Local Planning Policy 9 - Dual Density Design (LPP9)

Management Procedure	Relevant Delegation

Purpose

1. Background

This policy has been prepared in response to recommendations of the Local Housing Strategy (2011) which has sought increased densities in strategic locations throughout the City. This is in response to State Planning Policy Perth and Peel 3.5 million which outlines strategic urban infill goals for local governments and containment of urban sprawl through consolidation measures.

2. Application of the Policy

This policy applies to all properties located within the City of Kalamunda which in accordance with Local Planning Scheme No. 3 have an associated residential density code with dual coding. For example, R25/40 or R20/30.

This policy is considered to be a Local Planning Policy and shall be considered in all applications for planning approval under the City of Kalamunda Local Planning Scheme No.3 (the Scheme) and approval under the R Codes for residential development in dual density coded areas.

The City of Kalamunda will also apply this policy when preparing and determining local structure plans and local development plans and will have regard to this policy when making recommendations to the Western Australian Planning Commission on subdivision of land for residential development in dual density coded areas, to ensure the lots created can be developed in accordance with this policy.

This policy applies to land within the City of Kalamunda and will be used by the City when determining areas for recoding.

3. Statutory Authority / Legal Status

This Policy has been prepared under and in accordance with Schedule 2 of the Planning and Development (Local Planning Scheme) Regulations 2015 (The Regulations and Part 7 of the Residential Design Codes of Western Australia (R-Codes).

a) Relationship to Local Planning Scheme No.3
This policy is a planning policy prepared and to be read with regard to the general provisions and objectives of, Part 2 the Scheme. The policy augments and is to be read in conjunction with the provisions of the Scheme relating to development.

If there is a conflict between this local planning policy and the Scheme, then the Scheme shall prevail.

b) Relationship to other state planning/ development control policies.
This policy has due regard to and should be read in conjunction with state planning policies. Of particular relevance to this policy are:

i. State Planning Policy 1 – State Planning Framework.
ii. State Planning Policy 3.1 – Residential Design Codes.
iii. State Planning Policy 3.7 - Planning in Bushfire Prone Areas
iv. State Planning Policy - Liveable Neighbourhoods
v. State Planning Policy 2.2 Residential Subdivision

c) Relationship to other local planning policies
This policy has due regard to and should be read in conjunction with the City of Kalamunda other local planning policies. Of particular relevance to this policy are:

i. Local Planning Policy P-DEV 14 Earthworks
ii. Local Planning Policy P-DEV 20 Outbuildings and Sea Containers
iii. Local Planning Policy P-DEV 45 Public notification of planning proposals
iv. Local Planning Policy P-DEV 28 Reflective material in cladding or roofing, Guidelines for assessment
v. Local Planning Policy P-DEV 61 Retention and Upgrade of Grouped dwellings

This policy is prepared under Part 2 of the Scheme.

4. Policy Objectives

To specify policy provisions relating to Dual Density Coded properties *within* the dual density coded areas of Local Planning Scheme No.3. The objectives of the policy include:

a) Providing policy guidelines in terms of development standards suitable for the City of Kalamunda for all residential development within the Scheme No.3 area (dual density coded areas).
b) Promoting the development of a sustainable community which is environmentally sustainable and utilises best practise measures relating to energy efficiency and water sensitive urban design.
c) To create functional and liveable neighbourhoods which accommodate a diverse community and range of household types.
d) To create safe neighbourhoods where anti-social behaviour is discouraged through the use of best practice CPTED (Crime Prevention through Environmental Design) principles.
e) To encourage new developments to incorporate best practise urban design principles which enhance the built environment and create attractive and functional neighbourhoods.

5. Purpose

State Planning Policy 3.1 – Residential Design Codes (the R Codes) includes provisions for decision-makers to prepare local planning policies to alter certain development standards of the R Codes where a specific local need arises. The R Codes also acknowledge that applications with proposals which do not satisfy the deemed-to-comply provisions of the R -Codes may need to rely more specifically on local housing requirements and design objectives.

Further to the requirements of the R Codes, for assessment of applications within the dual density coded area this policy provides direction regarding local housing objectives, as well as variations relevant to the deemed-to-comply provisions of the R Codes. This policy provides assessment parameters for design principles based assessments within the local Kalamunda City context.

This policy should be read in conjunction with the R Codes.

6. Structure

Purpose: Outlines the application and purpose of the policy.
Policy Statement*:* Provides guidance on satisfying Scheme requirements and achieving the higher density code as well as providing policy rationale.
Policy Principle: Provides policy rationale and principles relating to the policy requirements specified in the Policy Statement.

Policy Table: Provides design criteria and policy requirements relating to residential development.
Explanatory Notes: Definitions and further explanation of terms used including a section for Frequently Asked Questions and Answers.

Policy Statement

Residential Development

1. Development at the higher density code for dual density codes lots.

Dual density codes apply to a number of areas as per the recommendations of the City's Local Housing Strategy and are drawn onto the Scheme map by notation such as 'R20/R40' or 'R20/R30'. These notations represent density codes as listed in the R Codes. While multiple density codes can apply to a property, it can only be developed or subdivided under the provisions of one of the density codes.

2. Determining when Density Code applies

At the time of a development or subdivision application being assessed, the City will determine if the higher or lower of the density codes will apply to the subject property. Generally, the lower density code will apply unless the applicant has satisfied Clause 5.24 of the Scheme, and the City has given permission to develop at the higher density code.

3. Satisfying Scheme requirements

Part 5 of the Scheme sets out criteria for assessing development applications and applying one of the two density codes. Following is an explanation for each criterion and a favourable method to satisfy it.

4. Streetscape and Urban Design

Minimum Lot Size requirement for Dual Density Coded Areas

In considering development and subdivision applications for land within the dual coded areas depicted on the Scheme Map, the City will apply the lower density unless:

5.24 Dual Density Coded Areas

5.24.1 In considering development applications for development of land within the dual coded areas depicted on the Scheme Map, the local government will apply the lower density unless:

a) The minimum area of the total development site being not less than 1,000 square metres; or

b) *The parent lot has two or more frontages to a public road; or*
c) *The parent lot is the only lot between two lots with two or more frontages to a public road; or*
d) *The parent lot is the only lot between two lots where on or both of the adjoining lots have been developed at the higher dual density code; or*
e) *The development is designed to accommodate a mixture of dwelling types and shall include two or more types of dwelling as defined by the R-Codes and at least one dwelling in the development is 2 storeys; and*
f) *The development is designed with due regard for any relevant Local Planning Policy or Design Guidelines for dual density coded areas; and*
g) *The development can be serviced by reticulated sewerage in accordance with the Government Sewerage Policy.*

5.24.2 In considering subdivision applications for land within the dual coded areas depicted on the Scheme Map the local government will recommend that the lower density be applied unless:

a) *The parent lot not less than 1,000 square metres; or*
b) *The parent lot has two or more frontages to a public road; or*
c) *The parent lot is the only lot between two lots with two or more frontages to a public road; or*
d) *The parent lot is the only lot between two lots where on or both of the adjoining lots have been developed at the higher dual density code; or*
e) *It is demonstrated that the subdivision is designed to facilitate future development which can accommodate a mixture of dwelling types and shall include two more types of dwelling as defined by the R-Codes and at least one dwelling in the development is 2 storeys; and*
f) *The subdivision is designed with due regard for any relevant Local Planning Policy or Design Guidelines for dual coded areas; and*
g) *The subdivisions can be serviced with reticulated sewerage in accordance with the Government Sewerage Policy.*

Recoding the designated areas of High Wycombe and Maida Vale, Forrestfield and Kalamunda with dual density codes and amending the Scheme Map accordingly.
Where an applicant seeks to develop or subdivide at the higher coding in a dual density coded area, land owner(s) are required to submit a development application. Where the total site area is greater than 1000m2 it has deemed to have met the above-mentioned requirements.

5. Dwelling Diversity

In order to achieve the higher density code, two or more dwelling types shall be included in any, including at least one dwelling being two storey where seeking application of the higher density code that is:

a) Less than 1000m2 in land area; or
b) Does not front more than one public street; or
c) Is not a lot between two lots which have more than one public street;
d) Is not a parent lot between two lots where one or both of the adjoining lots have been developed at the higher dual density code.

Where a development site is over 1000m2 the requirements for dwelling diversity does not apply.

A street is defined as per the Residential Design Codes as:

"Any public road, communal street, Private Street, right of way or other shared access way that provides principle frontage to a dwelling but does not include an access leg to a single battle-axe lot".

For the purposes of dwelling mix, single storey and two storey grouped dwellings will be considered as different dwelling types.

Dwellings are categorised into different typologies as defined by the R Codes, these include:

Table 1 Dwelling Diversity

Dwelling Type	R Code definition
Single Dwelling (House)	*A dwelling standing wholly on its own green title or survey strata lot, together with any easements over adjoining land for support of a wall or for access or services and excludes dwellings on title with areas held in common property.*
Grouped Dwelling (Single Storey)	*A dwelling that is one of a group of two or more dwellings on the same lot such that no dwelling is placed wholly or partly vertically above another, except where special conditions of landscape or topography dictate otherwise and includes a dwelling on a survey strata with common property. (e.g. villa, unit, town house)*
Grouped Dwelling (Two Storey)	

Ancillary Dwelling	*Self-contained dwelling on the same lot as a single house which may be attached to, integrated with or detached from the single house.*
Multiple Dwelling	*A dwelling in a group of more than one dwelling on a lot where any part of the plot ratio area of a dwelling is vertically above any part of the plot ratio area of any other; but:* • *Does not include a grouped dwelling, and* • *Includes any dwelling above the ground floor in a mixed use development.*
Special Purpose Dwelling	Includes ancillary dwelling, aged or dependent persons dwelling or a single bedroom dwelling: *Attracts a 1/3 reduction in site area requirement. Clause 5.1.1 C1.4 of the R Codes Applies*
Aged or Dependent Persons Dwelling.	*Aged Person, is defined as a person who is aged 55 years and over. Limited in plot ratio to 100m2 for grouped and 80m2 for multiple dwelling format.*
Single Bedroom Dwelling	*A Single bedroom dwelling is defined as a dwelling that contains a living room and no more than one other habitable room that is capable for use as a bedroom. Maximum plot ratio of 70m2*

6. Policy Principles

a) The protection of neighbourhood and streetscape character via the local planning policy recognised as a core town planning responsibility of local government. The Residential Design Codes, a Statement of Planning Policy, encourages local government to prepare local planning policies to address local issues of streetscape and neighbourhood character.

b) The Codes state: *In established areas there appears to be a consensus that new development should follow the characteristic patterns of housing types, street setbacks, scale, front gardens and street rhythm.*

c) The City of Kalamunda incorporates a diverse range of housing stock which is characterised by varied streetscapes some of which have a relatively consistent scale and form. This policy aims to protect and reinforce the existing development patterns

identified in different parts of Kalamunda City through appropriate design parameters, whilst also encouraging innovative housing design that meets the needs of a changing community.

d) A minimum development site area requirement encourages developers to achieve better design outcomes by generally incorporating a wider development site frontage (generally when two side-by-side lots are combined) and a single access point. This requirement seeks to encourage neighbouring land owners to collaborate to achieve joint development outcomes such as joint access driveways through use of reciprocal rights of carriageway or easements registered on title for mutual access, which reduces the prominence of driveways and crossovers within the streetscape.

e) A minimum development site area requirement or minimum of two street frontages creates an opportunity for greater passive surveillance and contiguous streetscape outcomes which can be achieved whilst promoting Crime Prevention through Environmental Design (CPTED) urban design principles for safer community design.

f) Corner lot development scenarios are identified as a core opportunity for higher density housing with dwellings / lots being able to have their own street frontage and therefore promoting consistent streetscape and passive visual surveillance.

g) Where a development site is provided with a mixture of dwelling types, it will cater for varying demographics, and thus providing for a diversity in housing. This is considered to be a highly desirable outcome as it will allow for a range or family types from single person to families within a development. As a primary objective, it is deemed acceptable for an exemption to the 1000m2 land size requirement in order to achieve dwelling mix.

7. Adjoining Property. Joint Site Access and Reciprocal Rights of Carriageway.

a) Where a dwelling mix cannot be achieved nor is the site located with access to two public streets. Or in between to lots which have access to two public streets, an applicant may wish to achieve the higher density code by collaboration with a neighbouring property owner to meet the 100m2 land area requirements.

b) A land owner may submit a development application in conjunction with and approval of an adjoining land owner. All land owners will need to sign a joint development application form and agree to the plan of development.

c) Site development may be staged with access constructed to standards specified by the City in a configuration acceptable to the City's Engineer.

8. Policy Principles

A minimum lot size requirement is the Scheme requirement for the following reasons:

a) The City makes provision for adjoining land owners submit a development application concurrently to form a "site" with 1000m2 of land or greater. Allowance for site to develop at a time has been made by provision of joint site vehicular / pedestrian access.

b) The policy allows for adjoining lots (not amalgamated) to form one development site for the purposes of application for the higher dual density code through reciprocal rights of carriageway / easements being created to form a development site greater than 1000m^2 or to achieve a development site with two or more designated street frontages.

c) Sites may still be amalgamated to meet minimum lot size or more than two street frontage requirements.

9. Retaining of Dwelling.

Where an existing dwelling is proposed to be retained as part of any subdivision, grouped dwelling or multiple dwelling development or mixed use development, the retained dwelling must be upgraded, as determined by the City of Kalamunda, so that the external appearance of the dwelling is of equivalent maintenance standard to a new development.

(See Local Planning Policy 8 – Retention and Upgrade of Grouped Dwellings (LPP8) for reference)

In addition to the requirements of Local Planning Policy 8 – Retention and Upgrade of Grouped Dwellings the additional requirements for retaining any dwelling are applicable in dual density coded areas:
Where a dwelling is retained the required upgrading shall involve the following elements:

a) Car parking bays, Carports and garages shall be designed as to blend with the main dwelling with respect to roof design, roof pitch, colours and materials. If for example the dwelling is brick, the pillars to the carport should be in a matching brick or brick render.

b) All non-original extensions or additions that are viewable from the street and not of a material or colour matching the original dwelling, shall be demolished. This requirement includes the removal or upgrade carports and garages, patios and pergolas that are visible from the street and which are not part of or compatible with the colours and materials of the original dwelling. Structures may be retained to the rear of the dwelling.

c) All roofing to be upgraded, either repainted or replaced. This shall include exterior guttering and downpipes.

d) All garage doors viewable from the street are to be replaced if not in a condition which is deemed to be of an equivalent maintenance standard for a new dwelling.

e) Building façade to be upgraded and repaired. This may include rendering existing brick or painting to a neutral colour or painting existing rendered façade. This may also include upgrading façade material (Hardy plank / fibro where applicable) or repointing of brickwork, repairing / replacing or repainting window frames.

f) Replacing or repairing driveways and crossovers which are undrained, extensively cracked and or in a state of disrepair.

g) Replacement of substandard or asbestos boundary fencing. Where fencing is deemed a Dividing Fence the applicant shall liaise with the adjacent property owner(s) and shall abide by the requirements of the Dividing Fences Act 1961.

h) Where retention and upgrade to an existing dwelling(s) are sought, the applicant shall provide a schedule of works in accordance with the requirements of Local Planning Policy P-Dev. 61- Retention and Upgrade of Grouped Dwellings.

i) Compliance with Sustainable Design Principles, Clause 14 of this policy.

j) Compliance with all other requirements of this policy.

10. Policy Principles

a) Encourage replacement development which is of a higher standard in terms of sustainability, energy efficiency and better streetscape and urban design outcomes. Where a dwelling is proposed to be retained, it shall be upgraded to a maintenance standard of a new dwelling regardless of dwelling type.

b) A key objective of this policy and the Local Housing Strategy is to improve design and amenity of existing neighbourhoods. By requiring the replacement and / or upgrade of all existing buildings, this provides the developer with the ability to achieve a higher standard of building design including energy efficiency, sustainability and urban design objectives of this policy.

The removal of all buildings may allow for better articulated and designed development sites where space utilisation is maximised, and higher density outcomes can be achieved more succinctly.

11. Dwelling Orientation & Legibility

Dwelling(s) shall be designed and oriented to address the public street, right of way, communal driveway and public open space.

a) Each elevation fronting a primary or secondary street shall be provided with openings to habitable rooms of not less than 1.5sqm in surface area to provide visual surveillance to and from the dwelling. Blank facade walls facing a street will not be permitted.
b) For dwellings that are fronting the street the front door to a dwelling shall be orientated in clearly legible location. For dwellings which do not front the street, the front door shall be visible from the access driveway.
c) To accentuate and identify a dwelling front entry, architectural features such as porticos or verandahs may be added to direct a pedestrian toward the primary entry to a dwelling or building.
d) Where Multiple Dwellings or Mixed Use development is proposed, a clearly defined communal entry or courtyard shall be provided.
e) Where more than 5 dwellings are proposed within any development, the proposal shall include 'way finding' signage and maps where applicable, to provide and assist visitors and residents; with intercom controls to manage visitor access to private areas.

12. Dwelling Design and Scale

Dwellings should be designed with appropriate scale and proportion to the streetscape and human scale.

Design solutions for the design of buildings will include the following considerations:

a) Changes in texture, material, detail and colour to modify the prominence of certain elements.
b) Public artwork or treatments to exterior blank walls.
c) Plant equipment, solar energy systems and stormwater collectors should be carefully designed to avoid visibility from surrounding spaces and buildings.
d) Using materials that complement prevailing materials found in the surrounding area.
e) Being aware that lighter colours project forward, whereas darker colours recede.
f) Horizontal elements can reduce building bulk, whereas vertical elements may add to bulk.
g) Roof treatments should be integrated with the building design and proportionate to the overall building size, scale and form.
h) Roofing material and colour should complement the building.
i) The use of good quality and robust materials, finishes and elements, resilient to wear and tear, and easy to repair and upgrade.

j) Safety and security is promoted in building design providing for clearly defined public versus private spaces, providing well-lit communal spaces and access points appropriate to the size and scale of the building(s).

13. Policy Principles

Best practice design achieves an appropriate built form by responding to its site as well as surrounding built fabric, in a considered manner, mitigating negative impacts on the amenity of neighbouring properties and the public realm.

14. Stormwater Drainage

A stormwater management plan shall be submitted in accordance with Clause 5.3.9 and 6.3.8 of the R Codes, as part of any development application for redevelopment in dual density coded areas.

Details shall include:

a) Stormwater drainage plan demonstrating the containment of storm water run-off within the site. This should be contained on-site using a method approved by the City's engineer.

b) Stormwater retention to the existing dwelling to upgraded to current standards as per City of Kalamunda's standards and specification.

c) Paths and driveways should be developed using pervious materials.

Refer to Appendix 4 for further information on pervious treatments.

15. Policy Principles

a) By requiring a minimum amount of landscaping and other features, building bulk and hard surfaces can be reduced, making streets more attractive and inviting, while stormwater management can be more effective.

b) Prioritisation of soft landscaping in redevelopments to facilitate a reduction in stormwater runoff and wastage, and provide for streetscapes which accommodate water infiltration.

c) Provision of surfaces which accommodate water infiltration with redevelopments.

Refer to Appendix 7 for further information regarding rain tanks to accommodate on-site drainage.

16. Utilities and Facilities

Essential utilities and facilities being provided and located in a suitable location.

a) All waste services and bin storage areas shall be located behind the front building line and shall be appropriately screened so as not to be seen from the street.

b) For developments of two or more dwellings, bin pads shall be provided within the verge area to the satisfaction of the City.

c) All store rooms shall be located behind the front building line and shall be appropriately screened so as not to be visible from the street.

d) All clothes drying areas shall be located shall be located behind the front building line and shall be appropriately screened so as not to be seen from the street. In the case of multiple dwellings, any clothes drying facilities located on balconies shall be screened so as not to be seen from the street or approach to the dwelling.

17. Policy Principles

a) By requiring additional standards for the provision of essential services, the visual presentation of such services will create a more visually appealing development, with rubbish bins and clothes washing screened from the street and to the approach to dwellings and buildings.

18. Vehicular Access and Visitor Parking

Where available, vehicular access shall be from a secondary street, right of way or communal access-way and the number of crossovers for any development shall be minimised.

19. Vehicular Crossovers and resident parking.

Further to the requirements of the Scheme, the number of crossovers for any development not located on a freehold lot shall be limited to one access point per site frontage, with the following requirements applicable:

a) Where common property driveways are proposed, all vehicle access and crossovers shall be via the common property driveway and second crossovers to the primary street frontage will not be permitted.

b) For the purpose of pedestrian safety and visual amenity, crossovers shall be restricted to one per street frontage per lot.

c) Private parking should be located where it is not visible from the street. Garages and carports shall be located behind the front setback line and orientated towards the access driveway rather than facing the street frontage.

Table Two Garage and Carports	
Higher Residential Design Code	**Minimum Carport / Garage Setback Required (Primary Street)**
R30	4 metres
R40	4 Metres
R60	2 metres

d) Private parking may be screened with vegetative planting
e) Where a corner lot is being subdivided/developed the number of crossovers shall be limited to one single width crossover per lot/dwelling.

20. Policy Principle

a) By reducing the number of crossovers, there is a lessor chance for conflict between vehicles and pedestrians; there will also be more opportunity to provide landscaping or open space in front of dwellings. This provision will apply to all subdivisions and development including freehold subdivision in dual coded areas.

21. Street Walls and Front Fencing

Where proposed as part of a development or subdivision within a Dual Density Coded area, the following provisions apply:

Further to the requirements of the City's Policy P-Dev. 57 for Street walls, Fencing and Gates the following applies:

a) Compliance with the requirements of the R Codes, Front fences and walls are not to exceed a maximum height of 1.8m. The portion of the front fence / wall shall be visual permeability above 1.2 metres from natural ground level being achieved. Private parking may be screened with vegetative planting.

b) For corner lots, solid fencing along the secondary street boundary shall not exceed more than half the length of that boundary where it is behind the front setback area. The remaining length of fence shall be visually permeable above 1.2m in height. Refer to Appendix 6 for a diagram on secondary street fencing.

c) Powder coated steel or aluminium sheeted fencing is not an acceptable material and will not be approved within the street setback area as defined by the R Codes.

d) All retaining walls within the street setback area greater than 500mm as measured from natural ground level will require planning approval. All other retaining walls are subject to the requirements of the R Codes and any applicable Local Planning Policy for retaining and earthworks.

22. Sustainable Design Principles

For the purpose of achieving the higher density coding of the dual density code, the following requirements must be achieved in order to satisfy the City's requirements for energy efficiency and sustainable design.

a) Roofing materials shall be non-reflective. Black or dark coloured roofing material is not permitted.

b) Solar panels, Provision of a minimum of 1.5kw photovoltaic solar panel system.

   i. Solar panels to be orientated to be in a full sun from 9am to 3pm in mid-winter
   ii. Solar panels should be installed in a north-facing position with minimal shading. North-east facing solar panels are also ideal for collecting solar energy.
   iii. New developments are encouraged to be designed to avoid overshadowing of solar energy systems on an adjoining site. An assessment of a development application will be undertaken in accordance with Clause 5.4.2 of the R Codes in each instance.

   (Refer to Appendix 9 for a diagram on the positioning of solar panels.)

c) The Provision of a minimum of 3000 Litre capacity rain water tank shall be provided for on site where the subject lot exceeds 300m2 or one tank per four multiple dwellings. The rain water tank shall be plumbed to either a toilet or laundry within the dwelling; or alternatively an approved grey water reuse system that collects grey water from the laundry or bathroom and re-directs it for garden irrigation/ground water recharge.

   (Refer to Appendix 8 for an additional information regarding Grey Water Treatment.)

d) The dwelling(s) shall demonstrate a Nationwide House Energy Rating Scheme (NatHERS) star rating one star in excess of the current energy efficiency requirement of the Building Codes of Australia for Class 1A buildings; and

e) The NatHERS star rating for the dwelling shall be certified by a NatHERS accredited energy assessor using NatHERS accredited software and shall be provided to the City at the development application stage.

Further to the requirements of Clause 5.3.1 and 6.3.1 Outdoor Living Areas of the R Codes

a) Courtyards and or balconies should be orientated to achieve passive solar design and provided with access to unimpeded northern winter sunlight.

b) Courtyards and or balconies should receive adequate cross ventilation and are open on at least two or more sides.

23. Policy Principles

a) To encourage energy efficient and sustainable design principles into the design, siting and construction of new and redeveloped residential and mixed use buildings.

b) Designing for sustainability promotes efficient design outcomes for environmentally friendly built form.

c) Minimisation of heat loss through roof colour can lead to dwellings with better efficiency and cost savings to the home owner.

d) Water recycling and water storage being promoted as an alternative method to mains water usage, providing sustainable alternatives for home owners.

e) Encouraging adaptability in design and construction to ensure the longevity of the building.

24. Additional requirements for the properties with a frontage to Hale Road Forrestfield or Kalamunda Road High Wycombe zoned Dual Density R35/R60.

When considering an application for approval of development or when making a recommendation to the Western Australian Planning Commission (WAPC) in respect of a subdivision for properties coded R25/60 with frontage to Hale Road Forrestfield or Kalamunda Road High Wycombe. Council may not approve development unless

a) The development creates or maintains adequate visual surveillance and provides for activated frontages to any secondary streets, public spaces and/or visual access links.

b) The development is designed to manage noise impacts associated with Hale Road or Kalamunda Road utilising quiet building design, including but not limited to double glazing of windows and the locating of bedrooms furthest away from the Hale Road or Kalamunda Road frontage and taking into consideration any Main Roads (MRWA) policy requirements.

c) Buildings may be built of up to three storeys (12m) in height may be permitted in accordance with the R Codes, and the Draft Design WA Guidelines.

d) Site access shall be provided from a road frontage other than Hale or Kalamunda Roads where a development site has two or more street frontages.

25. Policy Principles

a) The provisions aims to encourage access from a secondary street other than Hale Road in Forrestfield or Kalamunda Road in High Wycombe where density provisions are proposed to be increased to a maximum of R60. This will mitigate the potential traffic impact of additional vehicular movements onto Hale and Kalamunda Roads.

b) The provisions provide an opportunity to reduce new development vehicular access to both Hale and Kalamunda road as well as providing for safe access and egress into newly redeveloped properties.

26. Multiple dwellings with Areas with an R Code R40 or higher

Part 6 of the R Codes specifies a set of design elements which aims to ensure that the development of multiple dwellings occurs having due regard for the existing development pattern and context to the desired future built form of the locality. Table 4 Column 3 of the R Codes provide for a plot ratio density calculation in lieu of a site area per dwelling calculation. This method of calculating density represents a building floor area based calculation via plot ratio to determine density and the number of dwellings permissible on a development site.

Note that in accordance with Planning Bulletin 113/2015 this applies to development proposed at the R40 code or higher.

Plot ratio is defined in the R Codes as:

The ratio of gross plot ratio area of buildings on a development site to the area of land in the site boundaries.

Plot ratio area is defined in the R Codes as:

The gross total area of all floors of buildings on a development site, including the area of any internal and external walls but not including:

The gross total area of all floors of buildings on a development site, including the area of any internal and external walls but not including:

i. *The areas of any lift shafts*
ii. *Stairs or stair landings common to two or more dwellings*
iii. *Machinery, air conditioning and equipment rooms*
iv. *Space that is wholly below natural ground level*
v. *Areas used exclusively for the parking of wheeled vehicles at or below natural ground level*
vi. *Storerooms*
vii. *Lobbies, bin storage areas, passageways to bin storage areas or amenity areas common to more than one dwelling or balconies, eaves, verandahs, courtyards and roof terraces*

Further to the requirements of Column 4 of the R Codes, Clause 6.1.1 P1 of the R Codes provides for a design principles assessment for determining building bulk and scale. When assessing plot

ratio it is determined that a maximum of 25% plot ratio floor space variance may be applied for in the following circumstances:

a) The development does not seek any variation to requirements of this policy.

b) The development provides communal facilities or communal open space which provides additional benefit the residents of the development and designated as common property on any associated strata plan. This may include the one or more of the following:

   i. Common Gymnasium facilities

   ii. Communal barbeque and associated area and facilities

   iii. Communal swimming pool and/or spa

   iv. Communal roof top garden

   v. Communal food growing area

c) The development does not seek any other variation to the requirements of the Deemed to Comply provisions of the R Codes.

Plot ratio variance calculation table

Table Three Plot Ratio Variance		
Density Code	**Calculation**	**Plot Ratio Permitted**
R40 – where a plot ratio is 0.6	25% variance = 0.15.	0.75
R60 – where a plot ratio is 0.7	25% variance = 0.175	0.875

Policy Principles

a) In order to meet the objectives of Directions 2031 / Perth and Peel 3.5 million strategies the City of Kalamunda has an infill dwelling target in which 47% needs to be achieved within existing urban areas within the City.

27. Matters to be considered

The following matters will be given consideration in the assessment of applications for Residential Development in Dual Codes Areas.

Any relevant matters set out in Clause 67 of the Regulations and the objectives of the zone

a) The impact of the proposed residential development on the amenity and character of residential areas, as viewed from a street, public space or neighbouring property.

b) Whether any significant trees or other vegetation should be preserved.

c) Whether the development application will still achieve a desired streetscape where a variation is applied.

d) The preservation of areas of useable on-site open space.

e) Any special limitation on the development of the land by virtue of its size, shape or environmental/geographical feature.

f) Whether support for the development application will set an undesirable precedent for similar sized surrounding lots.

g) Comments received from affected adjacent property owners/occupiers.

28. Variations to the Policy

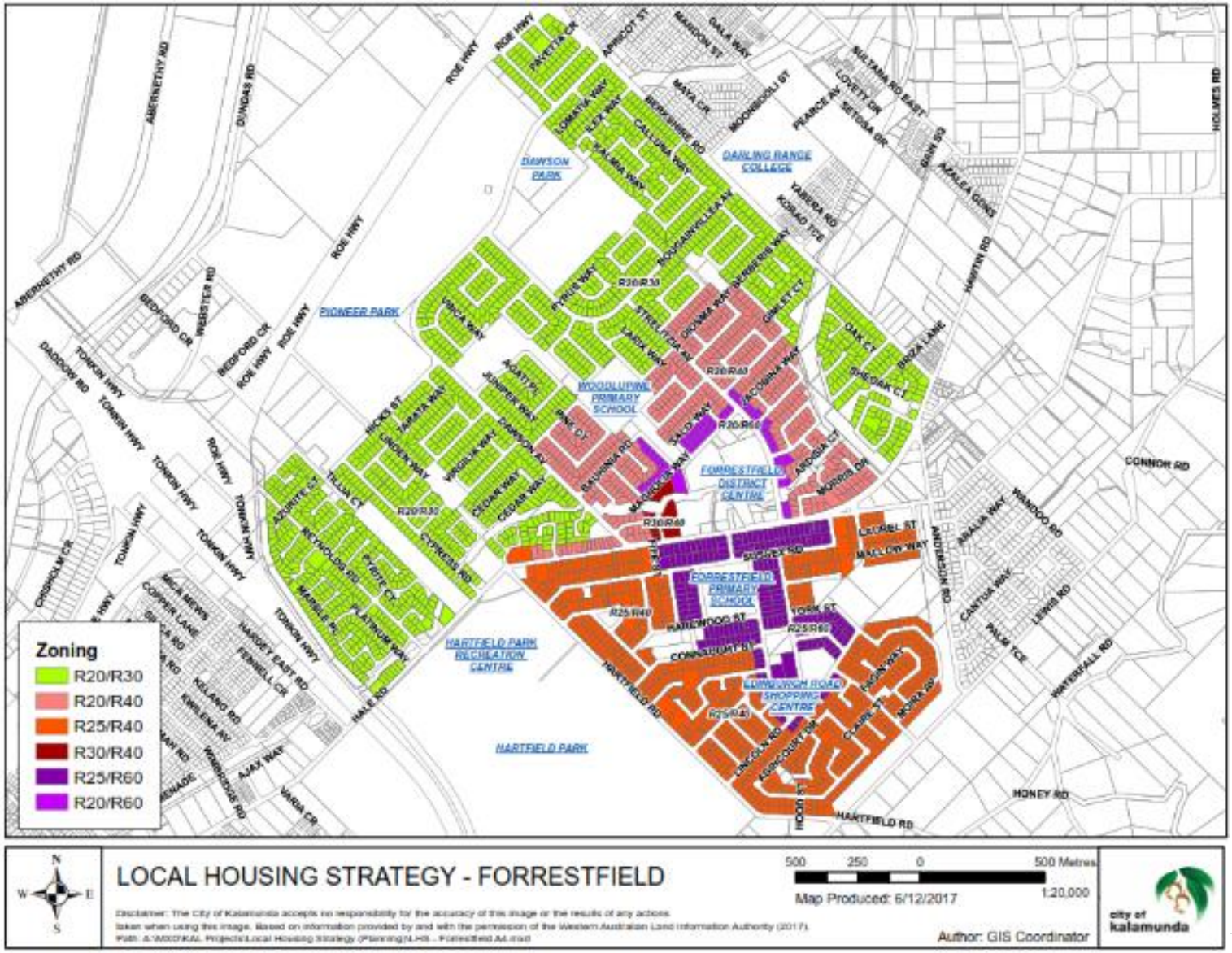
Variations to the provisions of the policy will be considered having regard to Clause 17 of the Policy "Matters to be considered'. This will require the applicant to provide additional justification demonstrating how the proposal will not adversely affect adjoining property owners, the streetscape or the amenity of the locality.

The City may undertake consultation with adjoining affected property owners/occupiers as part of the assessment process.

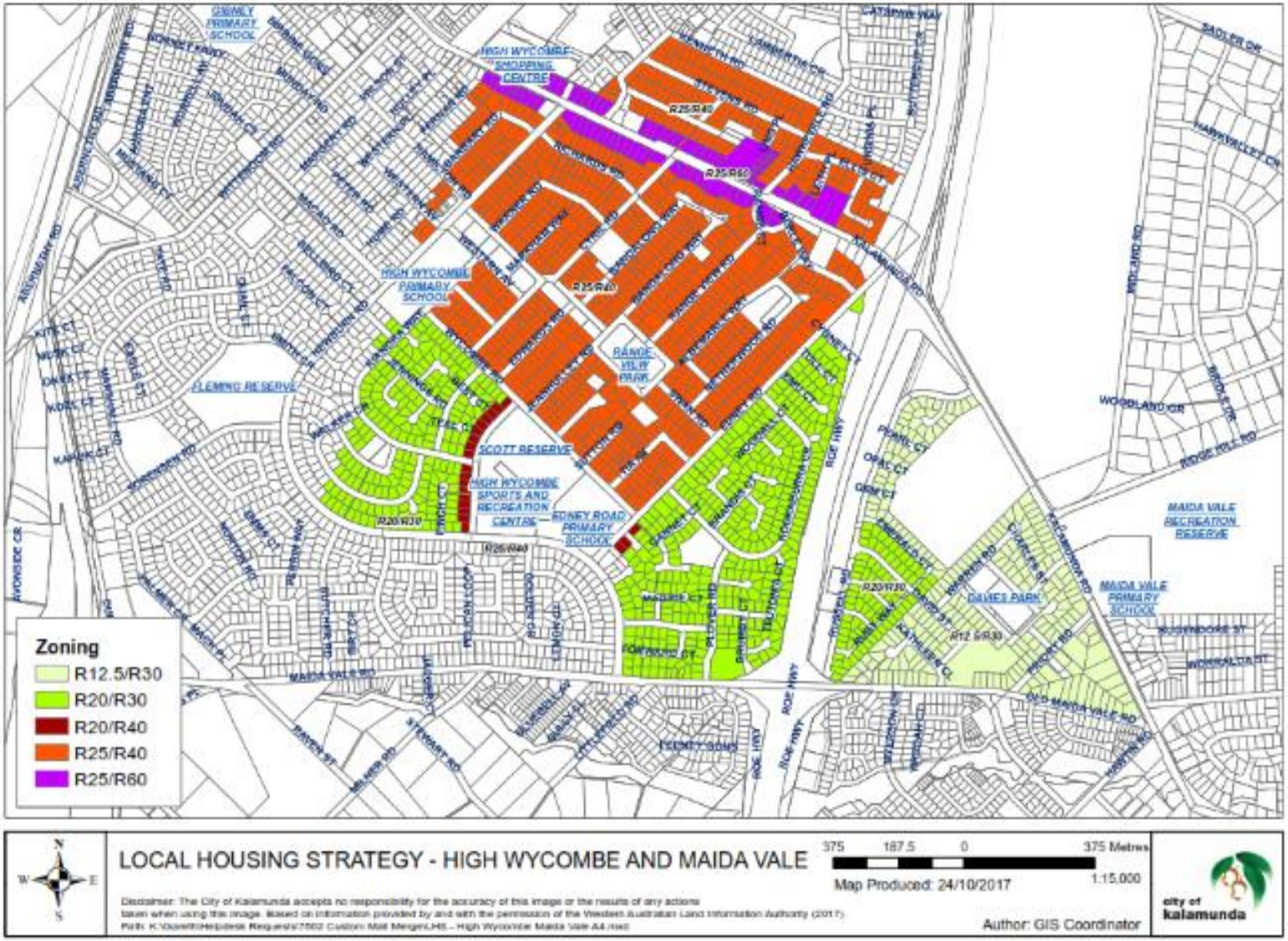
Legislation	*City of Kalamunda Local Planning Scheme No.3*
Adopted	28 November 2017 OCM 221/2017
Reviewed	
Next Review Date	

Appendix 1: Forrestfield Dual Density Coded Precinct

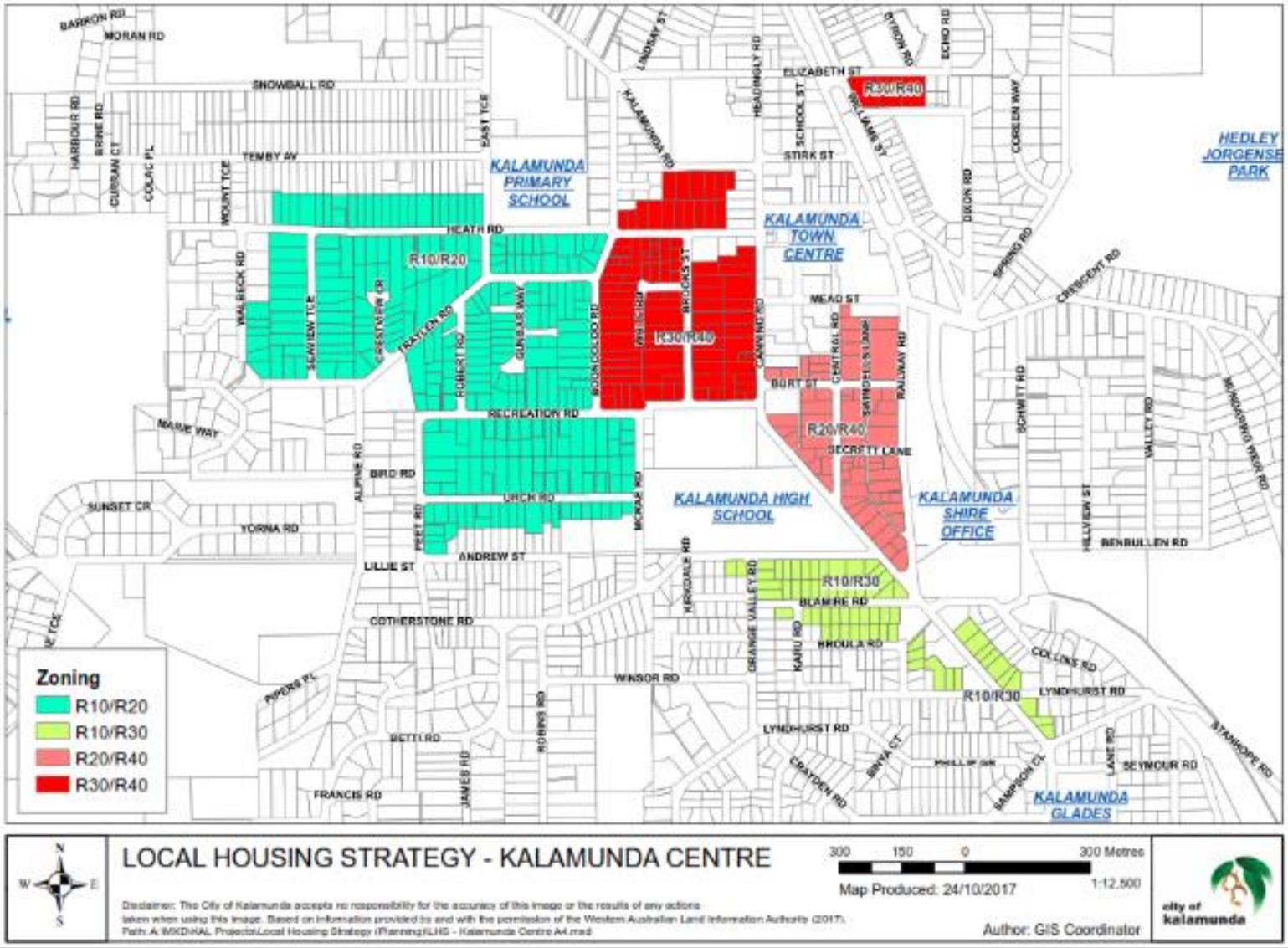
Map updated with correct zoning



Appendix 2: High Wycombe and Maida Vale Dual Density Coded Precinct



Appendix 3: Kalamunda Dual Density Coded Precinct



Appendix 4: Previous Driveways and Paths (Pavements)

What is a pervious or porous pavement?

Porous pavement (otherwise known as permeable or pervious pavement) is a load bearing pavement structure that is permeable to water. There is a wide variety of porous pavement types, each with advantages and disadvantages for various applications.

The common features of porous pavements include a permeable surface layer overlying an aggregate storage layer. The surface layer of porous pavement may be either monolithic (such as porous asphalt or porous concrete) or modular (clay or concrete blocks). The reservoir storage layer consists of crushed stone or gravel which is used to store water before it is infiltrated to the underlying soil or discharged towards a piped drainage system.

Porous paving can be used as an alternative to conventional paving and hardstand surfaces within urban developments to reduce stormwater runoff velocity and volume by:

- limiting the amount of impervious surface area on a site;
- encouraging infiltration of surface runoff;
- detaining and slowly releasing water from a site.

Water quality improvement is achieved through:

- filtering through the pavement media and underlying material;
- potential biological activity within the base and sub-media;
- reduction of pollutants through reduced runoff volumes.

Types of porous paving

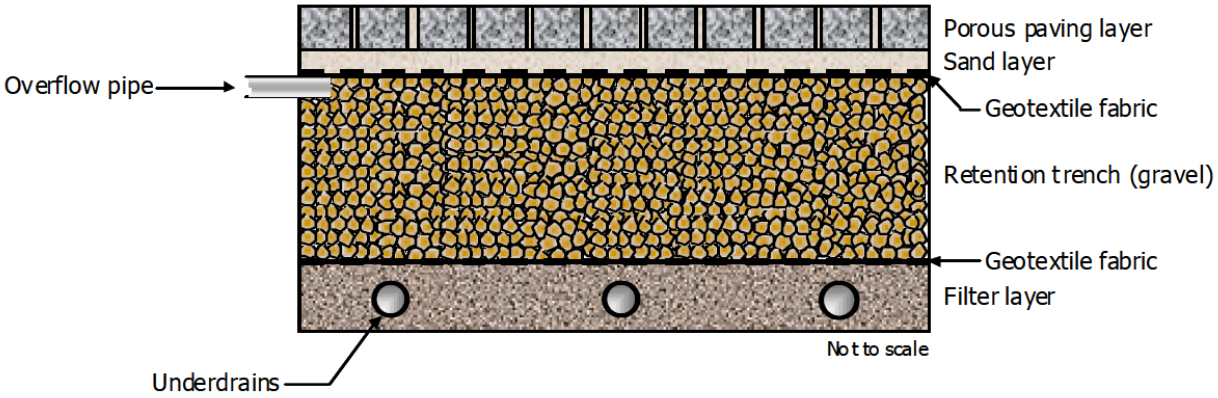
A number of porous paving types are available including:

Porous Asphalt or Concrete (Monolithic Structures): Open graded asphalt or concrete with reduced or no fines and a special binder that allows water to pass through the pavement by flowing through voids between the aggregate.

Modular Pavers: These are made of porous material or where pavers themselves are not permeable, however they are installed with gaps between the pavers to allow stormwater to penetrate into the subsurface.

Grid or Lattice Systems: These are made of concrete or plastic grids filled with soil or aggregate that water can percolate through. These systems may also be vegetated (usually with grass).

Porous pavers make up the surface of the porous paving system, however there are a number of layers to the overall system (refer to the diagram below). Pavers are generally laid on a bedding layer of coarse sand. Beneath the porous pavement surface and bedding layer is an aggregate storage or reservoir layer (the detention volume) underlain with geotextile fabric. The aggregate also serves as the road or parking area's support base and must be sufficiently thick to support traffic loads. A final filter layer is provided at the base of the paving system below the aggregate layer. This is usually fine sand (or finer material), that contains the underdrainage system of is the final layer prior to infiltration to surrounding soils or discharge to a piped drainage system. Geotextile fabric is used to provide separation between the bedding layer, the aggregate layer and the filter layer beneath. Stormwater runoff from the paved surface and adjacent impervious areas passes through the porous pavement to the aggregate reservoir where it is filtered and stored.



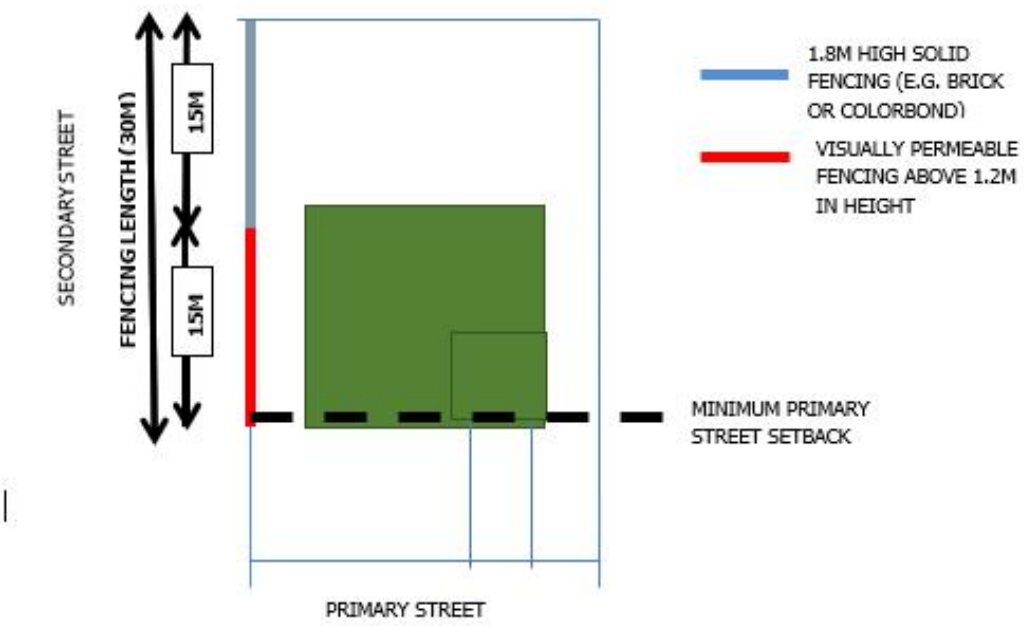
Permeable pavement systems can function in two ways:

- as an infiltration system, holding water to allow percolation in underlying soils;
- as a detention system, holding surface water temporarily to reduce peak flows by later release of stormwater to the drainage system.

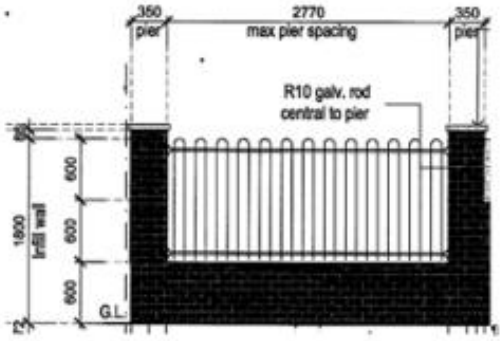
Porous paving systems can be designed to achieve a range of objectives including:

1) Minimising the volume of stormwater runoff from a development.
2) Preserving predevelopment hydrology.
3) Capturing and detaining or infiltrating flows up to a particular design flow.
4) Enhancing groundwater recharge or preserving predevelopment groundwater recharge.
5) Removing some sediments and attached pollutants by passing runoff through an underlying media layer.

Appendix 6: Secondary Street Fencing



Example of Visually Permeable Fencing



Appendix 7: Rain Garden

Rain gardens are shallow planted depressions designed to take the excess rainwater runoff from a house roof or other building, assisting runoff to infiltrate the underlying soil, recharge the groundwater, and reduce peak flows from the site.

Rain gardens are typically planted with native plants or sustainable species that are adapted to local climate conditions.

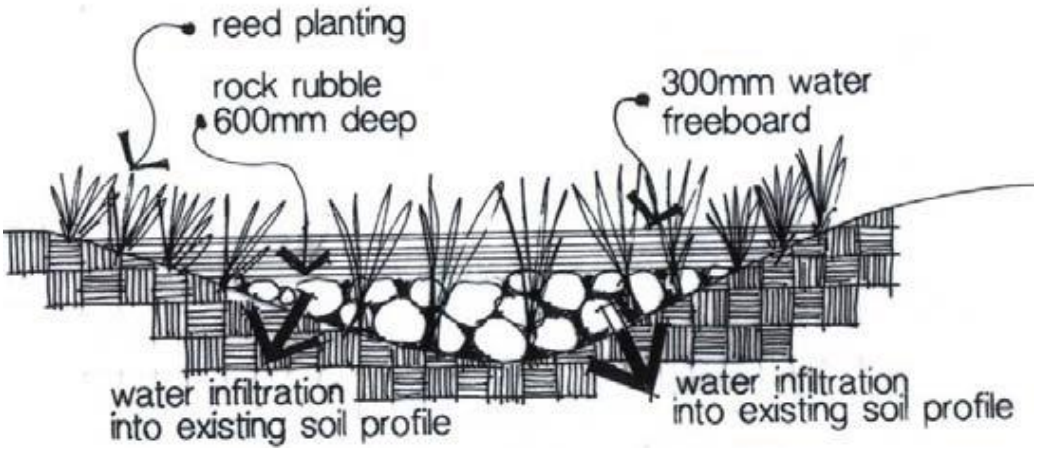
Rain gardens use the technique of retaining runoff for infiltration back into the soil. Through the chemical, biological and physical properties of plants, microbes and soil, the water is filtered before it enters the groundwater, with some degree of pollutant removal occurring.

In addition to retaining and filtering water on site, rain gardens have a number of other attractive benefits for the garden. The promotion of more planting rather than paved surfaces increases the proportion of pervious areas in the built environment. Biodiversity is increased as habitat

opportunities are increased for small animals, birds and insects. Rain gardens also provide visual interest through the introduction of ephemeral water features into the garden. The cooling effect of this water can improve the microclimate of the whole garden.

The main functions of rain gardens are water quality control, water conservation and increased amenity.

It is recommended to leave a 10-15 cm shallow depression at the surface of the rain garden to allow water to pond on the surface before it infiltrates into the garden soil. This excess water can be expected to drain away via the overflow pipe. Note that the overflow pipe should extrude from the surface of your rain garden and collect water that ponds beyond the surface.



The final step in installing a rain garden is the installation of adequate plants and the application of adequate mulching. Pebbles are the best way to achieve this as other mulch mixtures may contain organic matter that pollutes overflow runoff and may compact over time to inhibit infiltration.

Appendix 8: Grey Water Treatment System

Grey water is wastewater from the shower, bath, spa bath, wash basin or washing machine. Water from the kitchen sink has higher levels of greases, oils and detergents than wastewater from other sources. Kitchen sink water cannot be used in many types of grey water system, and is not included in the definition of grey water.

Grey water is not wastewater from a toilet, urinal or bidet. This wastewater is referred to as black water.

The grey water may only be reused legally in gardens via subsurface irrigation. This is a special purple pipe (to indicate its grey water) and must be buried at least 10cm below the soil surface or under mulch. Grey water Diversion Devices will have a manual switch or tap so grey water can be sent into the sewer rather than the irrigation when desired; for instance, in winter when the garden is naturally watered by rainfall.

Grey water must also be kept within the confines of the property.

There are two types of Grey water Diversion Devices:

1*) Gravity Diversion Systems:*

Work well when your block is on a slope and the garden is lower than the house. The pressure of gravity moves the water from the house to the garden irrigation system.

2) Pump Diversion Devices:

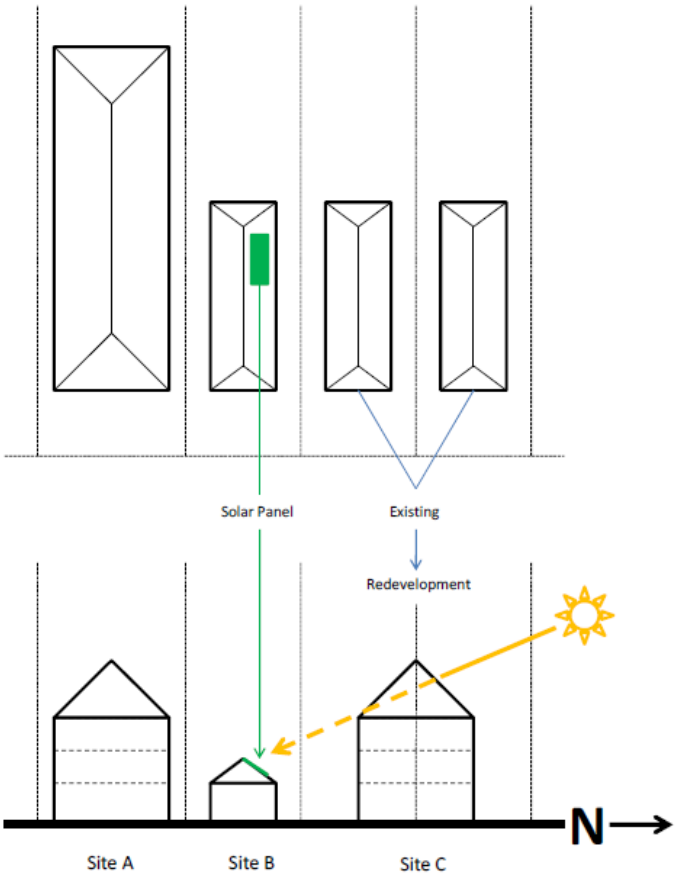
May be used when a suitable slope is not available or when the garden is uphill from the water collection point. In these systems a pump supplies water to the irrigation system.

Maintenance of the system is the responsibility of the homeowner and may be done by the homeowner. This includes frequent tasks of cleaning and replacing the filters, and an annual flush of the irrigation system with scheme water.

Appendix 9: The Installation of Solar Panels

Solar Panels produce the most amount of power when they are directed toward the sun.

The following diagram depicts a high density area. Site A has already been developed to its full potential whereas Sites B and C are lower density single dwellings. Should solar panels be installed at the dwelling at Site B, and Site C makes the decision to redevelop to its full development potential, it would cause significant overshadowing on the newly installed solar panels. However, it should be noted that State Planning Policy 3.1 – Residential Design Codes may control the amount of overshadowing on adjacent properties by up to 50%.



Legal References	
Related Local Law:	
Related Policy:	State Planning Policy 3.1 – Residential Design Codes Sustainable Living Guide Designing Out Crime Guidelines (WAPC) Liveable Neighbourhoods (WAPC)
Management Practice:	
Legislation:	Local Planning Scheme No. 3
Conditions:	a) Landscaping areas shall be planted within 28 days of practical completion of the proposed development and shall be maintained thereafter by the landowner/strata management group to the City's satisfaction. b) Vehicle parking, manoeuvring and circulation areas, accessway and crossover(s) to be suitably constructed, sealed, kerbed, line marked and drained to the City's satisfaction. c) The street tree(s) being planted within 28 days of the development's completion and maintained for two summer seasons by the landowner/strata management group to the City's satisfaction. d) Uniform fencing being installed within 28 days of the development's completion and maintained

	thereafter by the landowner/strata management group to the City's satisfaction.