**Public parks**
- Booyeembara Park (public park) - Montreal St, Fremantle
- Valley Park (public park and play) - Watkins and Nannine Ave, WGV
- Davies Reserve (public park and play) - Watkins and Wood St, WGV
- Stevens Reserve (public park and play) - Stevens St, Fremantle
- Bruce Lee Oval (public park and soccer) - South Street, Beaconsfield
- Frank Gibson Park (park, netball facilities) - High St, Fremantle

**City of Fremantle programs**
- Hilton Community Centre is available to use for community groups, runs adult learning and fitness classes in conjunction with The Meeting Place – 36 Paget St, Hilton
- Fremantle Arts Centre runs courses on various sculpture, arts and crafts, writing, painting, photography, performing arts and more – 1 Finnerty St, Fremantle www.fac.org.au/courses
- Hilton Harvest Community Garden www.hiltonharvest.weebly.com

³ VOCs = an abbreviation for volatile organic compounds. These are gases which are emitted from certain materials.
community character
Sustainable Housing for Artists and Creatives

Partnership between LandCorp / Access Housing / SHAC

1250m² – R80
- 12 apartments
- 1 crowdfunded artist studio
- NRAS rental subsidy
- Shared equity opportunity
one planet living
One Planet Living – holistic framework

Integrated developments

Focuses project team on actions that can make a difference
4. Summary of Action Plan

<table>
<thead>
<tr>
<th>One Planet Principle</th>
<th>Headline goals and targets</th>
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<tbody>
<tr>
<td><strong>Health and Happiness</strong></td>
<td>Foster a strong sense of community</td>
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<td>Foster a healthy community</td>
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<td><strong>Equity and Local Economy</strong></td>
<td>Ensure a diversity of housing type and tenure</td>
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<td>Encourage residents to engage in fair trade and local economy programmes</td>
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<tr>
<td><strong>Culture and Community</strong></td>
<td>Create a culture of sustainability</td>
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<td></td>
<td>Create a culturally vibrant community</td>
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<tr>
<td><strong>Land Use and Wildlife</strong></td>
<td>Create two new habitats</td>
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<td></td>
<td>Contribute to an increase in biodiversity</td>
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<td><strong>Sustainable Water</strong></td>
<td>Reduced potable water use by 75%</td>
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<td></td>
<td>Reduce flooding risk – 100% of stormwater treated onsite</td>
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<td><strong>Local and Sustainable Food</strong></td>
<td>Access to food growing space (100% of dwellings)</td>
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<td></td>
<td>Edible landscaping (30% of landscape trees)</td>
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<td></td>
<td>Encourage sustainable and healthy purchasing habits</td>
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<tr>
<td><strong>Sustainable Materials</strong></td>
<td>Reduced embodied energy of construction</td>
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<td>Sustainable materials in operation</td>
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<td><strong>Sustainable Transport</strong></td>
<td>Enable a sustainable transport carbon footprint</td>
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<td>Reduced private car ownership</td>
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<td><strong>Zero Waste</strong></td>
<td>Maximise construction waste recycling (95%)</td>
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<td></td>
<td>Reduction in household waste in operation (30%)</td>
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<td>Recycling rate of household waste (70%)</td>
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<tr>
<td><strong>Zero carbon</strong></td>
<td>Maximise energy efficiency (34% reduction)</td>
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<tr>
<td></td>
<td>Renewable energy generation (100% renewable energy)</td>
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living laboratory
WA’s first open source living laboratory

- Energy and water monitoring
- 60% reduction in scheme water (estate wide)
- 60% reduction in grid energy
- Net zero energy houses (solar panels)
- Up to 80% off grid apartments (panels & batteries)
- Building scale micro grid – strata governance
- Blockchain peer to peer ‘internet energy’
- e-Tool lifecycle assessment (lite)
Water Corporation Waterwise exemplar

- Fit for purpose non potable alternatives
- Community bore – POS, gardens, verges
- Rain water tanks – toilets, washing machines
- Water efficient taps and fittings
COMMUNITY BORE (Stormwater Reuse)  
(Non-Drinking Water Irrigation Scheme)

<table>
<thead>
<tr>
<th>Community Bore</th>
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<tbody>
<tr>
<td>Development catchment</td>
<td>2.82ha</td>
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<tr>
<td>Total annual rainfall interception</td>
<td>17,000kLpa</td>
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<tr>
<td>Previous groundwater irrigation demand (est.)</td>
<td>15,000 – 18,000kLpa</td>
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<tr>
<td>WGV POS irrigation demand</td>
<td>2,000kLpa</td>
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<tr>
<td>WGV residential irrigation demand</td>
<td>3,000kLpa</td>
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[Diagram of a water management system]
PERFORMANCE MONITORING & END-USER FEEDBACK
Gen Y demonstration housing project

- 251m²
- Zoned R40
- 3 apartments
- Leverage multi unit housing code
- Design for Gen Y lifestyle, tech, shared space
- Alternative, sustainable construction
- 2 car bays, shared open space

- Solar PVs & battery storage trial - governance
  - billings – sinking fund – energy trading
  ('internet energy')
- Underground rain water tank – shared
- Community bore - gardens
- Efficient taps and fixtures
- Light weight timber frame
- Passive Solar
Timber salvage and habitat creation
Urban forest / tree canopy target
Sump conversion – City of Fremantle & LandCorp

- Fenced, weed invested sump at capacity
- 1800m³ volume
- 900m³ underground cells
- 900m³ above ground biodiversity basin
thank you.