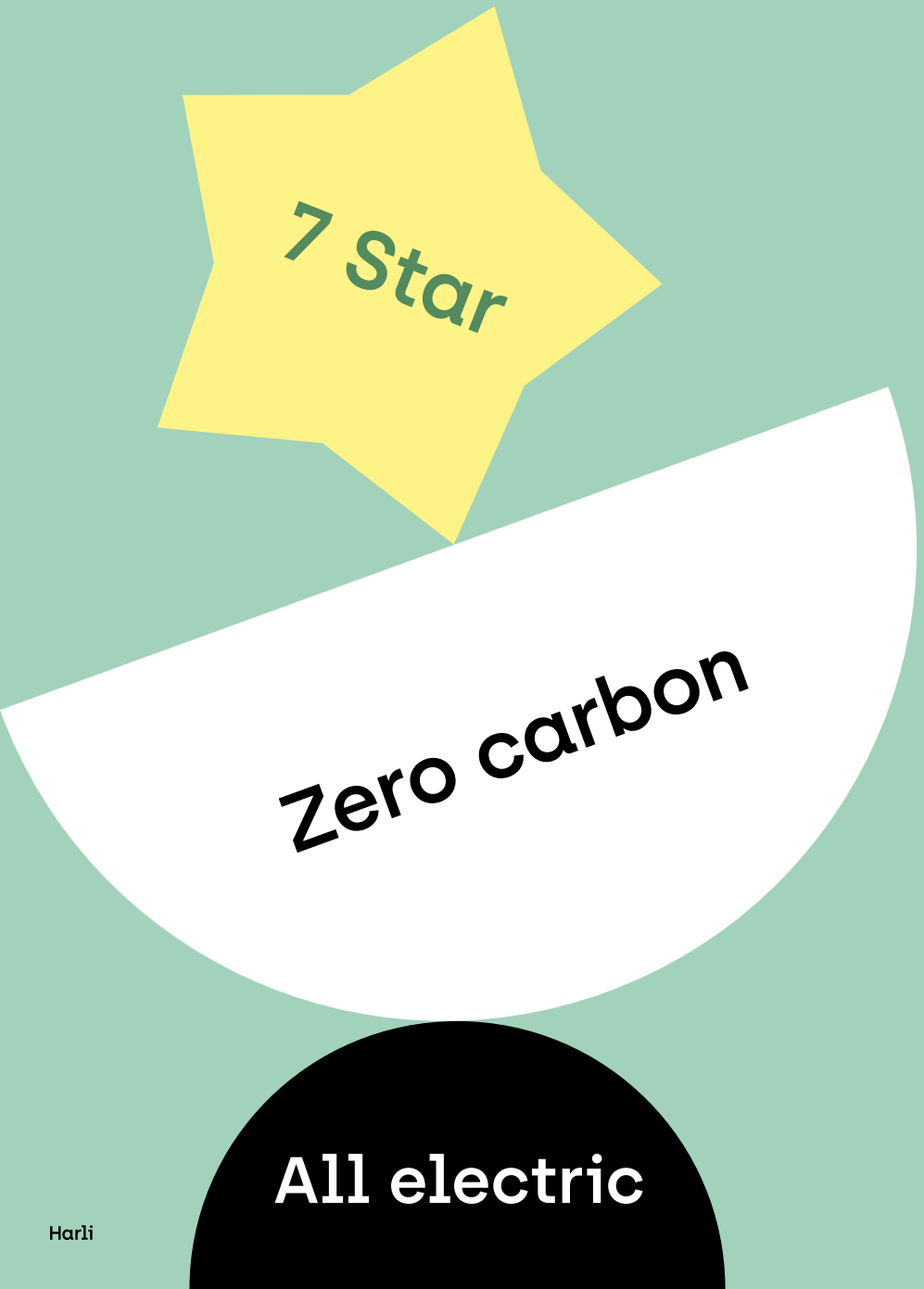
Harli

C.WEST 3977

Design Book

Contents



1.0 Introduction

Introduction

1.1 HARLI VISION

The Developer's vision for Harli is to see the land developed into an exemplar community which sets a new industry benchmark for urban residential development in terms of sustainability, community wellbeing and biodiversity and to showcase innovative planning and design together with housing and landscape excellence.

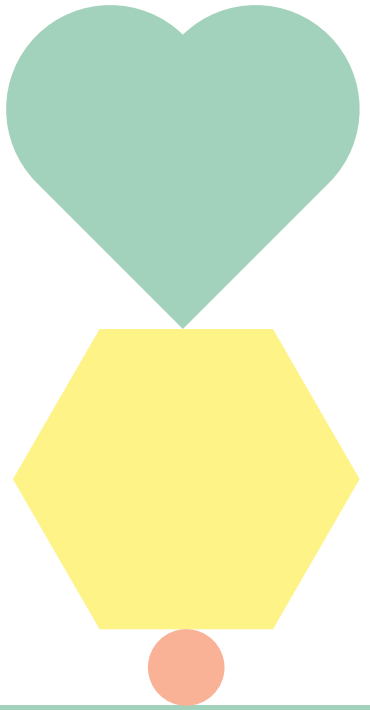
1.2 THE HARLI DESIGN BOOK

To support the Developer's vision, the Harli Design Book has been developed by Resolution Property Group in conjunction with NGD Design, ARK Resources and Tract Landscape to make it easy for future residents, architects, builders and landscape designers to understand and meet the design requirements for the Harli community.

Key Design Elements for Harli include:

1. House Design.
2. Landscape Design.
3. Sustainable Design.

For each Key Design Element, the Harli Design Book contains Design Standards (DS = minimum requirements) and Design Recommendations (DR = aspirational targets).

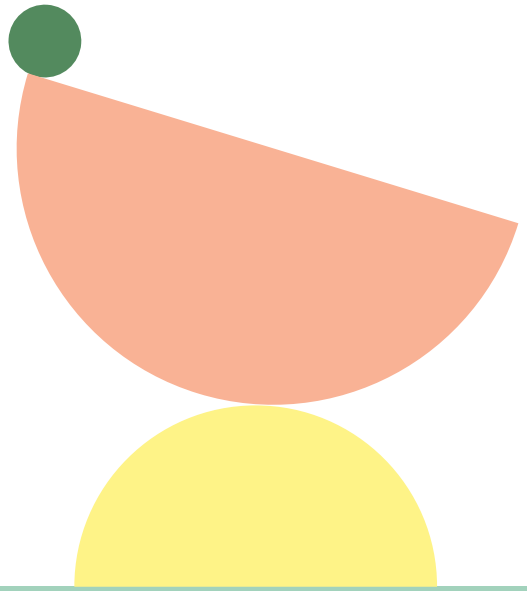


Introduction

1.3 DESIGN APPROVAL PROCESS

All home designs to be built at Harli must be approved by the Harli Design Assessment Panel (HDAP) prior to lodging a building permit application and/or commencing any construction works associated with your dwelling. The HDAP is appointed by the Developer to oversee and implement the requirements of the Harli Design Book.

The Harli Design Book may be updated from time to time at the HDAP's discretion. There may also be specific requirements that are applicable to particular lots in visually sensitive locations such as those adjoining parkland, wetlands and the Ranfurlie Golf Course.



Applications for HDAP approval will be assessed against the current version of the Harli Design Book. Other versions of the Harli Design Book and dwellings in other stages of Harli are not relevant to your application and do not represent a design precedent that can be realised on in your application.

Interpretation and application of the Harli Design Book requirements is at the sole discretion of the HDAP. The HDAP's decisions are final. No claims shall be made to the Developer, the HDAP or their representatives with respect to the decisions made.

The HDAP reserves the right to vary or waive the requirements of the Harli Design Book if it believes a proposal (or an element of a proposal) that is not strictly in accordance with the wording of the Harli Design Book nonetheless makes a positive contribution to the overall objectives of the built form and/or streetscape at Harli.

Allowance has been made for two submissions for each Design Approval application. Each additional submission may incur an administration fee, at the sole discretion of the HDAP. New submissions for a lot that has already had an application approved may also incur an administration fee.

1.4 DESIGN APPROVAL KEY STEPS ARE AS FOLLOWS:

STEP 1: DESIGN

Design your home to meet Design Standards (DS = minmum requirements) and consider Design Recommendations (DR = aspirational targets) contained in the Harli Design Book and complete the Design Application Checklist.

STEP 2: SUBMIT

Submit application package via the Design Approval Portal at www.ngdd.com.au

STEP 3: HDAP ASSESSMENT

STEP 4B: HDAP REFUSAL

Go back to Step 2 after addressing HDAP feedback.

STEP 4A: HDAP APPROVAL

Go to Step 5.

STEP 5: CONSTRUCTION

STEP 6: COMPLETION

Submission requirements

All submissions for HDAP approval must be in PDF format and include the following information:

1.4.1 Completed Design Application Checklist

1.4.2 FirstRate5 Whole-of-Home Tool Report

1.4.3 Site plan at 1:200, with dimensions and showing:

- Lot boundaries and any easement(s) on title
- Proposed building footprint and all setbacks
- Site coverage, contours and north point
- On-site car parking and driveways
- Other external structures (including sheds, pools and spas)
- All ancillary items, including fencing and retaining walls

1.4.4 Floor plans and roof plans at 1:100, with dimensions and showing:

- Internal layout, and any pergolas, decks, terraces, balconies, verandas, windows, doors and other openings
- Proposed floor levels

1.4.5 Elevations at 1:100, with dimensions and showing:

- Building heights, finished floor-to-ceiling levels
- Roof pitch, width of eaves
- Existing and finished ground levels including proposed earthworks and retaining walls

1.4.6 External finishes and colour samples

- Provide samples or images (swatches, colour photos, paint chips etc.) of all proposed external materials and colour selections

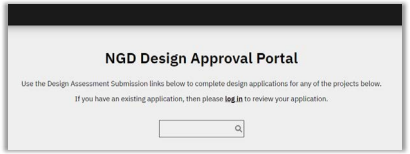
1.4.7 Landscape plan at 1:100, with dimension and showing:

- Indicative extent of all hardscape and softscape
- Planting schedule that lists all proposed species referenced on landscape plan
- Specifications for hardscape elements

Do not send information such as electrical plans, slab layouts, joinery details, internal colour schemes etc. This extra information slows down the assessment process and may result in a submission being rejected.

1.5 SUBMISSIONS TO DESIGN APPROVAL PORTAL

When you are ready to make your submission for HDAP Approval, you can lodge it on the Design Approval Portal at www.ngdd.com.au:



Generally, the HDAP will review and respond to you within ten working days of your submission, but this time may vary depending on the nature and completeness of your submission.

Submission requirements

1.6 RE-SUBMISSIONS TO DESIGN APPROVAL PORTAL

Should a re-submission be required, please ensure that any alterations or changes are suitably highlighted on the plans or in any accompanying communication. This will help to speed up the processing and assessment.

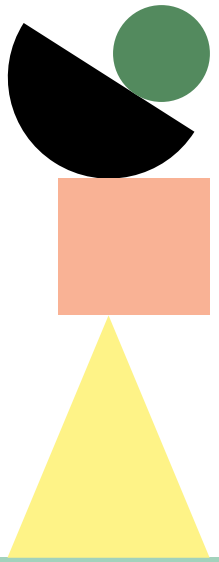
1.7 OTHER APPROVALS

The requirements detailed in this document are in addition to, and not in lieu of, any other legal requirements. Approval by the HDAP does not exempt the plans from any building or statutory regulations, nor infer compliance with the building regulations or other applicable statutory legislation. Separate approval must be obtained from the relevant authorities or a licenced building surveyor. It is the responsibility of the applicant to ensure any other approvals, authorisation permits or other requirements are obtained and satisfied.

1.8 SMALL LOT HOUSING CODE (SLHC)

The Harli Design Book applies to all single dwelling lots at Harli. The HDAP will assess all relevant applications against the Harli Design Book requirements. Single dwelling lots that are less than 300m^2 are also subject to the requirements of the Small Lot Housing Code (SLHC).

In the event of any clash between the SLHC and the Harli Design Book Standards, the SLHC shall take preference. The HDAP will not assess proposals against the requirements of the SLHC.



2.0 House design

House design

2.1 DWELLING ORIENTATION & SOLAR ACCESS

2.1.1. **DS1 –** All dwellings must be orientated to address solar access considerations including maximising daylight to living areas and bedrooms and to incorporate passive design initiatives to maximise energy efficiency.

2.1.2. **DR1 –** The HDAP encourages all dwelling's to achieve a daylight factor of >2 for a dwellings living area and bedroom.

2.2 BUILDING ENVELOPES

The Building Envelope Plan (BEP) for a lot defines the area on the lot that can and can't be built upon. BEPs are designed to allow the owner the maximum benefits of their lot, whilst simultaneously not disadvantaging others.

The BEP requirements cannot be varied without written consent of the Responsible Authority.

2.3 DWELLING SITING & SETBACKS

Please refer to the BEP for specific front and side setbacks for individual lots.

Generally, the BEP provides the following setback requirements:

2.3.1. **DS2A –** The front building line of the dwelling must be setback a minimum of 4m from the front lot boundary unless one of the following exceptions apply:

a. For lots of between 250m^2 and 300m^2 opposite or abutting a passive or active open space area where the front setback can be reduced to 3 metres.

b. For lots over 300m^2 which adjoin a bank / row of Small Lot Housing Code lots whereby a reduced setback may be considered to the satisfaction of the HDAP and Responsible Authority.

House design

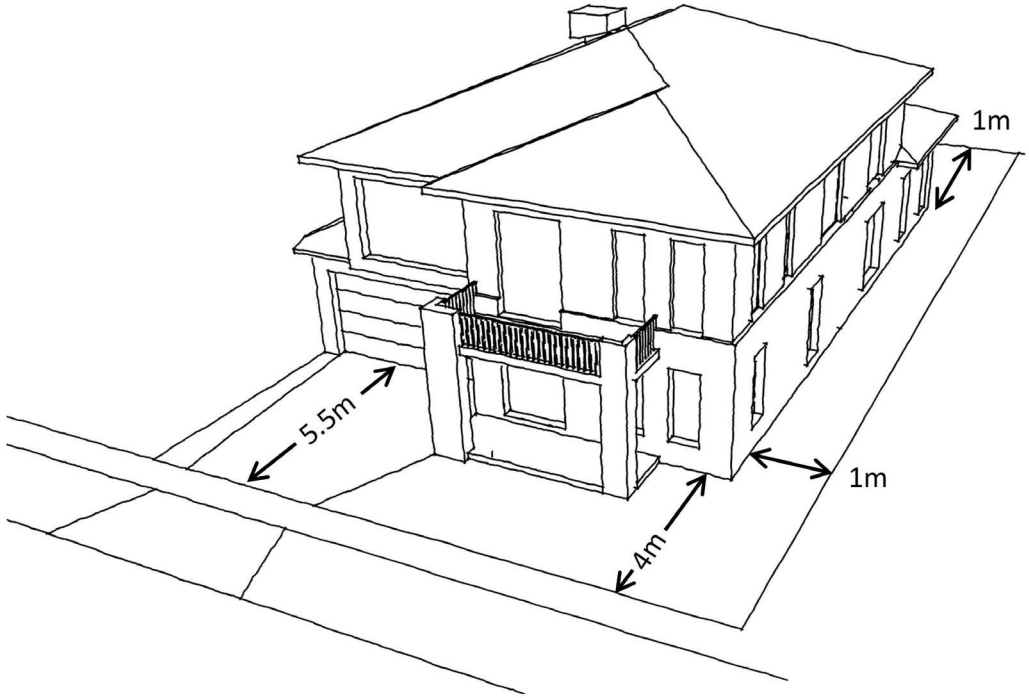
2.3.2. **DS2B** – Side setbacks must be a minimum of 1m from at least one side boundary and 2m from a side street boundary.

2.3.3. **DS2C** – Side setback must be a minimum 1m from any boundary abutting a reserve.

2.3.4. **DS2D** – Garage walls may be constructed on the boundary, as long as the boundary does not abut a reserve. If a garage wall is not on the side boundary, it must be setback at least 1m from the side boundary.

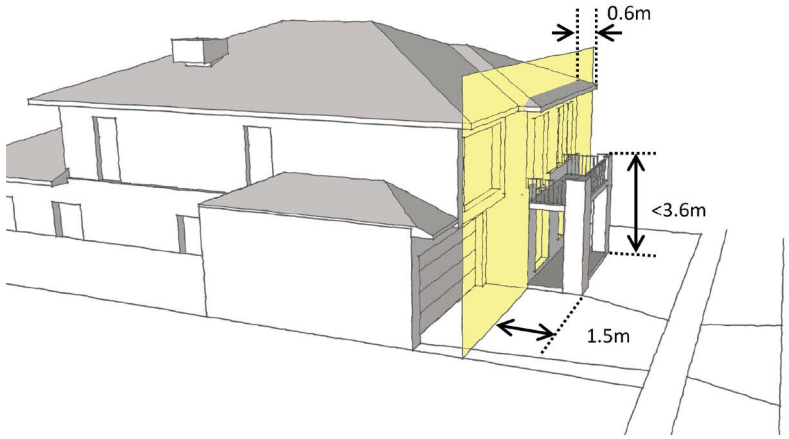
2.3.5. **DS2E** – The rear building line of the dwelling must be setback a minimum of 1m from the rear lot boundary.

2.3.6. **DS2F** – Garages must be setback a minimum of 5.5m from the front boundary or as stipulated by the building envelope (if applicable).



House design

2.3.7. **DS2G** – Entry features such as verandas, porches, porticos and balconies may encroach 1.5m into the front setback if the encroachment is less than 3.6m above natural ground level.



2.3.8. **DS2H** – Porches, porticos, pergolas and balconies may encroach 1m into the side street setback if the encroachment is less than 3.6m above natural ground level.

2.3.9. **DS2I** – Eaves, gutters, fascia with a combined width of 600mm may encroach into the front and side setbacks.

2.4 SITE COVERAGE

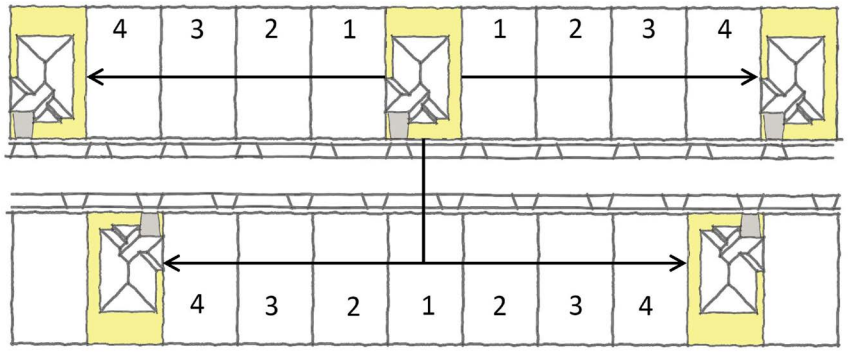
2.4.1. **DR2** – The HDAP encourages a range of house designs and the recommended living area of each dwelling (i.e. excluding the garage and any unenclosed areas such as porticos, verandas, alfresco areas etc.) is dependent on the size of the lot as follows:

LOT SIZE	RECOMMENDED FLOOR AREA
300m² - 450m²	100m²
451m² - 600m²	140m²
More than 600m²	160m²

House design

2.5 STREETSCAPE VARIETY

2.5.1. **DS3 –** Overly similar façades are not permitted within four lots of each other. This includes lots on the same side and the opposite side of a street.



2.6 LIVEABLE HOUSING DESIGN

2.6.1. All dwellings on lots greater than 300m² must meet the following Silver Standards of the Liveable Housing Design Guidelines (as extracted below).

DS4A – Dwelling Access

a. Provide a safe, continuous step-free pathway from the front boundary of the property to an entry door to the dwelling. (This provision does not apply where the average slope of the ground where the path would feature is steeper than 1:14.)

b. The path of travel referred to in (a) should have a minimum clear width of 1000mm and have:

   i. no steps.

   ii. an even, firm, slip resistant surface.

   iii. a crossfall of not more than 1:40.

   iv. a maximum pathway slope of 1:14.

   Where ramps are required, they should have landings provided at no greater than 9m for a 1:14 ramp and no greater than 15m for ramps steeper than 1:20. Landings should be no less than 1200mm in length.

c. The path of travel referred to in (a) may be provided via an associated car parking space for the dwelling.

   Where a car parking space is relied upon as the safe and continuous pathway to the dwelling entrance, the space should incorporate:

   i. minimum dimensions of at least 3200mm (width) x 5400mm (length).

   ii. an even, firm and slip resistant surface.

   iii. a level surface (1:40 maximum gradient, 1:33 maximum gradient for bitumen.

House design

d. A step ramp may be incorporated at an entrance doorway where there is a change in height of 190mm or less. The step ramp should provide:

   i. a maximum gradient of 1:10.

   ii. a minimum clear width of 1000mm (please note: width should reflect the pathway width).

   iii. a maximum length of 1900mm.

e. Where a ramp is part of the pathway, level landings no less than 1200mm in length, exclusive of the swing of the door or gate that opens onto them, must be provided at the head and foot of the ramp.

DS4B — Dwelling Entrance

a. The dwelling must provide an entrance door with:

   i. a minimum clear opening width of 820mm (see Figure 2(a)).

   i. a level (step-free) transition and threshold (maximum vertical tolerance of 5mm between abutting surfaces is allowable provided the lip is rounded or bevelled).

   ii. reasonable shelter from the weather.

b. A level landing area of at least 1200mm x 1200mm should be provided at the level (step free) entrance door. A level landing area at the entrance door should be provided on the arrival side of the door (i.e. the external side of the door) to allow a person to safely stand and then open the door.

c. Where the threshold at the entrance exceeds 5mm and is less than 56mm, a ramped threshold may be provided (see Figure 1(b)).

d. The level (step-free) entrance should be connected to the safe and continuous pathway as specified in Element 1.

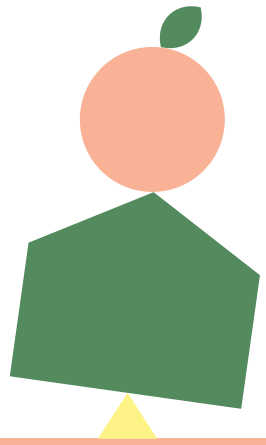
DS4C — Internal Doors & Corridors

a. Doorways to rooms on the entry level used for living, dining, bedroom, bathroom, kitchen, laundry and sanitary compartment purposes must provide:

   i. a minimum clear opening width of 820mm.

   ii. a level transition and threshold (maximum vertical tolerance of 5mm between abutting surfaces is allowable provided the lip is rounded or bevelled).

b. Internal corridors/passageways to the doorways referred to in (a) must provide a minimum clear width of 1000mm.



House design

DS4D — Toilet

a. Dwellings must have a toilet on the ground (or entry) level that provides:

   i. a minimum clear width of 900mm between the walls of the bathroom if located in a separate room.

   ii. a minimum 1200mm clear circulation space forward of the toilet pan exclusive of the swing of the door in accordance with Figure 3(a).

   iii. The toilet pan should be located in the corner of the room (if the toilet is located in a combined toilet / bathroom) to enable installation of grabrails at a future date. Reinforcement guidelines for walls in bathrooms and toilets are found in Element 6.

DS4E — Shower

a. One bathroom must feature a slip resistant, hobless shower recess. Shower screens are permitted provided they can be easily removed at a later date.

b. The shower recess should be located in the corner of the room to enable the installation of grabrails at a future date.

For hobless specification please see Australian Standard AS3740-3.6. Reinforcement guidelines for walls in bathrooms and toilets are found in Element 6.

DS4F - Reinforcement of Bathroom & Toilet Walls

Except for walls constructed of solid masonry or concrete, the walls around the shower, bath (if provided) and toilet should be reinforced to provide a fixing surface for the safe installation of grabrails.

a. The walls around the toilet are to be reinforced by installing:

   i. noggings with a thickness of at least 25mm in accordance with Figure 6(a); or

   ii. sheeting with a thickness of at least 12mm in accordance with Figure 6(b).

b. The walls around the bath are to be reinforced by installing:

   i. noggings with a thickness of at least 25mm in accordance with Figure 7(a); or

   ii. sheeting with a thickness of at least 12mm in accordance with Figure 7(b).

c. The walls around the hobless shower recess are to be reinforced by installing:

   i. noggings with a thickness of at least 25mm in accordance with Figure 8(a); or

   ii. sheeting with a thickness of at least 12mm in accordance with Figure 8(b).

House design

DS4G – Internal Stairways

a. Stairways in dwellings must feature:

   i. a continuous handrail on one side of the stairway where there is a rise of more than 1m.

DR3 – Owners and designers are encouraged to consider incorporating Gold Standard features of the Liveable Housing Design Guidelines.

2.7 ARCHITECTURAL CHARACTER

2.7.1. **DS5A** – One dwelling is allowed per lot.

2.7.2. **DS5B** – All dwellings are to be of contemporary design. Period styles, such as Edwardian and Georgian etc. are not permitted. Period detailing, such as quoins, corbelling, fretwork, lacework etc. are generally not permitted.

2.7.3. **DS5C** – The front façade of the dwelling must incorporate an entry feature at the front door to create a strong sense of entry. The entry feature must face the primary street frontage.

2.7.4. **DS5D** – Long, uninterrupted expanses of wall (greater than 6m or so) should be avoided where the wall faces a street. Articulation of the wall using windows, materials, and/or stepping in the wall will be required.

2.7.5. **DS5E** – The dwelling must have at least one habitable room window that addresses the primary street frontage.

2.7.6. **DS5F** – Ceiling heights must be at least 2550mm for single storey dwellings.

2.7.7. **DS5G** – Double storey dwellings must incorporate articulation and/or differing materials between the ground and first floor.

2.7.8. **DS5H** – Aluminium sliding windows must not be used on any elevation that is readily visible from the public realm.

2.7.9. **DS5I** – Dwellings constructed on stumps must include appropriate visual screening of the gap between the floor level and natural ground (i.e. stumps should not be exposed or visible from the public realm).

2.7.10. **DS5J** – Any façade that faces the public realm must not include infill or recessed panels above doors, windows or garage doors. The finish above the opening must match the finish on either side of the opening, unless the HDAP considers the panels to be part of an allowable design element.

House design

2.8 MATERIALS AND FINISHES

2.8.1. **DS6A** – External colour schemes for the dwelling, driveway and hard landscaping surfaces that are visible from the street are to adopt a colour palette of visually interesting muted neutral tones and materials which will enhance the streetscape and reflect the natural environment.

Bright colours and highly reflective surfaces will not be supported.

2.8.2. **DS6B** – The façade must be constructed using a mixture of external building materials/colours (at least two) and must not comprise of more than 80% of one material.

- This calculation does not include any openings (i.e. doors, including the garage door, windows etc).
- Two contrasting render colours are permitted.
- 100% face brick facades are not permitted.

Allowable finishes include:

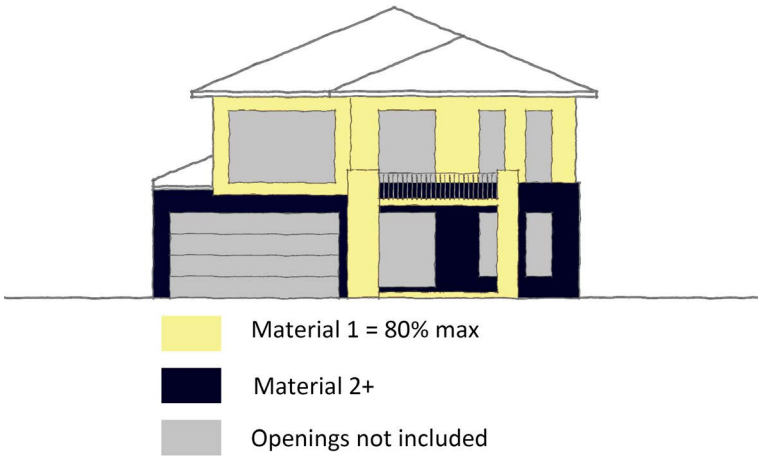
- Face brick
- Render
- Painted weatherboard
- Timber cladding
- Stone
- Any other HDAP approved material

2.8.3. **DS6C** – Façade materials that are not permitted include:

- Corrugated fibre cement sheeting
- Raw fibre cement
- Bare, painted or pre coloured concrete blocks
- Galvanized or zincalume metal sheeting
- Reflective materials such as glass
- Used/second-hand materials

2.8.4. **DS6D** – The roof finish must complement the style of your home. Acceptable materials include:

- Matt finished, powder coated metal roofing, including colorbond, in a corrugated profile or similar;
- Matt finished shingle style or low-profile concrete or terracotta tiles.

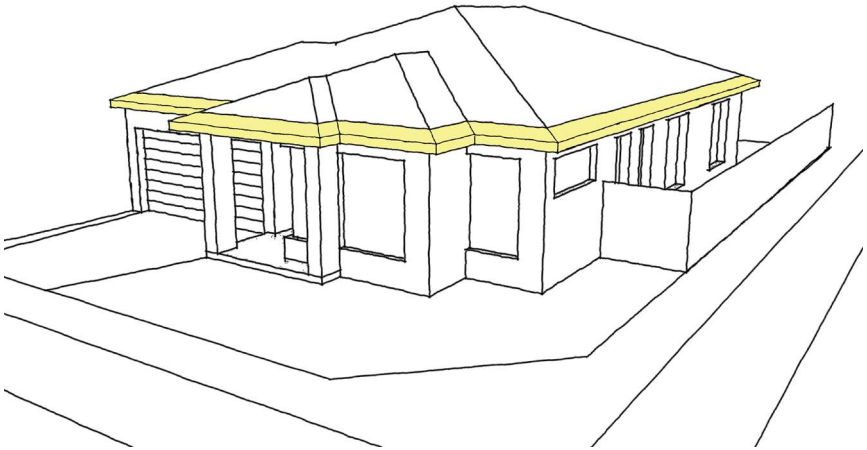


House design

2.9 CORNER LOTS

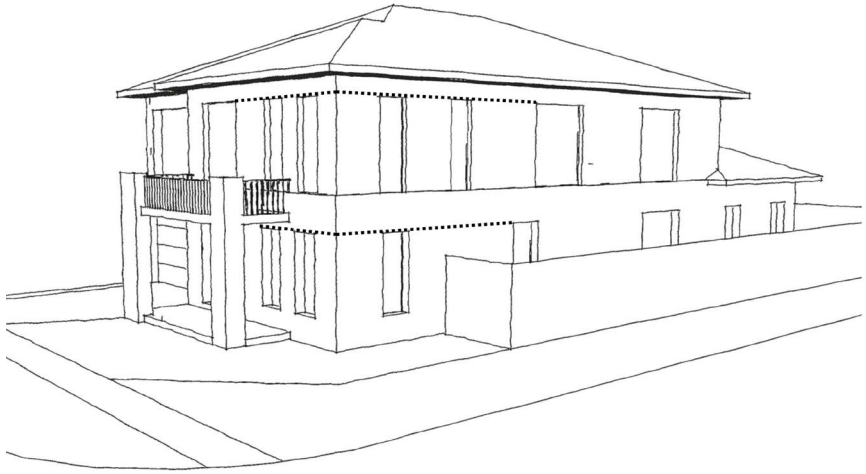
DS7A – Dwellings on corner lots must address both street frontages via the use of appropriate features and materials. Appropriate corner lot façade features will be assessed on a case-by-case basis by the HDAP.

2.9.1. **DS7B** – Dwellings on corner lots must include eaves/parapets to all sides facing the public realm, unless otherwise approved by the HDAP.



2.9.2. **DS7C** – In addition to the roof treatment above, any two of the following features repeated on the secondary façade will be required:

- A window with the same head height as the front façade windows.
- A material or finish from the front façade that wraps around for at least 3m along the secondary façade wall.
- A feature that matches the front entry feature.



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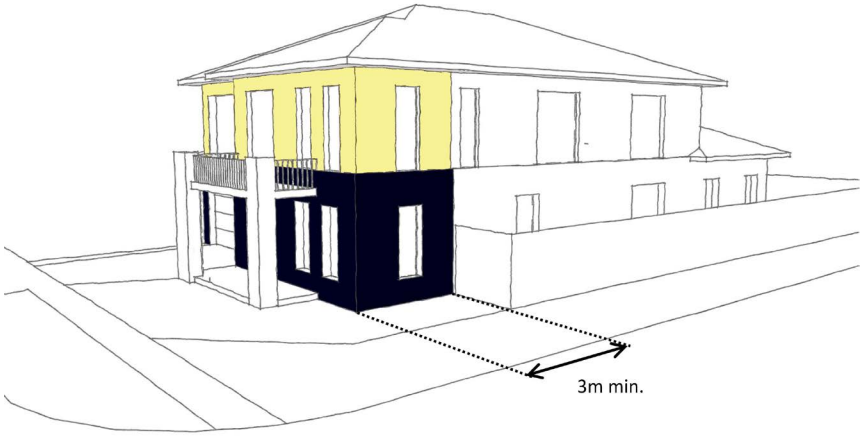


2.9.3. **DS7D –** Blank walls forward of the corner return fence will not be approved.

2.10 ROOF DESIGN

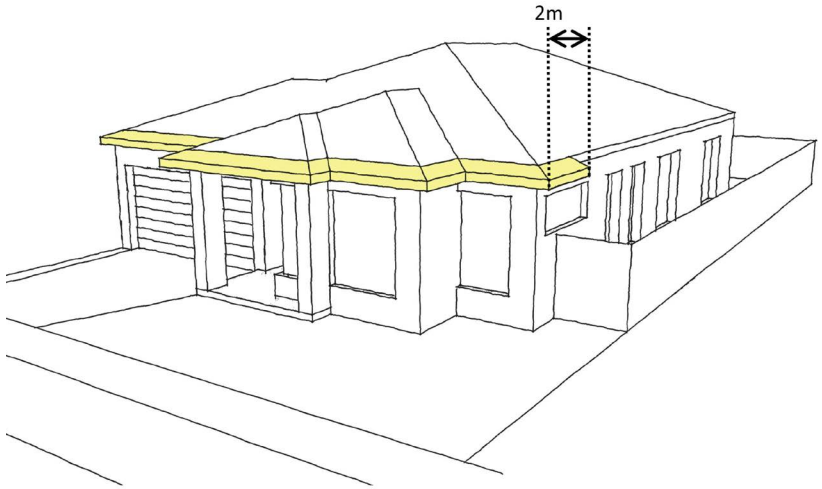
DS8A – A variety of roof shapes are encouraged. Articulated roof shapes with elements such as hips, and gables are preferred.

DS8B – Flat pitched, skillion and curved roofs may be accepted, subject to the HDAP's assessment that the proposal will contribute positively to the streetscape rather than detract from it.

DS8C – Elements such as Dutch Gables and Dormer Windows are allowed if they form part of a contemporary façade and do not incorporate period details.

2.10.1. **DS8D –** Hip and Gable roofs home must have:

- A roof pitch of at least 22.5º.
- Eaves with a minimum width of 450mm to the front facade.
- The front eaves returning along the side wall for at least 2m on single storey dwellings (unless the wall is on the boundary).
- A minimum eaves width of 450mm to the entire upper level on two storey dwellings.



House design

2.10.2. **DS8E –** Flat roofs (i.e. roofs with a pitch of less than 5º) visible from the public realm must be hidden behind a parapet.

2.10.3. **DS8F –** Parapets on the edge of a front façade must be returned along a side wall for at least 500mm.

- Walls on a boundary will not be exempt from this requirement.
- Parapets without a return along the side will not be approved.

DS8G – Corner lots have slightly different requirements for roof design. Please refer to Section 2.9.1 above.

2.11 GARAGES

DS9A – Garages can dominate a dwelling façade and detract from the streetscape. The positioning and treatment of garages and garage doors should contribute positively to both the dwelling design and streetscape.

2.11.1. **DS9B –** All lots must incorporate a fully enclosed garage.

2.11.2. **DS9C –** Carports and open sided garages that are visible from the public realm are not allowed.

2.11.3. **DS9D –** Garage doors must be sectional or panel lift. Roller doors are not permitted if they are visible from the public realm.

2.11.4. **DS9E –** Garages accessed from the primary frontage of a lot must be integrated into the overall form of the dwelling.

2.11.5. **DS9F –** Integrated garages must be stepped back a minimum of 500mm from the front building line, unless they are part of an overall solution to the slope of a lot.

House design

2.11.6. **DS9G –** The combined width of garage door openings must not exceed 40% of the primary frontage unless the building is two or more storeys and on a lot with an area between 250m^2 to 300m^2 whereby the garage opening must not exceed 30% of the area of the front façade of the dwelling with the area of the front façade measured from a two dimensional elevation plan of the façade excluding the area of the roof of the dwelling.

2.11.7. Use of two single garage doors in lieu of one double garage door may be acceptable if the HDAP considers this appropriate.

2.11.8. **DS9H –** Double garage width must not exceed 7m internally.

Provision for additional space for storage space or a workshop will be considered by the HDAP, where the wall facing the public realm has appropriate articulation. Examples of appropriate articulation is the use of windows and/or steps in the wall, to the satisfaction of the HDAP.

2.11.9. **DS9I –** Lots with a width of 12.5m or greater must provide a double garage.

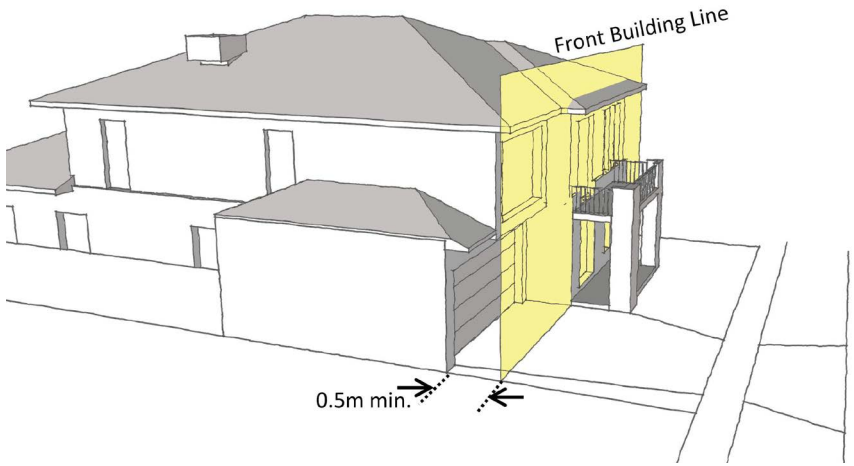
2.11.10. **DS9J –** Garages forward of the building and garages with doors that are perpendicular to the street may be considered by the HDAP if they are a part of an overall solution to the slope of a lot.

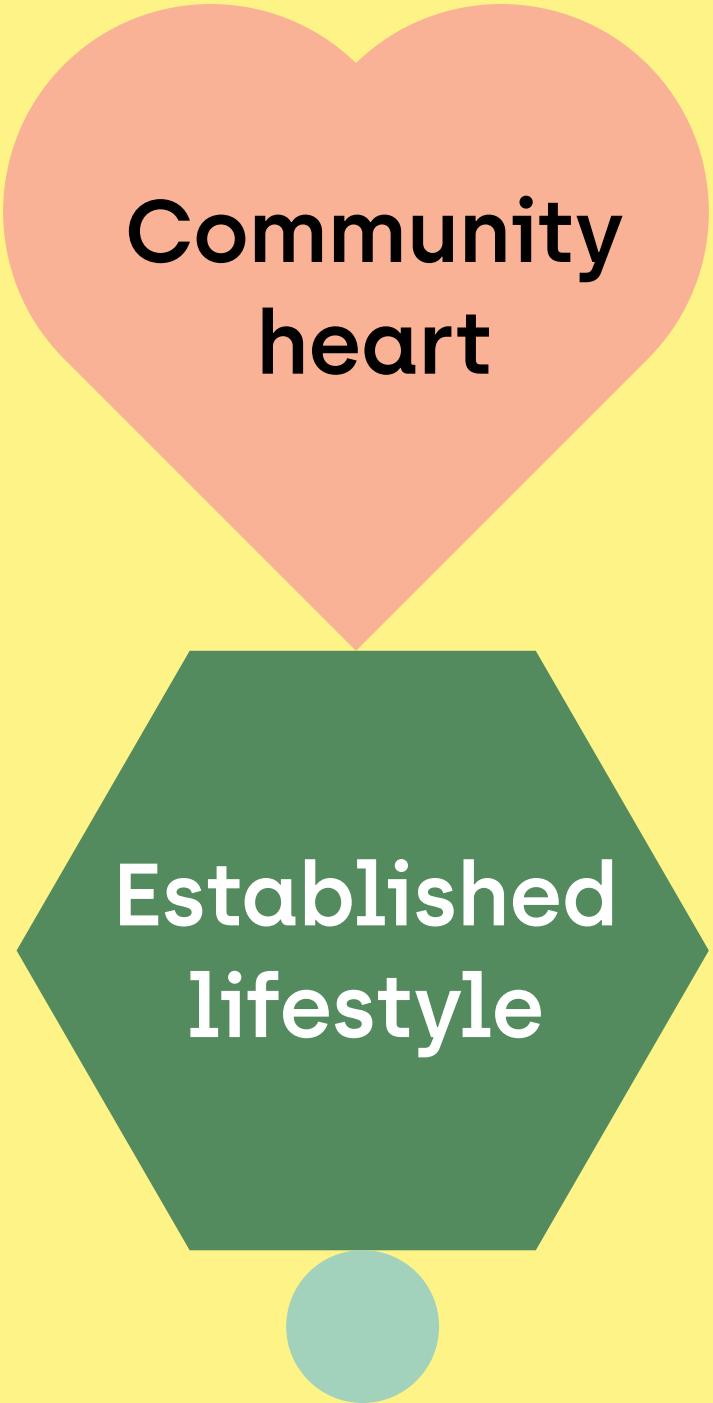
2.11.11. **DS9K –** Blank garage walls facing the street will not be permitted. Garage walls that face a street must address that frontage with appropriate design features, such as:

- Garage doors
- Windows
- Eaves

2.11.12. **DS9L –** Garages that are not accessed from the primary frontage (e.g. on corner or rear loaded lots) may be detached, at the discretion of the HDAP.

2.11.13. **DS9M –** Detached garages must match or compliment the dwelling in materials, colours and finishes.





3.0 Landscape design

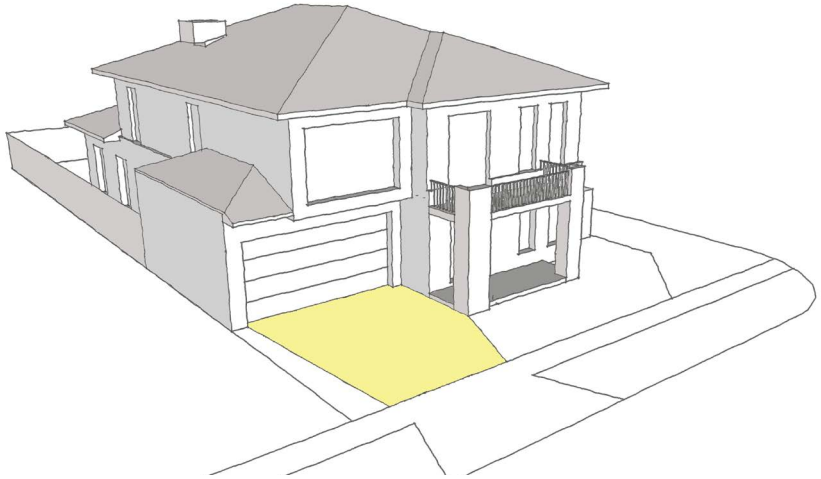
Landscape design

3.1 DRIVEWAYS AND CAR PARKING

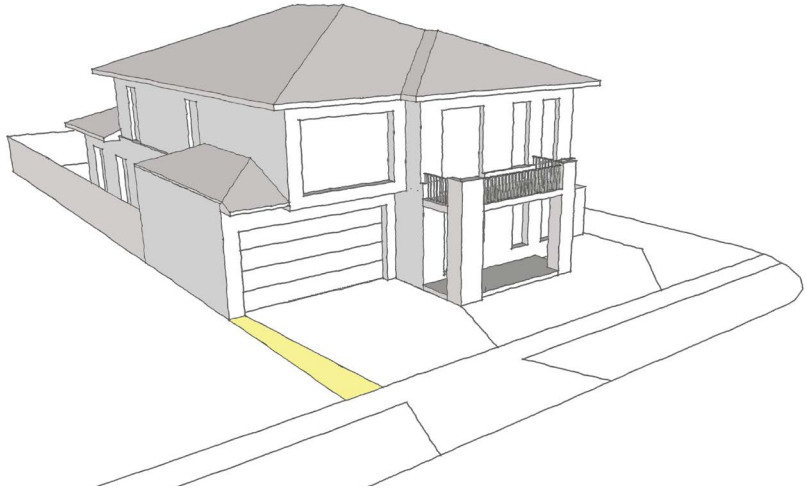
Driveways, like garages, can dominate the streetscape and detract from its visual appeal if not considered carefully. Limiting the number of crossovers per allotment and ensuring that the extent of the driveway is minimised allows for more area to be used as front garden. This in turn provides more opportunity to enhance the overall appearance of the street and soften the integration between the public street and private front garden.

3.1.1. **DS10A** – Only one driveway is permitted per allotment.

3.1.2. **DS10B** – The driveway should not be wider than the garage opening at the dwelling and the width of the crossover at the front property boundary.



3.1.3. **DS10C** – The driveway must be set minimum 0.5m off the side boundary to allow for a planting strip along the side boundary of the property.



It is recommended that homeowners install a 100mm diameter PVC conduit under the driveway to accommodate any future irrigation requirements for the planting strip.

3.1.4. **DS10D** – Driveway grades should be no more than 1 in 5, with a grade of less than 1 in 8 preferred.

Landscape design

3.1.5. **DS10E –** Driveways must be constructed from:

- Exposed aggregate concrete; or
- Any other finish the HDAP considers appropriate (including permeable materials, except loose material such as gravel).

3.1.6. **DS10F –** Plain concrete driveways are not permitted if visible from the public realm.

3.1.7. **DS10G –** Driveways must be constructed with a matt finish (shiny or reflective surfaces are not permitted).

3.1.8. **DR4 –** Designers are encouraged to consider the use of permeable driveways (subject to council/authority requirements).

3.2 FENCING

3.2.1. All fencing details must be submitted to the HDAP for approval before installation.

3.2.2. Side, rear and corner fence details must be submitted to the HDAP with the initial submission for Developer Approval.

3.2.3. The owner is solely responsible for the maintenance or replacement of fencing between an allotment and any adjoining reserve or element of the public realm.

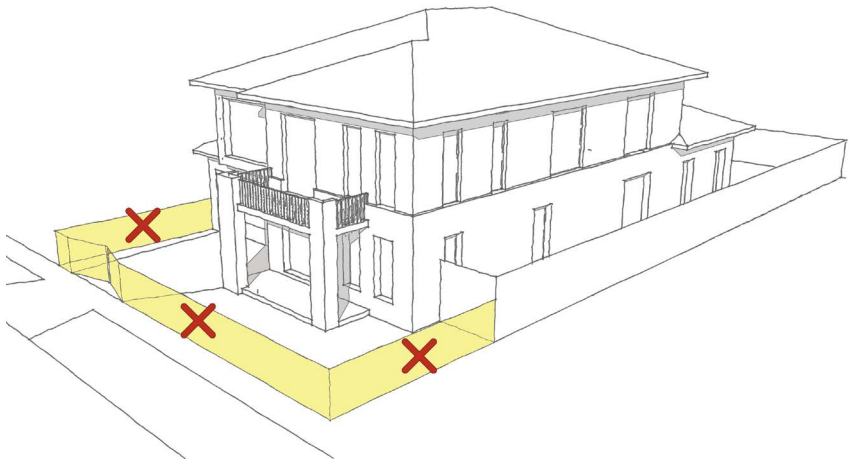
3.2.4. If an allotment already has a fence or retaining wall being part of a fence or wall erected by the Developer, the owner must not remove/damage or disfigure it and must maintain it in good condition.

Front Fence (fencing along the front boundary)

3.2.5. **DS11A –** Fencing forward of the dwelling is not permitted.

Wing Fence (fencing along the side boundary, between the front boundary and the return fence or garage)

3.2.6. **DS11B –** Wing fences are not permitted.

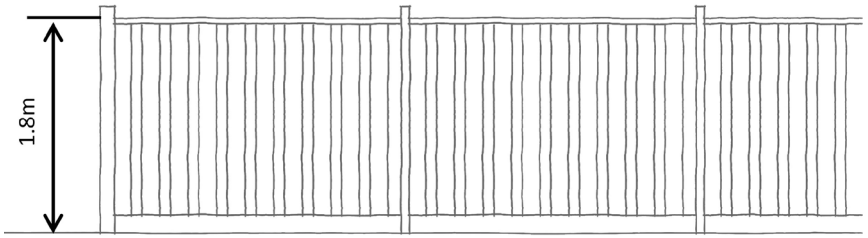


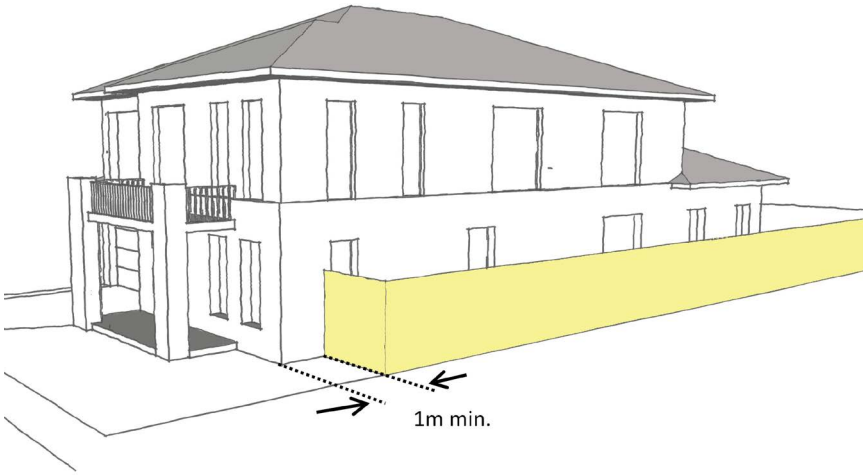
Landscape design

Side and Rear Fence (fencing on the boundary, where allowed)

3.2.7. DS11C – Side and rear fencing must be:

- Constructed with exposed, 125 x 75mm hardwood or cypress pine posts with timber capping no more than 2.4m apart;
- Constructed with 100 x 120mm lapped timber palings and a 125 x 25mm bottom plinth;
- Be 1.80m in height above natural ground level with top capping;
- Terminated a minimum of 1m behind the closest front wall of the dwelling; and
- Returned to meet the closest side wall of the dwelling (i.e. return fence).



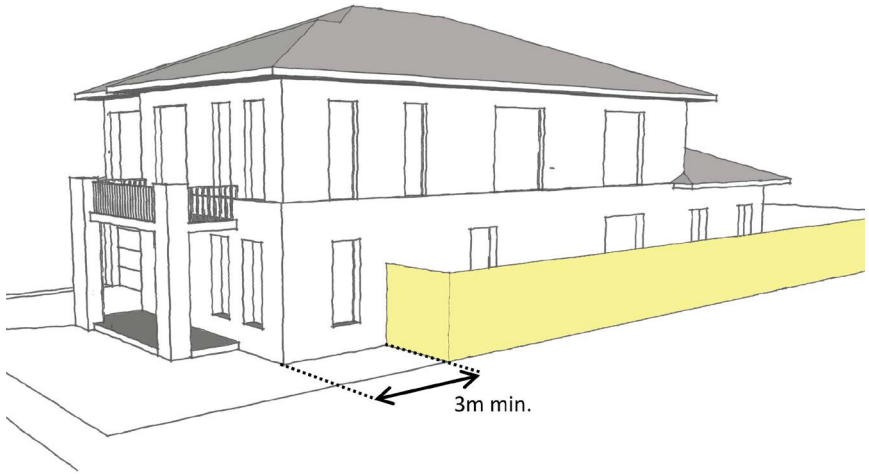


Landscape design

Corner Fencing (fencing on a side boundary that abuts the public realm)

3.2.8. **DS11D** – Corner fencing must be:

- Terminated a minimum of 3m behind the closest front wall of the dwelling; and
- Returned to meet the closest side wall of the dwelling (i.e. return fence).



Return Fence (Fencing between the boundary fence and the dwelling or garage)

3.2.9. **DS11E** – The return fence must match the adjacent boundary fence.

Gates

3.2.10. **DS11F** – Gates that form part of a fence must match the height, material and specifications of the fence.

Colorbond Fencing

3.2.11. **DS11G** – Colorbond fencing is not permitted.

3.3 RETAINING WALLS

The way your home sits on your lot will have a significant impact on how your home relates to the street. Considering and using the natural topography of your lot will contribute positively to the visual quality of the street.

Incorporating split level designs avoids unsightly, high retaining walls and expensive earthworks that isolate the home from the street rather integrating it into the public realm. Split level designs that follow the natural slope of the lot also provide opportunities for more defined zoning within the home.

Landscape design

3.3.1. **DS12A** – Retaining walls must be a maximum height of 1.0m. If a higher wall is required, more than one wall must be used in conjunction with graded slopes, battering and other landscape treatment to soften the appearance of the change in levels.

3.3.2. **DS12B** – Retaining walls must be spaced at least 500mm apart when placed parallel from each other.

3.3.3. **DS12C** – A landscaping strip in front of each retaining wall should be provided to soften the height.

3.3.4. **DS12D** – Retaining walls visible from the public realm (street or public reserve etc.) must be constructed from a material and finish to the satisfaction of the HDAP.

Acceptable finishes may include:

- Stone;
- Face or rendered masonry;
- Concrete sleepers with an appropriate texture and colour finish and galvanised support columns (plain concrete will not be accepted); and
- Timber sleepers with a minimum size of 200mm x 100mm and timber support columns with a minimum size of 100mm or galvanised support columns.

3.3.5. **DS12E** – The extent, height and finish of all proposed retaining walls must be included in any application for Design Approval.

3.3.6. **DS12F** – Retaining walls and fences constructed by the Developer are exempt from the above height limits and must not be removed or altered without written permission from the HDAP.

3.4 GARDENS

The landscape works to the front garden are part of the Design Approval process.

A landscape plan must be approved as part of the HDAP Approval process and must incorporate the following:

3.4.1. **DS13A** – At least 70% of plant species are to be native (subject to council requirements).

3.4.2. **DS13B** – At least 40% of the front garden area must comprise of permeable surfaces such as:

- Drought resistant lawn;
- Lawn alternative such as artificial grass, groundcovers, river pebbles, Lilydale toppings etc; and
- Garden beds with trees, shrubs etc.

Landscape design

3.4.3. **DS13C** – At least one tree with a minimum installation height of 1.5m (400mm pot size) must be planted between the front building line and street boundary.

Consideration should be given to the mature size of any trees, to allow appropriate room for roots and branches to spread.

3.4.4. **DS13D** – In addition to the tree requirement above, further plants required in your front yard are as follows:

a. A minimum of five medium to large shrubs (from 200mm pot size at installation).

b. A minimum of 20 smaller shrubs or ground cover plants (from 150mm pot size at installation).

3.4.5. **DS13E** – At least one edible tree/shrub must be planted on the lot.

3.4.6. **DR5** – The HDAP encourages the inclusion of three or more edible fruit trees within a dwelling's garden.

3.4.7. **DS13F** – Provision for a minimum $2m^2$ suitable for use as food garden space and composting preferably in the rear garden.

3.4.8. As fences are not permitted between the front boundary and the house, consideration may be given to the use of low hedges or medium sized shrubs along the front and side boundaries of the front garden to define property boundaries.

3.4.9. Consideration should be given to the cultivation of existing soil in the garden beds to a 200mm depth, the addition of imported topsoil and fertiliser to the garden bed, and the covering of the garden beds with pine bark or similar mulch.

3.4.10. **DS13G** – Brightly coloured or coarsely textured wood mulches (such as dyed shredded wood or shredded pallet wood) and brightly coloured pebbles (such as reds or whites) are not permitted.

3.4.11. **DS13H** – All garden beds must be edged using timber, masonry or metal edging and should be densely planted to ensure good coverage of growth. Empty spaces between species should be avoided.

3.4.12. **DS13I** – The nature strip(s) outside the lot is/are included as part of the works required for successful completion of the landscaping and street trees are required to be fenced during home construction. Nature strips must achieve neat and even grass coverage and any damage caused during construction of the dwelling must be rectified. Artificial turf is not permitted in the nature strip.

Landscape design

3.4.13. **DS13J –** The letter box must:

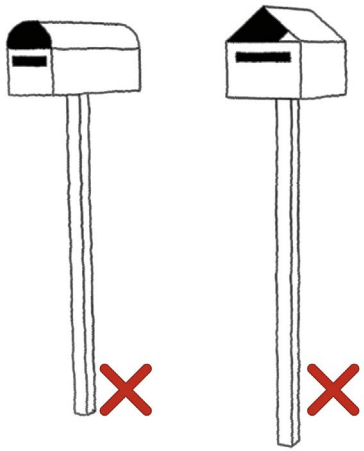
a. Complement the dwelling and front landscape in terms of materials, colour and style.

b. Comply with Australia Post guidelines, be clearly identifiable, suitably sized and located so as not to interfere with the streetscape.

c. Clearly identify the street number of the dwelling.

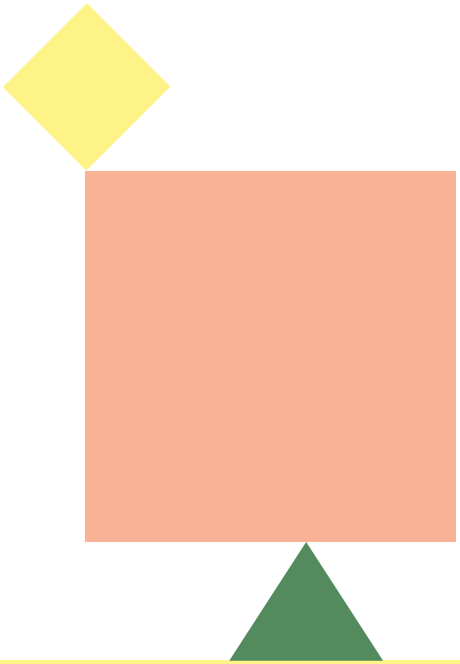
d. Be installed within 30 days of issue of an Occupancy Permit for your dwelling.

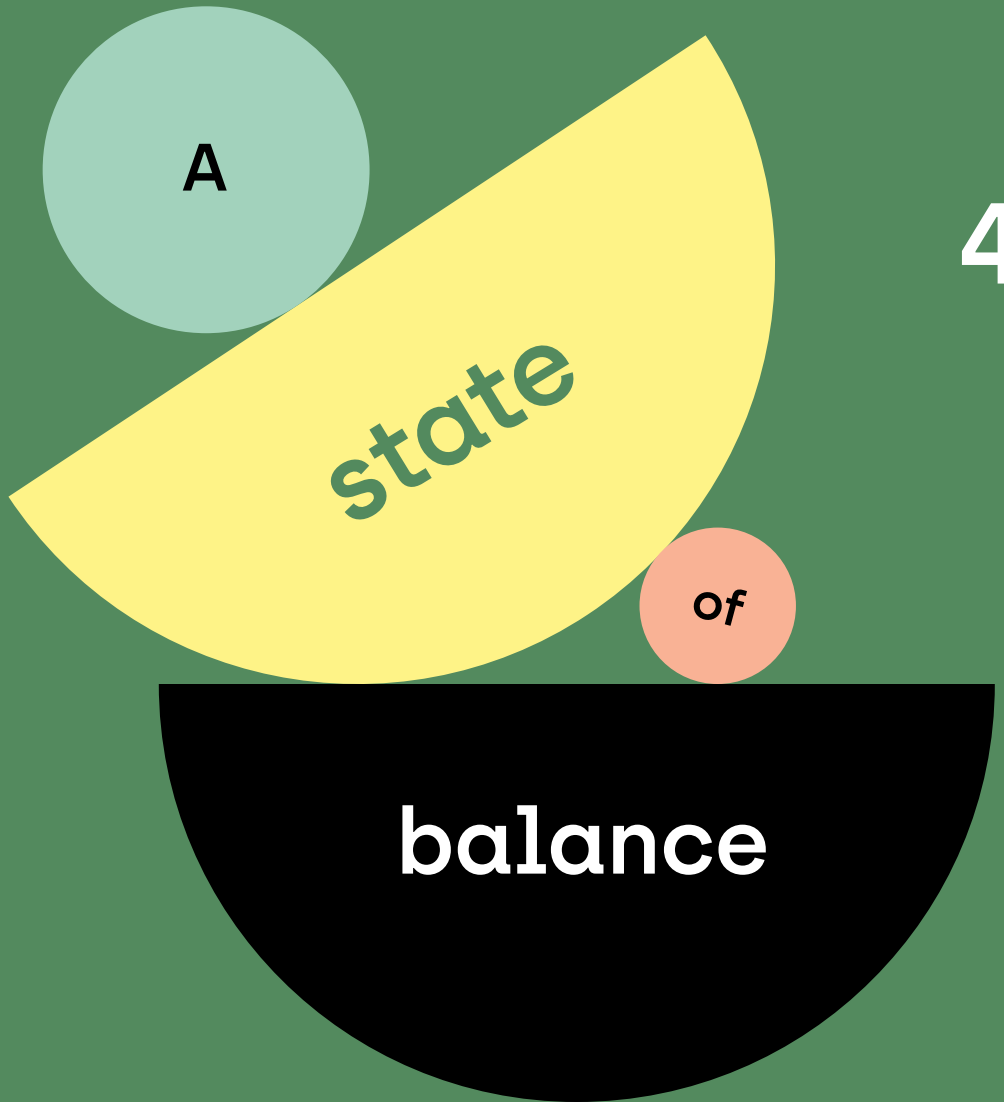
3.4.14. Single post letter boxes are not permitted.



DR6 – Landscape designers are encouraged to:

- Include one small to medium sized tree within the rear garden where possible; and
- Achieve 100% use of native species in garden areas (excluding food production & edible trees).





4.0 Sustainable design

Sustainable design

4.1 INTRODUCTION

4.1.1. All designs submitted to the Harli Design Assessment Panel (HDAP) must satisfy the following requirements and performance outcomes and integrate the features below.

4.2 MINIMUM NATHERS ENERGY RATING

4.2.1. **DS14A** – All dwellings must achieve a minimum 7 star NatHERS energy rating using Sustainability Victoria's FirstRate5 Whole-of-Home Tool.

4.2.2. **DR7** – The HDAP encourages designs that meet a minimum 8 star NatHERS energy rating.

4.3 ZERO NET CARBON CERTIFICATION

4.3.1. **DS14B** – All dwellings must achieve a Zero Carbon Certification using Sustainability Victoria's FirstRate5 Whole-of-Home Tool.

4.4 SOLAR PHOTOVOLTAIC SYSTEM

4.4.1. **DS14C** – All dwellings must be fitted with a solar photovoltaic (PV) system designed to generate renewable energy equal to 100% of a home's electricity demand on an annualised basis using Sustainability Victoria's FirstRate5 Whole-of-Home Tool.

4.4.2. **DS14D** – PV systems are to be designed and installed by a Clean Energy Council accredited provider.

4.4.3. **DR8** – The HDAP encourages the use of inverters to allow for future integration with electric vehicles and home battery systems.

4.5 LIGHT FITTINGS

4.5.1. **DS14E** – All light fittings must be high efficiency LED type and achieve a Minimum Colour Rendering Index (CRI): average Ra ⩾ 80, R9 > 0.

4.5.2. **DR 9** – The HDAP encourages use of adjustable colour temperature lighting to closely match natural sunlight and to minimise blue light in the evening.

4.5.3. **DR10** – The HDAP encourages light fittings to achieve a stroboscopic effect: SVM ⩽ 0,4 at full-load (except for light sources intended for use in outdoor applications).

4.5.4. **DR11** – The HDAP encourages light fittings to achieve a Flicker: Pst LM ⩽ 1,0 at full-load.

Sustainable design

4.6 APPLIANCES

4.6.1. **DS14F –** Fixed appliance energy star ratings must be within 1 Star of the best available at the time of HDAP approval. Refer to the Federal Government Equipment Energy Efficiency (E3) program. https://www.energyrating.gov.au/ to confirm appliance energy star ratings.

4.7 AIR QUALITY & VENTILATION

4.7.1. **DR12 –** The HDAP encourages dwellings to be designed to maximise opportunities for the supply of outdoor air to internal areas. This can be achieved by:

a. Maximising natural cross flow ventilation by appropriate placement of openable windows and doors on opposing facades.

b. Use of ducted heating and cooling.

c. Use of mechanical ventilation.

d. Use of single split systems connected to outdoor air supply.

4.7.2. **DR13 –** The HDAP encourages designs which achieve a minimum of 30m^3 per person/per hour.

4.8 WATER FIXTURES

4.8.1. **DS14H –** Water fixtures must have the following minimum WELS star ratings:

- Taps - 5 Star
- Showers - 3 Stars
- Toilets - 4 Stars
- Clothes washing machines and dishwashers within 1 Star of best available.

Refer to the following link for available products: https://www.waterrating.gov.au/choose/compare

4.8.2. **DR14 –** The HDAP encourages the use of water fixtures that achieve the maximum star rating where possible.

Sustainable design

4.9 WATER USE, RECYCLED WATER & WATER REUSE

4.9.1. **DS14I –** Subject to authority requirements, rainwater harvesting systems must be fitted to all dwellings comprising the following:

- A rainwater tank with a minimum volume of 2,000 Litres (for lots greater than 300m²);
- Partial roof area draining to the tank;
- Tank connection to all toilets;
- Tank connection to irrigation system (if installed); and
- Recycled (3rd pipe) water connection downstream of rainwater tank to ensure rainwater is used as a priority.

4.9.2. **DS14J –** All dwellings must be supplied with separate meters for potable and recycled water consumption.

4.9.3. **DR15 –** The HDAP encourages the use of rainwater harvested within home non-potable hot water system and smart rainwater tanks with the ability to discharge in anticipation of flooding events.

4.10 BIKE PARKING SPACE

4.10.1. **DS14K –** Each dwelling must provide space for one secure, undercover bike space per bedroom.

4.11 EV CHARGE POINT

4.11.1. **DS14L –** All dwellings must include a singe phase connection for EV charging (7kW / 16A).

4.11.2. **DR16 –** The HDAP encourages the provision of three phase power to enable fast charging (21kw/16 amps).

4.12 CONSTRUCTION TIMBER

4.12.1. **DR17 –** The HDAP encourages the use of sustainably sourced timber from either:

- Sustainable plantations accredited with Forest Stewardship Council (FSC) or Programme for the Endorsement of Forest Certification (PEFC) programs; or
- Recycled source. If sustainably sourced timber isn't used, the HDAP encourages timber be sourced from Australia.

4.12.2. **DR18 –** The HDAP encourages the use of timber framing where steel is not required for structural purposes.

4.13 EMBODIED CARBON CONSIDERATIONS

4.13.1. **DR19 –** The HDAP encourages the use of low carbon materials where possible.

Sustainable design

4.14 COOL ROOFS

4.14.1. **DS14M –** Dwellings must utilise a Green Roof or for pitched roofs less than 15º – a three year SRI of greater than 64 and for pitched roofs greater than 15º – a three year SRI greater than 34.r.

4.15 CONCRETE & ASPHALT

4.15.1. **DR19 –** The HDAP encourages the use of recycled aggregate & water as per Green Star DAB Credit 19B1.2 & 1.3 which are summarised below:

19B.1.2
WATER REDUCTION

0.5 point is available where the mix water for all concrete used in the project contains at least 50% captured or reclaimed water (measured across all concrete mixes in the project).

19B.1.3
AGGREGATES REDUCTION

0.5 point is available where either:

A. At least 40% of coarse aggregate in the concrete is crushed slag aggregate or another alternative material (measured by mass across all concrete mixes in the project), provided that use of such materials does not increase the use of Portland cement by over five kilograms per cubic metre of concrete;
or

B. At least 25% of fine aggregate (sand) inputs in the concrete are manufactured sand or other alternative materials (measured by mass across all concrete mixes in the project), provided that use of such materials does not increase the use of Portland cement by over five kilograms per cubic metre of concrete.

4.15.2. **DS14N –** Asphalt must be Warm Mix type as per Green Star Communities credit 26B1.4 or other low carbon alternative with lower embodied energy emissions.

4.16 INTERNAL & EXTERNAL FINISHES

4.16.1. **DS14O –** Internal & external finishes must be specified to minimise the levels of pollutants with the objective of safeguarding the wellbeing of residents.

To achieve this outcome, products should be specified in accordance with the Green Star criteria which are summarised in the following tables:

13.1.1B
LABORATORY TESTING

TVOC limits for paints, adhesives or sealants are detailed in Table 13.1.1B. Most adhesives and sealants are addressed in the 'General purpose adhesives and sealants' category of the table, unless they clearly belong in the other specialised product categories.

TABLE 13.1.1B: MAXIMUM TVOC LIMITS FOR PAINTS, ADHESIVES & SEALANTS

Product Category	Max TVOC content in grams per litre (g/l) of ready to use product
General purpose adhesives and sealants	50
Interior wall and ceiling paint, all sheen levels	16
Trim, varnishes and wood stains	75
Primers, sealers and prep coats	65
One and two pack performance coatings for floors	140
Acoustic sealants, architectural sealant, waterproofing membranes and sealant, fire retardant sealants and adhesives	250
Structural glazing adhesive, wood flooring and laminate adhesives and sealants.	100

Sustainable design

TABLE 12.1.2B CARPET TEST STANDARDS AND TVOC EMISSIONS LIMITS

Compliance Option	Test Protocol	Limit
ASTM D5116	ATSM D5116 - Total VOC limit* ASTM D5116 - 4PC (4-Phenylcyclohexene) *	0.5mg/m² per hour 0.05mg/m² per hour
ISO 16000 / EN 13419	ISO 16000 / EN 13419 - TVOC at three days	0.5mg/m² per hour
ISO 10580 / ISO/TC 219 (Document N2380)	ISO 10580 / ISO/TC 219 (Document N2380) - TVOC at 24 hours	0.5mg/m² per hour

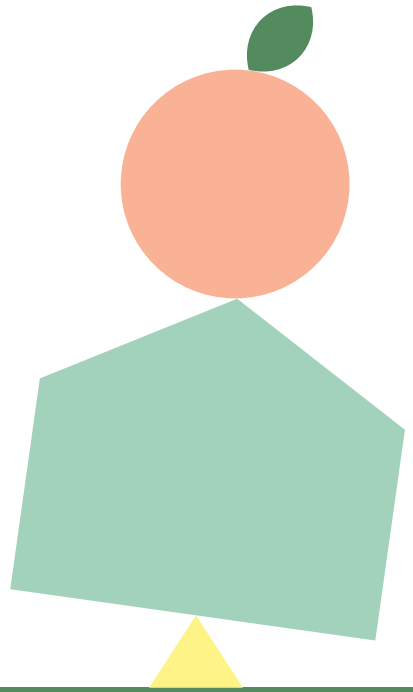


TABLE 13.2B: FORMALDEHYDE EMISSION LIMIT VALUES FOR ENGINEERED WOOD PRODUCTS

Test Protocol	Emission Limit/ Unit of Measurement
AS/NZS 2269:2004, testing procedure AS/NZS 2098. 11:2005 method 10 for Plywood	≤ 1mg/ L
AS/NZS 1859. 1:2004 - Particle Board, with use of testing procedure AS/NZS 4266.16:2004 method 16	≤ 1.5 mg/ L
AS/NZS 1859.2:2004 - MDF , with use of testing procedure AS/NZS 4266.16:2004 method 16	≤ 1mg/ L
AS/NZS 4357.4 - Laminated Veneer Lumber (LVL)	≤ 1mg/ L
Japanese Agricultural Standard MAFF Notification No.701 Appendix Clause 3 (11) - LVL	≤ 1mg/ L
JIS A 5908:2003- Particle Board and Plywood, with use of testing procedure JIS A 1460	≤ 1mg/ L
JIS A 5905:2003 - MDF, with use of testing procedure JIS A 1460	≤ 1mg/ L
JIS A1901 (not applicable to Plywood, applicable to high pressure laminates and compact laminates)	≤ 0.1 mg/m²hr*
ASTM D5116 (applicable to high pressure laminates and compact laminates)	≤ 0.1 mg/m²hr
ISO 16000 part 9, 10 and 11 (also known as EN 13419), applicable to high pressure laminates and compact laminates	≤ 0.1 mg/m²hr (at 3 days)
ASTM D6007	≤ 0.12mg/m³**
ASTM E1333	≤ 0.12mg/m³***
EN 717-1 (also known as DIN EN 717-1)	≤ 0.12mg/m³
EN 717-2 (also known as DIN EN 717-2)	≤ 3.5mg/m²hr

Sustainable design

Refer to Green Star Design & As Built Credit 13 for further details.

4.17 AIR TIGHTNESS

4.17.1. **DS14P –** Dwellings must achieve a minimum of Air leakage not more than 10 ACH at 50 Pa reference pressure when tested in accordance with AS/NZS ISO 9972, Method 1. Certificates are not required.

4.17.2. Photographic evidence of insulation installation must be provided upon request by the HDAP.

4.17.3. **DR20 –** The HDAP encourages designs that meet the following insulation ratings: Ceiling R5, Wall R3.5, Glazing Systems U2.0, Timber floors/heated slabs R2.5 and no recessed light fittings.

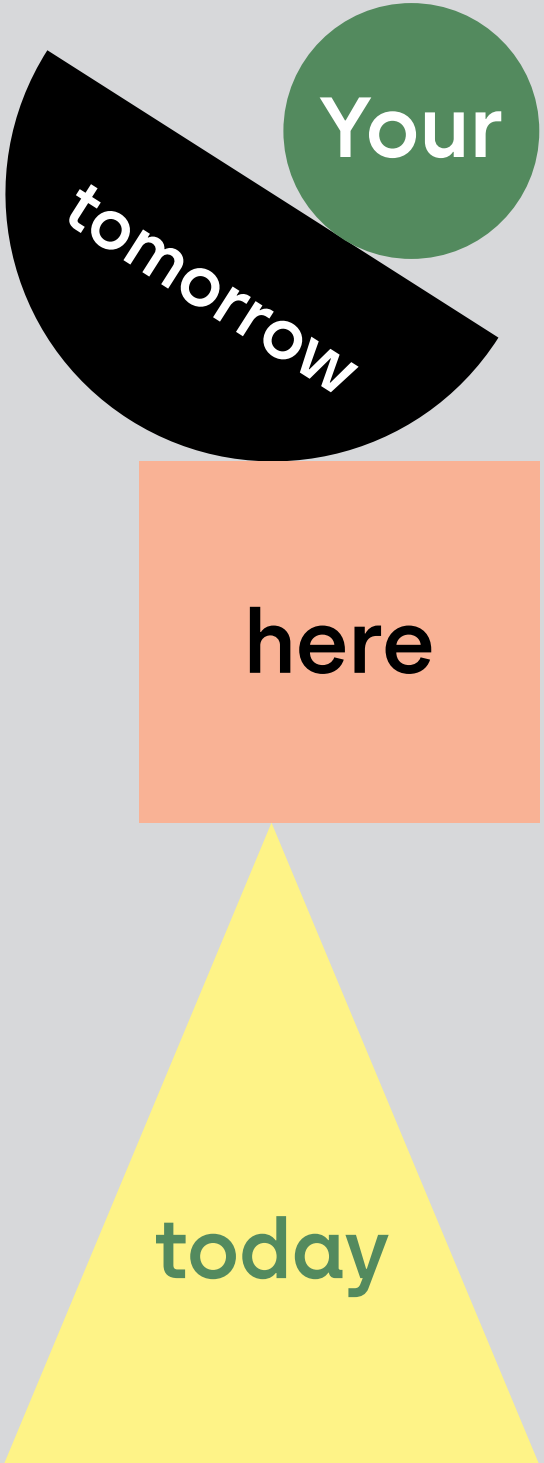
4.18 100% ELECTRIC

4.18.1. **DS14Q –** All household appliances including cooktops, ovens, water heaters, heating and cooling must be 100% electric.

Subject to authority requirements, the Developer does not intend to provide reticulated gas to individual dwellings.

4.19 HOUSEHOLD WASTE

4.19.1. **DS14R –** Each dwelling design must include suitable storage space for up to four bins to facilitate recycling & reuse.



5.0 Other items

Other items

5.1 TIMING CONSIDERATIONS

5.1.1. Construction of your dwelling must start within 12 months of the original lot settlement date; unless otherwise agreed in writing by the Developer.

5.1.2. Completion of your home, including garage, driveway and fencing must occur within 12 months of construction commencing and must occur before the home is occupied.

5.1.3. The front garden landscape, including any retaining walls, must be completed within 90 days of the date on the Occupancy Permit.

5.1.4. Window furnishings such as curtains or blinds must be installed within one month of the Occupancy Permit being issued. Sheets, blankets or similar materials are not permitted as window furnishings.

5.2 SHEDS & OUTBUILDINGS

5.2.1. Any proposed shed or outbuilding must to be approved by the HDAP before obtaining any statutory building or planning permits. Any submission must include a site plan, elevation plans and schedule detailing external finishes, colours and external fixtures.

5.2.2. Sheds and outbuildings must:

a. Not be readily visible from the public realm.

b. Not be higher than 3.6m at the ridgeline or 2.4m at the perimeter (excluding the gable infill) measured from the natural ground level.

c. Have a powder-coated or painted appearance.

5.3 SERVICE EQUIPMENT

5.3.1. Satellite dishes, antennae or external receivers must be:

- Located to the rear of the dwelling;
- Below the main ridge line of the roofline; and
- Not readily visible from the public realm.

5.3.2. Heating and cooling units must be:

- Located towards the rear of the dwelling;
- Below the main ridge line of the roofline;
- Not readily visible from the street; and
- Be positioned to minimise noise and/or fitted with baffles.

Other items

5.3.3. Any roof mounted service equipment must be:

- The same colour as the roof;
- Placed a minimum of half way to the rear of your home; and
- Placed below the ridge line.

5.3.4. Photovoltaic cells, solar panels and the like may be located to maximise their efficiency if they integrate with the roof form, including matching the roof pitch of north facing roofs on front elevations.

5.3.5. Storage tanks associated with solar systems are not permitted to be located on the roof and must be screened from public view.

5.4 SECURITY SHUTTERS/DOORS

5.4.1. Roll down security shutters must not be visible from the public realm.

5.4.2. The installation and use of any proposed shutters, battened or louvered screens must be approved by the HDAP.

5.5 SCREENING

5.5.1. Generally ancillary structures and elements must be located so that they are not readily visible from the public realm. This include items such as:

- Meter boxes
- Clothes drying areas
- External plumbing (except gutters and downpipes)
- Antennae
- Water Storage Tanks
- Hot water systems
- Rubbish bins
- Spa pumps

5.5.2. Trucks, commercial vehicles exceeding 1.5 tonnes, recreational vehicles, trailers, caravans, boats, horse floats or other like vehicles must be located so that they are not readily visible from the public realm when parked or stored on the lot.

Other items

5.6 SIGNAGE

5.6.1. Signage is not permitted on residential lots with the following exceptions:

a. Display home signage with the written approval of HDAP.

b. Builders or tradespersons identification (maximum 600mm x 600mm) required during dwelling construction. These signs must be removed within ten days of the issue of the Certificate of Occupancy for any dwelling.

c. Signs erected for the purposes of advertising the sale of a vacant lot other than any sign that relates to the sale of such lot by the Developer. Resale of vacant lots is not permitted except with the written consent of the Developer.

d. Only one sign advertising the sale of a complete dwelling is permitted. These signs must be removed within ten days of the property being sold and only one sign is to be erected per lot and is to be no larger than 1.8m x 1.2m.

e. All other signs must be submitted to the HDAP for consideration and approval must be granted prior to the sign being erected.

5.7 RECYCLED WATER

5.7.1. Dwellings must be prepared to allow connection of all toilets and garden taps to the "Third Pipe" recycled water network and provide a minimum of two garden tap outlets, one to the frontage area of the site and the other in the rear area of the site.

5.8 TELECOMMUNICATIONS

5.8.1. Homes at Harli should be wired in accordance with FTTH wiring standards to ensure they can be connected to any future FTTH service.

5.9 CONSTRUCTION WATER SUPPLY

5.9.1. Builders are to use the reticulated recycled water supply for construction water supply.

5.9.2. For concrete, this requirement is subject to structural requirements.

Other items

5.10 MAINTENANCE

5.10.1. The Purchaser must not allow rubbish to accumulate on an allotment (unless the rubbish is neatly stored in a suitably sized cage, industrial bin or skip).

5.10.2. Prior to the occupation of a dwelling, it is the Purchaser's responsibility to maintain the lot by keeping the lot free from rubbish and with grass/weeds cut, and keeping fences in a good state of repair, including the removal of graffiti.

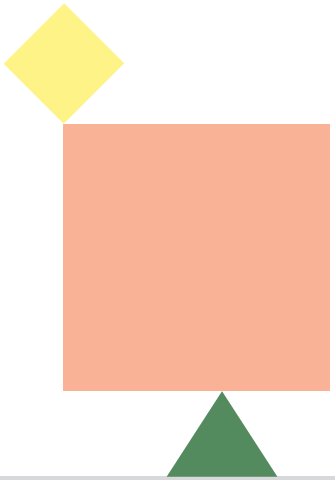
5.10.3. The Purchaser shall comply with any request by the Developer to clean up rubbish or maintain their lot within 14 days. If the Purchaser does not comply within 14 days of receiving a written notice, then the Purchaser shall be liable to reimburse the Developer all reasonable costs, including administration costs, incurred in the removal of rubbish or maintenance of the lot.

5.10.4. After occupation of the dwelling, front gardens must be maintained to an acceptable level. Rubbish and recycle bins must be stored out of public view. It will be at the discretion of the Developer to determine if allotments are being maintained to an acceptable level.

5.10.5. Vacant or partially developed lots must not be used for the storage of:

- Caravans
- Boats
- Containers
- Trucks
- Sheds
- Livestock

Except with the prior written consent of the HDAP.



Other items

5.11 CROSSOVER AND FOOTPATH PROTECTION

5.11.1. It is the responsibility of the lot owner to ensure that any required asset protection permits are obtained from City of Casey Council prior to the commencement of building works.

5.11.2. The lot owner must ensure that photographic evidence of any prior damaged public infrastructure within the vicinity of the lot is documented before dwelling construction commences.

5.11.3. Any damage arising from dwelling construction activity must be rectified at the cost of the lot owner.

5.11.4. It is advisable for lot owners to ensure that their builder is aware and made liable for any damage to the above items within the terms of their individual building contract.

5.12 STREET TREE PROTECTION

5.12.1. It is the responsibility of the landowner to ensure that any street trees and/or nature strips are protected during all building works.

5.12.2. Street trees will be regularly monitored by both the Developer and City of Casey Council to ensure that trees are not damaged as a result of the dwelling construction process. Tree replacement will be at the lot owner's expense.

5.13 FAIR TRADE

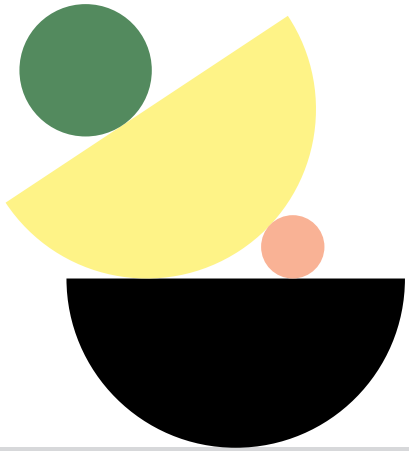
5.13.1. The HDAP encourages all builders to be conscious of fair trade considerations when procuring materials to be used in the construction of dwellings.

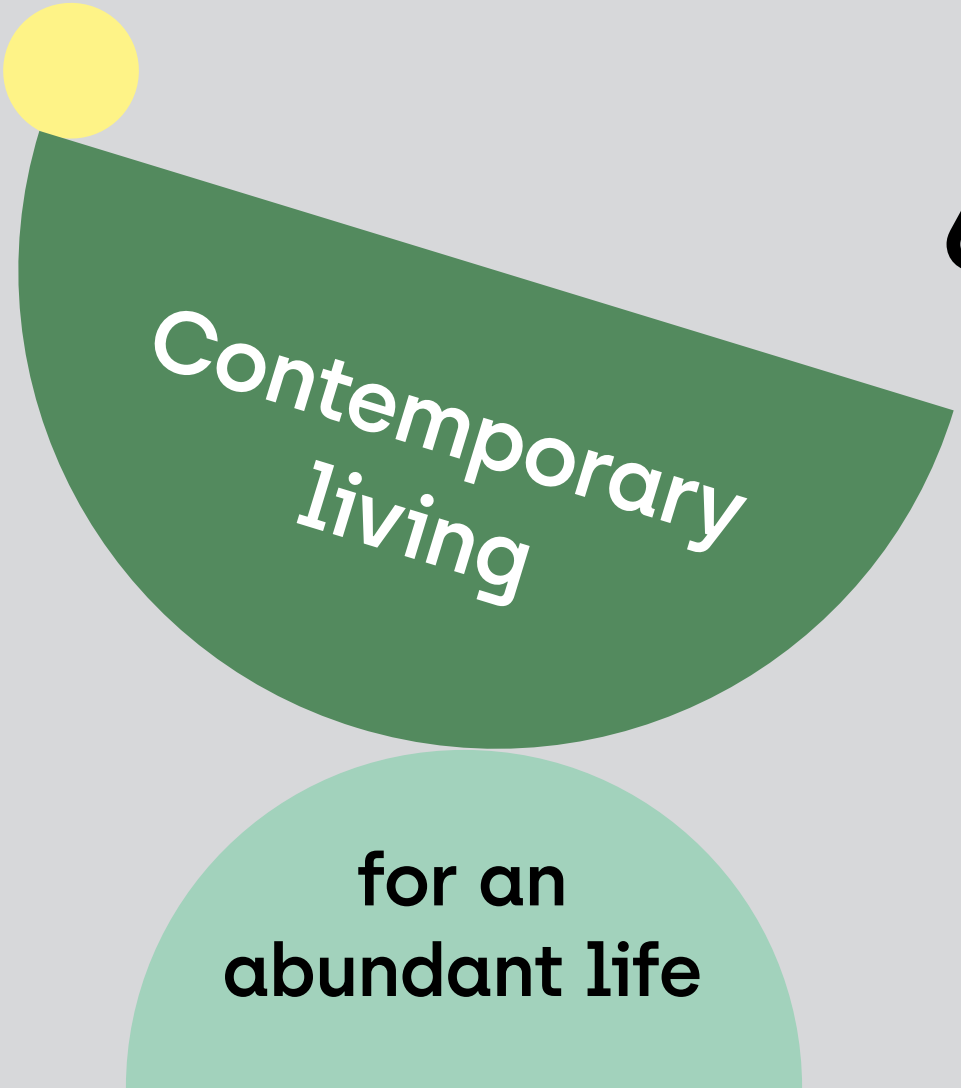
5.14 SOURCING LOCAL MATERIALS

5.14.1. The HDAP encourages all builders where possible to prioritise sourcing local contractors and materials.

5.15 CATS

5.15.1. For the protection of native flora and fauna, all cats at Harli are to be kept indoors from sunset to sunrise. Please also ensure that all cats are desexed and microchipped and have a bell on their collar at all times.





6.0 Definitions & references

Definitions & references

6.1.1. DS means a minimum design that must be met.

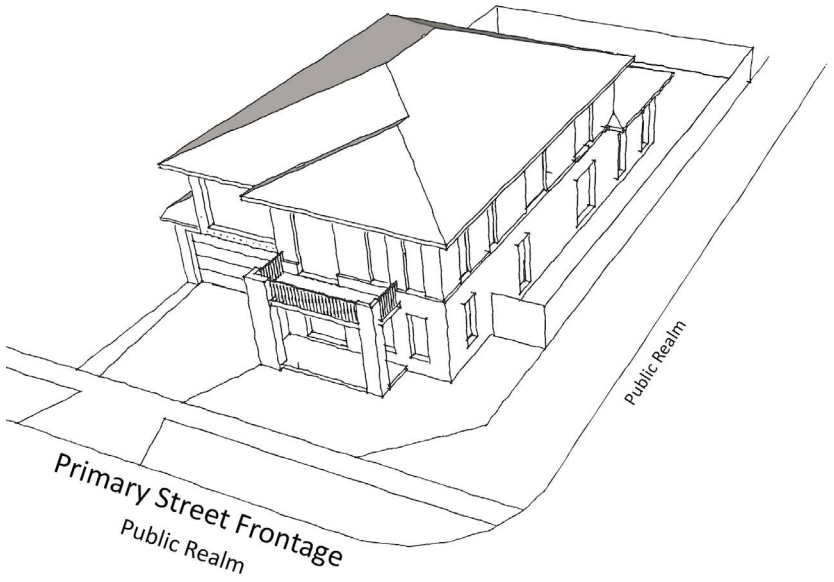
6.1.2. DR means a design recommendation that is voluntary.

6.1.3. Public Realm is any land that is within the ownership of a public body, including Council and servicing authorities.

6.1.4. Primary Frontage is the boundary with the greatest setback on the Building Envelope Plan, where one exists. Where there is no Building Envelope Plan, the Primary Frontage is the shortest boundary that does not abut another residential lot.

6.1.5. Building Envelope Plan means the plan that specifies the area on a site where a building can be sited in conjunction with the relevant Building Regulations. Building envelopes are only included on certain lots within Harli and are included in the contract of sale where applicable.

6.1.6. A Corner Lot is any lot that has two contiguous boundaries that do not abut another residential lot.

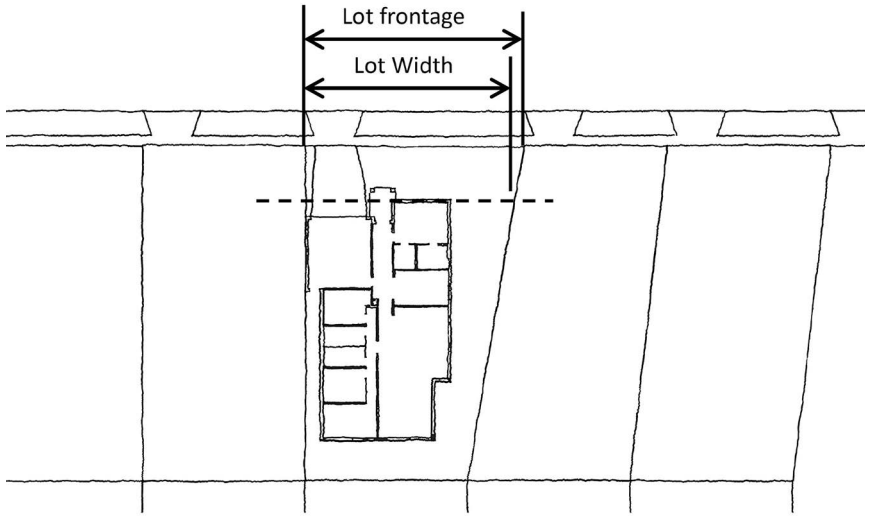


6.1.7. On Corner Lots, the Primary Frontage is the shortest boundary that does not abut another residential lot.

6.1.8. A Side Boundary is the boundary on either side of the primary boundary

6.1.9. For Irregular lots, the Lot Width is the width of the lot at the front building line. (The front building line does not include the entry feature of a dwelling).

Definitions & references



6.1.10. Natural Ground Level means the finished surface level of the ground at the time of registration of the Plan of Subdivision.

6.1.11. A habitable room is a living room or a bedroom.

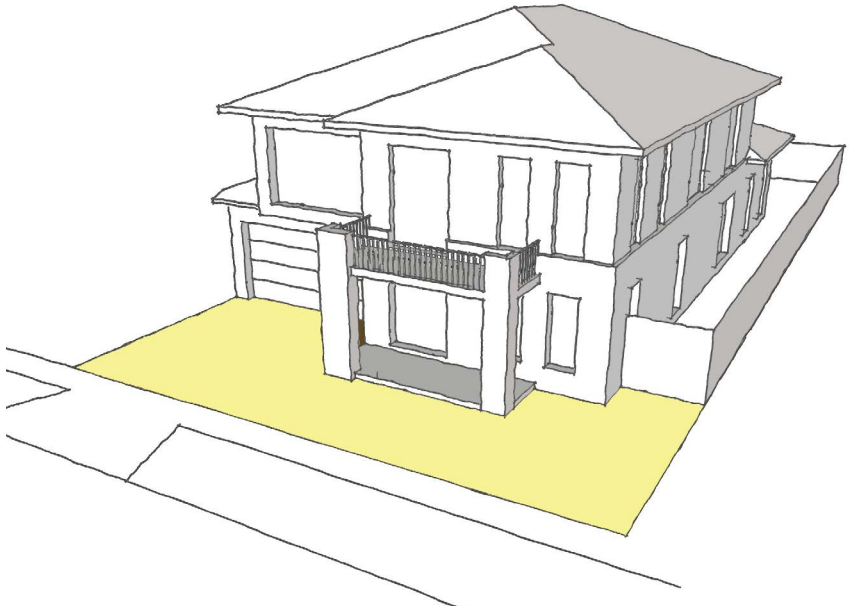
6.1.12. The front building line is the external face of the front most habitable room wall. Entry features, porches, porticos etc. do not form part of the front building line.

6.1.13. Front Loaded refers to a lot where the garage is accessed from the primary frontage.

6.1.14. Side Loaded refers to a lot where the garage is accessed from a secondary frontage.

6.1.15. Rear Loaded refers to a lot where the garage is accessed from the rear of the lot, usually from a lane or secondary street.

6.1.16. Front Garden refers to the whole area between the front boundary of a lot and the dwelling, garage and return fence.



Definitions & references

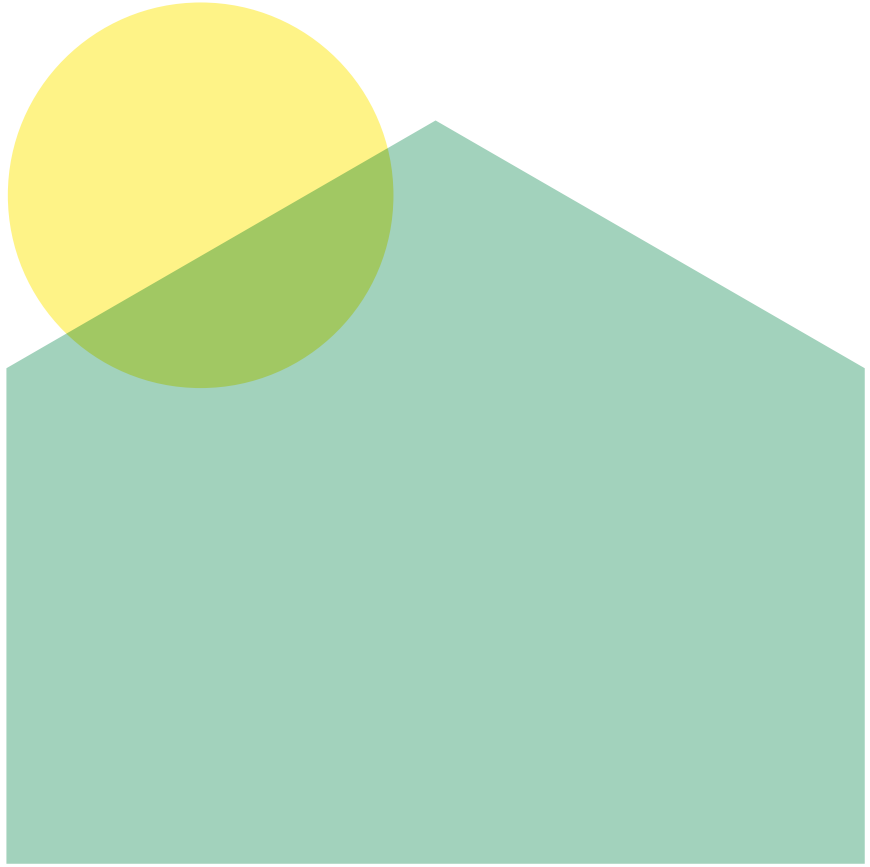
6.1.17. FirstRate5 Whole-of-Home Tool is the assessment tool developed by Sustainability Victoria.

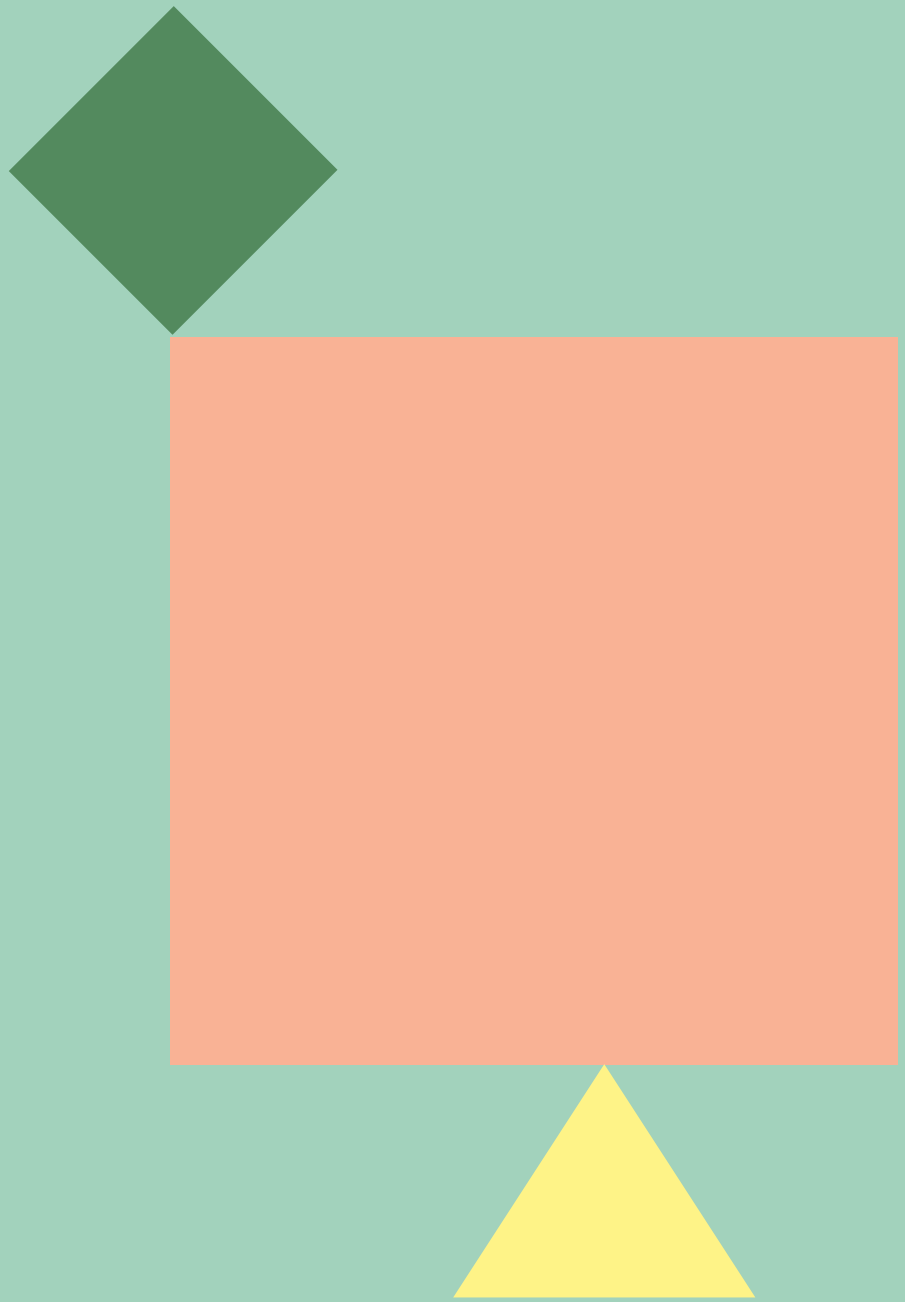
6.1.18. Green Star Design & As Built Rating Tool is the Green Star Design & As Built v1.3 tool developed by the Green Building Council Australia.

6.1.19. Green Star Communities Tool is the Green Star Communities v1.1 tool developed by the Green Building Council Australia.

6.1.20. WELS Is the Federal Government's Water Energy Labelling and Standards program. https://www.waterrating.gov.au/

6.1.21. Energy Appliance Label Scheme is the Federal Government's Equipment Energy Efficiency (E3) program. https://www.energyrating.gov.au/





7.0 Design application checklist

REFERENCE	DESIGN STANDARD	STANDARD ACHIEVED
DS1	All dwellings must be orientated to address solar access considerations including maximising daylight to living areas and bedrooms and to incorporate passive design initiatives to maximise energy efficiency.	
DS2A	The front building line of the dwelling must be setback a minimum of 4m from the front lot boundary unless one of the following exceptions apply: a. For lots of between 250m² and 300m² opposite or abutting a passive or active open space area where the front setback can be reduced to 3 metres. b. For lots over 300m² which adjoin a bank / row of Small Lot Housing Code lots whereby a reduced setback may be considered to the satisfaction of the HDAP and Responsible Authority.	
DS2B	Side setbacks must be a minimum of 1m from at least one side boundary and 2m from a side street boundary.	
DS2C	Side setback must be a minimum 1m from any boundary abutting a reserve.	
DS2D	Garage walls may be constructed on the boundary, as long as the boundary does not abut a reserve. If a garage wall is not on the side boundary, it must be setback at least 1m from the side boundary.	
DS2E	The rear building line of the dwelling must be setback a minimum of 1m from the rear lot boundary.	
DS2F	Garages must be setback a minimum of 5.5m from the front boundary or as stipulated by the building envelope (if applicable).	
DS2G	Entry features such as verandas, porches, porticos and balconies may encroach 1.5m into the front setback if the encroachment is less than 3.6m above natural ground level.	
DS2H	Porches, porticos, pergolas and balconies may encroach 1m into the side street setback if the encroachment is less than 3.6m above natural ground level.	
DS2I	Eaves, gutters, fascia with a combined width of 600mm may encroach into the front and side setbacks.	
DS3	Overly similar façades are not permitted within 4 lots of each other. This includes lots on the same side and the opposite side of a street.	
DS4A(a)	Provide a safe, continuous step-free pathway from the front boundary of the property to an entry door to the dwelling.	
DS4A(b)	The path of travel referred to in (a) should have a minimum clear width of 1000mm and have: i. No steps ii. An even, firm, slip resistant surface iii. A crossfall of not more than 1:40 iv. A maximum pathway slope of 1:14	

REFERENCE	DESIGN STANDARD	STANDARD ACHIEVED
DS4A(c)	The path of travel referred to in (a) may be provided via an associated car parking space for the dwelling. Where a car parking space is relied upon as the safe and continuous pathway to the dwelling entrance, the space should incorporate: i. Minimum dimensions of at least 3200mm (width) x 5400mm (length) ii. An even, firm and slip resistant surface iii. A level surface (1:40 maximum gradient, 1:33 maximum gradient for bitumen).	
DS4A(d)	A step ramp may be incorporated at an entrance doorway where there is a change in height of 190mm or less. The step ramp should provide: i. A maximum gradient of 1:10 ii. A minimum clear width of 1000mm iii. A maximum length of 1900mm	
DS4A(e)	Where a ramp is part of the pathway, level landings no less than 1200mm in length, exclusive of the swing of the door or gate than opens onto them, must be provided at the head and foot of the ramp.	
DS4B(a)	The dwelling should provide an entrance door with: i. A minimum clear opening width of 820mm ii. A level (step-free) transition and threshold (maximum vertical tolerance of 5mm between abutting surfaces is allowable provided the lip is rounded or bevelled); and iii. Reasonable shelter from the weather.	
DS4B(b)	A level landing area of at least 1200mm x 1200mm should be provided at the level (step free) entrance door. A level landing area at the entrance door should be provided on the arrival side of the door (i.e. the external side of the door) to allow a person to safely stand and then open the door.	
DS4B(c)	Where the threshold at the entrance exceeds 5mm and is less than 56mm, a ramped threshold may be provided.	
DS4B(d)	The level (step-free) entrance should be connected to the safe and continuous pathway as specified in Element 1.	
DS4C(a)	Doorways to rooms on the entry level used for living, dining, bedroom, bathroom, kitchen, laundry and sanitary compartment purposes should provide: i. A minimum clear opening width of 820mm; and ii. A level transition and threshold (maximum vertical tolerance of 5mm between abutting surfaces is allowable provided the lip is rounded or bevelled).	
DS4C(b)	Internal corridors/passageways to the doorways referred to in (a) should provide a minimum clear width of 1000mm.	
DS4D(a)	Dwellings should have a toilet on the ground (or entry) level that provides: i. A minimum clear width of 900mm between the walls of the bathroom if located in a separate room; and ii. A minimum 1200mm clear circulation space forward of the toilet pan exclusive of the swing of the door in accordance with Figure 3(a). iii. The toilet pan should be located in the corner of the room (if the toilet is located in a combined toilet / bathroom) to enable installation of grabrails at a future date.	

REFERENCE	DESIGN STANDARD	STANDARD ACHIEVED
DS4E(a)	One bathroom should feature a slip resistant, hobless shower recess. Shower screens are permitted provided they can be easily removed at a later date.	
DS4E(b)	The shower recess should be located in the corner of the room to enable the installation of grabrails at a future date.	
DS4F(a)	Except for walls constructed of solid masonry or concrete, the walls around the shower, bath (if provided) and toilet should be reinforced to provide a fixing surface for the safe installation of grabrails.	
DS4F(b)	The walls around the toilet are to be reinforced by installing: i. Noggings with a thickness of at least 25mm in accordance with Figure 6(a); or ii. Sheeting with a thickness of at least 12mm in accordance with Figure 6(b).	
DS4F(c)	The walls around the bath are to be reinforced by installing: i. Noggings with a thickness of at least 25mm in accordance with Figure 7(a); or ii. Sheeting with a thickness of at least 12mm in accordance with Figure 7(b).	
DS4F(d)	The walls around the hobless shower recess are to be reinforced by installing: i. Noggings with a thickness of at least 25mm in accordance with Figure 8(a); or ii. Sheeting with a thickness of at least 12mm in accordance with Figure 8(b).	
DS4G	Stairways in dwellings must feature a continuous handrail on one side of the stairway where there is a rise of more than 1m.	
DS5A	One dwelling is allowed per lot.	
DS5B	All dwellings are to be of contemporary design. Period styles, such as Edwardian and Georgian etc. are not permitted. Period detailing, such as quoins, corbelling, fretwork, lacework etc. are generally not permitted.	
DS5C	The front façade of the dwelling must incorporate an entry feature at the front door to create a strong sense of entry. The entry feature must face the primary street frontage.	
DS5D	Long, uninterrupted expanses of wall (greater than 6m or so) should be avoided where the wall faces a street. Articulation of the wall using windows, materials, and/or stepping in the wall will be required.	
DS5E	The dwelling must have at least one habitable room window that addresses the primary street frontage.	
DS5F	Ceiling heights must be at least 2550mm for single storey dwellings.	

REFERENCE	DESIGN STANDARD	STANDARD ACHIEVED
DS5G	Double storey dwellings must incorporate articulation and/or differing materials between the ground and first floor.	
DS5H	Aluminium sliding windows must not be used on any elevation that is readily visible from the public realm.	
DS5I	Dwellings constructed on stumps must include appropriate visual screening of the gap between the floor level and natural ground.	
DS5J	Any façade that faces the public realm must not include infill or recessed panels above doors, windows or garage doors. The finish above the opening must match the finish on either side of the opening, unless the HDAP considers the panels to be part of an allowable design element.	
DS6A	External colour schemes for the dwelling, driveway and hard landscaping surfaces that are visible from the street are to adopt a colour palette of visually interesting muted neutral tones and materials which will enhance the streetscape and reflect the natural environment.	
DS6B	The façade must be constructed using a mixture of external building materials/colours (at least 2) and must not comprise of more than 80% of one material.	
DS6C	Façade materials that are not permitted include: • Corrugated fibre cement sheeting. • Raw fibre cement. • Bare, painted or pre coloured concrete blocks. • Galvanized or zincalume metal sheeting. • Reflective materials such as glass. • Used/second-hand materials.	
DS6D	The roof finish must complement the style of your home.	
DS7A	Dwellings on corner lots must address both street frontages via the use of appropriate features and materials.	
DS7B	Dwellings on corner lots must include eaves/parapets to all sides facing the public realm, unless otherwise approved by the HDAP.	
DS7C	In addition to the roof treatment above, any 2 of the following features repeated on the secondary façade will be required: • A window with the same head height as the front façade windows. • A material or finish from the front façade that wraps around for at least 3m along the secondary façade wall. • A feature that matches the front entry feature.	
DS7D	Blank walls forward of the corner return fence will not be approved.	
DS8C	Elements such as Dutch Gables and Dormer Windows are allowed if they form part of a contemporary façade and do not incorporate period details.	

REFERENCE	DESIGN STANDARD	STANDARD ACHIEVED
DS8D	Hip and Gable roofs home must have • A roof pitch of at least 22.5º. • Eaves with a minimum width of 450mm to the front facade. • The front eaves returning along the side wall for at least 2m on single storey dwellings (unless the wall is on the boundary). • A minimum eaves width of 450mm to the entire upper level on two storey dwellings.	
DS8E	Flat roofs (i.e. roofs with a pitch of less than 5º) visible from the public realm must be hidden behind a parapet.	
DS8F	Parapets on the edge of a front façade must be returned along a side wall for at least 500mm. (Walls on a boundary will not be exempt from this requirement).	
DS9A	The positioning and treatment of garages and garage doors should contribute positively to both the dwelling design and streetscape.	
DS9B	All lots must incorporate a fully enclosed garage.	
DS9C	Carports and open sided garages that are visible from the public realm are not allowed.	
DS9D	Garage doors must be sectional or panel lift. Roller doors are not permitted if they are visible from the public realm.	
DS9E	Garages accessed from the primary frontage of a lot must be integrated into the overall form of the dwelling.	
DS9F	Integrated garages must be stepped back a minimum of 500mm from the front building line, unless they are part of an overall solution to the slope of a lot.	
DS9G	The combined width of garage door openings must not exceed 40% of the primary frontage unless the building is two or more storeys and on a lot with an area between 250m^2 to 300m^2 whereby the garage opening must not exceed 30% of the area of the front façade of the dwelling.	
DS9H	Double garage width must not exceed 7m internally.	
DS9I	Lots with a width of 12.5m or greater must provide a double garage.	
DS9J	Garages forward of the building and garages with doors that are perpendicular to the street may be considered by the HDAP if they are a part of an overall solution to the slope of a lot.	
DS9K	Blank garage walls facing the street will not be permitted.	
DS9L	Garages that are not accessed from the primary frontage (e.g. on corner or rear loaded lots) may be detached, at the discretion of the HDAP.	

REFERENCE	DESIGN STANDARD	STANDARD ACHIEVED
DS9L	Detached garages must match or compliment the dwelling in materials, colours and finishes.	
DS10A	Only one driveway is permitted per allotment.	
DS10B	The driveway should not be wider than the garage opening at the dwelling and the width of the crossover at the front property boundary.	
DS10C	The driveway must be set minimum 0.5m off the side boundary.	
DS10D	Driveway grades should be no more than 1 in 5.	
DS10E	Driveways must be constructed from exposed aggregate concrete or any other finish the HDAP considers appropriate.	
DS10F	Plain concrete driveways are not permitted if visible from the public realm.	
DS10G	Driveways must be constructed with a matt finish (shiny or reflective surfaces are not permitted).	
DS11A	Fencing forward of the dwelling is not permitted.	
DS11B	Wing fences are not permitted.	
DS11C	Side and rear fencing must be: • Constructed with exposed, 125 x 75mm hardwood or cypress pine posts with timber capping no more than 2.4m apart; and • Constructed with 100 x 120mm lapped timber palings and a 125 x 25mm bottom plinth; and • Be 1.80m in height above natural ground level with top capping; and • Terminated a minimum of 1m behind the closest front wall of the dwelling; and • Returned to meet the closest side wall of the dwelling (i.e. return fence).	
DS11D	Corner fencing must be: • Terminated a minimum of 3m behind the closest front wall of the dwelling; and • Returned to meet the closest side wall of the dwelling (i.e. return fence).	
DS11E	The return fence must match the adjacent boundary fence.	
DS11F	Gates that form part of a fence must match the height, material and specifications of the fence.	
DS11G	Colorbond fencing is not permitted.	
DS12A	Retaining walls must be a maximum height of 1m.	
DS12B	Retaining walls must be spaced at least 500mm apart when placed parallel from each other.	

REFERENCE	DESIGN STANDARD	STANDARD ACHIEVED
DS12C	A landscaping strip in front each retaining wall should be provided to soften the height.	
DS12D	Retaining walls visible from the public realm (street or public reserve etc.) must be constructed from a material and finish to the satisfaction of the HDAP.	
DS12E	The extent, height and finish of all proposed retaining walls must be included in any application for Design Approval.	
DS12F	Retaining walls and fences constructed by the developer are exempt from the above height limits and must not be removed or altered without written permission from the HDAP.	
DS13A	At least 70% of plant species are to be native.	
DS13B	At least 40% of the front garden area must comprise of permeable surfaces.	
DS13C	At least one tree with a minimum installation height of 1.5m (400mm pot size) must be planted between the front building line and street boundary.	
DS13D	Plants required in your front yard are as follows: • A minimum of 5 medium to large shrubs (from 200mm pot size at installation); and • A minimum of 20 smaller shrubs or ground cover plants (from 150mm pot size at installation).	
DS13E	At least one edible tree/shrub must be planted on the lot.	
DS13F	Provision for a minimum 2m^2 suitable for use as food garden space and composting preferably in the rear garden.	
DS13G	Brightly coloured or coarsely textured wood mulches (such as dyed shredded wood or shredded pallet wood) and brightly coloured pebbles (such as reds or whites) are not permitted.	
DS13H	All garden beds must be edged using timber, masonry or metal edging and should be densely planted to ensure good coverage of growth.	
DS13I	Nature strips must achieve neat and even grass coverage and any damage caused during construction of the dwelling must be rectified. Artificial turf is not permitted in the nature strip.	
DS13J	The letter box must: • Complement the dwelling and front landscape in terms of materials, colour and style. • Comply with Australia Post guidelines, be clearly identifiable, suitably sized and located so as not interfere with the streetscape. • Clearly identify the street number of the dwelling. • Be installed within 30 days of issue of an Occupancy Permit for your dwelling.	

REFERENCE	DESIGN STANDARD	STANDARD ACHIEVED
DS14A	All dwellings must achieve a minimum 7 Star NatHERS energy rating using Sustainability Victoria's FirstRate5 Whole-of-Home Tool (FR5).	
DS14B	All dwellings must achieve a Zero Carbon Certification using Sustainability Victoria's FirstRate5 Whole-of-Home Tool.	
DS14C	All dwellings must be fitted with a solar photovoltaic (PV) system designed to generate renewable energy equal to 100% of a home's electricity demand on an annualised basis using Sustainability Victoria's FirstRate5 Whole-of-Home Tool.	
DS14D	PV systems are to be designed and installed by a Clean Energy Council accredited provider.	
DS14E	All light fittings must be high efficiency LED type and achieve a minimum Colour Rendering Index (CRI): average Ra ⩾ 80, R9 > 0	
DS14F	Fixed appliance energy star ratings must be within 1 Star of the best available at the time of HDAP approval.	
DS14H	Water Fixtures must have the following minimum WELS star ratings: • Taps - 5 Star. • Showers - 3 Stars. • Toilets - 4 Stars. • Clothes washing machines and dishwashers within 1 Star of best available.	
DS14I	The following systems must be installed: • A rainwater tank with a minimum volume of 2,000 Litres (for lots greater than 300m²); • Roof area draining to the tank; • Tank connection to all toilets; • Tank connection to irrigation system (if installed); • Recycled (Third Pipe) water connection downstream of rainwater tank to ensure rainwater is used as a priority.	
DS14J	All dwellings must be supplied with separate meters for potable and recycled water consumption.	
DS14K	Each dwelling must provide space for 1 secure, undercover bike space per bedroom.	
DS14L	All dwellings must include a single phase connection for EV charging (7kW / 16A).	

REFERENCE	DESIGN STANDARD	STANDARD ACHIEVED
DS14M	Dwellings must utilise a Green Roof or: • for pitched roofs less than 15º – a 3 year SRI of greater than 64; and • for pitched roofs greater than 15º – a 3 year SRI greater than 34.	
DS14N	Asphalt must be Warm Mix type as per Green Star Communities Credit 26B1.4 or other low carbon alternative with lower embodied energy emissions.	
DS14O	Internal and external finishes must be specified in accordance with the Green Star criteria (refer to section 4.16).	
DS14P	Dwellings must achieve a minimum of Air leakage not more than 10 ACH at 50 Pa reference pressure when tested in accordance with AS/NZS ISO 9972, Method 1. Certificates are not required.	
DS14Q	All household appliances including cooktops, ovens, water heaters, heating and cooling must be 100% electric.	
DS14R	Each dwelling design must include suitable storage space for up to four bins to facilitate recycling and reuse.	
5.2.2	Sheds and outbuildings must: • Not be readily visible from the public realm. • Not be higher than 3.6m at the ridgeline or 2.4m at the perimeter (excluding the gable infill) measured from the natural ground level. • Have a powder-coated or painted appearance.	
5.3.1	Satellite dishes, antennae or external receivers must be: • Located to the rear of the dwelling; • Below the main ridge line of the roofline; and • Not readily visible from the public realm.	
5.3.2	Heating and cooling units must be: • Located towards the rear of the dwelling; • Below the main ridge line of the roofline; and • Not readily visible from the street; and • Be positioned to minimise noise and/or fitted with baffles.	
5.3.3	Any roof mounted service equipment must be: • The same colour as the roof; and • Placed a minimum of halfway to the rear of your home; and • Placed below the ridge line.	

REFERENCE	DESIGN STANDARD	STANDARD ACHIEVED
5.3.4	Photovoltaic cells, solar panels and the like may be located to maximise their efficiency if they integrate with the roof form, including matching the roof pitch of north facing roofs on front elevations.	
5.3.5	Storage Tanks associated with solar systems are not permitted to be located on the roof and must be screened from public view.	
5.4.1	Roll down security shutters must not be visible from the public realm.	
5.5.1	Generally ancillary structures and elements must be located so that they are not readily visible from the public realm.	
5.5.2	Trucks, commercial vehicles exceeding 1.5 tonnes, recreational vehicles, trailers, caravans, boats, horse floats or other like vehicles must be located so that they are not readily visible from the public realm when parked or stored on the lot.	
5.7	Dwellings must be prepared to allow connection of all toilets and garden taps to the Third Pipe recycled water network and provide a minimum of two garden tap outlets, one to the frontage area of the site and the other in the rear area of the site.	

Harli

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