3MS

DESIGN and BUILDING GUIDELINES

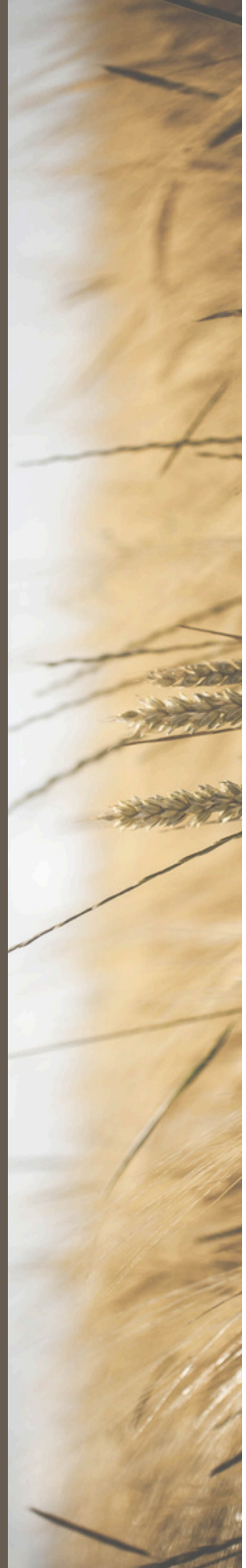
BRIDLEWAYS ESTATE
Cambridge

VERSION: Issue 8

DATE: 05-05-2026

TABLE OF CONTENTS

TABLE OF CONTENTS



1.1 - THE PURPOSE OF THE GUIDELINES

The Bridleways Estate Design & Building Guidelines have been developed to preserve and enhance the value of your property. It is the principal document for the development of the Bridleways Estate as a great residential enclave; supporting development in a coordinated manner in keeping with the vision of 'treading lightly on the land' and with an absolute commitment to this extraordinary landscape.

The Design Control Committee of the Bridleways Estate Residents Society Inc (BRS) is the reviewing body that ensures all the objectives of these guidelines are met by individual lot owners when developing their sites. The BRS is made up of a group of professionals chosen for their expertise and understanding of the objectives. This reviewing body & process is independent of council consenting. The BRS has the responsibility of assessing whether a project complies with the design guidelines and the degree to which it enhances the amenity and streetscape. It assesses proposals against high level objectives and specific controls set out in this document. In the case that some of these controls are not met, the BRS has the right to decline a submission. In these situations the BRS will work more closely with property owners and their consultants to achieve a successful outcome that meets the requirements of the guidelines.

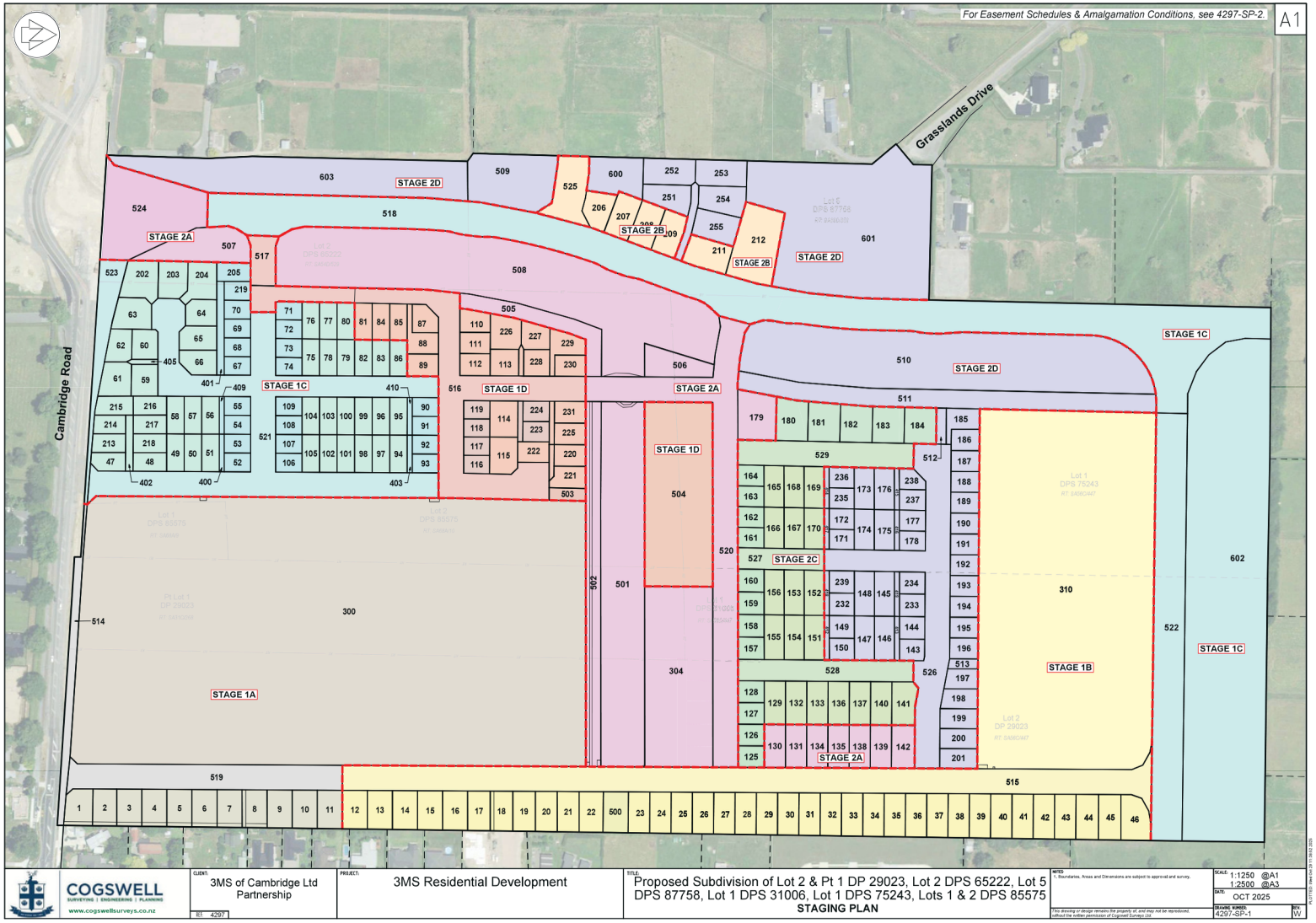
In most cases, if the objectives of these guidelines are met then the review process becomes part of the standard design process that a client would normally undertake with their design consultants.

The developer will cover the cost of the review process for purchasers designing a home that they will live in. If the review process is drawn out however, due to objectives not met, the BRS may charge the lot owner a fee to complete the review process (fee to be provided to the owner as and when required)

No bond is included in the section sale price, however, if damage is caused to any area outside the lot during the construction phase, the owner and / or builder will be liable to cover all repair costs. Cameras will be installed throughout Bridleways Estate and will be operational 24 hrs a day to provide surveillance througout the sub-division.

1.2 - THE SITE

Bridleways Estate is nestled to the western side of the Cambridge township, bordering the towns second entry gateway. It is centrally located and close to world class amenities such as the Avantidrome and Lake Karapiro Rowing Centre. It's also a stones throw away from excellent private and public schools and the vibrant town centre of Cambridge.



AMALGAMATION CONDITIONS – STAGE 1C:

That Lot 400 hereon (Legal Access) be held as to two undivided half shares by the owners of Lots 52 & 53 hereon as Tenants in Common in the said shares and that individual Records of Title be issued in accordance therewith.

That Lot 409 hereon (Legal Access) be held as to two undivided half shares by the owners of Lots 54 & 55 hereon as Tenants in Common in the said shares and that individual Records of Title be issued in accordance therewith.

That Lot 401 hereon (Legal Access) be held as to six undivided one-sixth shares by the owners of Lots 67 – 70, 205 & 219 hereon as Tenants in Common in the said shares and that individual Records of Title be issued in accordance therewith.

That Lot 402 hereon (Legal Access) be held as to six undivided one-sixth shares by the owners of Lots 47, 213, 214, 215, 217 & 218 hereon as Tenants in Common in the said shares and that individual Records of Title be issued in accordance therewith.

That Lot 405 hereon (Legal Access) be held as to two undivided half shares by the owners of Lots 61 & 62 hereon as Tenants in Common in the said shares and that individual Records of Title be issued in accordance therewith.

That Lot 403 hereon (Legal Access) be held as to two undivided half shares by the owners of Lots 92 & 93 hereon as Tenants in Common in the said shares and that individual Records of Title be issued in accordance therewith.

That Lot 410 hereon (Legal Access) be held as to two undivided half shares by the owners of Lots 90 & 91 hereon as Tenants in Common in the said shares and that individual Records of Title be issued in accordance therewith.

AMALGAMATION CONDITIONS – STAGE 1D:

That Lot 406 hereon (Legal Access) be held as to three undivided one-third shares by the owners of Lots 226 – 228 hereon as Tenants in Common in the said shares and that individual Records of Title be issued in accordance therewith.

That Lot 407 hereon (Legal Access) be held as to two undivided half shares by the owners of Lots 231 & 225 hereon as Tenants in Common in the said shares and that individual Records of Title be issued in accordance therewith.

That Lot 408 hereon (Legal Access) be held as to two undivided half shares by the owners of Lots 223 & 224 hereon as Tenants in Common in the said shares and that individual Records of Title be issued in accordance therewith.

That Lot 411 hereon (Legal Access) be held as to two undivided half shares by the owners of Lots 220 & 221 hereon as Tenants in Common in the said shares and that individual Records of Title be issued in accordance therewith.

That Lots 1003 and 1004 hereon be held in the same Record of Title.

AMALGAMATION CONDITIONS – STAGE 2A:

That Lots 1005 and 1009 hereon be held in the same Record of Title.

The amalgamation condition requiring Lots 1003 and 1004 (Stage 1D) to be held in the same Record of Title is to be cancelled.

AMALGAMATION CONDITIONS – STAGE 2B:

That Lots 1006 & 1008 hereon and 1009 (Stage 2A) be held in the same Record of Title.

The amalgamation condition requiring Lots 1005 and 1009 (Stage 2A) to be held in the same Record of Title is to be cancelled.

AMALGAMATION CONDITIONS – STAGE 2C:

That Lots 1007 hereon, Lots 1006 & 1008 (Stage 2B) be held in the same Record of Title.

The amalgamation condition requiring Lots 1006 & 1008 (Stage 2B) and Lot 1009 (Stage 2A) to be held in the same Record of Title is to be cancelled.

AMALGAMATION CONDITIONS – STAGE 2D:

That Lot 412 hereon (Legal Access) be held as to two undivided one-half shares by the owners of Lots 149 and 150 hereon as Tenants in Common in the said shares and that individual Records of Title be issued in accordance therewith.

That Lot 413 hereon (Legal Access) be held as to two undivided one-half shares by the owners of Lots 143 and 144 hereon as Tenants in Common in the said shares and that individual Records of Title be issued in accordance therewith.

That Lot 414 hereon (Legal Access) be held as to two undivided one-half shares by the owners of Lots 235 and 236 hereon as Tenants in Common in the said shares and that individual Records of Title be issued in accordance therewith.

That Lot 415 hereon (Legal Access) be held as to two undivided one-half shares by the owners of Lots 237 and 238 hereon as Tenants in Common in the said shares and that individual Records of Title be issued in accordance therewith.

That Lot 416 hereon (Legal Access) be held as to two undivided one-half shares by the owners of Lots 177 and 178 hereon as Tenants in Common in the said shares and that individual Records of Title be issued in accordance therewith.

That Lot 417 hereon (Legal Access) be held as to two undivided one-half shares by the owners of Lots 171 and 172 hereon as Tenants in Common in the said shares and that individual Records of Title be issued in accordance therewith.

That Lot 418 hereon (Legal Access) be held as to two undivided one-half shares by the owners of Lots 232 and 239 hereon as Tenants in Common in the said shares and that individual Records of Title be issued in accordance therewith.

That Lot 419 hereon (Legal Access) be held as to two undivided one-half shares by the owners of Lots 233 and 234 hereon as Tenants in Common in the said shares and that individual Records of Title be issued in accordance therewith.

That Lot 420 hereon (Legal Access) be held as to five undivided one-fifth shares by the owners of Lots 251, 252, 253, 254 and 255 hereon as Tenants in Common in the said shares and that individual Records of Title be issued in accordance therewith.

That Lots 300, 601 and 603 hereon be held in the same Record of Title.

The amalgamation condition requiring Lots 1006 & 1008 (Stage 2B) and Lot 1007 (Stage 2C) to be held in the same Record of Title is to be cancelled.

Memorandum of Easements

Purpose/Interest	Shown	Burdened Land	Benefited Land	
	Lot 400	Lot 400	Lots 42 & 53	
	Lot 409	Lot 409	Lots 54 & 55	
	Lot 402	Lot 402	Lots 47, 213 - 215, 217 & 218	
	Lot 405	Lot 405	Lot 61 & 62	Stage 1C
	Lot 401	Lot 401	Lots 67 - 70, 205 & 219	
	Lot 410	Lot 410	Lots 90 & 91	
	Lot 403	Lot 403	Lots 92 & 93	
Right of Way;	*R*	*Lot 1002*	*Lots 76, 77 & 80*	
Right to convey Electricity;	Lot 411	Lot 411	Lots 220, 221, 225 & 231	
Right to convey Telecommunications;	Lot 407	Lot 407		Stage 1D
Right to convey Water;	Lot 406	Lot 406	Lots 226 - 228	
Right to drain Water;	Lot 408	Lot 408	Lots 223 & 224	
Right to drain Sewage.	Lot 412	Lot 412	Lots 149, 150, 232 & 239	
	Lot 418	Lot 418		
	Lot 413	Lot 413	Lots 143, 144, 233 & 234	
	Lot 419	Lot 419		Stage 2D
	Lot 414	Lot 414	Lots 171, 172, 235 & 236	
	Lot 417	Lot 417		
	Lot 415	Lot 415	Lots 177, 178, 237 & 238	
	Lot 416	Lot 416		
	Lot 420	Lot 420	Lots 251, 252, 253, 254 & 255	
	Lot 409	Lot 409	Lot 400	
Right to drain Water	Lot 410	Lot 410	Lot 403	Stage 1C
	Lot 407	Lot 407	Lot 411	
Right to drain Sewage	Lot 407	Lot 407	Lot 222, 223 & 224	Stage 1D

Memorandum of Easements in Gross

Purpose/Interest	Shown	Burdened Land	Grantee	
Right to convey Electricity; Right to convey Telecommunications	A, B	Lot 300	Waipa Networks Limited	Stage 1A
	C	Lot 310		Stage 1B
	D	Lot 506		
	T	Lot 304		
	W	Lot 508		
	E, F	Lot 502		Stage 2A
Right to convey Telecommunications	G	Lot 501	Tuatahi First Fibre	
	V	Lot 501	3MS of Cambridge Limited Partnership	
	U	Lot 502		
Right to drain Water	H	Lot 1	Waipa District Council	
	I	Lot 2		
	J	Lot 3		
	K	Lot 4		Stage 1A
	L	Lot 5		
	M	Lot 6		
	N	Lot 7		
	O, P	Lot 8		
	Q	Lot 18		Stage 1B
Right of Way	*S*	*Lot 1003*		Stage 1D

Schedule of Existing Easements

Purpose/Interest	Shown	Burdened Land	Document	
Right of Way	Marked E DPS 87758	Lot 5 DPS 87758	B621604.5	Stages 1C, 1D, 2A, 2B, 2D

Easements in Gross in favour of Waipa District Council are to be created for Rights to convey Water, Rights to drain Water & Wastewater over the balance lot (Lots 1000-1009) for each stage.

These easements are to be surrendered when the balance lots are to be developed (following stage to creation).

A1

Number of Lots:	238
Area of Sections:	118,547 m²
Area of Commercial:	7,845 m²
Area of Retirement:	86,333 m²
Area of School:	39,907 m²
Area of ROW's:	3,434 m²
Area of Reserve:	68,106 m²
Area of Road:	105,365 m²
Area of Balance Land:	48,702 m²
Avg. Lot Size:	498 m²
Max. Lot Size:	2,112 m²
Min. Lot Size:	301 m²

- General Residential
- Townhouse
- Superlot
- Neighbourhood Park
- Ryman Healthcare
- Commercial Site
- Reserve

COGSWELL SURVEYING | ENGINEERING | PLANNING
www.cogswellsurveys.co.nz

CLIENT: 3MS of Cambridge Ltd Partnership

REF: 4297

PROJECT: 3MS Residential Development

TITLE: Proposed Subdivision of Lot 2 & Pt 1 DP 29023, Lot 2 DPS 65222, Lot 5 DPS 87758, Lot 1 DPS 31006, Lot 1 DPS 75243, Lots 1 & 2 DPS 85575
EASEMENT SCHEDULES & AMALGAMATIONS

NOTES: 1. Boundaries, Areas and Dimensions are subject to approval and survey.

SCALE: 1:N/A @A1 1:N/A @A3

DATE: OCT 2025

DRAWING NUMBER: 4297-SP-2

REV: W

1.3 - THE VISION

The developer's vision for Bridleways Estate sub-division was one of old meets new – with homes designed to embrace the Cambridge of old found alongside complementary contemporary homes, with a strong interconnecting thread being materiality and texture. The existing built fabric of Cambridge displays a range of building typologies that are representative of the eras in which they were built, rather than of the specific location and context. Beyond the traditional commercial centre, residential areas include villas, art deco dwellings and more recent dwelling styles using the typical range of materials such as brick, clay tile, profiled metal and various lightweight timber cladding materials. The intent is to follow history and promote good quality outcomes that reflect the following ideas:

- The use of strong built forms, including the use of angular and visible roof forms: ideas that are advocated by the structure plan and perhaps reflect some of the bolder and more memorable built forms in Cambridge.
- A palette of materials that are relatively robust and rely on inherent texture, such as timber claddings and masonry in different forms.
- A range of enduring colours that have contrast but are generally natural hues that reflect the colours of the land and nature.

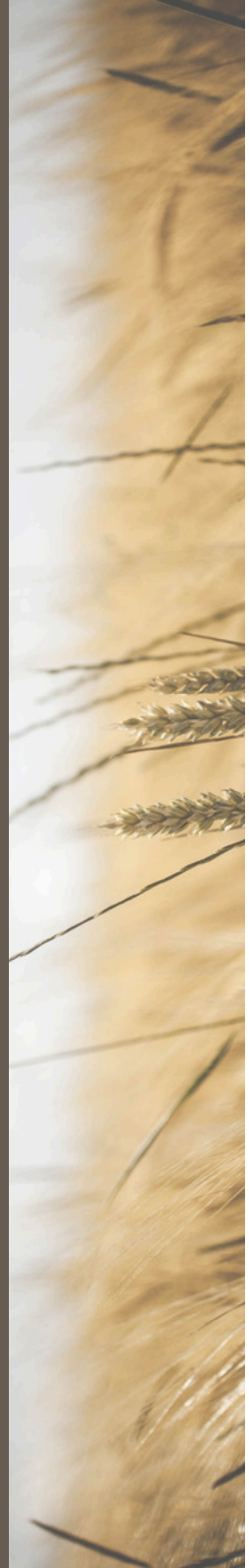
The aim is to make this development a sought-after place to live in Cambridge. The site has several open space amenities on hand and supports Cambridge as a place to move around on foot or bicycle with ease. At a more local level, the intent is that the detailed design of houses and landscape is controlled to ensure a high-quality outcome and a community with superb amenities and an unbeatable standard of living within the heart of the Waikato.

1.4 - WHAT MAKES THIS DEVELOPMENT UNIQUE

Bridleways Estate has created large recreational spaces for the community to enjoy, enhancing the amenity value to all local residents. This forward-thinking development will offer facilities designed to foster a strong sense of community, such as a commercial hub, a school and a destination, all ages playground. The ultimate goal is to create a safe community for all of its residents! The Bridleways Estate sub-division also offers and embraces varying lot sizes and design typologies to address the Government's need for additional housing. Homes can be designed to suit a wide range of demographics - families, young professionals and empty nesters to name a few.
Bridleways Estate encourages sustainable design and is committed to energy conservation. Their focus is to reduce the environmental impacts of all activities relating to the development of Bridleways Estate and to ensure that all homes within the estate are warm, dry and affordable to run.

Why live in an energy efficient and environmentally friendly development?

Internationally, sustainably designed homes show a faster appreciation in value when compared to homes designed using non-sustainable design principles. This is because the operating costs of sustainable homes are much lower, and the internal living environments tends to be more comfortable – warmer in the winter, cooler in the summer, dry and quiet whilst being light filled and spacious. It is anticipated that energy efficient homes will become highly sought after, especially as green building standards are likely to become mandatory in the future.



Environmentally Sustainable Design (ESD) encompasses a number of complementary design philosophies, some of which are outlined below. The BRS encourages owners to incorporate as many of the items below into their design.

- Energy efficient building construction with enhanced insulation, glazing, use of solar shades over glazing on Northern & Western elevations, optimisation of natural daylight, solar heating, passive ventilation, careful orientation and site placement of buildings.
- Energy efficient building operation through design and specification of energy efficient heating, cooling, and lighting equipment, and suitable controls to avoid energy wastage.
- Reduced environmental impact through specification of certified sustainable building materials, recycled and recyclable materials, and use of materials with lower embedded energy costs (including manufacture and eventual disposal).
- Reduced environmental impact through preservation of natural site features, and sensitive landscaping.
- Enhanced health and well being of occupants. This can be achieved through provision of upgraded (above the NZBC) fresh air ventilation, effective climate control, homogenous lighting levels, control of glare from lighting and windows, minimising the use of PVC and specification of Enviro-Choice labelled materials, paints, and floor coverings to minimise off-gassing of harmful substances such as volatile organics and formaldehyde.
- Reduced water and sewage treatment system loads through specification of water efficient fixtures and fittings, low flush WCs, and potential grey water recycling and rain water harvesting.
- Promotion of cycling, walking and the use of public transport to reduce pollution.
- Mitigation of the environmental impacts of construction by promoting recycling activities and waste management policies to be implemented by contractors on site.
- Encouragement of ongoing recycling activities by promoting Waipa District Council's current recycling programmes.

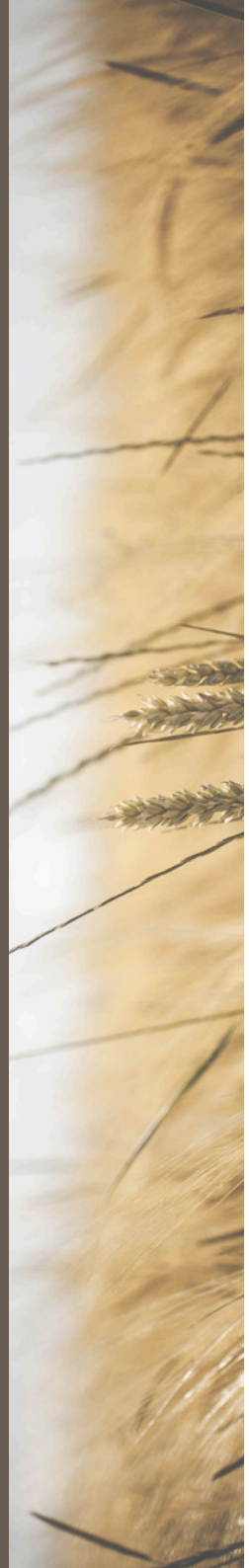
What are some of the principles of Environmentally Sustainable Design (EDS) within this development?

ESD will add value to every home whilst helping to preserve the environment. There are several aspects contributing to the sustainable design ethos of homes within the development:

- Home Orientation – Every home will be built with an orientation to the North to maximise solar gain for heating and energy generation.
- Thermal Mass – The use of concrete floor slabs (and other forms of thermal mass) to act as a thermal heat sink. Concrete is highly efficient at absorbing the sun's energy during the day and re-radiating this heat at night into the home.
- Insulation – The use of floor, wall and ceiling insulation levels that exceed the current New Zealand Building Code specifications.
- Rainwater Collection – The use of rain water collection tanks. This will protect and preserve Cambridge's water source, saving individuals and the community money.

All homes within the development will have a combination of the following features:

- Compulsory photovoltaic cells - capacity to be based on the size of each dwelling along with it's electrical loading. BRS to advise.
- Compulsory use of APL & AGP high performance joinery units to meet new H1 requirements. (Thermally broken joinery is now optional to achieve compliance - please refer to sheet 16 below for further details).
- Compulsory provisional wiring for EV (electric vehicles).
- Compulsory rainwater harvesting systems.
- Effective solar shading to glazing on Northern & Western elevations.
- Concrete, brick, stone, rammed earth, or equivalent heat sinks to harness sunlight for passive heating & internal temperature regulation.
- Greater levels of floor, wall and ceiling insulation as outlined in section 2.3 - H1 Changes.
- Fibre Optic telecommunications and media to every home.



In addition to this, the development:

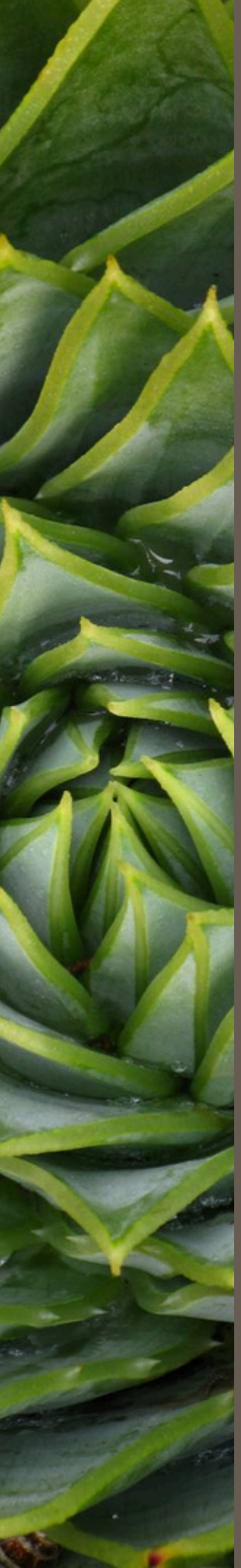
- Encourages the use of energy efficient and low water usage appliances throughout the home.
- Encourages the use of energy efficient lighting systems such as LED or compact fluorescent.
- Encourages high efficiency space heating systems.
- Encourage the use of heat pump hot water.

The goal of the development is to achieve harmony between housing, the unique landscape, and all resident's. This will be achieved by designing energy efficient homes that are sympathetic to their surroundings to preserve the special character of Bridleways Estate.

Please read these Design and Building Guidelines carefully and ensure that your architects, designers, landscape designers and builders are familiar with them too. This document should also be read in conjunction with the Waipa District Council Operative District Plan.

All properties within this development are required to be designed in accordance with these Building & Design Guidelines. They will also need to be approved by the BRS before submission for Building Consent approval by the Waipa District Council.

These building & design guidelines apply only to **general residential** lots in the Bridleways Estate on which dwellings can be designed and constructed by purchasers of lots. Additional guidelines will apply to townhouse lots and super house lots on which dwellings are intended to be constructed by the developer on an as built basis.



OBJECTIVES

- To ensure that all design and construction within the Bridleways Estate is done in an environmentally responsible manner.
- To raise awareness of recent legislative changes that address the need for more energy efficient design & construction methodologies in New Zealand.
- To ensure that all homes built within Bridleways Estate exceed the NZ Building Code requirements.
- To ensure that all homes built within Bridleways Estate are warm, dry and cost effective to run.

2.1 - IMPORTANT DESIGN CONSIDERATIONS: CLIMATE CHANGE

The Government's Building for Climate Change initiative aims to reduce carbon emissions from the construction and operation of buildings in NZ, with the goal of all new buildings in New Zealand being net carbon zero by 2030. Bridleways Estate intends to be a leader in the reduction of carbon emissions through the guidelines set out in this document. Their focus is to achieve a healthier future for all New Zealander's by setting standards that exceed the current NZ Building Code. All houses within the subdivision are to adhere to strict design & building guidelines and feature key design elements that demonstrate a commitment to carbon footprint reduction.

A NET ZERO CARBON BUILDING is defined as 'one that is highly energy efficient with all remaining energy sourced from onsite and/or offsite renewable sources' World Green Building Council.

Over the last 20 years there has been dramatic global temperature increases, and climate change is now a recognised phenomenon. To do it's part in addressing this serious issue, the New Zealand government has signed up to the Paris agreement, a legally binding international treaty on climate change. Its goal is to limit the global average temperature increase to 1.5° Celsius above pre-industrial levels
The government has also created the Climate Change Response (Zero-Carbon) Amendment Act 2019, which provides a framework by which New Zealand can develop and implement clear and stable climate change policies.

The building / construction sector is a major contributor to greenhouse gas emissions in New Zealand. Because of this there is an expectation that all homes designed in the Bridleways Estate will maintain a strong energy efficient focus - favouring passive ventilation principles to reduce the need for mechanical assistance, using sustainable materials and products and ensuring homes are designed within the governments net zero carbon framework.

2.2 - BASIC PRINCIPLES TO CONSIDER IN THE DESIGN

Energy consumption – Energy consumption needs to be reduced and fossil fuels removed as an energy source. Incorporating PV solar panels for power generation and the use of smart appliances should be considered along with provisions for EV (electrical vehicles)

Reduce steel and cement-based products where possible.

Insulation - Up spec'ing of insulation levels to help reduce peak electrical demands during winter months (Refer H1 changes proposed below).

Total embodied energy - This is the energy consumed by all of the processes associated with the production of a building & it's material i.e. extraction, manufacture, transportation etc. The selection of quantity of materials is important as part of the design process to reduce our carbon footprint in construction.

Demolition waste and recycling - The BRS encourages the recycling of construction materials where ever possible.

Homestar, Nabersnz, and Green Building Certification - The BRS encourages designers & architects to explore these tools used to assess sustainable and 'green' construction methodologies (they include a variety of other sustainable principles relating to health, toxicity, resources). They are available via the NZ Green Building Council and Enviromark , and can be applied to either residential or commercial buildings.
The living building challenge also offers an overall sustainable assessment of ‘good’ buildings.
Designers are encouraged to do their own research into climate change and what needs to be done to achieve compliance by 2030 – below are some useful website links:

https://www.nzgbc.org.nz/

https://www.nzgbc.org.nz/homestar

https://www.nzgbc.org.nz/zerocarbon

2.3 - CHANGES TO H1

The government has introduced changes to the H1 compliance code. Bridleways Estate has embraced these changes and will require all homes designed within the subdivision to comply with the 2023 mandatory values. It is important that all designers & architects designing the homes to be fully aware and understand the changes.

Below is a summary of these changes:

1. NZ will now be broken up into 6 climates zones rather than the current 3 to better reflect NZ's varying climates, and the need for therefore specific design requirements within each zone. The sub-division is in Zone 2.

2. The underfloor will have different R values across the country with a rise on the current R values in both on-slab and raised floors. Slab on grade will be **R1.5** and all other floors to be **R2.5**

3. **R2.0** construction R values to all walls.

4. The R value requirements on windows will be **R0.46** for Zone 2

5. The use of Thermally broken joinery is now OPTIONAL. BRS understands compliance can be achieved without the need for thermally broken joinery units. It is also important for landowners to understand the benefits of using Thermally Broken Joinery so they can make an informed decision. Thermally broken joinery in New Zealand offers several key benefits, primarily revolving around energy efficiency and comfort. By interrupting heat transfer, these joinery systems help reduce energy consumption for heating and cooling, leading to lower utility bills and a more comfortable indoor environment. Additionally, they minimize condensation, improve noise reduction, and enhance the durability of the joinery.

6. The residential minimums in the ceilings will rise to **R6.6** construction. The perimeter of a roof, **500mm** out from the walls, will have a requirement of **R3.3** as the **R6.6** thickness would require too much of a radical redesign of current truss systems.

H1 ENERGY EFFICIENCY ACCEPTABLE SOLUTIONS IN ALL 6 CLIMATE ZONES

H1 ENERGY EFFICIENCY ACCEPTABLE SOLUTION H1/AS1

Building thermal envelope

2.1.2.2 *Building elements* that are part of the *thermal envelope* shall have minimum *construction R-values* no less than those in:

a) For *building elements* that contain embedded heating systems, those in Table 2.1.2.2A; or

b) For *building elements* that do not contain embedded heating systems, those in Table 2.1.2.2B.

2.1.2.3 For *building consent* applications submitted before 2 November 2023, the minimum *construction R-values* for windows and doors in climate zones 1 and 2 are permitted to be reduced to R0.37 m²·K/W.

COMMENT: Paragraph 2.1.2.3. allows for a longer transition period for higher minimum *construction R-values* for windows and doors in climate zones 1 and 2. However, starting on 2 November 2023, all *building consent* applications for climate zones 1 and 2 must use a minimum *construction R-value* of R0.46 m²·K/W.

TABLE 2.1.2.2A: Minimum construction R-values for heated ceilings, walls or floors

Paragraph 2.1.2.2 a), 2.1.3.1

Building element	Construction R-values (m²·K/W)[1],[2],[3]					
	Climate zone 1	Climate zone 2	Climate zone 3	Climate zone 4	Climate zone 5	Climate zone 6
Heated ceiling[4]	R6.6	R6.6	R6.6	R6.6	R6.6	R6.6
Heated wall	R2.9	R2.9	R2.9	R2.9	R2.9	R2.9
Heated floor	R2.5	R2.5	R2.5	R2.8	R3.0	R3.0

Notes:

(1) R_{in}/*R-value* < 0.1 and R_{in} is the *thermal resistance* between the heated plane and the inside air.

(2) Floor coverings, for example carpet or cork, will reduce the efficiency of the *heated floor*.

(3) Climate zone boundaries are shown in Appendix C.

(4) In *roofs* with a *roof* space, where the insulation is installed over a horizontal ceiling, the *roof R-value* may be reduced to R3.3 for a distance of up to 500 mm from the outer edge of the ceiling perimeter where space restrictions do not allow full-thickness insulation to be installed.

TABLE 2.1.2.2B: Minimum construction R-values for building elements that do not contain embedded heating systems

Paragraph 2.1.2.2 b), 2.1.3.1

Building element	Construction R-values (m²·K/W)[1]					
	Climate zone 1	Climate zone 2	Climate zone 3	Climate zone 4	Climate zone 5	Climate zone 6
Roof[2]	R6.6	R6.6	R6.6	R6.6	R6.6	R6.6
Wall	R2.0	R2.0	R2.0	R2.0	R2.0	R2.0
Floor						
Slab-on-ground floors	R1.5	R1.5	R1.5	R1.5	R1.6	R1.7
Floors other than *slab-on-ground*	R2.5	R2.5	R2.5	R2.8	R3.0	R3.0
Windows and doors[3]	R0.46[3]	R0.46[3]	R0.46	R0.46	R0.50	R0.50
Skylights	R0.46	R0.46	R0.54	R0.54	R0.62	R0.62

Notes:

(1) Climate zone boundaries are shown in Appendix C.

(2) In *roofs* with a *roof* space, where the insulation is installed over a horizontal ceiling, the *roof R-value* may be reduced to R3.3 for a distance of up to 500 mm from the outer edge of the ceiling perimeter where space restrictions do not allow the full-thickness of insulation to be installed.

(3) For *building consent* applications submitted before 2 November 2023, the minimum *construction R-values* for windows and doors in climate zones 1 and 2 are permitted to be reduced to R0.37 m²·K/W.

2.4 - HOMESTAR

The objective behind the Homestar Rating guide is to improve performance and environmental impact of new and renovated builds in New Zealand, to ensure all Homestar rated buildings are warm, healthy, comfortable places to live. Below are some examples of the design features and specifications that are required to achieve a Homestar rating of 7 (highest rating is 10). The BRS encourages home owners to achieve Homestar accreditation, however this will not be mandatory.

EFFICIENT SPACE AND WATER HEATING:

An adequately sized heat pump (either central heating or high wall/floor mounted) or a flued wood burner is provided in the main living area.

An electric resistive or heat pump hot water cylinder with cylinder wrap or an instantaneous gas heater.

Restrict shower flow rates to **9L/min**.

MOISTURE CONTROL AND VENTILATION:

All concrete or steel elements (framing, lintels, etc) within roofs and/or walls are thermally broken with an adequate thickness of insulation on the outside of the element.

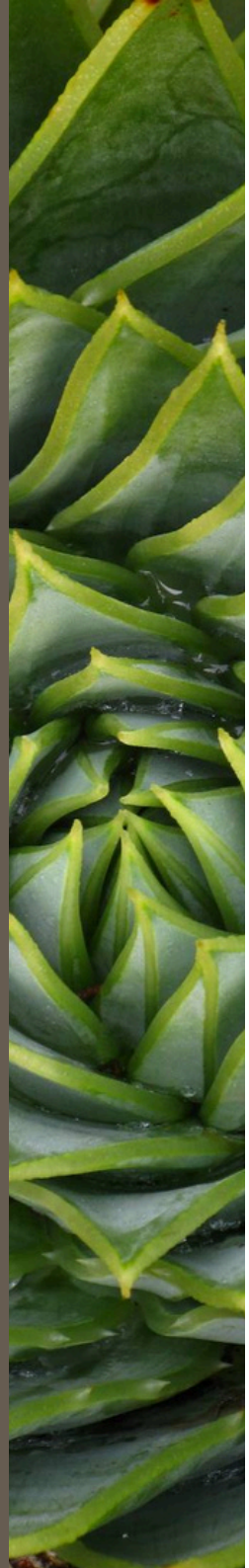
All windows are to be high performance APL & AGP joinery units.

A washing line in a dedicated spot outside the thermal envelope is available and / or a heat pump dryer.

LIGHTING AND DAYLIGHTING:

All interior lights are LED or Compact fluorescent (CFL) with a lighting power density no more than **5W/m².**

All exterior lights are LED, CFL or other lamp type with a minimum efficacy of **40Lm/W.**



2.4 - HOMESTAR continued

Window areas in external walls are no less than:

- 15% of the floor areas for living areas and bedrooms where the windows are not significantly shaded.
- 20% of the floor areas for living areas and bedrooms where the windows are significantly shaded, e.g. by eaves, balconies, purpose designed shading, etc.

WATER USE IN THE HOME:

WC's are dual flush with no more than **4.5L / 3L** cisterns (4 Star WELS).

All bathroom hand wash basin tap flow rates are **≤ 6L/min** (5 Star WELS).

MANAGEMENT:

A construction environmental management plan (EMP) has been developed using NZGBC template or approved equivalent, or main contractor has ISO14001 certification.

Where contractors are working onsite it is recommended to use approved contractor accreditation:

- Enviro-Mark NZ Gold Standard or above
- Resene Eco Decorator
- EcoSmart Electrician
- IAONZ Accreditation
- Homestar or Greenstar Professional

2.4 - HOMESTAR continued

VEGETATION:

Promotion of vegetation around Bridleways Estate / Homestar properties through vegetable gardens and fruit trees

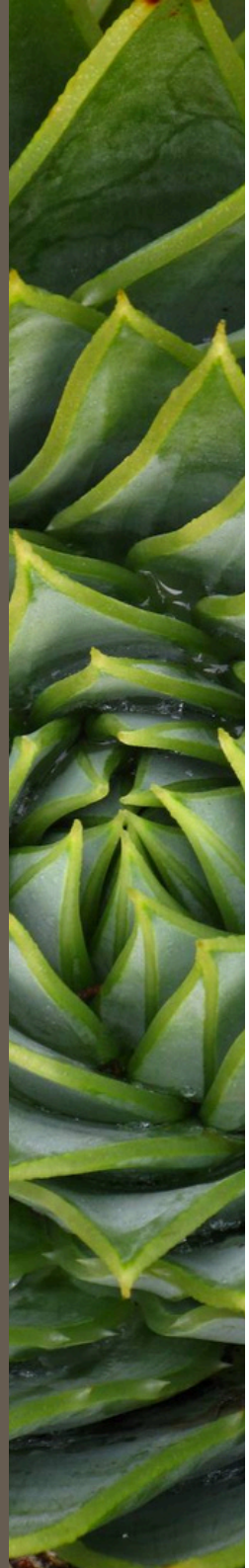
- 0.5 points awarded per m^2 of vegetable gardens (1 point max).
- 0.5 points awarded per two fruit trees (1 point max).

VEGETABLE GARDEN AREAS:

The area measured is the total area used or designated for vegetable planting. Make an assumption where the planted area is not clearly defined and /or there is mixed planting.

FRUIT TREES:

When counting fruit trees do not include those where the fruit is purely ornamental; however, include if at all edible.



2.4 - HOMESTAR continued

BENEFITS OF HOMESTAR:

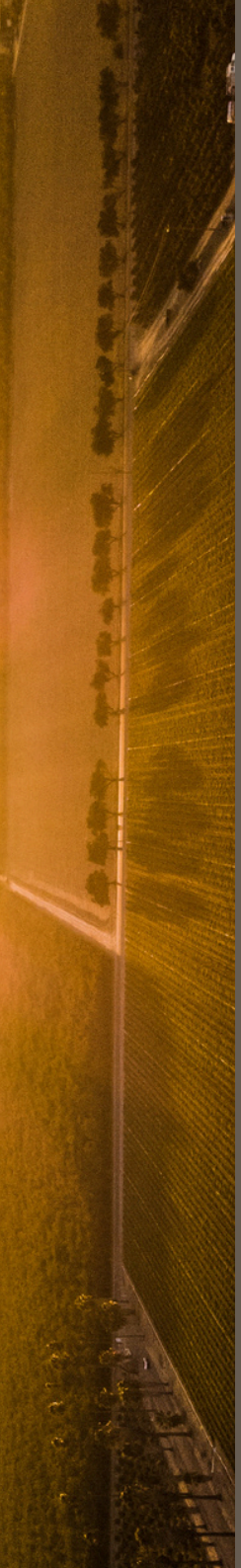
The minimum Homestar rating (a six) guarantees a home that's warmer, drier and healthier than a similar one just built to code. It'll also use less power and water, an important consideration if your water is metered. As you progress through the ratings, the thermal performance of the house will improve along with increasing sustainability of the building with features such as greywater recycling (for example, shower water run-off is used to flush the toilets).

The study also calculated the payback period and found it leaned heavily in favour of opting for Homestar on your next build. The payback time for a six rating was only six years. A 10 would take a lot longer (20 years), which isn't unreasonable if you're planning on living in your home for the long haul.

The cost increases shown in the table below are for keeping an original house design and adapting it to the Homestar level. So, for a level six or seven Homestar qualification, you could get away with no extra investment by specifying a smaller floor area or cutting costs when it comes to the internal fittings. Another option is rolling up your sleeves and doing some DIY, such as painting, and redirecting the money you'd save on tradespeople towards Homestar improvements.

2.4 - HOMESTAR continued: COSTS OF HOMESTAR

Last year, BRANZ ran the numbers on the costs associated with going for a Homestar rating for 10 different houses in Hobsonville Point, Auckland. There was a 3% to 4% premium to achieve the minimum rating. Getting the top rating would add a quarter to the final build cost.



3 - SITE DESIGN

OBJECTIVES

- To ensure individual building lots, streetscapes and neighbourhoods are developed in a co-ordinated manner, where the architectural and landscape components of the built environment are balanced, and residential amenity is maintained.
- To ensure there is a balance between built form and open space.
- To ensure homes are orientated to maximise solar gain.
- To enhance residential amenity within the Bridleways Estate subdivision by ensuring sites are developed in an appropriate and considered way and are responsive to site context.
- To promote an appropriate design response to site context.

3.1 - SITE GRADING, EARTHWORKS & MINIMUM FLOOR LEVELS

Modifications to the ground levels and the grading pattern for each lot are not permitted without the written approval of the BRS.

If topsoil (excavated for the house pad) is to be kept onsite during construction, the owner and / or builder is to ensure the mound is compact and / or covered appropriately to protect neighbours from dust pollution / nuisance.

Each lot has a nominated minimum floor level. Please refer to the 'Minimum Floor Level' diagram in Section 8 of this document.

3.2 - SITE SERVICING

All services and utilities are to be located below the ground.

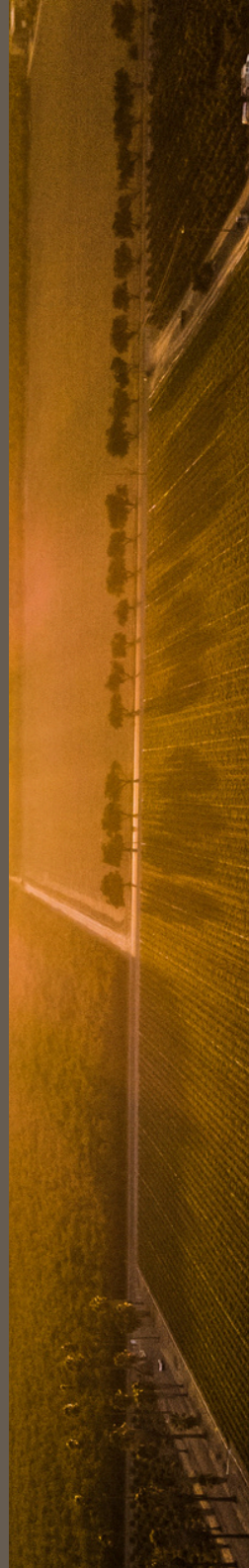
Each lot is connected to the reticulated sewer system throughout the subdivision.

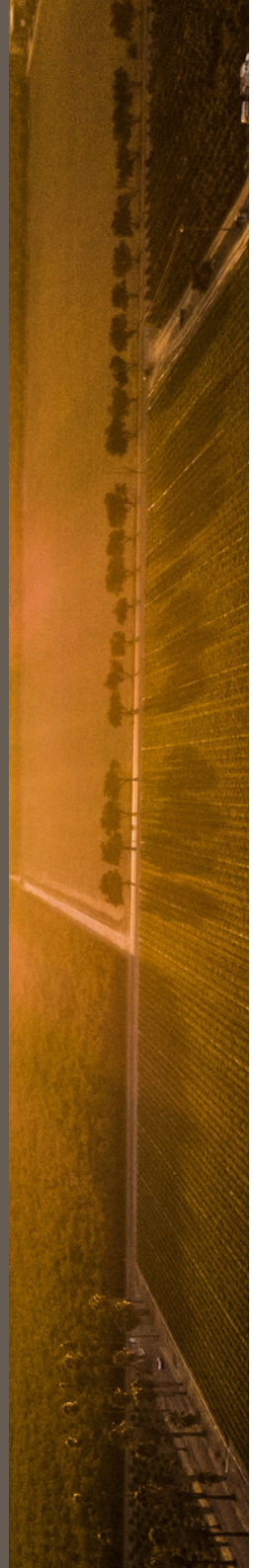
A water connection is available to each lot within the subdivision.

In addition, each site is required to have a minimum **2000L** above ground water tank with a compulsory trickle feed from the main water supply (see note 5.8 below for further information). Please ensure the water tanks and associated pipe works (if placed along a boundary fence) are below the fence line and are not visible from the adjacent neighbouring property.

The purpose of the water tank is to collect rain water from the roof and then re-use this non potable water to service laundries, WC areas & site irrigation. Plumber to ensure human health & safety mechanisms are in place when servicing these areas i.e. filters or appropriate signage indicating that water is non potable if filters aren't used.

Gas cylinders are to be discretely placed and tucked away from public view.

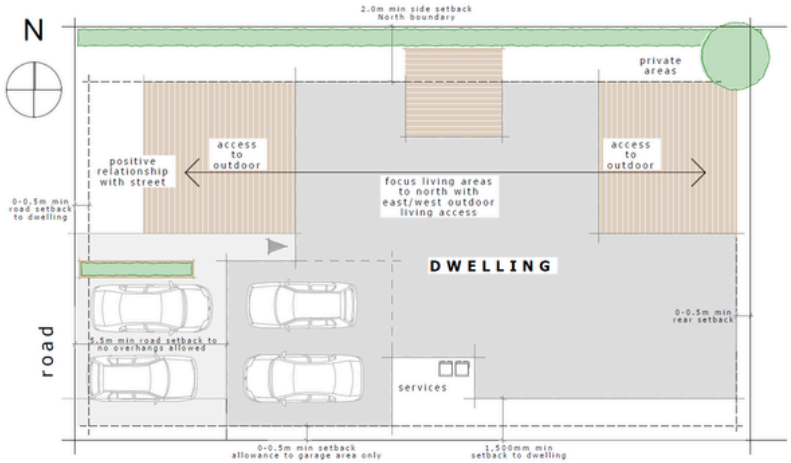




3.3 - BUILDING DESIGN, ORIENTATION & SOLAR GAIN

East / West Axis Lots

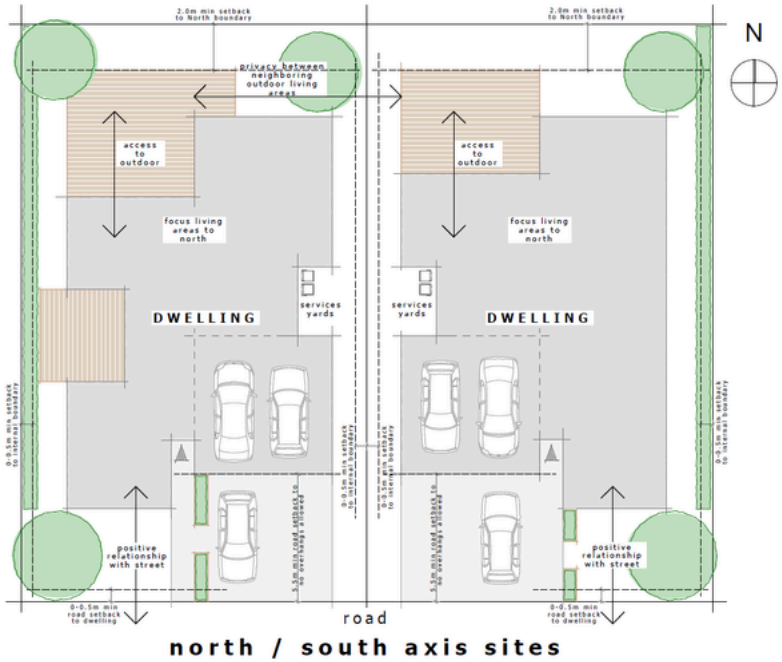
- There shall be no more than **TWO** principal dwelling per lot. Due to the high demand and interest for co-generational living within the Bridleways Estate, BRS has decided to allow for 2 dwellings per site. The additional dwelling needs to incorporated within the main roof form (not stand alone), and can have either it's own separate entry or the entry within the main house floor layout. Development contributions will be required for the second dwelling so please seek confirmation of DC costs with Waipa District Council during the design stage.
- Entries to be facing the street. For lots with a road frontage width of 14.0m, BRS will allow the applicant to explore an alternative entry point location as long as landscaping is used to direct people to the entry and design complies with 15% glazing rules (Rule 4.10).
- Living areas to be facing north with direct access to east / west facing outdoor spaces.
- Outdoor living spaces to positively enhance streetscapes through planting & fencing (refer to landscaping guidelines) with private spaces to rear.
- Where possible service areas such as laundries and bathrooms to be located on the southern side of the lot (to act as a buffer to the northern face).
- Where possible garages are to be located on the southern side of the lot (to act as a buffer to the northern face).



west / east axis sites

North / South Axis Lots

- There shall be no more than TWO principal dwelling per lot. Due to the high demand and interest for co-generational living within the Bridleways Estate, BRS has decided to allow for 2 dwellings per site. The additional dwelling needs to incorporated within the main roof form (not stand alone), and can have either it's own separate entry or the entry within the main house floor layout. Development contributions will be required for the second dwelling so please seek confirmation of DC costs with Waipa District Council during the design stage.
- Entries to be facing the street. For lots with a road frontage width of 14.0m, BRS will allow the applicant to explore an alternative entry point location as long as landscaping is used to direct people to the entry and design complies with 15% glazing rules (Rule 4.10).
- Living areas to be facing north with direct access to east / west facing outdoor spaces.
- Garages to be located on the southern side of the lot, whilst laundries and bathrooms are to be located on the east / west side of the lot.



north / south axis sites

3.4 - SETBACKS

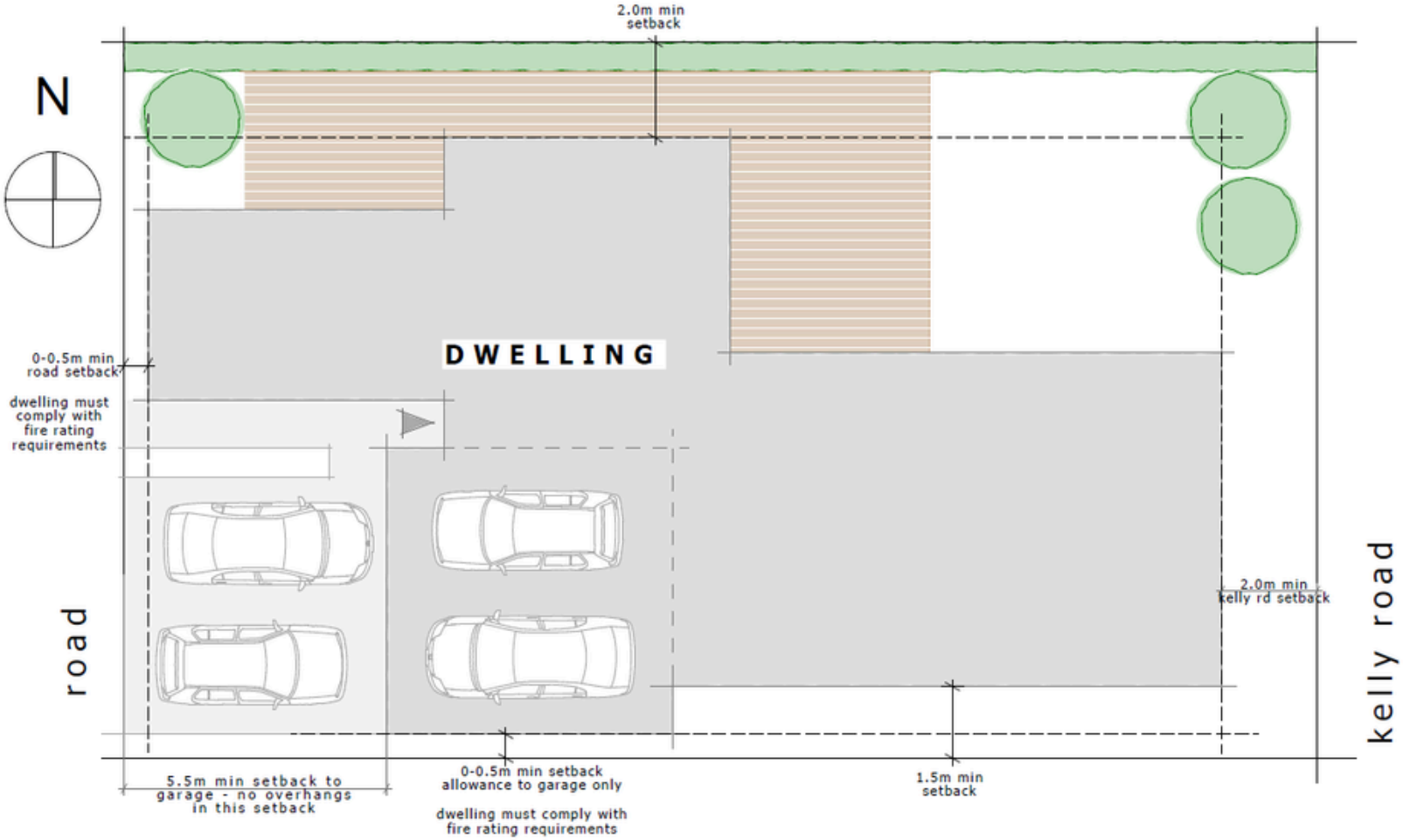
- All buildings are to be setback as outlined in subdivision layout plan for each individual lot. Please refer to the setback diagrams below for clarification.
- Garages should be setback from the road boundary by a minimum of **5.5m** to allow additional vehicle parking in front of the garage as outlined below.
- Wall construction will need to comply with engineering standards and footings will need be within the property boundaries. The maximum height of these walls is not to exceed **2.7m** with no gutter / downpipe visible to the adjacent property.
- Eaves less than **600mm** can encroach into the side and rear setback areas. Eaves cannot encroach into the road setback outside the boundaries. Garage eaves of less than **600mm** can encroach into the **5.5m** road setback (**4m** for Lots 1 - 8).

Minimum building setback from road boundaries / laneways

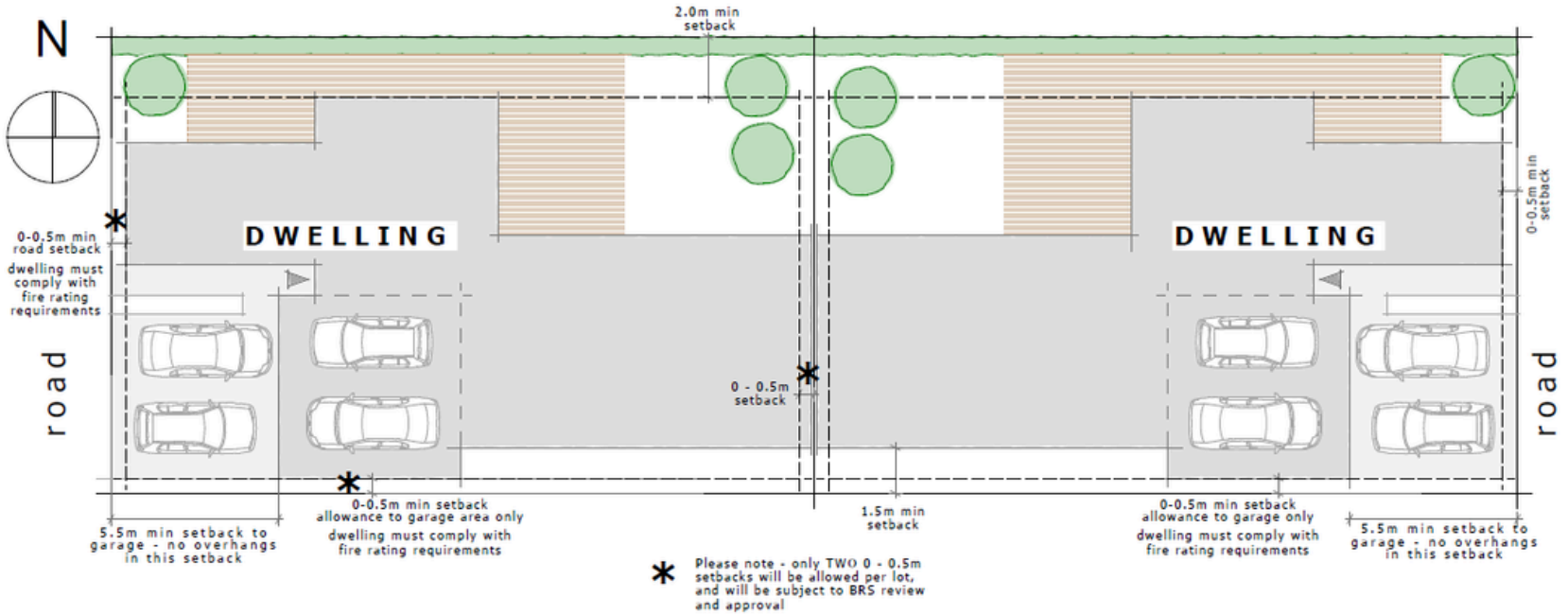
- Dwelling (non-garage areas): **0m**. Please ensure compliance with fire rating regulations.
- Garage: **5.5m** (refer diagram). This allows space for a further 2 additional on-site carparks.
- For lots that do not have access direct from the road and only accessed via a laneway, the **5.5m** garage setback still applies to allow parking for 2 additional on-site carparks.
- For lots adjoining Cambridge Road, the setback to the Cambridge Road boundary is to be **2m**.
- For **Lots 1 - 8** a reduced garage set back of **4m** is permitted due to the storm water easement on the Eastern side of the properties.
- BRS reserves the right to limit the number of **0m** boundary setbacks to 2 total per site and will be subject to BRS review and approval.

Minimum building setback from internal site boundaries

- Dwelling (Northern boundary): **2m** unless adjoining a laneway and therefore can be **0m**. Please ensure compliance with fire rating regulations.
- Dwelling (Southern boundary): 1m preferred however BRS reserves the right to approve 0m subject to the wall and eaves achieving the required fire rating, complying with height to boundary rules (section 4.4) and internal spaces meeting natural light and ventilation requirements.
- Dwelling (adjoining another lot): **0m** min. Subject to the wall and eaves achieving the required fire rating, complying with height to boundary rules (section 4.4) and internal spaces meeting natural light and ventilation requirements.
- Garage (Southern boundary): **0m**. BRS reserves the right to approve a garage to be located on the northern boundary at **0m** as the crossing location may have already been positioned by the developers.
- For lots adjoining the existing Kelly Road residential properties (**Lots 1 - Lot 16** inclusive) requires a building setback of **2m** from Eastern boundary (Refer diagram).
- For lots adjoining **Lot 512 & Lot 513** (pedestrian access ways): **1.5m**
- BRS reserves the right to limit the number of **0m** boundary setbacks to 2 total per site and will be subject to BRS review and approval.
- Refer to imagery below for clarification.



setback example - lots adjoining kelly road existing residents



setback example - adjoining lots

3.5 - SITE COVERAGE

Building site coverage for Lots over 410m2 **must not exceed 50% of the net site area for all general residential lots** (small and large lots).

For lots equal or less than 410m2 Building site coverage must not exceed 60% of the net site.

Building site coverage is defined as the area of a site which is covered by buildings - includes parts covered by overhangs, cantilevered structures and covered decks, however excluding the eaves of a building if less than **600mm** deep.

Fences, terraces, retaining walls, uncovered decks less than **1m** above GROUND LEVEL, and swimming pools are not included in the definition of SITE COVERAGE, however, may be included within IMPERMEABLE SURFACE calculations (see below).

3.6 - IMPERMEABLE SURFACES

Impermeable surfaces must not exceed 65% of the net site area for all general residential lots (small and large lots over 410m2).

For lots under 410m2 Impermeable surfaces must not exceed 70% maximum.

Impermeable surfaces are defined as being a surface that does not allow natural percolation of water into the ground at a rate that avoids ponding or runoff - includes roofs, paving (including proprietary pavers), decking that does not allow water to drain through to a permeable surface, swimming pools, patios, metalled driveways, highly compacted soils, hard surfaced materials, and other similar materials.

4 - ARCHITECTURAL DESIGN

OBJECTIVES

- To ensure that development within Bridleways Estate is consistent with the vision of creating a community with outstanding amenities and a unique sense of place.
- To ensure individual building lots, streetscapes and neighbourhoods are developed in a co-ordinated manner, where the architectural and landscape components of the built environment are balanced.
- To ensure that lots are developed in a co-ordinated manner with complimentary use of materials, colours and external finishes. These materials must exhibit durability, honesty, integrity, and be appropriate to the lots landscape setting.
- To ensure that the Bridleways Estate is symmpathetic to the character of Cambridge, and enhances the lifestyle and amenity value of Cambridge residents.

4.1 - BUILDING DESIGN & UNIQUENESS

All dwellings designed within Bridleways Estate are to be suitably unique. The layout, elevations (particularly when viewed from a public space such as a road or reserve), cladding and colour combination is to be carefully considered and designed in such a way that it is unique in comparison to other dwellings within Bridleways Estate.

Confirmation of Unique Design form will need to be signed and provided to the BRS at the time of preliminary design submission. Please refer to the back of this document for a copy of this form.

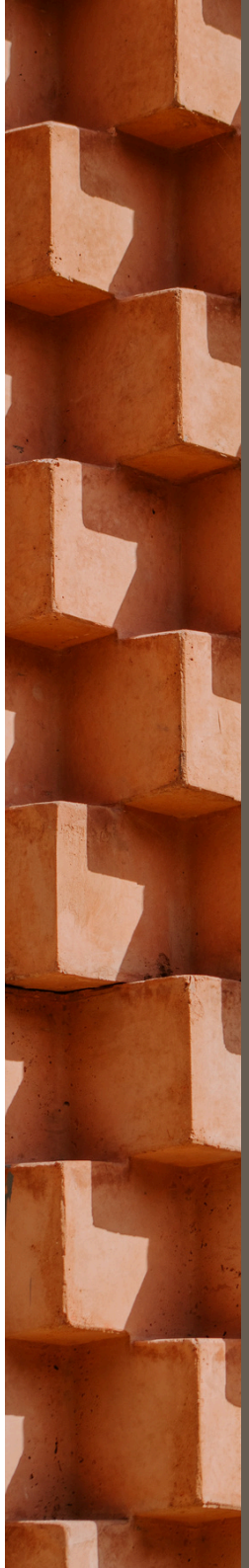
4.2 - BUILDING SIZE: HEIGHT, LENGTH & MIN. FLOOR AREA

HEIGHT

The maximum height of the main residential dwelling shall not exceed **9 metres** in height. Height shall be measured from the finished ground level.

The final design of these buildings will be subject to the approval of the BRS.

Any activities that do not comply with the above will be deemed Discretionary Activities and will require prior approval from the BRS and then Resource Consent approval from the Waipa District Council.



4.2 - BUILDING SIZE: HEIGHT, LENGTH & MIN. FLOOR AREA continued

LENGTH

It is preferable that the continuous building/roof length must not exceed **16m**, however, BRS can approve a continuous building/roof length longer than 16m without the need for a DPBA.

All buildings, regardless of length, will be assessed by BRS to ensure they are designed in keeping with the character of the neighbourhood. Claddings and glazing will be assessed in relation to building length to ensure long lengths of wall are visually broken.

MINIMUM FLOOR AREA

- Minimum floor area to be **150 m²** including garaging (measured to outside of timber frame line). Excludes decks, patios and any covered / uncovered outdoor structures.
- On smaller sites where the road frontage is **14.0m** or less, BRS will allow a single garage set off the boundary by 0-1.5m (subject to fire ratings and engineered design) on the basis that the minimum dimension is 4.5m x 6.0m deep to allow for bike and general storage as part of this space. This needs to be demonstrated on the plans as part of the Preliminary approval process.

For sites with road frontage of 14m or less, carports are allowed if the carport is well-integrated and forms a cohesive part of the overall dwelling design. All carport proposals will be subject to review and approval by the BRS Committee and applicants must be open to design feedback and potential revisions.
A minimum of three on-site car parks must be provided for these lots.

For sites with a road frontage exceeding 14m, the inclusion of a carport will require a formal request and approval from the BRS Committee.

BRS will approve double garaging on **14.0m** road frontage sites or less if the garaging is **0-600mm** off the boundary and complies with fire, engineering and height to boundary standards. BRS preference will be **0m** from boundary to maximise northern sunlight potential.

4.3 - BUILDING LAYOUT

All main living areas must be positioned so that they are orientated north.

All service areas of the main residential dwelling must be positioned on the southern side of the dwelling. Service areas include: laundry, bathroom areas and main storage areas.

Where possible, garaging must be positioned on the southern side of the lot.

Where possible garage doors should be located on the roadside and set back from the road boundary by **5.5m** to allow 2 x additional carparks.

4.4 - HEIGHT TO BOUNDARY / DAY LIGHT CONTROL

The BRS encourages all residents to be considerate of their neighbours by thoughtfully designing homes to avoid overshadowing and privacy issues.

No building shall penetrate a height recession plane at right angles to a boundary inclined inwards and upwards at an angle of **45** degrees from **2.7m** above ground level of all boundaries of a lot.

Please see diagram below for clarity.

height to boundary considerations

4.5 - ROOF FORMS

Bridleways Estate encourages the use of gable roof forms, however other roof forms and combinations of forms will be considered and will be subject to approval by the BRS.

If a combination of roof forms is proposed then the designer or architect will need to submit a comprehensive design statement outlining reasoning behind the varied roof forms.

Examples include but are not limited to:

a. Mono-pitch roof forms combined with flat roof areas
b. Gable & hip roof forms combined with flat roof areas
c. Exclusive flat roof forms

Primary gable roof pitch to be between **25 - 40 degrees,** unless approval is sought from BRS Review Team for a reduced pitch. Any primary gable forms less than 25 degrees will be assessed on the design intent/ merit and would need to impress the BRS review team for approval to be given. This revision is to assist with reducing shadowing onto neighbouring lots in the winter period even though the home may comply with height to boundary compliance rules. This rule change also provides visual interest to the streetscape.

Primary mono-pitch roof to be between **8 - 15 degrees** - subject to the BRS approval.

All flat roof areas are defined as being: any roof area where the pitch is between **2 - 8 degrees**.

4.6 - ROOFS

All roofs should be neutral or dark in colour with a reflectivity value of **20%** or less, and have a G10 or similar matte finish.

Dark recessive colours are also permitted in the range of charcoals, browns and greys.

4.6 - ROOFS continued

Unpainted roof surfaces will not be permitted in the sub-division.

All roofing details i.e. gutters, downpipes and flashings shall be materials that complement the roof and / or wall materials.

4.7 - ROOF PENETRATIONS

All roof penetrations (other than chimneys), including aerials or satellite dishes must be discretely located AND screened from public view.

It is encouraged that all metal chimney flues and other roof penetrations enclosed or painted the same / similar colour to the roof itself to make them less visually obtrusive.

All chimneys must comply with the maximum building height rules in the Waipa District Plan.

Solar panels should be fixed parallel with roof forms where ever possible. If panels need to be angled this must be done as low as is feasibly possible to minimise their visual presence whilst maximising performance.

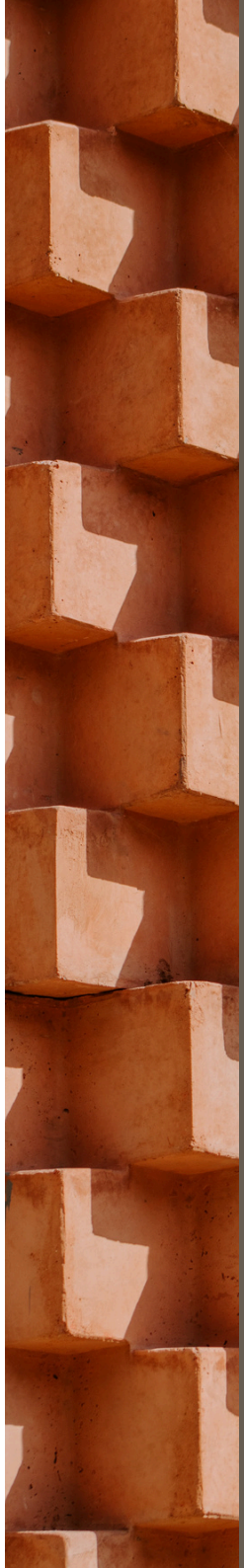
4.8 - OUTDOOR LIVING AREAS / COURTS

Bridleways Estate encourages lot owners to create multiple outdoor living courts and entertaining spaces as opposed to a single space. This creates a number of areas that can be enjoyed at different times of the day, throughout the year.

Each dwelling shall have outdoor living areas / courts which:

a) Have an overall total area (primary and secondary outdoor living areas) equating to at least **50m²**.

b) Have a **minimum primary outdoor living area of 4m x 3m** constructed of either timber deck, paving or concrete (please consider impermeable surface calculations here).

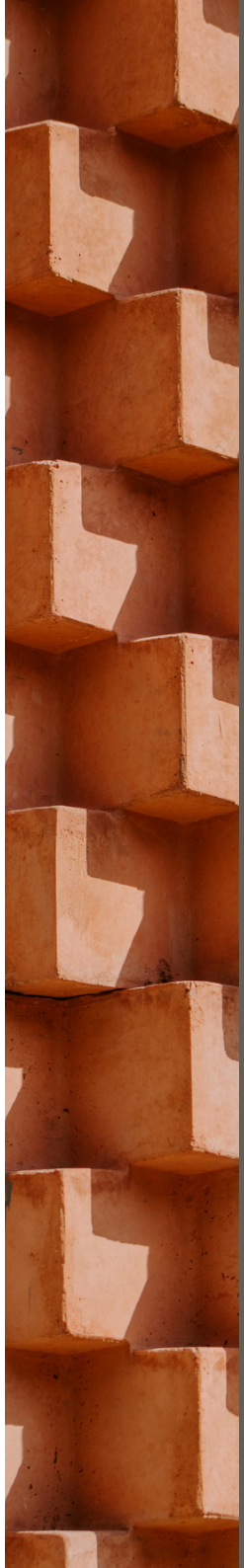


4.8 - Outdoor Living AREAS / Courts continued

c) Have **minimum secondary outdoor living areas of 10 sq metres** with a minimum dimension of **2.0m.** These may include grassed areas or smaller decks can overlap grassed areas to achieve compliance.

d) Are free of buildings, driveways, manoeuvring areas, parking spaces, and outdoor storage areas, but may include grass, covered or uncovered decks, roof overhangs, and pergolas that are designed to provide cover for users of the outdoor living spaces.

e) Low level decks that create outdoor living areas are permitted to extend to boundary fencing and be within set back zones provided the deck height is the same as the house floor level.



4.9 - BUILDING FAÇADE & ROAD FRONTAGE

Each lot with a road frontage of **20.0m** or more shall have a maximum garage façade length (when stepped forward from the main building façade) not exceeding **7.0m** in length over the selected cladding type and ensuring compliance with the 5.5m setback rule to allow parking for 2 cars. **

Each lot with a road frontage of between **17.5m - 19.99m** shall have a garage façade length (when stepped forward from the main building façade) not exceeding **6.8m** in length over the selected cladding type and ensuring compliance with the 5.5m setback rule to allow parking for 2 cars. **

Each lot with a road frontage of between **14.0m - 17.49m** shall have a garage façade length (when stepped forward from the main building façade) not exceeding **6.5m** in length over selected cladding type and ensuring compliance with the 5.5m setback rule to allow parking for 2 cars. **

Garages – Each lot with a road frontage of 17.5m or more shall have a double garage incorporated within the design.

Lots with a road frontage between 14.0m and 17.49m (and those with a frontage of less than 14.0m) may incorporate either single or double garages. Carports are permitted where they are well-integrated and form a cohesive part of the overall dwelling design. All carport proposals will be subject to review and approval by the BRS Committee and applicants must be open to design feedback and potential revisions.
A minimum of three on-site car parks must be provided for these lots.

The minimum internal dimensions for a single garage or carport are 4.5m in width by 6.0m in length. Where a single garage or carport is proposed, the design must also include dedicated space for bicycle and general storage. This provision must be clearly indicated on the preliminary approval plans.

**Any exception to the 5.5m garage setback rule will be subject to assessment and approval by the BRS Committee, based on the design and presentation of the garage frontage to the street. The designer must demonstrate that adequate on-site parking for a minimum of two vehicles is provided.

4.10 - NEIGHBOURHOOD AMENITY AND SAFETY

All lots must achieve a minimum glazing of **15%** for facades facing roads & public spaces.

4.11 - INTERNAL GUTTERS

Internal gutters are permitted **ONLY** where the architect/architectural designer has exceeded the New Zealand Building Code calculations for internal gutter size by **50%**.

Overflow facilities must be provided to all internal gutters. Overflow pipe size must be equivalent in size to the main down pipe size.

Roofs and overflow pipes must be regularly maintained to allow for the free flow of all storm water and to prevent blockages. Leaf catches are to be fitted to all downpipes.

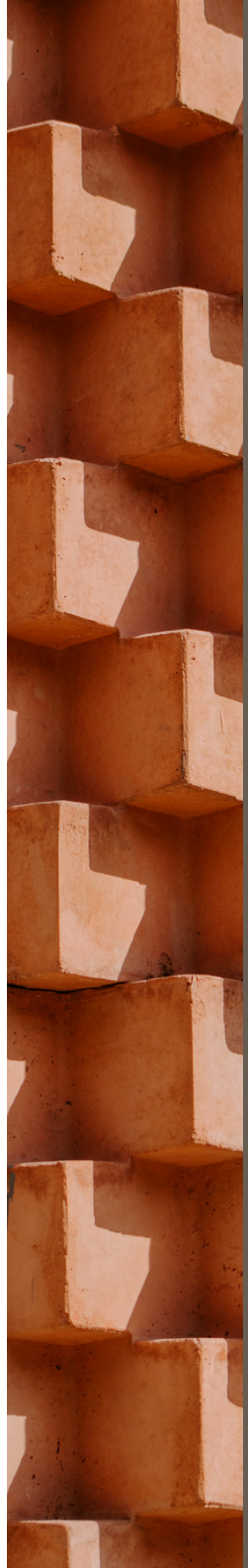
4.12 - SERVICES / EQUIPMENT

Meter boxes and heat pump/air-conditioning units to be painted in a recessive colour in line with the wall cladding and any air conditioning units need to be screened.

4.13 - GENERAL DESIGN CONSIDERATIONS

Homes should be designed to avoid overheating within the home and to help maintain comfortable internal temperatures all year round (eaves, shading devices, solar orientation, thermal mass etc.)

Designers should strongly consider sourcing material and product from local suppliers.



MATERIALS

There will be a requirement for sustainably sourced products that help to achieve the goal of net zero carbon. Wherever possible 'Enviro-Choice' materials should be chosen (including paints and floor coverings) to minimise off-gassing of harmful substances such as volatile organics and formaldehyde.

Designers are encouraged to select a material palette that is in-keeping with the character of Cambridge i.e. painted weatherboards, cedar weatherboards, natural brickwork, painted brickwork, board & batten etc,

The following is mandatory for all homes & buildings built within the Bridleways Estate:

- **ALL** joinery must be supplied by Architectural Profiles Limited (APL).
- **ALL** glazing must be supplied by Architectural Glass Products (AGP).
- **ALL** exterior claddings and materials to have one of the following:

a) Current BRANZ appraisal certification

b) Current CodeMark certification

OBJECTIVES

- To ensure that the architectural and landscape design components of the built environment are complementary and balanced.
- To maintain planting cohesion between private & public spaces
- To ensure the materials used for landscape features are consistent with architectural forms to create continuity between landscape and architecture.
- To preserve neighbourhood amenity by ensuring that site utilities, rain water harvesting tanks, and service areas are positioned discretely so as not to impact on public amenity.
- To ensure that night time ambience is maximised by ensuring neighbourhood light intensity is kept to a minimum, whilst maintaining community safety.

5.1 - STREET LOT FRONTAGES AND PUBLIC WALKWAYS

Where there is a solid 1.2m - 1.8m high fence, front lots and public walkways shall be planted with a green hedge, shrub or climbing plant. *(The plant should be maintained to keep within size of garden bed, shall not intrude grass berm / footpath and must include a mowing edge).*

Hedging / Shrub Types: Fence Setback 1.2 metres off the Boundary

(a) *Griselinia species*
(b) *Ilex largo*
(c) *Michelia species*
(d) *Lomandra* 'Lime Tuff'
(e) *Lomandra* 'White Sands'


Hedging Types: Fence Setback 1 metre off the Boundary

(f) *Camellia sasanqua* Early Pearly / Setsugekka
(g) *Corokia* species


Shrub Types: Fence Setback 600mm off the Boundary

(h) *Pittosporum* Little Kiwi / Golf Ball / Humpty Dumpty
(i) *Lomandra* 'Evergreen Baby'
(j) *Liriope muscari* 'Evergreen Giant'
(k) *Euonymus* 'Emerald Gem'


The grass berm in front of the boundary may be planted with the following shrub species:

a) *Lomandra* 'Little Pal'
b) *Liriope muscari*
c) *Hedge species such as Euonymus or Buxus* 'Green Gem'

Climbing Plant Types: Fence Setback 400mm off the Boundary

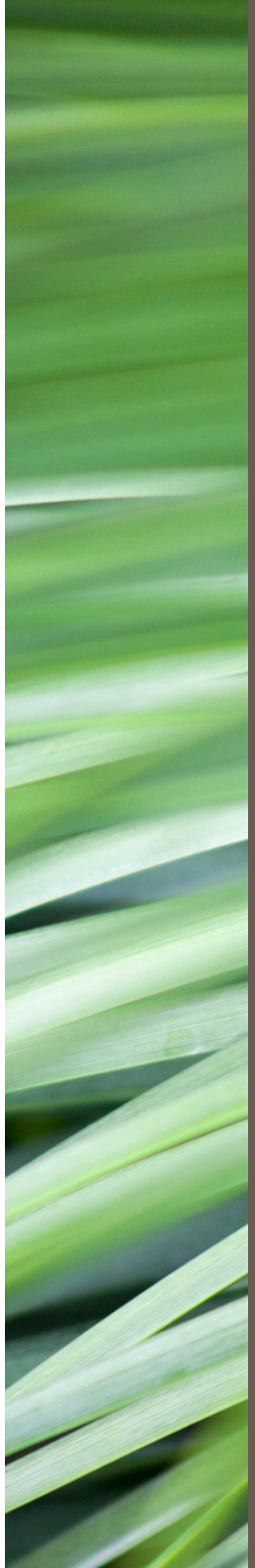
(l) Espaliered Citrus (on wires)
(m) Trachelospermum jasminoides
(n) Climbing evergreen Hydrangea (in shade)
(o) Michelia ‘Fairy Cream’


Climbing Plant Types: Fence Setback 200mm off the Boundary

(p) Ficus pumila


On house lots where there is no fencing or hedging along the front boundary of a property, there is a requirement for a garden bed to be planted between the front boundary and dwelling. This garden must cover a minimum of 25% of the total area between the front boundary & the dwelling (excluding driveways) and must include mowing edges.

The purpose of this is to soften the transition between berm & dwelling and to prevent front yards from looking bare. It also enhances the street appeal of all properties. Please note that vegetable gardens are not to be planted in the aforementioned area.



5.2 - TREES FOR INSIDE FRONT LOTS

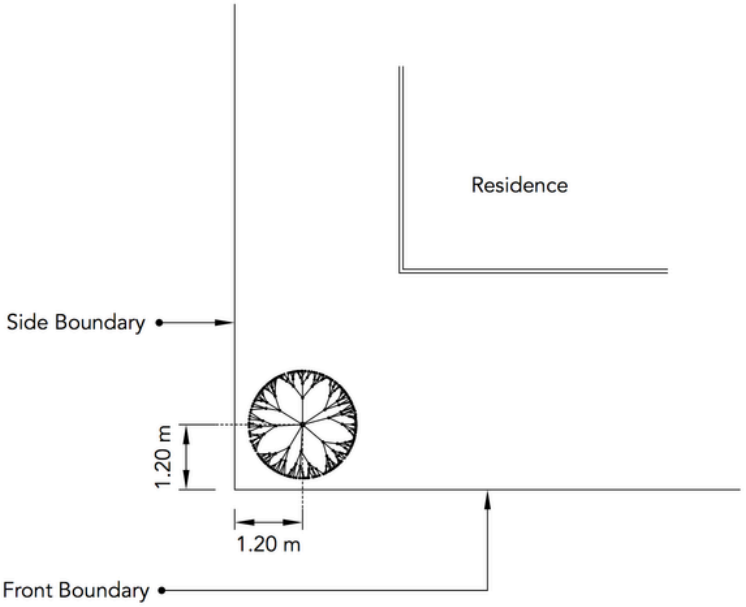
Small Tree Types: Setback 1.2 metres off the fence inside the Boundary

(To be kept under 3 metres)

a) *Cercis canadensis species*
b) Citrus species
c) *Acer species (small)*
d) *Gingko biloba 'Jade Butterflys'*
e) *Lagerstroemia 'Kimano'*
f) Liquidamber styraciflua 'Gumball'





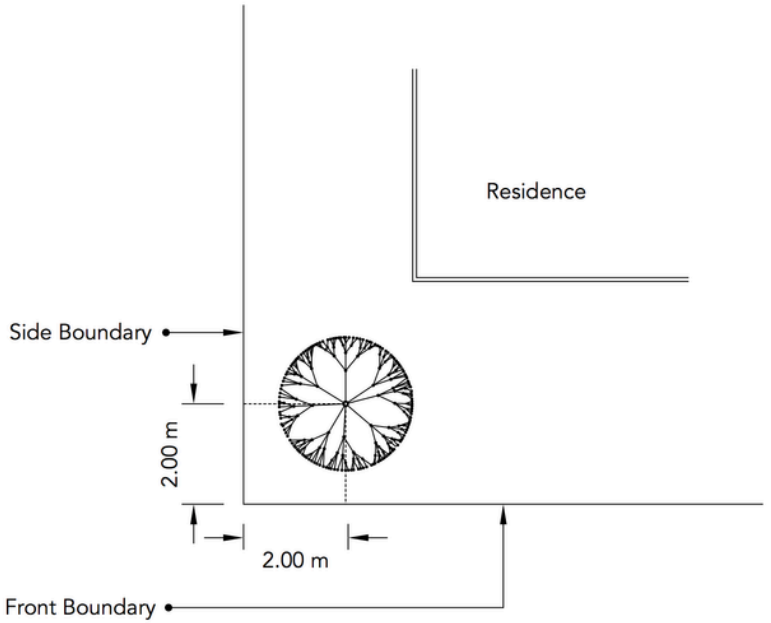
Medium Tree Types: Setback 2 metres off the fence inside the Boundary

(To be kept under 4 metres)

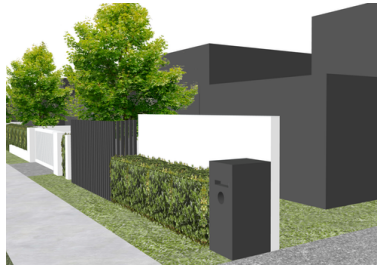
(g) *Michelia* 'Fairy Cream'
h) *Sophora* species
i) Acer species
j) Liquidamber styraciflua 'Little Richard'
k) Electryon excelsus







5.3 - FENCING FOR FRONT LOTS



Front yard fencing should be designed to:

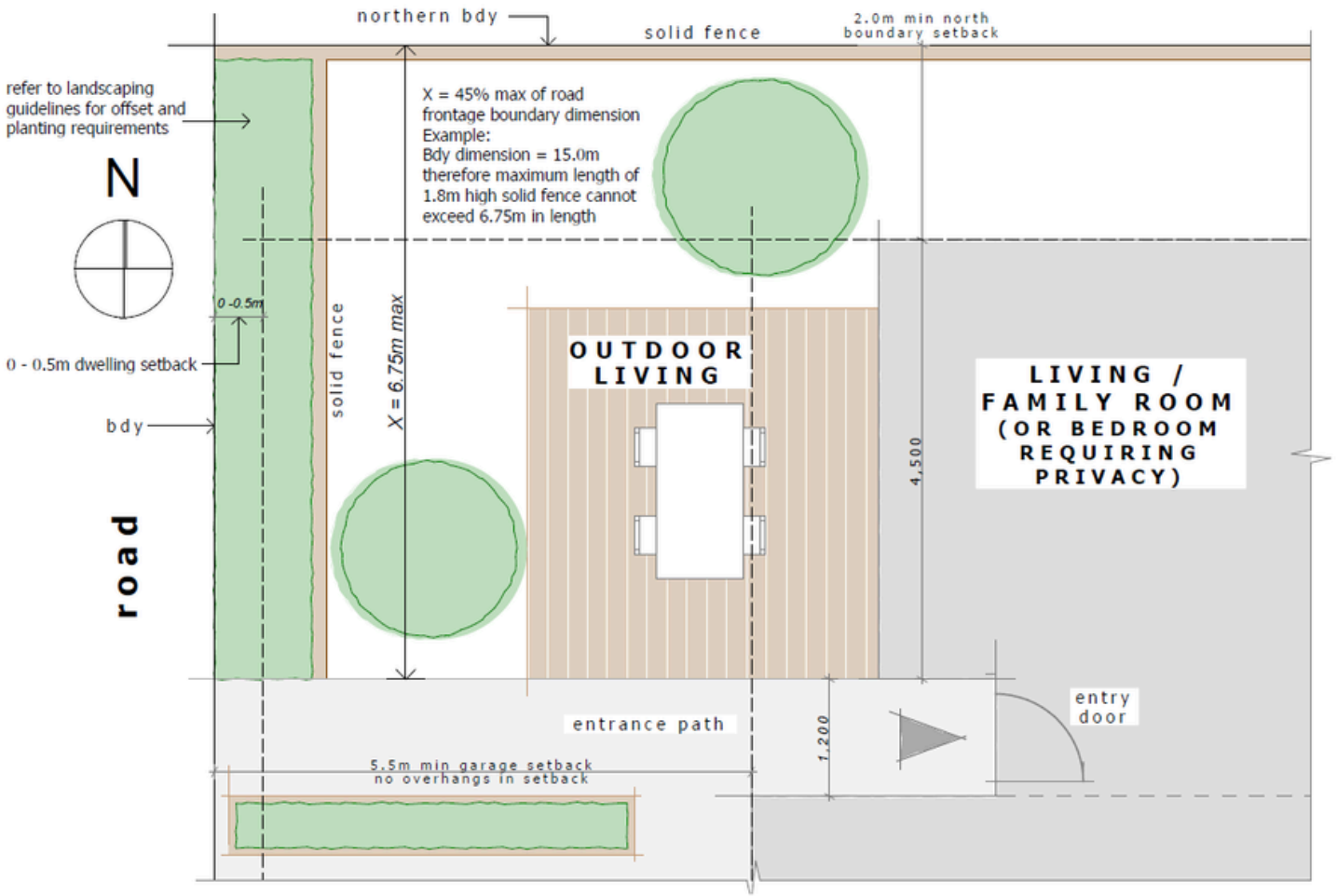
a) Complement the house's architectural style.

b) Use high-quality detailing, craftsmanship, and materials to create a sense of substance and depth.

The top **0.5m** of a **1.8m** high privacy fence that is visible from the public realm (e.g. corner lots and back alleys) shall be semi-transparent, except where pool fences need to be compliant.

These types of fences / gates are not to exceed **45%** of the lot boundary road length (the boundary that the wall relates too). BRS reserves the right to approve this type of **1.8m** solid fencing only if the area it is providing privacy for is an outdoor living area, bedroom area or swimming pool area. This type of wall will be required to be offset from the boundary by **200mm** min as per the diagram on pg 50.

5.3 - FENCING FOR FRONT LOTS



front boundary - solid 1.8m wall example

5.3 - FENCING FOR FRONT LOTS

Front yard fencing should be designed to:

a) Complement the house's architectural style.
b) Use high-quality detailing, craftsmanship, and materials to create a sense of substance and depth.

The top **0.5m** of a **1.8m** high privacy fence that is visible from the public realm (e.g. corner lots and back alleys) shall be semi-transparent, except where pool fences need to be compliant.

Front Visually Impermeable Fence Types (1.2 - 1.8m high)

(Cannot see through the fence)

c) Solid Acoustic Panel, Louvre, Tongue and Groove).
d) Brick or cladding material used on house.
e) Concrete block.
f) Concrete block with plaster and paint finish.

Front Visually Permeable Fence Types (1.2 - 1.8m high)

*(Can see through the fence with **50mm** or more continuous vertical or horizontal gaps)*

g) Slat Fencing (Aluminium, Cedar).
h) Aluminium fencing.
i) Pickett fencing
j) Breeze block.
k) Timber post and rail (**1.2m** high only).

5.3 - FENCING FOR INTERNAL BOUNDARIES

Internal boundary fencing should be designed to:

a) Complement the house's architectural style
b) Use high-quality detailing, craftsmanship, and materials to create a sense of substance and depth.

Visually Impermeable Fence Types (1.8m high)

(Cannot see through the fence)

c) Solid Acoustic Panel, Louvre, Tongue and Groove).
d) Brick or cladding material used on house.
e) Concrete block.
f) Concrete block with plaster and paint finish.

Where possible, it is preferred that the side solid internal boundary fence step down from 1.8m to 1.2m at the front of the house. This creates safety and good urban design.

5.3.1 - GENERAL NOTE ON FENCE COLOURS & PAINTING

To ensure a cohesive and high-quality streetscape throughout Bridleways Estate, fences should be finished in one of the approved tones:

- Matt black, Iron Sands
- White or cream (to complement the home's colour palette)
- Natural timber tone to match the aesthetics of the house. No Stain.

Please choose a finish that works harmoniously with your home's exterior colours and materials. This helps maintain the overall aesthetic and premium feel of the neighbourhood.
If you're unsure which finish best suits your build, feel free to get in touch with the design committee for guidance.

5.4 - RETAINING WALLS

Front yard retaining walls should be planted or shielded from view.

Walls made of treated pine should be stained or painted black.

Retaining Wall Types:

a) Interlocking timber (stained, planted in front of or painted black)

b) Materials used on the house, such as brick, block or steel.

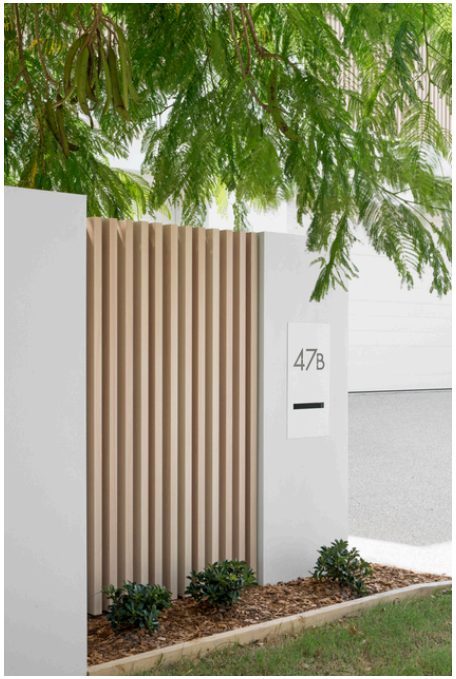
5.5 - GATES

For pedestrian entrance paths or across driveways, gates can be built inside fences and walls. The gate should be visually transparent and scaled appropriately to the fence or wall with which it is related.

5.6 - LETTER BOXES

Except for apartment blocks, which may have shared mail boxes, each house shall have its own letterbox. Letterboxes must be at the front of the property and reachable from the walk or driveway that leads to the front entrance. Letterboxes should be incorporated into the front fence / wall.

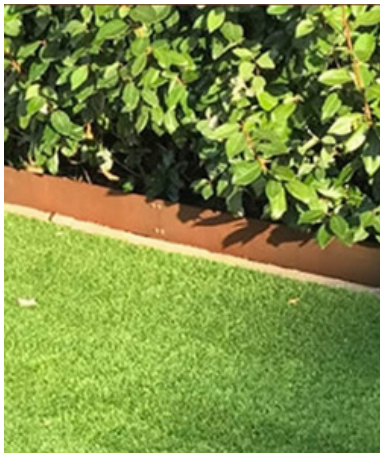
Mailboxes must be made of the same material as the house if there is a planted boundary line (E.g. hedge).

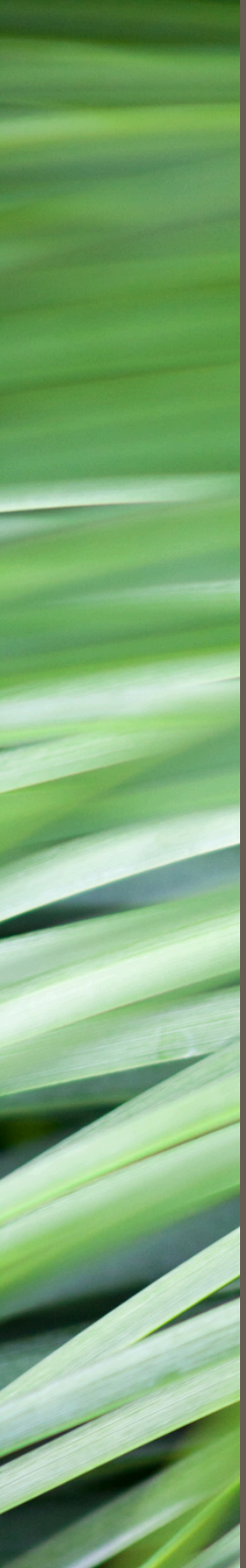


5.7 - FRONT BOUNDARY MOWING EDGES

Where there is planting and approved fencing on the front boundary or lots that adjoin walkways, all gardens must include a mowing / garden edging such as:

a) Concrete.
b) **50mm** wide stained black timber.
c) Steel.





5.8 - WATER TANKS

There will be a requirement to incorporate a **2000L water tank** (or 2 x 1000L may be incorporated within design when fixed to a boundary fence so to not be visible above fence line) for rain water harvesting.

All water tanks to be fitted with an Apex Rain Aid.

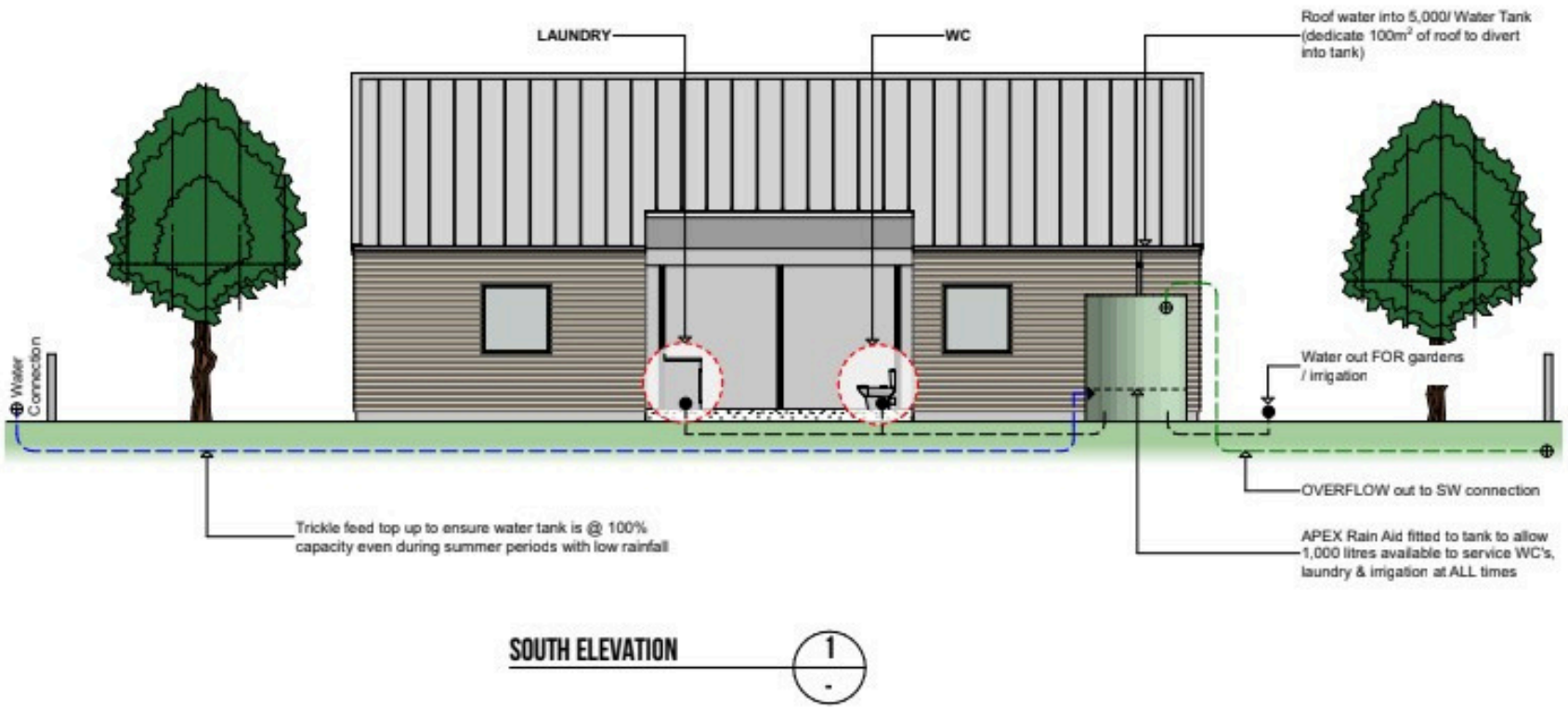
The Apex Rain Aid Control valve is designed to use with mains water supply systems. This valve offers a reliable connection on a rainwater retention tank and ensures a backup supply of water in case of emergencies. The difference of **100mm** between the open and closed positions of the valve helps with better monitoring.

Where possible it is preferred that water tanks are positioned on and strapped to the southern side of the dwelling. Where this is not possible i.e. zero setback, the water tanks can be positioned on a another wall of the house or a solid section of fence as long as they are above ground and screened and cannot be visible from the adjacent property.
Please ensure this is clearly identified on the site plan submitted preliminary submission documentation.

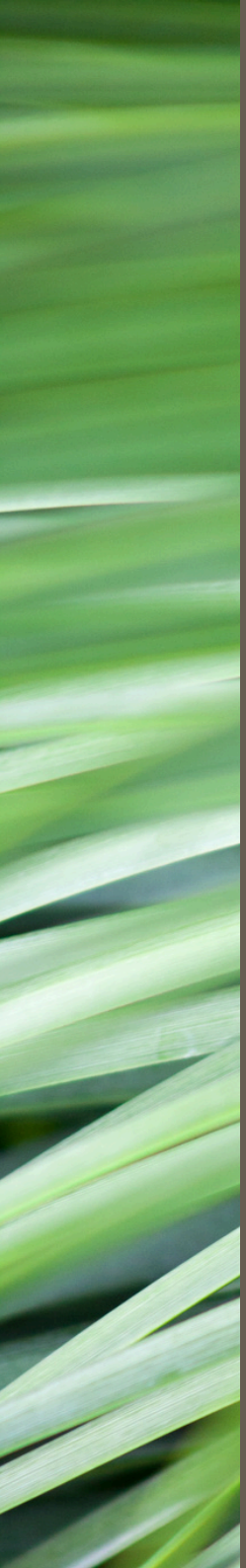
FEATURES

- Under normal conditions, rain water will fill the tank, if the rainwater level drops below a pre-set level, the RainAid® will open to maintain the water level using mains water.
- The rainwater tank is used to supply water to non potable outlets such as toilets, laundry and garden.
- Cold mains pressure water connection.
- Maximum temperature: **60 deg C.**
- Minimum temperature: **1 deg C.**

Supplied with inlet strainer.



SOUTH ELEVATION 1/-



5.9 - EXTERIOR LIGHTING & SECURITY CAMERA'S

Low intensity, indirect light sources are to be used for all exterior lights.

All fixtures are required to have covers or reflectors to direct light to the ground and shield the light sources to avoid glare and light pollution.

No up-lighting shall be permitted unless it falls directly onto a non -transparent surface or is situated away from boundary lines.

Bridleways Estate encourages the use of up-lighting close to the main dwelling and central to the lot.

Any security camera's installed on properties must be operated in a lawful manner to ensure a satisfactory level of privacy and amenity is maintained for all residents.

5.10 - SERVICE AREAS

Clothes-lines, re-cycling bins & water tanks must be discretely located and positioned so that they cannot be seen from the road, or neighbouring properties.

EAST / WEST AXIS LOTS

Services areas on the Southern side of the lot, with access directly from the garage or laundry.

Solid fencing to the Southern boundary to be used to screen neighbours' Northern views.

Screening required to road to protect public views.

Consider utilising building form to assist with screening without disrupting accessway or natural daylighting / ventilation along building line.

NORTH / SOUTH AXIS LOTS

Services areas on the West or East side of the lot, with access directly from the garage or laundry.

Solid fencing to East or West to be used to screen neighbours' views.

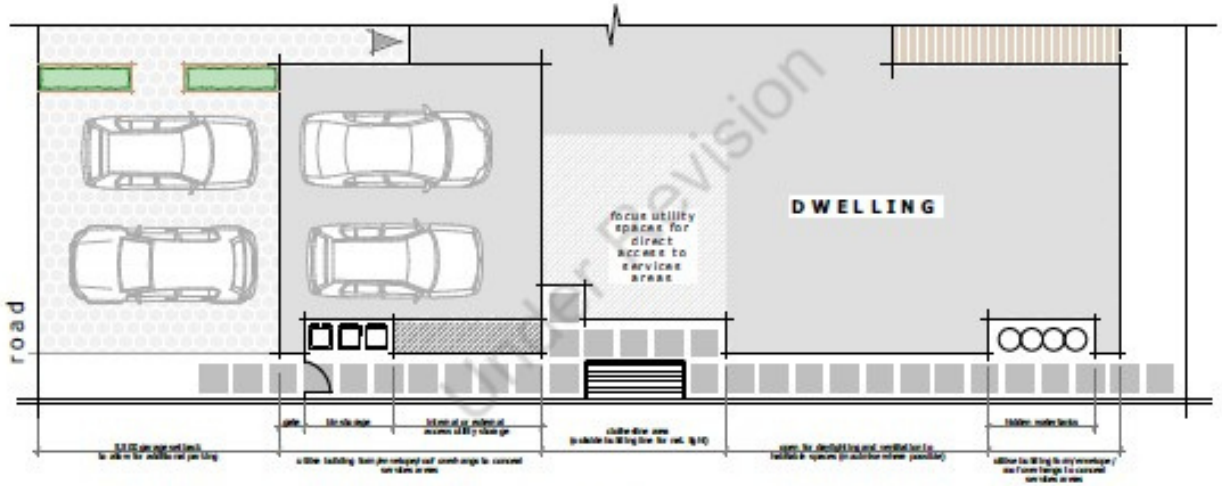
Screening required to road to protect public views.

Consider utilising building form to assist with screening without disrupting accessway or natural daylighting/ventilation along building line.

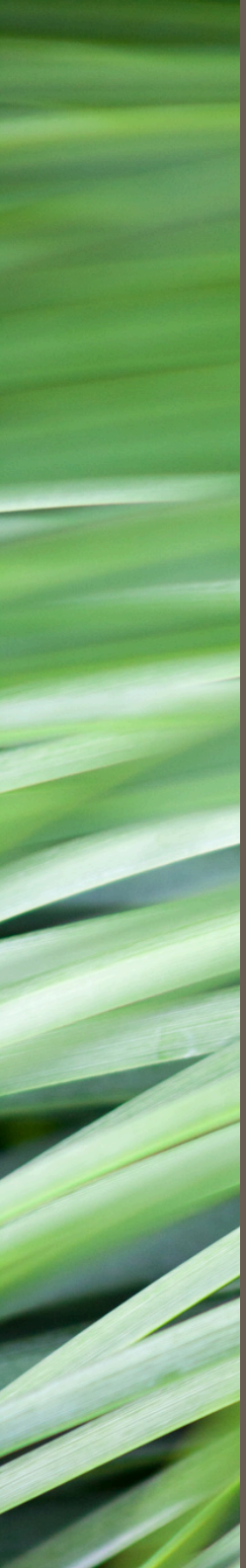
There will be a requirement for sustainably sourced landscaping products to be used. This will help to achieve the goal of net zero carbon. Wherever possible 'Enviro-Choice' materials should be chosen (including landscaping paints and stains) to minimise off-gassing of harmful substances such as volatile organics and formaldehyde.

Designers should strongly consider sourcing material and product from local suppliers.

Example of how a service area may be addressed, especially where setbacks are reduced on small sites:



south / west / east service areas



5.11 - ACCESSORY BUILDINGS

No accessory buildings, including greenhouses or garden sheds are permitted.

Play houses, dog kennels and pool sheds are allowed as long as they do not exceed **1.8 m** in height & and an overall floor area of **3 m²** - subject to approval by the BRS.

5.12 - DRIVEWAYS

Some properties may extend their driveway crossings to suit the layout of the house.
This will be at the expense of the homeowner and the works will need to be undertaken by an approved 3M's subcontractor.
Driveway crossing extensions will need to be approved by the design committee.
Driveway crossing extensions will not be possible if there is any interference with streetscapes and infrastructure.
Please refer to diagrams in appendix for Options for Driveway windening. Please contact BRS Landscaping design committee to confirm which one is applicable to your site.
Any upgrades or changes to vehicle crossings also require a Vehicle Crossing Application to Council.

5.13 - BIN STORAGE - TOWNHOUSES

For townhouse sites, bin storage areas must be integrated into the overall site design and screened from view from the street. This may be achieved through a curved or articulated (e.g. S-shaped) fence form that incorporates a dedicated bin enclosure.

The screening structure must be a minimum of 1.5m in height, or sufficient to fully conceal all bins from public view. The enclosure must accommodate a minimum of three bins and allow for a landscaped area in front to soften its appearance. Refer to appendix for design clarification.

6.1 - DESIGN APPROVAL & FINAL SUBMISSION OVERVIEW

Design approval is required from the BRS prior to commencing any construction work on site - this includes construction of fencing and any landscaping work.

Approval from the BRS is required prior to submission of plans to the Waipa District Council (WDC) for building consent and / or resource consent. A summary and more detailed outline of the design approval process can be found below:

1. PROPERTY OWNERS SUBMIT PRELIMINARY CONCEPT DESIGN TO BRS FOR REVIEW - refer to checklist below

↓

2. ONCE THE BRS HAVE RESPONDED, EITHER PROCEED TO FINAL REVIEW STAGE OR RE-SUBMIT PLANS WITH SUGGESTED REVISIONS ADDRESSED

↓

3. PLANS ARE SUBMITTED TO THE BRS FOR FINAL APPROVAL

↓

4. ONCE APPROVAL GRANTED BY BRS OWNERS ARE FREE TO SUBMIT PLANS TO THE WAIPA DISTRICT COUNCIL FOR BUILDING CONSENT AND / OR RESOURCE CONSENT

↓

5. ONCE THE BUILDING HAS BEEN SET OUT ON SITE THE COUCIL AS PART OF THEIR INSPECTION PROCESS WILL CHECK BOUNDARY LOCATIONS TO ENSURE EVERYTHING COMPLIANT & IS CONSISTENT WITH APPROVED BUILDING CONSENT DOCUMENTATION

6.2 - PRELIMINARY DESIGN APPROVAL

Owners are encouraged to talk to the BRS before design commences in order to clarify the intent and requirements of these design and building guidelines.

Once all the documentation below has been received, the BRS will review your submission and provide a written response within 3-5 working days.

Please ensure that you submit a signed copy of the Confirmation of Unique Design form and Preliminary Design Submission form along with your plans for preliminary approval. All forms must be completed in full and submitted with the preliminary design documents outlined below. Failure to do so may delay the processing of this application.

You must submit 2 sets of documents to the BRS as part of the Preliminary Design Approval process. This documentation consists of conceptual plans showing the lot planning, building concepts, compliance with the Design and Building Guidelines, covenants on the title and the Waipa District Council District Plans. Please see the form below for further information.

The BRS has the right to refuse approval of any plans which in their opinion fail to meet an acceptable design quality. Where plans are initially refused, the BRS will assist the designer / architect, providing areas to be addressed in order to achieve design approval.

6.3 - FINAL SUBMITTAL OF PLANS

Provided the BRS are satisfied with the building concept at the Preliminary Concept Design Approval stage, owners are free to submit final plans by completing a Final Design Submission form & providing 2 x full sets of plans either in hard copy or electronic form. This information is to include the following, please refer to the Final Submittal of Plans form below for more information:

1) Legal Description.

2) Landscape / Lot Plan (1:100 scale AND 1:200 scale) showing:

- Utilities locations – existing and proposed.
- Drainage, Non Potable Reticulation Plan and Location.
- Setbacks – easements.
- Sidewalks, stairways, parking, driveways, desks, patios, courtyards, swimming pools, playhouses, awnings, rain water harvesting system(s), clothes line, fences and walls.
- Garages.
- Any fence location, height, appearance.
- Location of lawn areas, trees.

3) Building Plans (1:100 scale AND 1:200 scale) showing:

- Plans, sections, elevations.
- Roof slope and building height.
- Colours and materials identified.
- Any rooftop equipment including antennae, satellite dishes, chimneys, exterior lighting, solar panels etc.

4) Specifications & Supporting Documents:

- Samples and colours of the roof and wall materials and of other special features.
- Solar Panel Brand and System Specifications (Min 3KW)

5) Energy Performance Data.

- H1 compliance report / worksheet.
- Solar shading calculations or azimuth diagrams.

6.4 - BRS REVIEW

House siting and grades, exterior design, materials and colours shall be reviewed by the BRS within 3-5 working days of a completed final submission being received.

6.5 - PLAN APPROVAL

The BRS will notify the owner in writing with a formal letter of approval when their plans have been approved.
Approved plans can be collected from the BRS. In the event of a non-approval by the BRS the owner their architect or designer may work with the BRS to obtain approval. The decision of the BRS is final.

6.6 - BUILDING CONSENT APPLICATION AND APPROVAL

The owner, architect, designer or builder will need to apply for and acquire the Building Consent from the Waipa District Council only once formal written BRS approval has been obtained. The formal letter of approval from BRS will need to be provided to the Waipa District council with the consent documentation.

6.7 - BUILDING INSPECTIONS

The owner / builder is responsible for organising the required building inspections to ensure that all complies with the approved building consent documentation.

BRIDLEWAYS ESTATE - CONFIRMATION OF UNIQUE DESIGN FORM

Confirmation that this design is Unique to Bridleways Estate

Owners Details

Name of owner:

Contact Details:

Agent Details

Name of architecture or design company:

Name of architect or architectural designer:

Contact details:

Project Location

Street Address:

Lot Number

CT Number::

I confirm this design is unique to Bridleways Estate:

Owners signature: **Date:**

Agents signature: **Date:**

BRIDLEWAYS ESTATE - PRELIMINARY DESIGN SUBMISSION FORM

Please ensure this form is completed in full and submitted with the Confirmation of Unique Design form and the preliminary design documents outlined below.

Failure to include all required information may delay the processing of this application.

Owners Details

Name of owner:

Postal Address:

Mobile phone number:

Project Location

Street address:

Lot number:

CT number:

Agent Details

Name of architecture or design company:

Name of architect or architectural designer:

Contact details:

What you need to provide with this application

2 x sets of documentation to scale at A3, that includes:

1. Conceptual floor layout plans and elevations with basic 3D renders to demonstrate building forms & location of PV roof panels.

2. Conceptual lot/ site plan to demonstrate the following:

a. Position of the building in relation to site boundaries .i.e. proposed setbacks

b. Living court locations and courtyard sizing.

c. Location & sizing of water tank - also where this water is to be used on site

d. Clothesline and bin locations to show compliance with the guidelines.

e. Highlight area for additional parking in front of the garaging.

f. Other information that may be relevant to this application

I confirm that the above information is correct and that I would like the BRS to go ahead and process my application.

Owners signature:
Date:

BRIDLEWAYS ESTATE - FINAL SUBMITTAL OF PLANS FORM

Please ensure this form is completed in full and submitted with the design documents outlined below.

Failure to include all required information may delay the processing of this application.

Owners Details

Name of owner:

Postal Address:

Mobile phone number:

Project Location

Street address:

CT number:

Lot number:

What you need to provide with this application

Landscape / Lot Plan (1:100 scale AND 1:200 scale) showing:

- Utilities locations – existing and proposed.
- Drainage, Non Potable Reticulation Plan and Location.
- Setbacks – easements.
- Sidewalks, stairways, parking, driveways, desks, patios, courtyards, swimming pools, playhouses, awnings, rain water harvesting system(s), clothes line, fences and walls.
- Garages.
- Any fence location, height, appearance.
- Location of lawn areas, trees.

Building Plans (1:100 AND 1:200 scale) showing:

- Plans, sections, elevations.
- Roof slope and building height.
- Colours and materials identified.
- Any rooftop equipment including antennae, satellite dishes, chimneys, exterior lighting, solar panels etc.

Specifications & Supporting Documents:

- Samples and colours of the roof and wall materials and of other special features.
- Solar Panel Brand and System Specifications (Min 3KW)
- Storm water design report by selected Engineer

Energy Performance Data:

- H1 compliance report/worksheet.
- Solar shading calculations or azimuth diagrams.

I confirm that the above information is correct and that I would like the BRS to go ahead and process my application.

Owners signature:

Date:


ALANTIDROME
Home of Cycling
RevOlve CAFE
SPORT NEW ZEALAND
THE LION FOUNDATION
PERRY
APL
bnz
SUPPORTING CHAMPIONS

OBJECTIVES

- To ensure that harmony is maintained between owners, builders, and neighbours.
- To provide clarity around the expectations of owners and builders during the construction phase.
- To ensure the amenity value of Bridleways Estate is preserved during the construction phase.

CONSTRUCTION GUIDELINES

7.1 - CONSTRUCTION TIME PERIOD

Construction must begin within 12 months of taking ownership of a lot unless the express consent has been granted by the BRS to extend this period.

7.2 CONSTRUCTION TIME LIMIT

Once construction has commenced, all buildings should be completed within 12 months of the date of commencement unless prior approval had been given by the BRS. Code of compliance must be granted within this 12 month period.

A building is considered to be completed (as mentioned above) once it has been granted code of compliance by the Waipa District Council.

Code of compliance will not be issued if the interior or exterior of a dwelling is left unfinished or exterior/interior walls and/or doors are left unpainted or unstained – except where cedar cladding or decorative stone or brick has been used.

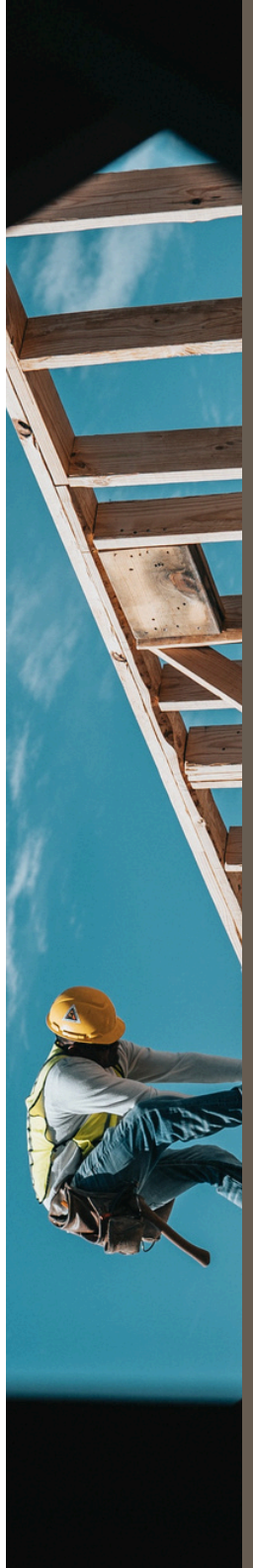
7.3 HOURS OF CONSTRUCTION

Building work is permitted Monday – Sunday between the hours of 7.00am – 5.00pm.

7.4 BUILDING LOCATION

All buildings must be placed within the setbacks referred to in Section 3.4.

The main residential dwelling must be orientated on the lot with the long axis in the east-west direction. This orientates the main living areas to the north to maximise solar gain.



7.5 DAMAGE DURING CONSTRUCTION

Damage caused during construction by the builder to services such as roads, curbs, cesspits, lights, power, sewers etc. will be charged to the owner. The owner must notify the BRS in writing of any damage to services. Please refer to the relevant section of the Bridleways Estate Sales and Purchase Agreement.

7.6 DISCHARGE

Builders should not dispose of, or allow runoff of, impermeable materials into soakage pits or roadways; and not remove or damage vegetation in road reserves or reserve land.

7.7 CONSTRUCTION STORAGE

All construction materials must be stored within the boundaries of the lot.

If a proper clean up does not occur at any stage of construction, debris will be removed and any removal costs will be charged to the owner.

No fires are permitted on site.

8.1 SUBDIVISION SCHEME PLANS

Please refer to the lastest **SCHEME PLAN** document provided separately.

8.2 FINISHED FLOOR LEVELS

Please refer to the **FINISHED FLOOR LEVEL** information document provided separately.

8.3 - LOT VEHICLES AND MACHINERY

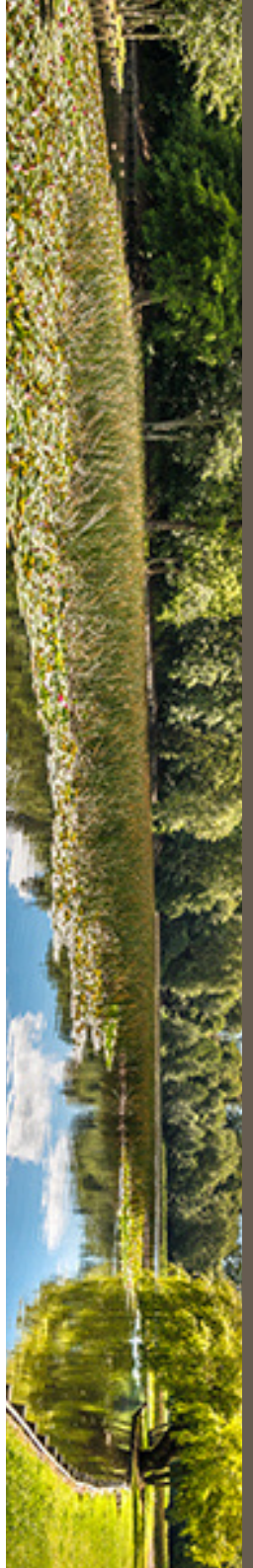
The BRS will not allow any of the following to remain on a lot unless they are garaged: Cars and / or boats. Caravans, RV's and any other over sized, non-residential vehicles or machinery are **NOT** permitted to be housed on site.

8.4 - IMMOBILE VEHICLES

Under **NO** circumstances will broken down or immobile vehicles will be permitted on a lot.

8.5 - TEMPORARY OR RELOCATABLE BUILDINGS

NO second hand or relocated buildings of any description are permitted on a lot.



9 - GLOSSARY OF KEY TERMS

- Builder: The building contractor or contractors and tradespeople hired and paid by the lot owner to develop and build on the lot.
- Developer: 3MS of Cambridge Limited Partnership
- Duplex Homes: For the purposes of these Design and Building Guidelines a duplex house is defined as being side-by-side duplex on a single lot and single level that share a common wall.
- Environmentally Sustainable Design (ESD): The use of design and build practices/principles that are not harmful to the environment, and conserve resources such as water and energy. Eco-friendly products used in the design and build process minimise contributions to air, water and land pollution.
- Embodied Energy: Embodied energy is the energy consumed by all of the processes associated with the production of a building material i.e. extraction, manufacture, transportation etc.
- Energy Efficiency: Refers to the efforts to reduce the amount of energy required to provide products and services. For example, insulating a home allows a building to use less heating and cooling energy to achieve and maintain a comfortable temperature.
- Homestar Rating: The objective of Homestar is to help people start to improve the health, comfort and efficiency of their home. The full Homestar scale is based on a 10-star rating system where 10 is the highest score.

A 10-star Homestar home would be a world leading design and would need to be self-sufficient in terms of energy and water. When you test your home online you won't be able to achieve 10 stars. The highest rating available using the online test will vary depending on house size and location but is generally about 8 – 9. The BDRC encourages homeowners to complete the Homestar self-assessment and submit this document as part of the BDRC review process. It is anticipated that with good planning and design, every home within the Bridleways Estate subdivision could achieve a Home-star rating of 7 or higher – refer to http://homestar.org.nz

- Owner: The owner of the lot or his/her designate.
- Passive Heating: Using the sun's energy to heat a home.
- Passive Cooling: Design features used to cool a building without power consumption.
- R – Values: The R-value of a substance is its direct measure of its resistance to transferring energy or heat. The higher the R-value of a material the better an insulator it is and the more effective it is at retaining heat (energy) within a home.
- BRS: The Design Committee comprising the Developer and the Developer's nominees.
- Solar Gain: Also known as solar heat gain or passive solar gain, this principle refers to the increase in temperature of a space, object or structure that results from solar radiation.
- Sustainable Design: The premise behind sustainable design is to negate the negative environmental impacts through skillful, sensitive design and build practices.
- Sustainable Design Principles: Optimizing use of the sun, improving indoor air quality, creating high-performance and moisture-resistant houses, using the land responsibly, and using the earth's natural resources wisely.

9 - GLOSSARY OF KEY TERMS

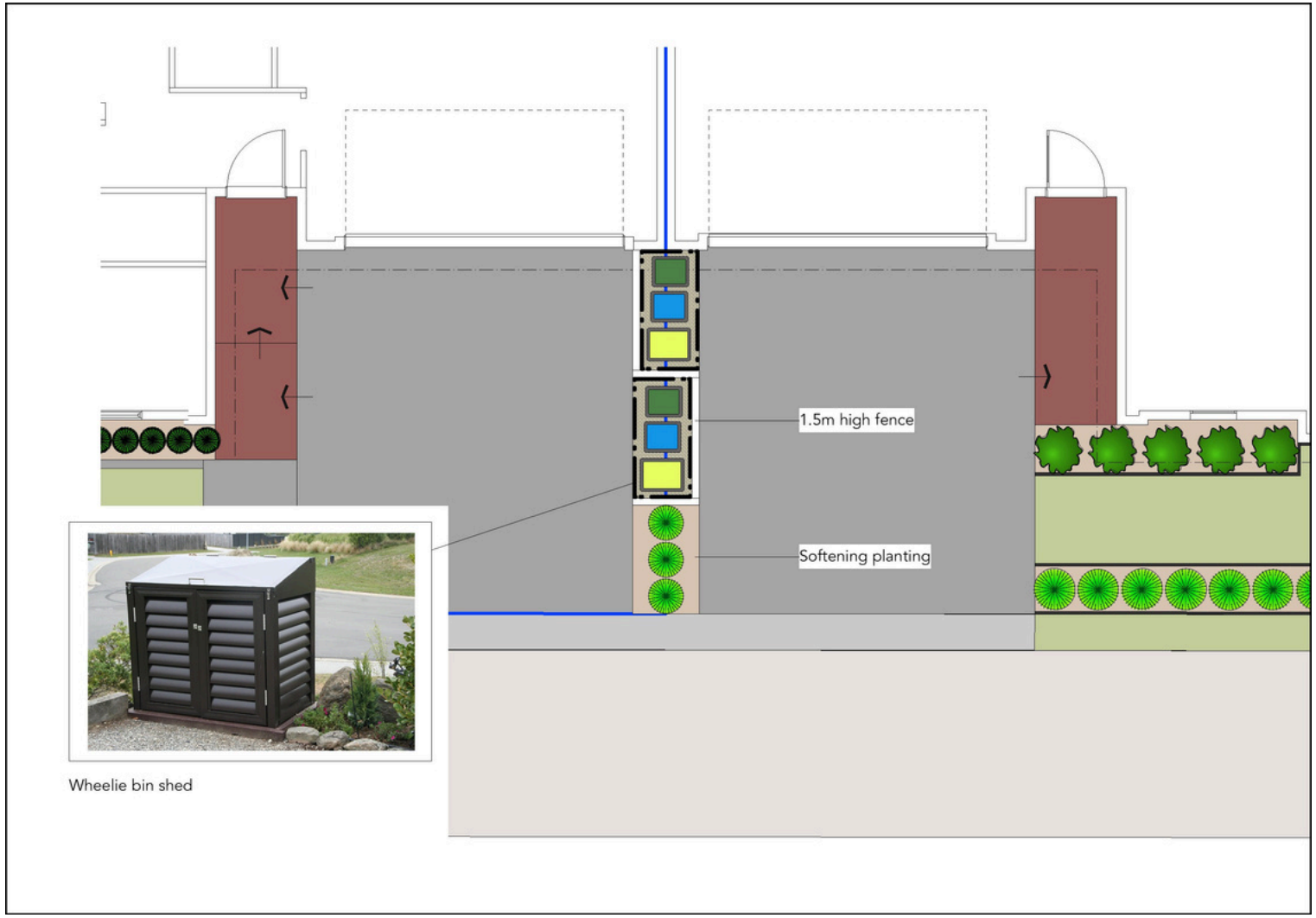
- Sustainable Products: The term 'sustainable product' can be subjective; however, a broad definition of a 'sustainable product' is an item or service that minimises its impact on the environment at each phase of its life cycle. Unfortunately, most products do not exist on a simple continuum from 'green' to 'brown' and so are not easy to compare. Usually, their environmental impacts vary at different stages of their lifecycle. For example, a product may be easy to recycle but is resource-intensive to manufacture (e.g. electronic equipment) or is used for a relatively short time (e.g. paper or plastic bags). A product may last a long time but may be toxic or difficult to recycle (e.g. treated timber). Choosing sustainable products is about trying to find a balance between different environmental characteristics over the life of the product.

- Thermal Mass: Materials that have a significant capacity to store heat e.g Concrete masonry and brick. Can also be referred to as a Heat Sink.

For general definitions and further clarity please refer to the 'Definitions' section of the Waipa District Plan.

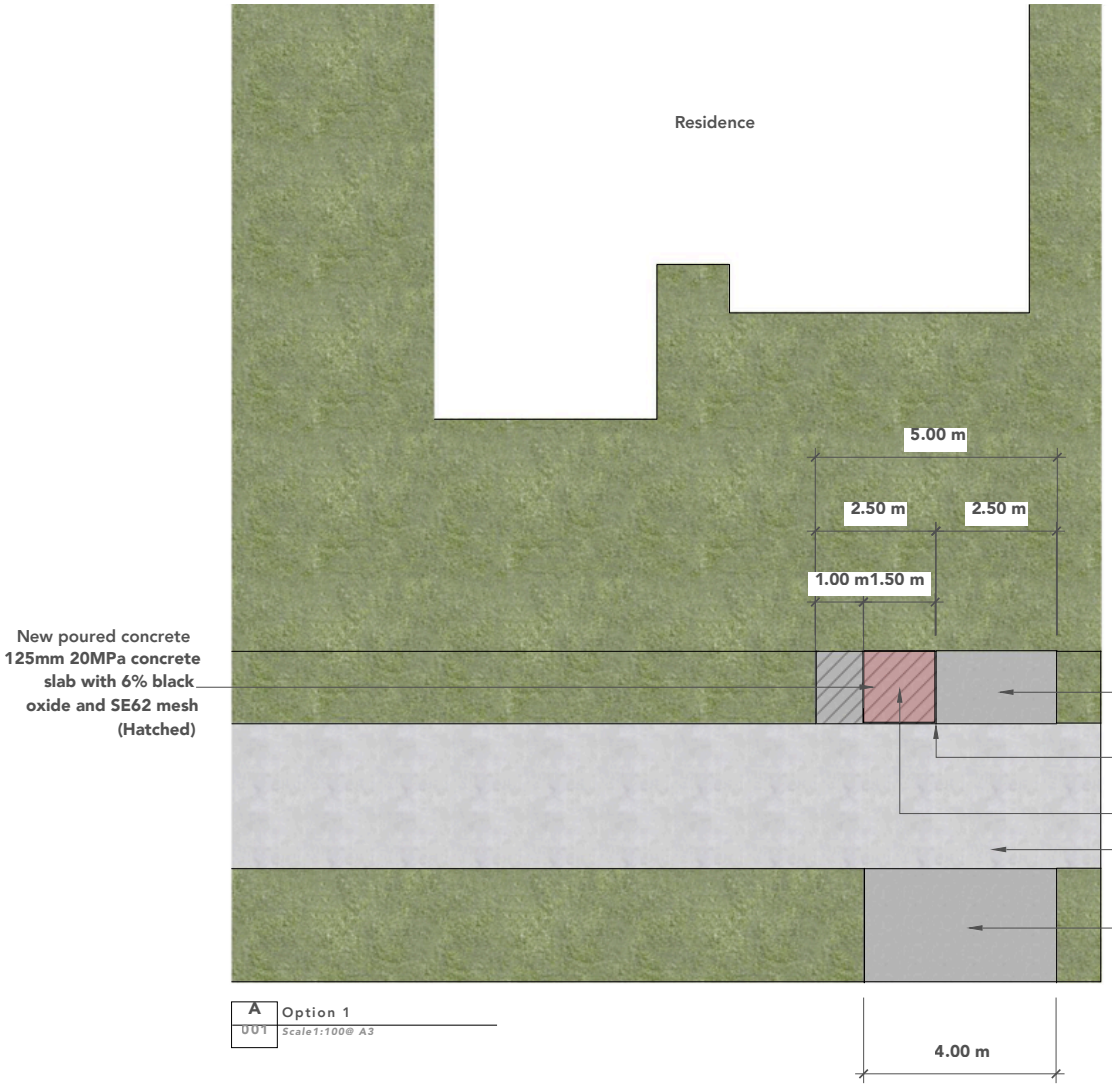
10 - APPENDIX

5.13 - BIN STORAGE - TOWNHOUSES



DRIVEWAY ENTRANCES

OPTION 1 - **BACK OF FOOTPATH WIDENING**



A 001 Option 1
Scale1:100@ A3

Key:

Area allocated for new poured concrete

Existing concrete to be removed

Concrete Specifications:

Driveway Entrances:
125mm 20MPa
concrete slab with 6% black oxide and SE62 mesh
100mm GAP40 bedding

Additional Notes:

Existing drivewaywidths are 4.00 m

Existing pedestrian paths are not to be removed

OPTION 2 - DOUBLE DRIVEWAY UPGRADE

Key:

Area allocated for new poured concrete

Existing concrete to be removed

Concrete Specifications:

Driveway Entrances:
125mm 20MPa
concrete slab with 6% black oxide and SE62 mesh
100mm GAP40 bedding

Additional Notes:

Existing drivewaywidths are 4.00 m

Existing pedestrian paths are not to be removed

Existing concrete

Concrete to be cut in middle of new 6 metre distance

Existing concrete to be removed (Shown in red)

Existing 3 metre wide pedestrian path not to be removed

Existing concrete to be removed (Shown in red)

Existing concrete

Concrete to be cut in middle of new 6 metre distance

Existing kerb to be removed and replaced with cut down vehicle crossing kerb to match existing

DRIVEWAY ENTRANCES