

DS092A - Final Amended Local Planning Policies

1. Design Guidelines – Beresford Beachfront Mixed Use
2. Geraldton Airport Special Control Area
3. Mobile Trading
4. Shipping Containers
5. Stormwater Management

Local Planning Policy 4.1 Beresford Beachfront Mixed Use

VERSION 3

March 2026

town planning services

Version	Adoption	Comment
1	26 February 2008 Council Item DS138	Final.
2	15 December 2015 Council Item DRS242	Readopted under the new LPS No. 1.
3	24 March 2026 Council Item DSxxx	LPP updated following review.

Contents

1.0	CITATION.....	3
2.0	INTRODUCTION	3
3.0	APPLICABLE DEVELOPMENT	4
4.0	PLANNING POLICY	4
5.0	DEVELOPMENT REQUIREMENTS	5

1.0 CITATION

This is a local planning policy prepared under the *Planning and Development (Local Planning Schemes) Regulations 2015* and the City of Greater Geraldton (the City) Local Planning Scheme No. 1 (LPS No.1). It may be cited as the *Local Planning Policy No. 4.1 – Beresford Beachfront Mixed Use (LPP No. 4.1)*.

2.0 INTRODUCTION

In February 2008, the City adopted the Design Guidelines – Beresford Beachfront Mixed Use Local Planning Policy to guide development and to assist in the invigoration of the ‘Beachfront Precinct’ following significant state government investment in the area. The Beachfront Precinct’ is currently zoned ‘Mixed Use’ with a density code of R80 under the provisions of LPS No.1.

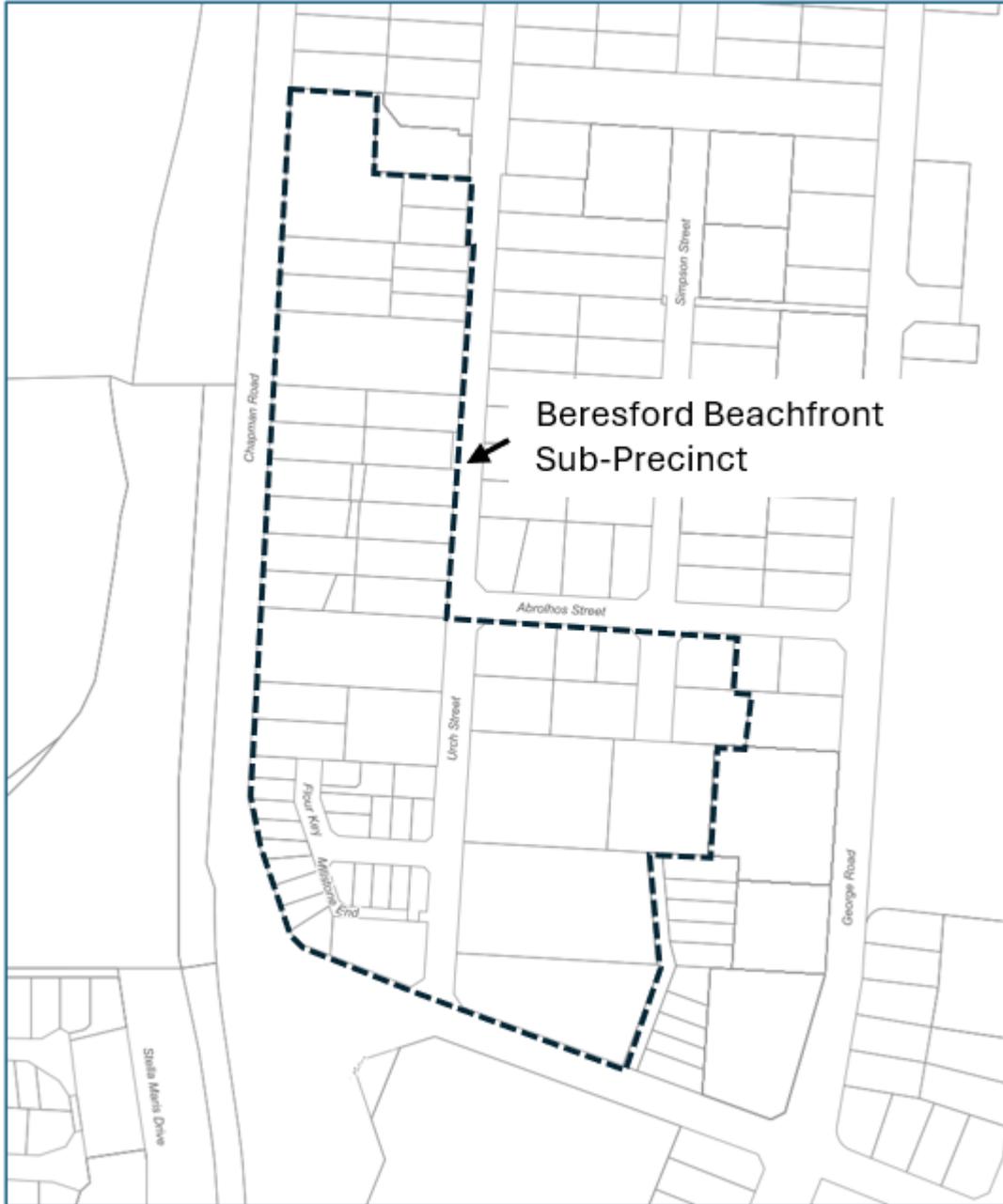
Table 5 under Clause 3.4 ‘Mixed Use zone’ LPS No.1, sets out the key development for the Mixed use zone, however under Clause 3.4.1 the City may require design guidelines to be prepared and adopted.

The purpose of this local planning policy is to modify Deemed to Comply provisions of the Residential Design Codes relating to building height to ensure that new development is consistent with the desired outcomes within the Beachfront Precinct.

3.0 APPLICABLE DEVELOPMENT

LPP No. 4.1 applies to all development in the Beresford Beachfront Sub-Precinct. The boundaries of the Beresford Beachfront Sub-Precinct are show in Figure 1 below:

Figure 1 – Beresford Beachfront Sub-Precinct



town planning services

4.0 PLANNING POLICY

Development within the Beresford Beachfront Sub-Precinct incorporates building heights that are consistent with the desired visual amenity outcomes.

5.0 DEVELOPMENT REQUIREMENTS

This Policy amends the following ‘deemed-to-comply’ provisions of R-Codes Volumes 1 and 2 in accordance with R-Codes Volume 1 clause 3.2.3 as identified below –

Table 1: R-Codes Volume 1 Part C

Development Standard	Deemed to comply (R-Codes)	Policy ‘Deemed to comply’ provisions
Building Height	Clause 3.2	Building heights as per Table 3 below.

Table 2: R-Codes Volume 2

Development Standard	Acceptable Outcomes	Policy ‘Deemed to comply’ provisions
Building Height	Clause A2.2.1	Building heights as per Table 3 below.

Table 3:

Maximum Number of Storeys	Concealed or Skillion Roof	Pitched, Hipped or Gable Roof	
	<i>Maximum Building Height</i>	<i>Maximum height of wall</i>	<i>Maximum total building height</i>
2	8m	7m	10m

Note: Where the natural ground level of a lot is below street level, building height should be measured from the natural ground level along the street frontage. For all other lots, building height should be measured from the natural ground level of the lot as per the R-Codes.

Local Planning Policy 2.4

Geraldton Airport Special Control Area

VERSION 2

March 2026

town planning services

Version	Adoption	Comment
1	23 February 2016. Council Item DRS245	Final – No objections received during advertising.
2	24 March 2026 Council Item DSxxx	LPP updated following review.

Contents

1.0 CITATION..... 3

2.0 INTRODUCTION 3

Purpose 3

Background Information..... 3

 2.1 Importance of the Geraldton Airport..... 3

 2.2 Aircraft Noise..... 3

 2.3 The Geraldton Airport Master Plan 3

3.0 APPLICABLE DEVELOPMENT 4

4.0 OBJECTIVES 4

5.0 DEVELOPMENT REQUIREMENTS 4

 5.1 Zoning and Subdivision 4

 5.2 Development/Land Use 5

 5.3 Noise Attenuation 5

 5.4 Acceptable..... 6

 5.5 Conditionally Acceptable 7

 5.6 Unacceptable 7

 5.7 Notification on Certificate of Title 7

 5.8 Application Requirements..... 8

6.0 DEFINITIONS 8

APPENDIX 1 – AUSTRALIAN NOISE EXPOSURE FORECAST, GERALDTON AIPORT .. 9

town planning services

1.0 CITATION

This is a local planning policy prepared under Schedule 2 of the Planning and Development (Local Planning Schemes) Regulations 2015. This policy may be cited as Local Planning Policy (LPP No.2.4) – *Geraldton Airport Special Control Area*.

2.0 INTRODUCTION

Purpose

The purpose of this policy is to provide guidance on noise sensitive development within the Geraldton Airport Special Control Area.

Background Information

2.1 Importance of the Geraldton Airport

The Geraldton Airport is an essential regional transport infrastructure element and an integral part of the State aviation infrastructure network. The City is committed to the long-term operation of the airport by ensuring that development of surrounding areas appropriately responds to the noise it generates.

While it is not feasible to exclude all noise sensitive development from the airport environs the impact of aircraft noise can be mitigated through appropriate land use planning and noise attenuation measures.

2.2 Aircraft Noise

The Australian Noise Exposure Forecast (ANEF) system provides a measurement of the level of aircraft noise anticipated within areas surrounding airports in Australia.

2.3 The Geraldton Airport Master Plan

The Geraldton Airport Master Plan 2012-2030 establishes the strategic development framework for the airport based on its ultimate capacity. This includes the development of a new 2,600 x 45 m Code 4E runway and its future extension to 3,500 metres.

As part of the master plan, considerable work has been undertaken to develop a practical method of noise exposure forecasting for the airport to ensure that future land use controls protect current and future operations.

The Geraldton Airport Master Plan 2012-2030 has also included the modelling for the N70 contour which is considered a 'Number Above' noise metric. The N70 contour depicts the number of aircraft noise events louder than 70dB(A) on an average day. 70dB(A) events have often been used to categorise an event as noisy, as these events correspond to a 60dB(A) indoor noise level. A 60dB(A) indoor noise level is one which can disturb conversation or other indoor activities such as watching television.

The N70 contour broadly follows the ANEF contours and a combination of the ANEF and N70 forms the basis for the delineation of the Geraldton Airport Special Control Area in the Scheme.

3.0 APPLICABLE DEVELOPMENT

This policy applies to land within the Geraldton Airport Special Control Area.

Other policies and planning instruments relevant to the implementation of this policy should be considered as appropriate.

4.0 OBJECTIVES

- a) To protect against developments that are incompatible with continuing airport operations.
- b) To control noise sensitive development that has the potential to impact on the capacity of the airport.
- c) To provide guidance on the rezoning, subdivision and development of land within the Geraldton Airport Special Control Area.
- d) To provide guidance on noise attenuation measures to mitigate against noise impacts from the airport.

5.0 DEVELOPMENT REQUIREMENTS

5.1 Zoning and Subdivision

- 5.1.1 There is a general presumption against the rezoning of land for incompatible land uses within the Geraldton Airport Special Control Area unless in accordance with the Local Planning Strategy.
- 5.1.2 Subdivision applications will not be supported by the local government that create the potential for additional residential development and intensification of incompatible land uses unless guided by a structure plan, or the Local Planning Strategy.
- 5.1.3 In determining any rezoning or subdivision, the local government shall take into consideration:
 - a) The relevant ANEF contour information for the subject area (see Appendix 1); and
 - b) Whether the zoning or subdivision will create or intensify incompatible land uses within the Geraldton Airport Special Control Area.
- 5.1.4 A Local Development Plan may be requested as part of any subdivision of land within the Geraldton Airport Special Control Area.
- 5.1.5 The Local Development Plan should demonstrate the location of building envelopes or building exclusion areas having regard to the Geraldton Special Control Area and ANEF noise contours. Building envelopes or building exclusion areas should ensure where possible that development will occur outside of the Geraldton Airport Special Control Area or in lower ANEF noise contours.

5.2 Development/Land Use

5.2.1 In determining any application for development approval, the local government shall take into consideration:

- a) The relevant ANEF contour information for the subject property (see Appendix 1).
- b) Whether the proposed use would be considered 'acceptable', 'conditionally acceptable' or 'unacceptable' on the Building Type Acceptability table (see Table 1).
- c) Details on the development and whether it is considered to be compatible or incompatible within the Geraldton Airport Special Control Area. This information should address where relevant:
 - The type and nature of the development including details of the type of activities expected to be undertaken as part of the development, including any outdoor activities.
 - Whether the development is new or an addition to an existing use. If an addition, detail should be provided on the proposed intensification of the use including the increase in floor space.
 - The proposed type and number of occupiers, users, visitors or customers anticipated as part of the development and their sensitivity to aircraft noise generated from the airport.

5.3 Noise Attenuation

5.3.1 Development within the Geraldton Airport Special Control Area may require construction standards to include noise attenuation measures that mitigate adverse noise impacts in accordance with *Australian Standard 2021 Acoustics – Aircraft noise intrusion – Building siting and construction* (AS 2021: 2015).

5.3.2 Noise attenuation measures are determined by the classification given for particular building types within various ANEF zones under the Building Site Acceptability Table which is included in Table 1. The building type acceptability table will classify the site as either 'acceptable', 'unacceptable' or 'conditionally acceptable' which will then determine whether noise attenuation is required.

Table 1: Building Type Acceptability Based on ANEF Zones

Building type	ANEF zone of the site			
	less than 20 ANEF (Note 1)	20 to 25 ANEF (Note 2)	25 to 30 ANEF	30 to 35 ANEF
House, home unit, flat, caravan park	Acceptable	Conditionally Acceptable	Unacceptable (Note 3) (Note 4)	
Hotel, motel, hostel	Acceptable	Conditionally Acceptable	Unacceptable (Note 3) (Note 4)	
School, university	Acceptable	Conditionally Acceptable	Unacceptable (Note 3) (Note 4)	
Hospital, nursing home	Acceptable		Conditionally Acceptable	Unacceptable (Note 3) (Note 4)
Public building	Acceptable	Conditionally Acceptable		Unacceptable (Note 3) (Note 4)
Commercial building	Acceptable		Conditionally Acceptable	
Light industrial	Acceptable			Conditionally Acceptable
Other industrial	Acceptable			

Excerpt from AS 2021:2015 Table 2.1. This is a summary only, those seeking the full details of the recommendations, associated notes and conditions should consult AS2021:2015 for the full details.

1. The actual location of the 20 ANEF contour is difficult to define accurately, mainly because of variation in aircraft flight paths. Therefore, the procedure of Clause 2.3.2 of AS2021 may be followed for building sites outside but near to the 20 ANEF contour.
2. Within 20 ANEF to 25 ANEF, some people may find that the land is not compatible with residential or educational uses. Land use authorities may consider that the incorporation of noise control features in the construction of residences or schools is appropriate.
3. This Standard does not recommend development in unacceptable areas. However, where the relevant planning authority determines that any development may be necessary within existing built-up areas designated as unacceptable, it is recommended that such development should achieve the required ANR determined according to Clause 3.2 of AS2021. For residences, schools, etc., the effect of aircraft noise on outdoor areas associated with the buildings should be considered.
4. In no case should new development take place in greenfield sites deemed unacceptable because such development may impact airport operations.

5.4 Acceptable

5.4.1 Where the building type is classified as ‘acceptable’ in the Building Type Acceptability Table for the relevant ANEF contour, no noise attenuation is required.

However, an ‘acceptable’ classification should not be construed as an expectation that little to no aircraft noise will be experienced. It is merely that AS 2021: 2015 does not deem the noise level to be excessive and therefore warranting noise mitigation measures. Research¹ has shown that at the 20 ANEF level it is estimated that approximately 11% of people will be seriously affected by aircraft noise and approximately 45% of people will be moderately affected.

¹ National Acoustic Laboratories, *Aircraft Noise in Australia: A Survey of Community Reaction*, 1982.

Based on this, applicants may wish to include noise attenuation in the construction of more sensitive land uses, such as residential development even where the development is considered 'acceptable'.

5.5 Conditionally Acceptable

5.5.1 Where the building type is classified as 'conditionally acceptable' in the Building Type Acceptability Table for the relevant ANEF contour, noise attenuation is usually required in accordance with AS 2021:2015.

5.5.2 Compliance with AS 2021:2015 must be demonstrated at the building permit application stage. Therefore, should an application for development approval be approved by the local government the following condition will be imposed:

"The proposed development is located within the Geraldton Airport Special Control Area and noise attenuation measures are required in accordance with Australian Standard 2021:2015. Prior to an application for a building permit being made a schedule demonstrating compliance with the Australian Standard 2021:2015 is required to be submitted and approved by the local government."

5.5.3 In order to demonstrate compliance with AS2021:2015 in accord with clauses 5.5.1 and 5.5.2, the applicant will require specialist acoustic advice which is likely to involve engaging the services of an appropriately qualified acoustic consultant.

5.6 Unacceptable

5.6.1 Where the building type is classified as 'unacceptable' in the Building Type Acceptability Table for the relevant ANEF contour, the development should generally not be approved.

5.6.2 Where an application for development approval is submitted it must be accompanied by an acoustic consultants' report. This report is to demonstrate that noise attenuation measures can ensure that the development complies with AS 2021:2015. The report must be prepared by a qualified acoustician experienced in the characteristics of aircraft noise.

5.6.3 Where an application for development approval is approved, the following condition will be imposed:

"The proposed development is located within the Geraldton Airport Special Control Area and development (including noise attenuation measures) is required in accordance with the acoustic consultant's report dated (insert date) prepared by (insert author) as lodged with the local government."

5.7 Notification on Certificate of Title

5.7.1 A notification on title advising of the potential noise impacts will be required as a condition of all subdivision applications, and on all development approvals where the proposed development is identified as 'conditionally acceptable' or 'unacceptable' for the ANEF zone with reference to the Building Site Acceptability Table.

5.7.2 In the case of an application for development approval where a notice on title is required, this will be conditioned to be completed prior to the commencement of the use or development.

5.7.3 The wording of the notification will be as follows;

“The lot is situated in the vicinity of Geraldton Airport, and is currently affected, or may in the future, be affected by aircraft noise. Noise exposure levels are likely to increase in the future as a result of increases in numbers of aircraft using the airport, changes in aircraft type or other operational changes. Further information about aircraft noise, including development restrictions and noise insulation requirements for noise affected properties, are available on request from the relevant local government offices.”

5.8 Application Requirements

5.8.1 Applications for rezoning, subdivision or development approval should be supported with a report detailing the information requested in clauses 5.1 and 5.2.

5.8.2 To this end the onus is on the proponent to demonstrate that the proposal is not considered an incompatible land use and will not compromise continuing airport operations.

5.8.3 If the development is considered ‘unacceptable’ then the acoustic consultant report demonstrating compliance with AS 2021:2015 is to be submitted with the application for development approval in accordance with clause 5.6.

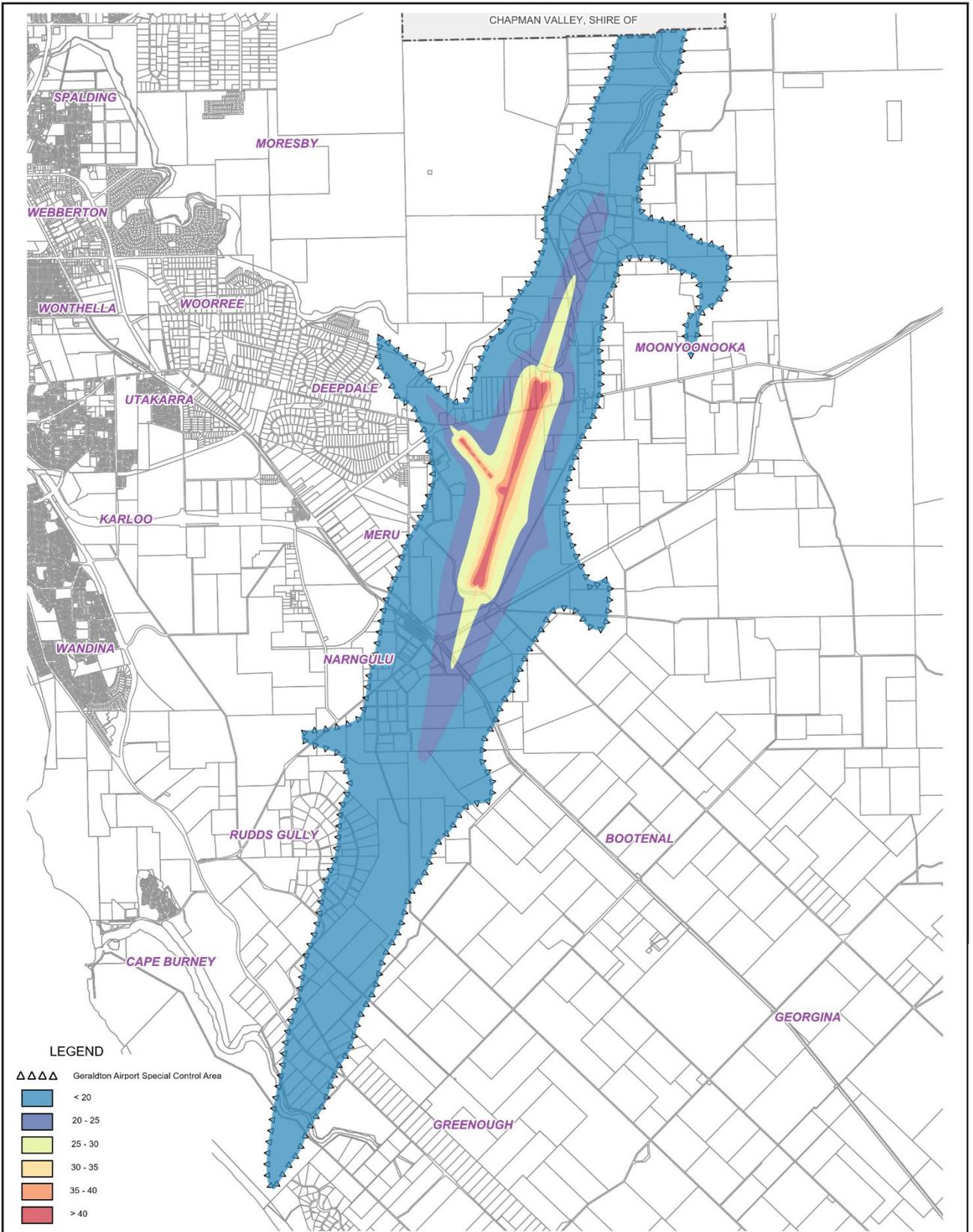
6.0 DEFINITIONS

Incompatible land use means a land use or development which may be considered to be sensitive to and impacted by aircraft noise.

AS 2021: 2015 refers to *Australian Standard 2021 Acoustics – Aircraft noise intrusion – Building siting and construction*.

APPENDIX 1 – AUSTRALIAN NOISE EXPOSURE FORECAST, GERALDTON AIRPORT

town planning services



GERALDTON AIRPORT AUSTRALIAN NOISE EXPOSURE FORECAST



Whilst all care has been taken in the preparation of this data, this information is provided as a guide only and no responsibility shall be taken for any omissions or errors in this document. The accuracy provided is not to be used for legal purposes, but reference is made to the certificates of titles, survey diagrams and legal versions of the Town Planning Scheme.

Local Planning Policy 2.5 Mobile Trading

VERSION 5

March 2026

town planning services

Version	Adoption	Comment
1	24 March 2009 Council Item SC056	Final – No objections received during advertising.
2	22 December 2009 Council Item SC134	Final – No objections received during advertising.
3	1 July 2011 Council Item SC001	Final – Readopted under the new City of Greater Geraldton.
4	15 December 2015 Council Item DRS242	Readopted under the new LPS No. 1.
5	24 March 2026 Council Item DSxxx	LPP updated following review.

Contents

- 1.0 CITATION..... 3
- 2.0 INTRODUCTION 3
- 3.0 APPLICABLE DEVELOPMENT 3
- 4.0 OBJECTIVES 3
- 5.0 POLICY PROVISIONS 3
- 6.0 ACCOMPANYING MATERIAL..... 4
- 7.0 CONSULTATION 4
- 8.0 DEFINITIONS 5

town planning services

1.0 CITATION

This is a local planning policy prepared under the *Planning and Development (Local Planning Schemes) Regulations 2015 (the Regulations)* and the City of Greater Geraldton Local Planning Scheme No. 1 ('the Scheme'). It may be cited as Local Planning Policy 2.5 *Mobile Trading*.

2.0 INTRODUCTION

The Regulations and the Scheme generally require development approval from the local government to be granted prior to the use or development of zoned and reserved land. It is recognised that mobile traders can help to invigorate and activate places and to contribute to the social, physical and economic well-being of the municipality. We also recognise that there is a duty to protect places from inappropriate forms of development and to ensure that places are safe and comfortable for people.

The purpose of this policy is to provide guidance and decision-making criteria for the location and operation of mobile vendors in the City of Greater Geraldton.

This policy aims to encourage and support mobile trading in appropriate locations, to provide for a healthy thriving economy and support business growth while protecting the environment and enhancing social and cultural outcomes.

3.0 APPLICABLE DEVELOPMENT

This policy applies to the sale, hire or provision of a product or service from a vehicle on private land.

4.0 OBJECTIVES

The objectives of this policy are as follows:

- a) To support and encourage mobile trading in appropriate locations.
- b) To accommodate appropriate vendor activities to provide services that enhance the visitor/resident experience.
- c) To ensure that the parking of vehicles (or erection of other equipment) will not adversely affect the public amenity and the characteristic streetscape of the area and the street.

5.0 POLICY PROVISIONS

5.1 Development Approval

- a) For public places, development approval is not required for mobile trading under this policy, however approval may be required under the City's Public Places and Local Government Property Local Law.
- b) For property that is not a public place, development approval is not required for mobile trading under this policy where the use is in existence for less than 48 hours, or a longer period agreed by the local government, in any 12 month period.
- c) For mobile trading that does not fall under (a) or (b), under this policy, development approval is required to be obtained.

Note: Refer to the City's Trading Permit Guidelines for further information regarding mobile trading on *public land*. Additionally other approvals may be required to undertake mobile trading on *crown land*.

5.2 Site Requirements

5.2.1 The following will be considered in determining whether to grant approval:

- a) The ability of customers to readily and safely access the site;
- b) Availability of customer parking;
- c) The potential for the use to create a traffic hazard or danger to the public;
- d) Waste management; and
- e) Whether the goods displayed and the gathering of customers will impede pedestrians or vehicle movements or cause conflict with other activities.

5.2.2 Approvals will not be given on sites within 200m of other businesses that are considered by the local government to sell or offer the same or similar product or service.

5.3 Approval Periods

5.3.1 Approval periods for mobile trading vendors are restricted to:

- A maximum of 3 days a week (regardless of the number of sites visited) with no more than 3 consecutive days of operation at any time; and
- No more than 4 hours in any one location each day.

These approval times are what is considered to be a 'short period of time' for a mobile vendor.

6.0 ACCOMPANYING MATERIAL

Where development approval is required, applications must be accompanied by:

- a) Details of goods/merchandise and or services to be offered;
- b) A plan drawn to scale showing the location where the vehicle is to be parked;
- c) Details of vehicle intended to be used for trading including a photograph(s) of the vehicle;
- d) Times, days and dates sought; and
- e) Evidence of public liability insurance (where applicable).

7.0 CONSULTATION

Consultation with the adjoining landowners may be undertaken, at the City's discretion.

8.0 DEFINITIONS

Public Land means land owned or managed by the City of Greater Geraldton.

Mobile Trader means working in one place for a short period of time and then moving on to operate in another place.

Local Planning Policy 2.6 Shipping Containers

VERSION 4

March 2026

town planning services

Version	Adoption	Comment
1	10 July 2007 Council Item DS001	Final – No objections received during advertising.
2	11 September 2007 Council Item DS044	Final – No objections received during advertising.
2	1 July 2011 Council Item SC001	Final – Readopted under the new City of Greater Geraldton.
3	15 December 2015 Council Item DRS242	Readopted under the new LPS No. 1.
4	24 March 2026 Council Item DSxxx	LPP updated following review.

Contents

1.0	CITATION.....	3
2.0	INTRODUCTION	3
3.0	APPLICABLE DEVELOPMENT	3
4.0	PLANNING POLICY	3
5.0	DEVELOPMENT REQUIREMENTS	3
6.0	CONSULTATION REQUIREMENTS	4
7.0	DEFINITIONS	4

1.0 CITATION

This is a local planning policy prepared under the *Planning and Development (Local Planning Schemes) Regulations 2015* and the City of Greater Geraldton Local Planning Scheme No. 1 ('the Scheme'). It may be cited as the *Local Planning Policy No. 2.6 - Shipping Containers (LPP No.2.6)*.

2.0 INTRODUCTION

The placement of a shipping container or other similar relocatable storage units on land requires the development approval of the local government as it is considered to fall within the definitions of 'building' and therefore, 'development' under the Scheme.

The purpose of this policy is to provide the development requirements to control the placement of shipping containers or other similar relocatable storage units to safeguard the visual amenity of the locality.

3.0 APPLICABLE DEVELOPMENT

This policy applies to all land which is zoned or reserved under the Scheme.

4.0 PLANNING POLICY

The objectives of this policy are as follows:

- a) To establish guidelines for the assessment of proposals to place shipping containers on land within the municipality.
- b) To ensure an acceptable standard of development is achieved that does not detrimentally affect the amenity of the locality.

5.0 DEVELOPMENT REQUIREMENTS

- 5.1 Development approval is not required where the shipping container is being used for the temporary storage of plant, machinery or building equipment on a building site where a building permit is current and construction is taking place (12 months maximum).
- 5.2 When being used as an outbuilding in a Residential Zone, the shipping container will be assessed against the relevant provisions of the City of Greater Geraldton Planning Scheme No.1 and Local Planning Policy No. 1.2 – Outbuildings, in addition to this policy and the R-Codes.
- 5.3 Development applications for the use of shipping containers, must demonstrate that the structure will:
 - a) not result in a detrimental impact on the amenity of the land or any adjoining land or development;
 - b) be setback from the boundaries as required by the Scheme, the Residential Design Codes or any other relevant planning document;
 - c) not be in front of the primary street and/or secondary street setback or be visually prominent from any public road;
 - d) not compromise any associated approved development or use by:
 - i. impinging on any car parking bays required to satisfy the minimum car parking requirement for the associated approved development or use;
 - ii. being located within an existing service yard or bin storage area;

- iii. obstructing any existing access or visual truncation provided to an accessway, pedestrian or traffic;
- iv. be in good repair with no visible rust marks, a uniform colour to complement the building to which it is ancillary or surrounding natural landscape features; and
- v. be appropriately screened (vegetation or otherwise), where considered necessary by the local government, to meet a. above and the objectives.

6.0 CONSULTATION REQUIREMENTS

Consultation with the adjoining landowners may be undertaken at the City's discretion.

7.0 DEFINITIONS

Shipping Container shall include other similar relocatable 'box-type' storage units. A shipping container modified for the purpose of human habitation is exempt from this policy but subject to the necessary approvals for a Repurposed Dwelling (e.g. R-Codes assessment and Local Planning Policy).

Local Planning Policy 1.4 Stormwater Management

VERSION 2

March 2026

town planning services

Version	Adoption	Comment
1	28 August 2018 Council Item DCS377	Final – No objections received during advertising.
2	24 March 2026 Council Item DSxxx	LPP updated following review.

Contents

- 1.0 CITATION..... 3
- 2.0 INTRODUCTION 3
- 3.0 APPLICABLE DEVELOPMENT/POLICY SCOPE..... 4
- 4.0 PLANNING POLICY 4
- 5.0 DEVELOPMENT REQUIREMENTS 4
 - 5.1 Residential Development 4
 - 5.2 Commercial and Industrial Development 8
 - 5.3 Standard Soakwell Volumes 9
- 6.0 DEFINITIONS 9

town planning services

1.0 CITATION

This is a local planning policy prepared under the *Planning and Development (Local Planning Schemes) Regulations 2015* and the City of Greater Geraldton Local Planning Scheme No. 1 ('the Scheme'). It may be cited as Local Planning Policy 1.4 *Stormwater Management*.

2.0 INTRODUCTION

The *Residential Design Codes Volumes 1 and 2 (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 for 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.

This policy provides local housing objectives and varies relevant deemed-to-comply provisions of the R-Codes to assist in their implementation. It should be read in conjunction with the R-Codes.

Stormwater management is an integral part of building construction and all development is required to have water draining from roofs, driveways, communal streets and other impermeable surfaces directed to an approved stormwater disposal system.

This policy has been prepared to guide applicants, landowners and decision makers in relation to the City of Greater Geraldton's expectations for stormwater management on residential, commercial and industrial properties. It should be read in conjunction with the National Construction Code and the City of Greater Geraldton *Animals, Environment and Nuisance Local Law 2014* (Part 4, Division 4 – Stormwater management)

3.0 APPLICABLE DEVELOPMENT/POLICY SCOPE

This policy applies to all residential, commercial and industrial development in the City.

4.0 PLANNING POLICY

The objectives of this policy are to:

- a) To alter the deemed-to-comply provisions of the R-Codes for *Design Principle 5.3.9 and 6.3.8 – Stormwater management*.
- b) To ensure that sufficient information is provided with a development application (or a building permit where development approval may not be required) so that the local government can assess how stormwater will be appropriately managed.
- c) To specify the minimum standards for the effective retention of stormwater on-site for all types of development.

5.0 DEVELOPMENT REQUIREMENTS

5.1 Residential Development

- 5.1.1 The deemed-to-comply provisions for Part 5.3.9, C9 and Part 6.3.8, C8 of the R-Codes states that:

All water draining from roofs, driveways, communal streets and other impermeable surfaces shall be directed to garden areas, sumps or rainwater tanks within the development site where climatic and soil conditions allow for the effective retention of stormwater on-site.

Note: The above clause does not just apply to a residence but to all roof areas on the property, which includes sheds, carports, patios and the like. Applications for any impermeable roofed structure are required to demonstrate compliance with the deemed-to-comply provisions.

- 5.1.2 In addition to the deemed-to-comply provision (clause 5.1.1 above), the local government will allow stormwater to drain from driveways directly to the road carriageway provided:
 - a) The maximum area is 36m² (generally a double width garage driveway setback 6m from the property boundary); and
 - b) The drainage is only for the stormwater that falls directly onto the driveway (i.e. no stormwater from roofs, other impermeable surfaces or other driveways is directed onto the driveway).

Figures 1 – 3 Examples of downpipes that do not comply with clause 5.1.2



Figure 1



Figure 2



Figure 3

town planning services

- 5.1.3 The amount of storage to be provided for stormwater retention is calculated for the 1 in 1 year ARI rainfall event for 1 hour duration, which is equivalent to 17mm of rainfall intensity as follows:

$$\text{Volume of storage required (m}^3\text{)} = \frac{\text{Total impermeable surface area (m}^2\text{)} \times 0.9}{}$$

60 for mostly sandy soils (A class sites)* or
50 for slightly clay or silty soils (S or M class sites)*

* For H1, H2 or E class sites (in accordance with soil types as per AS 2870) a detailed stormwater disposal method will need to be provided.

The ratio of the volume of storage (m³) to the impermeable surface area (m²) equates to:

- 1m³ of storage volume for every 67m² of impervious area for sandy soils.
- 1m³ of storage volume for every 56m² of impervious area for slightly clay or silty soils.

- 5.1.4 Depressed garden or landscaped areas should be a minimum of 1m away from a boundary fence. They should have a low point 100mm below the adjacent areas to provide storage capacity.

- 5.1.5 To demonstrate that the development meets the deemed-to-comply provisions of the R-Codes the following information is required (with either the development application or the building permit):

- a) Site classification of the property (in accordance with soil types as per AS 2870);
- b) Area of impermeable surfaces (such as roofs and paved areas);
- c) Depressed garden areas proposed (if any) for stormwater retention with levels;
- d) Calculations showing the amount stormwater required to be contained; and
- e) Storage size of garden areas, soakwells or rainwater tanks to accommodate the above calculation.

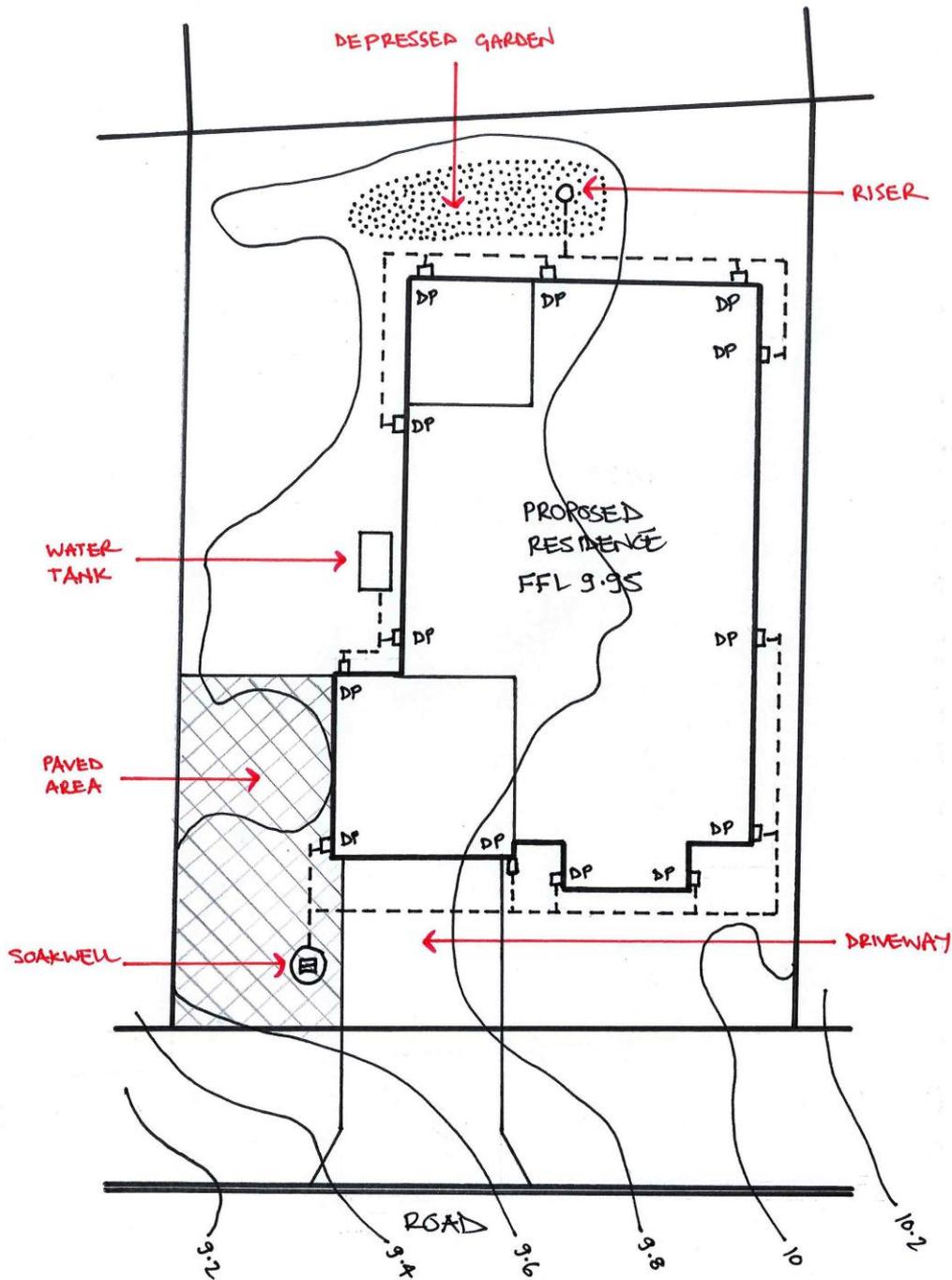
- 5.1.6 A combination of rainwater tanks, soakwells, depressed gardens or other forms Water Sensitive Urban Design (WSUD) solutions are encouraged and the design should allow for an overflow pathway directing higher rainfall intensity events away from the residence and neighbouring properties and ensuring water does not pond against fences or buildings.

- 5.1.7 The use of a stormwater grate is encouraged to reduce the risk of water back flowing up into eaves.

Figure 4 Example of a stormwater grate referred to in 5.1.7



Figure 5 Stormwater Plan for an A Class site (example only and not to scale)



Stormwater volume calculations:

Roof area + 232m² Paved area + 124m² Driveway – 36m² (refer to clause 4.1.3)

Total impermeable surface area: 320m² x 0.9 / 60

Volume of storage required = 4.80m³

Stormwater management systems:

Soakwell (1500mm diameter x 1200mm depth) 2.12m³

Water tank (2,000 litres) 2m³

Depressed garden (24m² area x 0.05m average depth) 1.2m³

Total volume of storage proposed: 5.32m³

5.2 Commercial and Industrial Development

5.2.1 All water draining from roofs, driveways, car parking areas, hardstand areas and other impermeable surfaces shall be retained on-site.

5.2.2 A combination of rainwater tanks, soakwells, storage pits, landscaped drainage basins / open swales or other forms WSUD solutions are encouraged. Fenced, open earth drainage sumps will only be approved if the proponent provides evidence to the satisfaction of the local government that all other WSUD disposal options are not viable for the site.

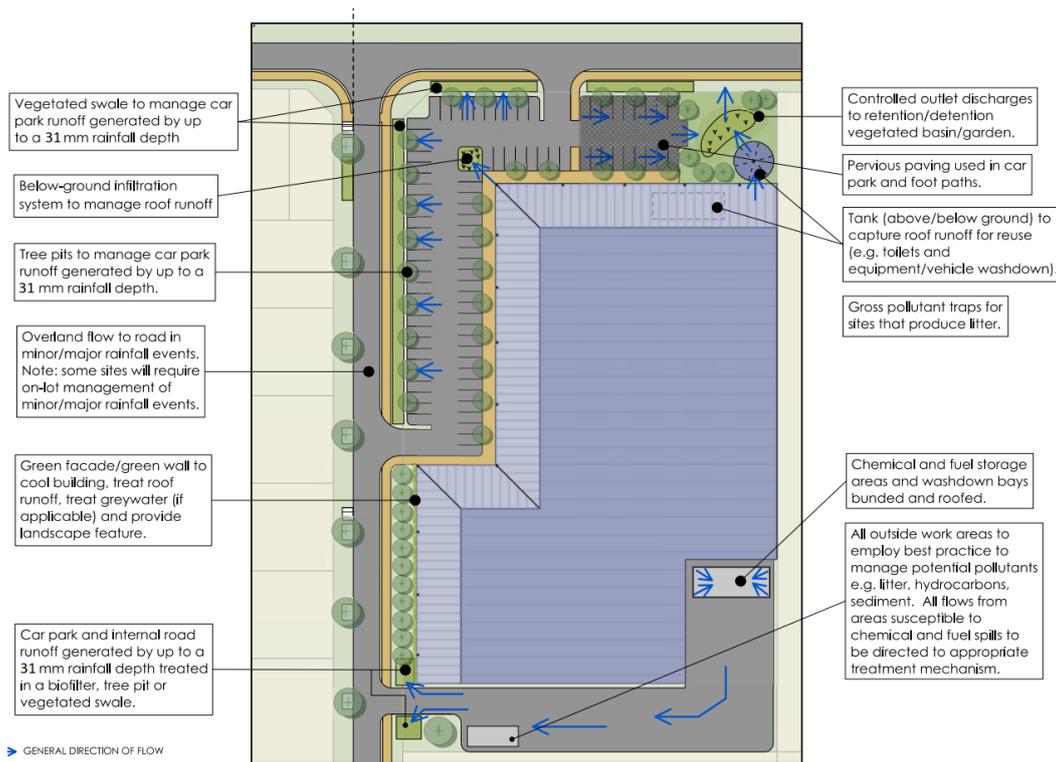
5.2.3 The amount of storage to be provided for stormwater retention is calculated for the 1 in 10 year ARI rainfall event for 1 hour duration, which is equivalent to 31mm of rainfall intensity as follows:

$$\text{Volume of storage required (m}^3\text{)} = \text{Total impermeable surface area (m}^2\text{)} \times 0.9 \times 0.031$$

5.2.4 In addition, the method to cater for a 1 in 100 year ARI rainfall event for one hour duration is to be demonstrated. This is commonly achieved via an overland flow path.

5.2.5 For large-scale commercial, industrial, or residential developments, the City may consider alternative stormwater management solutions beyond those outlined in this policy. Nothing in this policy prevents an applicant from preparing a Stormwater Management Plan that demonstrates adequate drainage of the development by alternative means. The plan must be prepared by a qualified professional engineer with relevant experience in drainage design and should be developed in accordance with a brief agreed upon with the City's Infrastructure Services team. The recommendations of the Stormwater Management Plan will be subject to review and approval by an authorised officer of the City to ensure compliance with the City's design objectives and broader stormwater management principles.

Figure 6 Stormwater Plan for commercial site (example only and not to scale)



5.3 Standard Soakwell Volumes

5.3.1 The table below shows standard soakwell sizes, stormwater storage capacity and the equivalent impermeable area for A, S and M class sites (in accordance with soil types as per AS 2870).

Soakwell Sizes and Storage Capacity		
Diameter (mm)	Depth (mm)	Volume (m ³)
600	600	0.17
900	600	0.38
900	900	0.57
1200	1200	1.36
1800	600	1.53
1500	1200	2.12
1500	1500	2.65
1800	1200	3.05
1800	1500	3.81
1800	1800	4.58

5.3.2 To provide sufficient drainage area for soakwells to function effectively, they should be setback a minimum of 2m from footings and/or the property boundary.

6.0 DEFINITIONS

Impermeable Surface the ground surface area that will impede the absorption of stormwater into the natural ground surface.

R-Codes Residential Design Codes Volumes 1 and 2