

Objectives	Standard	Compliance
<p>Clause 55.02-1</p> <p>Neighbourhood Character Objectives</p> <p><i>To ensure that the design respects the existing neighbourhood character or contributes to a preferred neighbourhood character;</i></p> <p><i>To ensure the development responds to the features of the site and surrounding area.</i></p>	<p>Standard B1 (Cannot be varied)</p> <p>The design response <u>must</u> be appropriate to the neighbourhood and the site.</p> <p>The proposed design must respect the existing or preferred neighbourhood character and respond to the features of the site.</p>	<p>Complies.</p> <p>Refer to the response in this report.</p>
<p>Clause 55.02-2</p> <p>Residential Policy Objectives</p> <p><i>To ensure that residential development is provided in accordance with any policy for housing in the SPPF and the LPPF including the MSS and local planning policies;</i></p> <p><i>To support medium densities in areas where development can take advantage of public transport and community infrastructure and services.</i></p>	<p>Standard B2 (Cannot be varied)</p> <p>An application <u>must</u> be accompanied by a written statement that describes how the development is consistent with any relevant policy for housing in:</p> <ul style="list-style-type: none"> the SPPF; and the LPPF including the MSS; and Local Planning Policies 	<p>Complies.</p> <p>The site is located in an established residential area served by existing infrastructure and services, this supports medium housing densities in accordance with the State and Local Planning Policies Framework.</p>
<p>Clause 55.02-3</p> <p>Dwelling Diversity Objective</p> <p><i>To encourage a range of dwelling sizes and types in development of ten or more dwellings</i></p>	<p>Standard B3 (Can be varied)</p> <p>Developments of 10 or more dwellings <u>should</u> provide a range of dwelling sizes and types including:</p> <ul style="list-style-type: none"> dwellings with a different number of bedrooms; and at least one dwelling with a kitchen, bath or shower, and toilet and wash basin at ground floor level. 	<p>Not Applicable.</p>
<p>Clause 55.02-4</p> <p>Infrastructure Objectives</p> <p><i>To ensure development is provided with appropriate utility services and infrastructure;</i></p> <p><i>To ensure development does not unreasonably overload the capacity of utility services and infrastructure</i></p>	<p>Standard B4 (Can be varied)</p> <p>Development <u>should</u> be connected to reticulated services including reticulated sewerage, drainage, electricity and gas if available.</p> <p>Developments <u>should</u> not unreasonably exceed the capacity of utility services and infrastructure, including reticulated services and roads.</p> <p>In areas where utility services or infrastructure have little or no space capacity, developments <u>should</u> provide for the upgrading or mitigation of the impact on services</p>	<p>Complies.</p> <p>Council's Development Engineering (Drainage) Unit raised no concern to the proposal, subject to standard conditions.</p>

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	or infrastructure.	
Clause 55.02-5 Integration with the Street Objective <i>To integrate the layout of development with the street</i>	Standard B5 (Can be varied) Developments <u>should</u> provide adequate vehicle and pedestrian links that maintain or enhance local accessibility. Dwellings <u>should</u> be orientated to front existing and proposed streets High fencing in front of dwellings <u>should</u> be avoided if practicable. Development next to existing public open space <u>should</u> be laid out to complement the open space.	Complies – Condition Required. Council's traffic engineers recommends the crossovers be shifted to either boundaries to form double width crossovers with the adjoining properties to minimise pedestrian breaks along the Bradshaw Street, road reserve. Dwelling 1 is appropriately orientated to the street and no front fence is proposed.
Clause 55.03-1 Street Setback Objective <i>To ensure that the setbacks of buildings from a street respect the existing or preferred neighbourhood character and make efficient use of the site.</i>	Standard B6 (Can be varied) Walls of buildings <u>should</u> be setback from streets the distance specified in Table B1	Complies – Variation Acceptable. Refer to response to this report. Dwelling 1 requires a setback of 5.26 metres from the street. The dwelling has been suitably setback 5.6 metres from the street in accordance with this Standard.
Clause 55.03-2 Building Height Objective <i>To ensure that the height of buildings respects the existing or preferred neighbourhood character.</i>	Standard B7 (Can be varied) The max building height <u>should</u> not exceed 9m, unless the slope of the natural ground level at any cross section wider than 8m of the site of the building is 2.5 degrees or more, in which case the max building height should not exceed 10m. Change of building height between existing buildings and new buildings <u>should</u> be graduated.	Complies. The development overall building height is 8.2 metres and accords with the requirements of this Standard.
Clause 55.03-3 Site Coverage Objective <i>To ensure that the site coverage respects the existing or preferred neighbourhood character and responds to the features of the site</i>	Standard B8 (Can be varied) The site area covered by buildings <u>should</u> not exceed 60%.	Complies. The development overall site coverage is 45.3% and accords with the requirements this Standard.
Clause 55.03-4 Permeability Objectives <i>To reduce the impact of increased stormwater run-off on the drainage system;</i> <i>To facilitate on-site stormwater</i>	Standard B9 (Can be varied) At least 20 % of the site <u>should</u> not be covered by impervious surfaces.	Complies. The development overall permeability is 34.6% and accords with the requirements this Standard. This calculation does not include the area of the proposed permeable driveway.

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<i>infiltration.</i>		
Clause 55.03-5 Energy Efficiency Objectives <i>To achieve and protect energy efficient dwellings and residential buildings;</i> <i>To ensure the orientation and layout of development reduce fossil fuel energy use and make appropriate use of daylight and solar energy</i>	Standard B10 (Can be varied) Buildings <u>should</u> be: <ul style="list-style-type: none"> • Orientated to make appropriate use of solar energy. • Sited and designed to ensure that the energy efficiency of existing dwellings on adjoining lots is not unreasonably reduced. Living areas and private open space <u>should</u> be located on the north side of the dwelling, if practicable. Developments <u>should</u> be designed so that solar access to north-facing windows is maximised.	Complies. Dwelling's 2 and 3 main living areas are appropriately orientated to take advantage of the northerly aspect. The condensed nature of dwelling 1 means the main living areas will be able to receive adequate solar access / daylight from the east and west elevations for the majority of the day. The main secluded private open space have been appropriately orientated to take advantage of the northerly aspect. Further, given the orientation and siting of the development the proposal will not unreasonably reduce the energy efficiency of the adjoining dwellings and as depicted on the Shadow Diagram Plans.
Clause 55.03-6 Open Space Objective <i>To integrate the layout of the development with any public or communal open space provided in or adjacent to the development</i>	Standard B11 (Can be varied) Any public or communal open space <u>should</u> : <ul style="list-style-type: none"> • be substantially fronted by dwellings, where appropriate; • provide outlook for as many dwellings as practicable • be designed to protect any natural features on the site; and • be accessible and useable. 	Not Applicable.
Clause 55.03-7 Safety Objective <i>To ensure the layout of development provides for the safety and security of residents and property</i>	Standard B12 (Can be varied) Entrances to dwellings and residential buildings <u>should</u> not be obscured or isolated from the street and internal accessways. Planting which creates unsafe spaces along streets and accessways <u>should</u> be avoided. Developments <u>should</u> be designed to provide good lighting, visibility and surveillance of car parks and internal accessways. Private spaces within developments <u>should</u> be protected from inappropriate use as public thoroughfares.	Complies. The dwellings front entrances and garages are prominent from the street and common accessway.
Clause 55.03-8 Landscaping Objectives <i>To encourage development that respects the landscape character</i>	Standard B13 (Can be varied) Landscape layout and design <u>should</u> : <ul style="list-style-type: none"> • Protect any predominant 	Complies – Condition Required. Refer to the response in this report.

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<p><i>of the neighbourhood;</i></p> <p><i>To encourage development that maintains and enhances habitat for plants and animals in locations of habitat importance;</i></p> <p><i>To provide appropriate landscaping;</i></p> <p><i>To encourage the retention of mature vegetation on the site</i></p>	<p>landscape features of the neighbourhood.</p> <ul style="list-style-type: none"> • Take into account the soil type and drainage patterns of the site. • Allow for intended vegetation growth and structural protection of buildings. • In locations of habitat importance, maintain existing habitat and provide for new habitat for plants and animals. • Provide a safe, attractive and functional environment for residents. • Developments <u>should</u> provide for the retention or planting of trees, where these are part of the character of the neighbourhood. • Development <u>should</u> provide for the replacement of any significant trees that have been removed in the 12 months prior to the application being made. • The landscape design <u>should</u> specify landscape themes, vegetation (location and species), paving and lighting. 	
<p>Clause 55.03-9</p> <p>Access Objectives</p> <p><i>To ensure vehicle access to and from a development is safe, manageable and convenient;</i></p> <p><i>To ensure the number and design of vehicle crossovers respects the neighbourhood character</i></p>	<p>Standard B14 (Can be varied)</p> <p>The width of accessways or car spaces <u>should</u> not exceed:</p> <ul style="list-style-type: none"> • 33% of the street frontage; or • if the width of the street frontage is less than 20m, 40% of the street frontage. <p>No more than one single-width crossover should be provided for each dwelling fronting a street.</p> <p>The location of crossovers should maximise the retention of on-street car parking spaces.</p> <p>The number of access points to a road in a Road Zone should be minimised.</p> <p>Developments must provide for access for service, emergency and delivery vehicles.</p>	<p>Complies.</p> <p>The width of the accessways does not exceed the allowable maximum 33% and accords with the intent of this Standard.</p> <p>There is sufficient distance between the proposed crossovers to adequately maintain an on-street car parking space within the Bradshaw Street, road reserve.</p>

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<p>Clause 55.03-10 Parking Location Objectives</p> <p><i>To provide for convenient parking for residents and visitor vehicles;</i></p> <p><i>To avoid parking and traffic difficulties in the development and the neighbourhood;</i></p> <p><i>To protect residents from vehicular noise within developments</i></p>	<p>Summary of Standard B15 (Can be varied)</p> <p>Car parking facilities <u>should</u>:</p> <ul style="list-style-type: none"> • Be reasonably close and convenient to dwellings and residential buildings; • Be secure; • Be well ventilated if enclosed. <p>Shared accessways or car parks of other dwellings and residential buildings <u>should</u> be located at least 1.5m from habitable room windows. This setback may be reduced to 1m where there is a fence at least 1.5m high or where window sills are at least 1.4m above the accessway.</p>	<p>Complies – Variation Acceptable.</p> <p>Refer to response in this report.</p> <p>Dwelling 2, master bedroom window facing the accessway has been suitably setback with a sill height of greater than 1.4 metres in accordance with this Standard.</p> <p>The location of the car parking spaces are conveniently located to the dwellings and accords with the requirements of this Standard.</p>
<p>Clause 55.04-1 Side and Rear Setbacks Objective</p> <p><i>To ensure that the height and setback of a building from a boundary respects the existing or preferred neighbourhood character and limits the impact on the amenity of existing dwellings</i></p>	<p>Standard B17 (Can be varied)</p> <p>A new building not on or within 200mm of a boundary should be set back from side or rear boundaries:</p> <ul style="list-style-type: none"> • At least the distance specified in a schedule to the zone, or • If no distance is specified in a schedule to the zone, 1 metre, plus 0.3 metres for every metre of height over 3.6 metres up to 6.9 metres, plus 1 metre for every metre of height over 6.9 metres. <p>Sunblinds, verandahs, porches, eaves, fascias, gutters, masonry chimneys, flues, pipes, domestic fuel or water tanks, and heating or cooling equipment or other services may encroach not more than 0.5 metres into the setbacks of this standard.</p> <p>Landings having an area of not more than 2 square metres and less than 1 metre high, stairways, ramps, pergolas, shade sails and carports may encroach into the setbacks of this standard.</p>	<p>Complies – Condition Required.</p> <p>Refer to response in this report.</p>
<p>Clause 55.04-2 Walls on Boundaries Objective</p> <p><i>To ensure that the location, length and height of a wall on a boundary respects the existing or preferred</i></p>	<p>Standard B18 (Can be varied)</p> <p>A new wall constructed on or within 200mm of a side or rear boundary of a lot or a carport constructed on or</p>	<p>Complies.</p> <p>The height and length of dwelling 1 and 3 garages has been setback in accordance with this Standard.</p>

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<i>neighbourhood character and limits the impact on the amenity of existing dwellings</i>	<p><i>within 1 metre of a side or rear boundary of a lot should not abut the boundary:</i></p> <ul style="list-style-type: none"> • <i>For a length of more than the distance specified in a schedule to the zone; or</i> • <i>If no distance is specified in a schedule to the zone, for a length of more than:</i> <ul style="list-style-type: none"> ○ <i>10 metres plus 25 per cent of the remaining length of the boundary of an adjoining lot, or</i> ○ <i>Where there are existing or simultaneously constructed walls or carports abutting the boundary on an abutting lot, the length of the existing or simultaneously constructed walls or carports,</i> <p><i>whichever is the greater.</i></p> <p><i>A new wall or carport may fully abut a side or rear boundary where slope and retaining walls or fences would result in the effective height of the wall or carport being less than 2 metres on the abutting property boundary.</i></p> <p><i>A building on a boundary includes a building set back up to 200mm from a boundary.</i></p> <p><i>The height of a new wall constructed on or within 200mm of a side or rear boundary or a carport constructed on or within 1 metre of a side or rear boundary should not exceed an average of 3.2 metres with no part higher than 3.6 metres unless abutting a higher existing or simultaneously constructed wall.</i></p>	
<p>Clause 55.04-3</p> <p>Daylight to existing windows objective</p> <p><i>To allow adequate daylight into existing habitable room windows.</i></p>	<p>Standard B19</p> <p>(Can be varied)</p> <p><i>Buildings opposite an existing habitable room window should provide for a light court to the existing window, of at least 3m² and 1m clear to the sky. The area may include land on the abutting lot.</i></p> <p><i>Walls or carports more than 3m high</i></p>	<p>Complies.</p> <p>There are no existing habitable room windows that will be impacted by the proposal.</p>

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	<p><i>opposite an existing habitable room window should be setback from the window at least 50% of the height of the new wall if the wall is within a 55 degree arc from the centre of the existing window. The arc may be swung to within 35 degrees of the plane of the wall containing the existing window.</i></p> <p><i>Note: Where the existing window is above ground level, the wall height is measured from the floor level of the room containing the window.</i></p>	
<p>Clause 55.04-4</p> <p>North-facing windows objective</p> <p><i>To allow adequate solar access to existing north-facing habitable room windows.</i></p>	<p>Standard B20</p> <p>(Can be varied)</p> <p><i>If a north-facing habitable room window of an existing dwelling is within 3 metres of a boundary on an abutting lot, a building should be set back from the boundary 1 metre, plus 0.6 metres for every metre of height over 3.6 metres up to 6.9 metres, plus 1 metre for every metre of height over 6.9 metres, for a distance of 3 metres from the edge of each side of the window. A north-facing window is a window with an axis perpendicular to its surface oriented north 20 degrees west to north 30 degrees east.</i></p>	<p>N/A.</p> <p>The existing north facing windows located at 121 Bradshaw Street is setback more than 3.0 metres from the boundary.</p>
<p>Clause 55.04-5</p> <p>Overshadowing open space objective</p> <p><i>To ensure buildings do not significantly overshadow existing secluded private open space.</i></p>	<p>Standard B21 (Can be varied)</p> <p>Where sunlight to the secluded private open space of an existing dwelling is reduced, at least 75%, or 40m² with a minimum dimension of 3m, whichever is the lesser area, or the secluded open space <u>should</u> receive a minimum of 5 hours sunlight between 9am and 3pm at 22 September.</p> <p>If existing sunlight to the secluded private open space of a dwelling is less than the requirements of this standard, the amount of sunlight <u>should</u> not be further reduced.</p>	<p>Complies.</p> <p>The development has been appropriately sited to minimise overshadowing of the adjoining secluded private open space areas in accordance with this Standard and as depicted on the Shadow Diagram Plans.</p>
<p>Clause 55.04-6</p> <p>Overlooking objective</p> <p><i>To limit views into existing secluded private open space and habitable room windows.</i></p>	<p>Standard B22 (Can be varied)</p> <p>Habitable room windows, balconies, terraces etc <u>should</u> be located and designed to avoid direct view to secluded private open space and habitable room windows of an existing dwelling within 9m distance,</p>	<p>Complies – Condition Required.</p> <p>Refer to response in this report.</p> <p>The remaining ground and first floor windows have been suitably screened in accordance with this Standard.</p>

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	and a 45 degree arc from the window , balcony etc.	
Clause 55.04-7 Internal Views Objective <i>To limit views into the secluded private open space and habitable room windows of dwellings and residential buildings with a development</i>	Standard B23 (Can be varied) Windows and balconies <u>should</u> be designed to prevent overlooking of more than 50% of the secluded private open space of a lower-level dwelling or residential building directly below and in the same development.	Complies. Windows have been appropriately screened to limit internal overlooking in accordance with this Standard.
Clause 55.04-8 Noise Impacts Objectives <i>To contain noise sources in developments that may affect existing dwellings;</i> <i>To protect residents from external noise</i>	Standard B24 (Can be varied) Noise sources such as mechanical plant, <u>should</u> not be located near bedrooms or immediately adjacent existing dwellings. Noise sensitive rooms and secluded private open spaces of new dwellings and residential buildings <u>should</u> take account of noise sources on immediately adjacent properties. Dwellings and residential buildings close to busy roads, railway lines or industry <u>should</u> be designed to limit noise levels in habitable rooms.	Complies. There are no noise sources proposed that will adversely impact the development or the amenity of the adjoining residences.
Clause 55.05-1 Accessibility Objective <i>To encourage the consideration of the needs of people with limited mobility in the design of developments</i>	Standard B25 (Can be varied) The dwelling entries of the ground floor of dwellings and residential buildings <u>should</u> be accessible or able to be easily made accessible to people with limited mobility	Complies. The dwellings are reasonably accessible from the front entrance and from the proposed garages.
Clause 55.05-2 Dwelling Entry Objective <i>To provide each dwelling or residential building with its own sense of identity</i>	Standard B26 (Can be varied) Entries to dwellings and residential buildings <u>should</u> : <ul style="list-style-type: none"> • Be visible and easily identifiable from streets and other public areas; and • Provide shelter, a sense of personal address and a transitional space around the entry. 	Complies. The front entrances are easily identifiable, provides shelter and a sense of address from the street.
Clause 55.05-3 Daylight to New Windows Objective	Standard B27 (Can be varied) A window in a habitable room <u>should</u> be located to face:	Complies. The development has been designed to receive adequate daylight to all habitable room windows in accordance with this Standard.

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<i>To allow adequate daylight into new habitable room windows</i>	<ul style="list-style-type: none"> an outdoor space clear to the sky or a light court with a minimum area of 3m² and minimum dimension of 1m, not including land on an abutting lot, or a verandah provided it is open for at least 1/3rd of its perimeter, or a carport provided it has two or more open sides and is open for at least 1/3rd of its perimeter. 	
Clause 55.05-4 Private Open Space Objective <i>To provide for adequate private open space for the reasonable recreation and service needs of residents</i>	Summary of Standard B28 (Can be varied) A dwelling or residential building <u>should</u> have private open space of: <ul style="list-style-type: none"> 40m² with one part to be secluded private open space at the side or rear with a minimum area of 25m² and convenient access from a living room. 	Complies. Each dwelling has been provided with the required provision of SPOS and open space that is orientated to have a northerly aspect and accessible from the main living area of the dwelling in accordance with this Standard.
Clause 55.05-5 Solar Access to Open Space Objective <i>To allow solar access into the secluded private open space of new dwellings and residential buildings</i>	Standard B29 (Can be varied) The private open space <u>should</u> be located on the north side of the dwelling or residential building if appropriate. The southern boundary of secluded private open space <u>should</u> be setback from any wall on the north of the space at least (2 +0.9h), where 'h' is the height of the wall.	Complies. The secluded private open spaces areas have been appropriately sited to receive sufficient solar access for the majority of the day in accordance with this Standard.
Clause 55.05-6 Storage Objective <i>To provide adequate storage facilities for each dwelling</i>	Standard B30 (Can be varied) Each dwelling <u>should</u> have convenient access to at least 6m ³ of externally accessible, secure storage space.	Complies. Each dwelling will be provided sufficient storage space in the form of a 6 cubic metre storage shed.
Clause 55.06-1 Design detail objective <i>To encourage design detail that respects the existing or preferred neighbourhood character.</i>	Standard B31 (Can be varied) The design of buildings <u>should</u> respect the existing or preferred neighbourhood character, including: <ul style="list-style-type: none"> Facade articulation and detailing; Window and door proportions; 	Complies. Refer to the response in this report.

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	<ul style="list-style-type: none"> • Roof form; and • Verandahs, eaves and parapets. • Garages and carports should be visually compatible with the development and the existing or preferred neighbourhood character. 	
Clause 55.06-2 Front Fences Objective <i>To encourage front fence design that respects the existing or preferred neighbourhood character</i>	Standard B32 (Can be varied) The design of front fences <u>should</u> complement the design of the dwelling or residential building and any front fences on adjoining properties. A front fence within 3m of a street <u>should</u> not exceed: <ul style="list-style-type: none"> • 2m height for streets in a Road Zone, Category 1; or • 1.5m height for any other street. 	N/A. No front fence is proposed as part of the development.
Clause 55.06-3 Common Property Objectives <i>To ensure that communal open space, car parking, access areas and site facilities are practical, attractive and easily maintained;</i> <i>To avoid future management difficulties in areas of common ownership</i>	Standard B33 (Can be varied) Developments <u>should</u> clearly delineate public, communal and private areas. Common property where provided, <u>should</u> be functional and capable of efficient management.	Complies. The proposed development boundaries are clearly defined.
Clause 55.06-4 Site Services Objectives <i>To ensure that site services can be installed and easily maintained;</i> <i>To ensure that site facilities are accessible, adequate and attractive</i>	Standard B34 (Can be varied) The design and layout of dwellings and residential buildings should provide sufficient space (including easements where required) and facilities for services to be installed and maintained efficiently and economically. Bin and recycling enclosures, mailboxes and other site facilities should be adequate in size, durable, waterproof and blend in with the	Complies. The bin and recycling enclosures are situated from street view and can be conveniently wheeled out for waste collection. The mailboxes are suitably located to the street.

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	development. Bin and recycling enclosures should be located for convenient access by residents. Mailboxes should be provided and located for convenient access as required by Australia Post.	

Suitable turning areas have been provided for convenient access and egress from dwelling 2 and 3 car parking. It is noted whilst a turning area has been provided to dwelling 3 to allow for the vehicle to exit the site in a forwards matter, this is not specified requirement under Design Standard 1, Accessways of Clause 52.06, Car parking of the Moonee Valley Planning Scheme.

DRAINAGE

Concerns/Alterations needed to title plan and design plans

- The provision of 300mm trench grates at the bottom of each garage.
- In order to allow for appropriate overland flow in the case of a significant rain event, it is advised that the garage of dwelling two to be setback approximately 300mm off the northern boundary

Conditions

C8 New Crossings And Removal Of Existing Crossings

Before the building/s approved by this permit is/are occupied, concrete vehicular crossing(s) must be constructed to suit the proposed driveway(s) in accordance with the responsible authority's specification and any obsolete, disused or redundant vehicle crossing(s) must be removed and the area reinstated to footpath, nature strip and kerb and channel to the satisfaction of the responsible authority.

All vehicle access points must be located a minimum of 1.0 metre from any infrastructure including service pits. In addition all vehicle access points must be located a minimum 2.0m from any tree. Alternatively, such assets may be incorporated into the crossover with the prior written consent of the responsible authority and the relevant servicing authority/agency. Subsequent works and costs in association with relocation and/or amendment must be incurred at the owner's cost, to the satisfaction of the relevant servicing authority/agency and the Responsible Authority.

D1 Discharge Of Water

Provision must be made for the drainage of the land including landscaped and pavement areas. The discharge of water from the land must be controlled around its limits to prevent any discharge onto any adjoining or adjacent property or streets other than by means of an underground pipe drain which is discharged to an approved legal point of discharge to the satisfaction of the Responsible Authority.

D2 Stormwater Detention

An on-site stormwater detention drainage system must be installed on the land to the satisfaction of the Responsible Authority.

Before the development starts a Drainage Layout Plan, including computations and manufacturers specifications, to the satisfaction of the Responsible Authority must be submitted to and approved by the Responsible Authority. The Drainage Layout Plan must be prepared by a Civil Engineer with suitable qualifications to the satisfaction of the Responsible Authority and must depict an on-site stormwater detention drainage system to be installed on the land.

When approved, the Drainage Layout Plan will form part of this permit.

The on-site stormwater detention drainage system must be installed and the provisions, recommendations and requirements of the endorsed Drainage Layout Plan must otherwise be implemented and complied with to the satisfaction of the Responsible Authority.

D5 Installation Of Pump/Pressurised Systems

Stormwater runoff from the development must drain via an underground system and discharge to the kerb and channel in front of the land (OR WHATEVER POINT NOMINATED BY ENGINEERING). If discharge to the kerb and channel via gravity is not possible, the discharge to the kerb and channel in front of the land must be via a dual pump system in accordance with AS3500.3.2. 2003, Section 9.

Notes

T1 Not A Building Permit

This is not a building permit under the Building Act. A separate building permit is required to be obtained for any demolition or building works.

T2 Asset permits and protection

Before the development starts, the permit holder must contact the Moonee Valley City Council regarding legal point of discharge, vehicular crossings, building over easements, asset protection, road consent/occupancy etc

T17 Computations For Stormwater Retention

The required on-site detention system must be designed to limit the rate of stormwater discharge from the land to pre-development levels in accordance with the following calculation; $C=0.4$, $t_c=5\text{mins}$, ARI 1 in 5. An ARI of 1 in 10 should be used for storage and the greater of post development C or $C=0.80$.

T20 Street Tree Removal And/Or Replacement

Before the development starts, separate approval must be obtained from the Moonee Valley City Council in relation to the proposed removal and/or replacement of the nominated street tree(s). Please contact Council on 9243 8888 to speak with Council's Arborist.

T21 AS3500.3:2003 Section 9 – Pump Installation

The pump system is to be in accordance with AS3500.3:2003 Section 9 and is to be installed by a person with suitable qualifications to the satisfaction of the Responsible Authority.

T22 Pump System Failure

Council will not be responsible for any damage to the land or neighbouring properties in the event that the pump system fails due to mechanical failure, exceedance of maximum design rainfall or otherwise. Property owner/s may face liability for any damage to neighbouring properties as a result of such failure.

T23 Pump System – (Interim Measure)

The use of an underground pump system is only considered an interim measure. Should an easement drain be constructed in future via a Special Charge Scheme, the owner may be required to contribute to the cost of the construction of an easement drain.

Drainage – D1, D2, D5, T2, T17, T18, T21, T22, T23

Traffic -

- Access way and proposed vehicle crossover to be pushed to the closest property boundary and to be 3m wide.
- Proposed vehicle crossover will impact existing services and must be referred to relevant Service Authority to either relocate 1m from the vehicle crossover or install a heavy duty trafficable pit lid.
- Proposed vehicle crossovers will impact existing tree application must be referred to Parks Department for assessment.
- Existing vehicle crossover must be upgraded including splays to be updated on plans, constructed in line with Council's VCP, match into proposed access way and constructed as a double vehicle crossover with the neighbouring property.
- Proposed vehicle crossover including splays to be updated on plans, constructed in line with Council's VCP, match into proposed access way and constructed as a double vehicle crossover with the neighbouring property.
- Check swept paths with plans scale provided by the Planner.

*see Dee for further clarification.

Hi Vi

The removal of the tree on the n/strip can proceed. Usual conditions shall apply.

Also happy with Arb report regarding all other trees at this site.

Cheers MM

ESD

RE: ESD Referral - 123 Bradshaw Street, Essendon - MV 818/2016 - 3 dwellings - STORM+BESS

I have reviewed these documents, my comments in red:

STORM report #425584, 24 Jan 2017 – incorrect:

- the driveway is split into two (excluding the permeable area) so each area needs to be entered separately and the treatment measure designed & sized appropriately. NOTE: owing to the slope & segmentation of the driveway it may be worth considering Enviss Sentinal pits rather than traditional raingardens as there is nowhere to locate them.

BESS report #6185, 24 Jan 2017 (draft) – incorrect:

Water fixtures, fittings & connections:

- Dishwashers & washing machines are supplied by occupants & therefore not within the building works / scope out

Water 2.1 Rainwater collection & Reuse:

- there is no other additional reuse proposed / delete credit
- require a “Published” version for endorsement

DWGS: sheets 01-10, rev 12/09/2016, by Ultimate Design – missing following information:

Sheet 04 Proposed Gr FI plan:

- F3 inground raingarden to driveway information (see below)
- Provide a note stating “*Landscaping is to be water efficient as per endorsed BESS report.*”
- Provide a prominent note stating: “*Refer to endorsed BESS report for all ESD requirements to each dwelling.*”
- Show & note secure bicycle parking spaces, 1 per dwelling, as per BESS report

Sheet 07 Elevations:

- Provide a prominent note stating “*All windows and glazed doors to all Living Areas and Bedrooms to be min. double glazed as per endorsed BESS report.*”

F. All of this information must be consistent with the information provided in the approved STORM report:

3. IN-GROUND RAINGARDEN- on the relevant drawings (ie. site/gr fl plan, WSUD plan, landscape plan):

- i. show graphically & note the size in m²
- ii. show graphically the extent, size and grading of the impervious catchment area draining to WSUD treatment measure, demonstrate how the rainwater is collected from this area and discharged into the buffer strip or in-ground raingarden (ie. is it gravity fed or does it

require a pump system) provide a note equivalent to “The rainwater from the impervious paved area of XXm² to be collected & discharged into a Xm² buffer strip or in-ground raingarden, to be fully lined with an impervious liner and have its overflow/aggie drain connected to the LPOD”

1.1 Referrals

No external referrals were required for this application.

The following internal referrals were undertaken:

Table 2

Internal Referrals	Comments/Conditions
<p>Development Engineering (Traffic)</p> <p>21 Feb 2017</p> <p>17/201722</p>	<p>No objection, subject to conditions.</p> <p>Council’s Development Engineering (Traffic) Unit requested swept paths be provided to demonstrate vehicles are able to exit in a forwards direction.</p> <p>The requirement of Design Standard 1, Accessways of Clause 52.06, Car parking does not apply to this development as the southern accessway only serves three (3) vehicles and therefore there is no requirement for these vehicles to exit the site in a forwards direction.</p> <p>Nevertheless, plans include swept paths demonstrating vehicles are able to exit the site in a forwards direction.</p>
<p>Development Engineering (Drainage)</p> <p>24 April 2017</p> <p>17/201717</p>	<p>No objection, subject to conditions. The non-standard conditions include the provision of trench grates to each garage.</p>
<p>Arborist</p> <p>7 March 2017</p> <p>17/201724</p>	<p>Council’s Arborist had no objection to the removal and replacement of the northernmost street tree located within the Bradshaw Street, road reserve.</p> <p>Further, Council’s Arborist concurred with the proposed Tree Protection and Management Plan measures specified on pages 8 and 9 of the Arborist’s Report prepared by Arbor Report Victoria dated 2</p>

	<p>December 2016.</p> <p>To ensure the neighbours trees (Trees 2-8) at 121 Market Street are suitably protected, these Tree Protection and Management Plan measures will form part of a condition of any permit.</p>
<p>ESD Officer 21 March 2017 17/201728</p>	<p>Council's ESD Officer raised no objection to the proposal, subject to an amended STORM and BESS report and plan annotations.</p>
<p>Property 7 March 2017 17/201725</p>	<p>No objection to the proposal.</p>

ArborReport Victoria

Trading as D.S.Murray & Co.
ABN 16 180 495 610

Arboricultural Consultants.

501/89 Beach St., Port Melbourne 3207
Phone: 96456000 Mob. 0412 809 571 Email: robportmel@bigpond.com

ARBORIST'S REPORT.

CLIENT NAME: Mr S Alesio
1 Wickham Grove,
Strathmore
VICTORIA 3041

SITE/LOCATION: 123 Bradshaw Street
Essendon

MAP REF: Melway Map 28 B1

DATE OF INSPECTION: December 2, 2016

BACKGROUND:

The property has an existing residence with attached garage and a few trees. It is proposed to demolish the buildings and build three new residential units on the land. The works may have an impact on trees on adjoining properties.

PURPOSE OF THIS REPORT:

- To provide an arborist's report addressing the requirements of The City of Moonee Valley Council. The report is to cover 8 trees on properties adjoining the subject site.
- To provide details of species, origin, age, height, trunk location, trunk diameter, and approximate canopy spread, of the trees.
- To assess the health and structure of each tree.
- To assess the retention value (RV) of each tree.
- To calculate Structural Root Zones (SRZs).
- To list measures to protect those trees being retained during construction, including Tree Protection Zones (TPZs) and a tree protection and management plan (TPMP).
- To consider the impact of the proposed building on existing trees, under the guidelines of Australian Standard AS 4970-2009 *Protection of Trees on Development Sites*.

METHODS:

Trees were assessed visually from ground level.

No trees were climbed to inspect structure or decay.

All measurements are approximate.

Access to trees on the adjoining properties was not available and their measurements are estimates.

Please refer to the accompanying**Proposed Ground Floor PlanTown Planning Drawing 12/9/2016 (the plan).**

DESCRIPTION OF THE TREES.

TREE NUMBER ON THE PLAN: T1.

SPECIES: *Cotoneaster frigidus*

COMMON NAME: Cotoneaster.

COMMENTS:

T1 is the stump of a tree which has been removed almost to ground level.

TREE NUMBER ON THE PLAN: T2.

SPECIES: *Cotoneaster frigidus*

COMMON NAME: Cotoneaster.

ORIGIN: Exotic.

APPROXIMATE AGE: Mature.

APPROXIMATE HEIGHT: 4m.

CROWN SPREAD: North-South: 3m.
East-West: 5m.

TRUNK TYPE: Multi-stemmed.

TRUNK DIAMETER 1400mm ABOVE GROUND: Ranging up to 50mm

TPZ radius: 2m.

DIAMETER OF LOWER TRUNK: N/A. **SRZ radius:** 1.5m.

STRUCTURAL CONDITION:

Many small stems/branches arise from ground level.

HEALTH & VIGOUR:

Healthy.

COMMENTS:

RV High (growing in an adjoining property). To be retained.

TREE NUMBER ON THE PLAN: T3.

SPECIES: *Citrus limon*

COMMON NAME: Lemon.

ORIGIN: Native.

APPROXIMATE AGE: Mature.

APPROXIMATE HEIGHT: 3m.

CROWN SPREAD: North-South: 3m.
East-West: 3m.

TRUNK TYPE: Bifurcated.

TRUNK DIAMETER 1400mm ABOVE GROUND: 60 & 80mm. **TPZ radius:** 2m.

DIAMETER OF LOWER TRUNK: 100mm. **SRZ radius:** 1.5m.

STRUCTURAL CONDITION:

There are two trunks from close to ground level.

HEALTH & VIGOUR:

Healthy and bearing fruit at the time of inspection.

COMMENTS:

RV High (growing in an adjoining property). To be retained.

TREE NUMBER ON THE PLAN: T4.

SPECIES: *Prunus cerasus*

COMMON NAME: Cherry.

ORIGIN: Exotic

APPROXIMATE AGE: Semi-mature.

APPROXIMATE HEIGHT: 3m.

CROWN SPREAD: North-South: 3m.
East-West: 3m.

TRUNK TYPE: Single.

TRUNK DIAMETER 1400mm ABOVE GROUND: 100mm. **TPZ radius:** 2m.

DIAMETER OF LOWER TRUNK: 140mm. **SRZ radius:** 1.5m.

STRUCTURAL CONDITION:

OK.

HEALTH & VIGOUR:

Healthy and vigorous.

COMMENTS:

RV High (growing in an adjoining property). To be retained.

TREE NUMBER ON THE PLAN: T5.

SPECIES: *Prunus cerasus*

COMMON NAME: Cherry.

ORIGIN: Exotic

APPROXIMATE AGE: Semi-mature.

APPROXIMATE HEIGHT: 2.5m.

CROWN SPREAD: North-South: 3m.
East-West: 2m.

TRUNK TYPE: Single.

TRUNK DIAMETER 1400mm ABOVE GROUND: 80mm. **TPZ radius:** 2m.

DIAMETER OF LOWER TRUNK: 100mm. **SRZ radius:** 1.5m.

STRUCTURAL CONDITION:

The trunk terminates two metres above ground level. The canopy consists of horizontally oriented branches.

HEALTH & VIGOUR:

OK. Bearing fruit at the time of inspection.

COMMENTS:

RV High (growing in an adjoining property). To be retained.

TREE NUMBER ON THE PLAN: T6.

SPECIES: *Prunus persica*

COMMON NAME: Peach.

ORIGIN: Exotic.

APPROXIMATE AGE: Semi-mature.

APPROXIMATE HEIGHT: 3m.

CROWN SPREAD: North-South: 3m.
East-West: 2m.

TRUNK TYPE: Single.

TRUNK DIAMETER 1400mm ABOVE GROUND: 60mm. **TPZ radius:** 2m.

DIAMETER OF LOWER TRUNK: 90mm. **SRZ radius:** 1.5m.

STRUCTURAL CONDITION:

OK.

HEALTH & VIGOUR:

Infested with Peach Curly Leaf and partly defoliated. Bearing fruit despite the poor condition.

COMMENTS:

RV High (growing in an adjoining property). To be retained.

TREE NUMBER ON THE PLAN: T7.

SPECIES: *Camellia sasanqua*

COMMON NAME: Camellia.

ORIGIN: Exotic.

APPROXIMATE AGE: Mature.

APPROXIMATE HEIGHT: 3m.

CROWN SPREAD: North-South: 4m.
East-West: 3m.

TRUNK TYPE: T7 has a short trunk

TRUNK DIAMETER 1400mm ABOVE GROUND: 80mm. **TPZ radius:** 2m.

DIAMETER OF LOWER TRUNK: 90mm. **SRZ radius:** 1.5m.

STRUCTURAL CONDITION:

T7 has a short trunk which soon branches to form the canopy. The trunk diameter was estimated below the first branch.

HEALTH & VIGOUR:

OK.

COMMENTS:

RV High (growing in an adjoining property). To be retained.

TREE NUMBER ON THE PLAN: T8.

SPECIES: *Prunus dulcis*

COMMON NAME: Almond

ORIGIN: Exotic.

APPROXIMATE AGE: Semi-mature.

APPROXIMATE HEIGHT: 5m.

CROWN SPREAD: North-South: 5m.
East-West: 6m.

TRUNK TYPE: Single.

TRUNK DIAMETER 1400mm ABOVE GROUND: 100mm. **TPZ radius:** 2m.

DIAMETER OF LOWER TRUNK: 150mm. **SRZ radius:** 1.5m.

STRUCTURAL CONDITION:

OK.

HEALTH & VIGOUR:

OK.

COMMENTS:

RV High (growing in an adjoining property). To be retained.

Australian Standard AS 4970-2009 *Protection of Trees on Development Sites* defines two specific zones:

1) TREE PROTECTION ZONE (TPZ):

The TPZ is designed to protect the roots, the trunk, and the canopy of each tree.

The area of the TPZ is a circle with a radius calculated by multiplying the trunk diameter at 1400mm above ground level, by 12.

The TPZs are marked on the accompanying plan, to scale, by circles. The TPZ circle is the larger circle in each case.

The minimum allowance for a TPZ is a circle with a radius of two metres, regardless of trunk diameter.

All the trees covered in the report have the minimum allowable TPZ.

Except in specific circumstances, for the duration of the development, the TPZ should be enclosed by fencing and activity inside the enclosure should be restricted.

There should be:

- No building materials, rubbish or filling of any kind stored inside the fencing.
- No soil disturbance. **This includes no trenching for connection of services.**
- No fixings attached to the trees themselves, in particular no bolts, screws, wires or ropes.
- No preparation of paint, cement or plaster products, or washing of tools used with these products.
- No parking of vehicles or refuelling of vehicles or appliances.
- No change in soil surface levels.

2) STRUCTURAL ROOT ZONE (SRZ):

The SRZ is the area required for tree stability, or the area where the structural (anchor) roots can be expected to be found.

The radius of the SRZ is calculated according to the formula $R_{SRZ} = (D \times 50)^{0.42} \times 0.64$, where D is the trunk diameter (in metres) measured immediately above the root buttress. (Australian Standard AS 4970-2009 *Protection of Trees on Development Sites*). There should be **no soil disturbance** within the SRZ without prior investigation to ascertain the location of roots.

The SRZ is required to be calculated when there is encroachment into the TPZ. It is then marked on the plan, to scale, by a circle.

The minimum allowance for an SRZ is a circle with a radius of 1.5 metres regardless of trunk diameter.

All the trees covered in the report have the minimum allowable SRZ.

DISCUSSION:

No trees covered in this report are to be removed.

The area of the TPZ of each tree is 12.6m².

Excavation for the footings of the Unit 3 garage would encroach on the TPZ of T3 by about 2.1m², or about 16.6% of the TPZ area. There would also be encroachment into the SRZ.

Australian Standard AS 4970-2009 *Protection of Trees on Development Sites* allows for encroachment into the TPZ of 10%. 16.6% considerably exceeds the allowance. However, AS 4970-2009 also allows that, if the encroachment is greater than 10%, the size of the TPZ may be extended in another area, contiguous with the original TPZ, to compensate for the encroachment. In this instance the TPZ can be increased in the adjoining property where the tree is growing.

The surface level of the site falls from the East (street frontage) end to the West (rear). This enables the garage floor/slab to be installed above the existing grade.

To reduce the impact of the encroachment on the tree, and move the excavation outside the SRZ, the edge beam of the slab must be moved 500mm North of the Southern property boundary. The slab can then be cantilevered over the beam.

Under these conditions the proposal would be within the guidelines of the Standard, particularly since the tree is in healthy and vigorous condition.

Excavation for the footings of the Unit 3 garage would encroach on the TPZ of T4 by about 1.1m², or about 8.7% of the TPZ area. There would also be encroachment into the SRZ.

The provision for T3 above will also apply to T4. Although the encroachment is smaller, the lack of excavation at the boundary will also benefit T4.

Paving of the proposed driveway to the Unit 3 garage would encroach on the TPZ of T4 by about 2.4m², or about 19% of the TPZ area.

Paving of the proposed driveway to the Unit 3 garage would encroach on the TPZ of T5 by about 2.8m², or about 22% of the TPZ area.

Paving of the proposed driveway to the Unit 3 garage would encroach on the TPZ of T6 by about 3.9m², or about 31% of the TPZ area.

Paving of the proposed driveway to the Unit 3 garage would encroach on the TPZ of T7 by about 4.7m², or about 37% of the TPZ area.

Paving of the proposed driveway to the Unit 3 garage would encroach on the TPZ of T8 by about 4.3m², or about 34% of the TPZ area.

The paving would also cover part of the SRZs of T4, 5, 6, 7 and 8.

The fall of the existing surface level will allow ample scope for the driveway paving to be installed above the existing grade. The driveway must have a permeable surface to allow penetration of rainfall and gaseous exchange between the atmosphere and the soil.

All these small trees would remain viable provided that the conditions of the TPMP are adhered to.

TREE PROTECTION AND MANAGEMENT PLAN.

1. A pre-construction meeting should be organized to include the project manager, the contractors and the project arborist, to introduce the tree protection measures and requirements.
2. Minor pruning of the tips of branches of T3, 4, 5, 6, 7 and 8 will be necessary to accommodate the proposed development.
3. Pruning must be done by a suitably qualified arborist in accordance with Australian Standard AS4373 – 2007 *Pruning of Amenity Trees*, to the satisfaction of the responsible Authority.
4. **Before demolition begins** T3, 4, 5, 6, 7, and 8 must have Tree Protection Zone Fences enclosing parts of the TPZs. The fences must be erected with commercially available temporary security fence panels made of chain wire mesh on galvanized pipe frames. Each fence must have a sign attached saying “TREE PROTECTION FENCE”.
5. The fences must be erected in the positions shown on the plan by broken lines. The positions reflect the guidelines of the Australian Standard AS 4970-2009 *Protection of Trees on Development Sites*, but are modified to account for limitations on the site.
6. Ground cover vegetation in the area enclosed by the fences must be removed or sprayed with herbicide. The area must then be mulched with wood chips to a depth of 100 mm.
7. Tree protection fences must not be moved or altered without approval by the project arborist, or without written consent of the Responsible Authority. They may need to be moved from time to time to allow construction work.
8. When construction begins the TPZ fencing for T3 and T4 can be removed.
9. No TPZ fencing is required for T2 or T3 because they will be satisfactorily protected by the existing boundary fencing.
10. The slab for the Unit 3 garage must be suspended over the edge beam on the South side as described above.
11. When construction is completed, and the landscaping phase begins, TPZ fencing can be removed.
12. In preparation for installation of the driveway, the area fenced for T4, 5, 6, 7 and 8 must be cleared by hand without disturbing the surface soil. The driveway sub-strate must then be laid above the existing grade.
13. Where the proposed new driveway passes through the TPZs of T4, 5, 6, 7 and 8, the paving must be permeable (at least within the TPZs). Surface treatment such as Waterpave® or ECOTRIHEX® permeable paving could be used. Details of these two products are available on the internet.
14. At the conclusion of the development the project arborist must assess the condition of the trees and their growing environment, and make recommendations for any remedial actions.
15. Following the final inspection and completion of remedial works, the project arborist must certify that the completed works have been carried out in compliance with the

approved plans and specifications for tree protection. The certification should comply with AS 4970-2009 clause 5.5.2



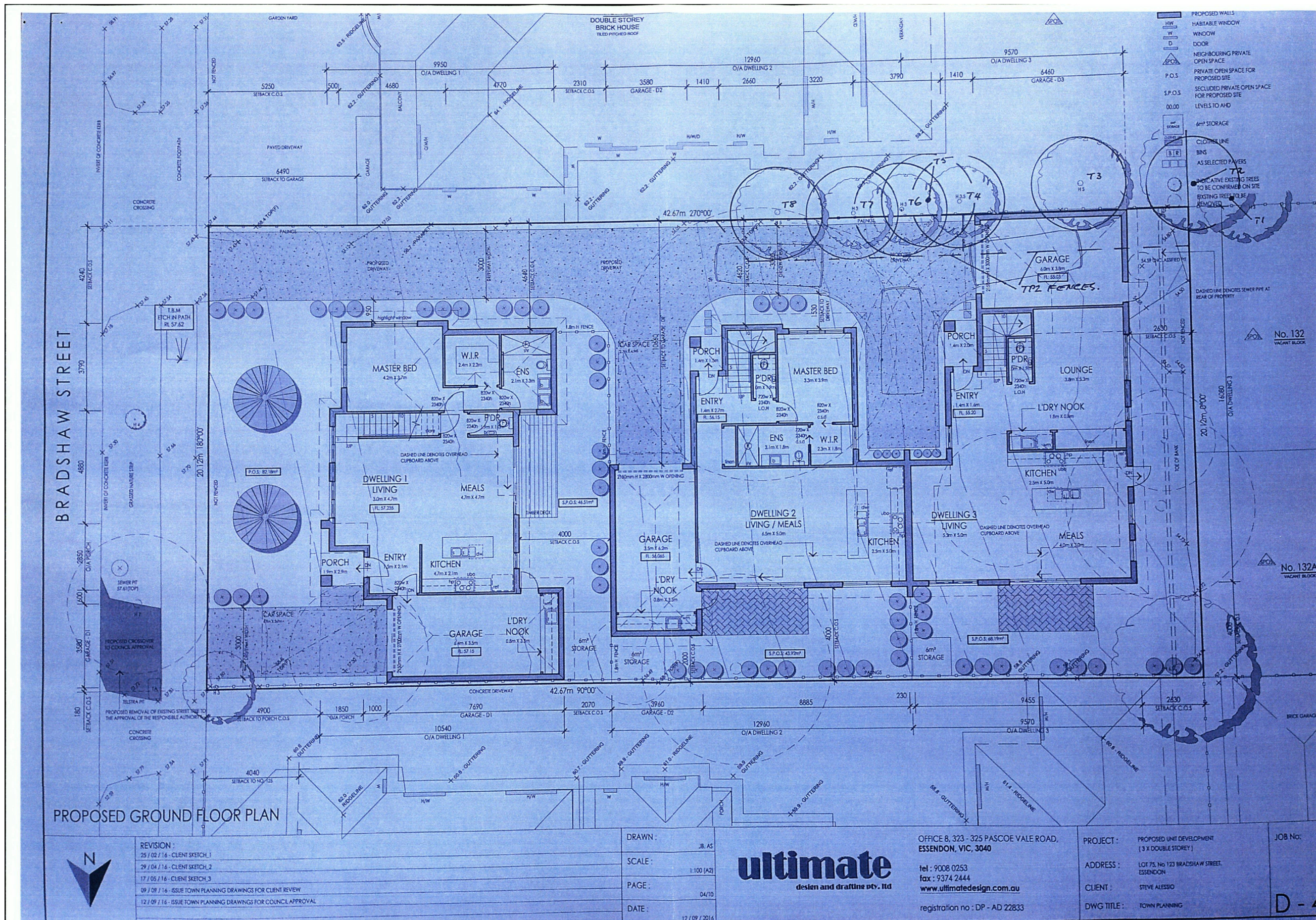
Robert Murray *A.C.A. Uni.Melb.*
Arborist.

Date 3 / 12 / 2016

Ref:

Australian Standard AS4373 – 2007 *Pruning of Amenity Trees*. Standards Australian Sydney.

Australian Standard AS 4970-2009 *Protection of Trees on Development Sites* Standards Australian Sydney.



PLANNING DEPARTMENT

10 FEB 2017

DATE RECEIVED
MOONEE VALLEY CITY COUNCIL

Sustainable Design Assessment

25 January 2017

Proposed Unit Development

Lot 75, No 123 Bradshaw St, Essendon VIC 3040





Project Details

Report Date	25 January 2017
Project Name	Proposed Unit Development
Project Address	Lot 75, No 123 Bradshaw St, Essendon VIC 3040
Client Name	Ultimate Design & Drafting

Consultant Details

Contact Name	Caleb Young
Company Name	Green Rate
Postal Address	PO Box 3080, Eltham VIC 3095
Telephone No.	(03) 9439 1167
Email Address	info@greenrate.com.au
Web Address	www.greenrate.com.au

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Introduction

This Sustainable Design Assessment (SDA) has been prepared for the residential development at Lot 75, No 123 Bradshaw St, Essendon.

Environmentally Sustainable Design (ESD) considerations have become an integral part of the planning permit application process in most municipalities. In order to assist councils achieve these common goals, a framework has been developed named The Sustainable Design Assessment in the Planning Process (SDAPP). An increasing number of councils are adopting this framework, which stands to deliver:

- A practical approach to assessing sustainable development matters during the planning permit application process.
- The consistent inclusion of key environmental performance considerations into the planning approvals process.
- A guide to achieving more sustainable building outcomes for the long-term benefit of the wider community.

This SDA uses The Built Environment Sustainability Scorecard (BESS) to demonstrate compliance with SDAPP for the proposed development.

BESS

The Built Environment Sustainability Scorecard (BESS) assesses energy and water efficiency, thermal comfort, and overall environmental sustainability performance of new buildings or alterations. It was created to assist builders and developers to demonstrate that they meet sustainability information requirements as part of planning permit applications.

Overarching Principles

- Purpose-built for the planning permit stage
- Assess any size or type of development via a single interface
- Facilitates a consistent framework and assessment of sustainability at the planning stage
- Provides flexibility for the user while delivering sustainability outcomes.
- Multiple options for demonstrating compliance, include in-built calculators, deemed-to-satisfy approaches and option of alternative compliance
- Location-neutral. Does not advantage or disadvantage a development based on location.

The complete BESS report can be found in Appendix A and the Melbourne Water STORM report in Appendix B.



APPENDIX A:
BUILT ENVIRONEMNT
SUSTIANABILITY SCORECARD (BESS)

BESS Report



Built Environment
Sustainability Scorecard



Council Alliance for a
Sustainable Built Environment

123 Bradshaw St, Essendon 3040 Essendon ·

Site area: 858 m² ·

Building Floor Area: 480 m² ·

Date of Assessment: 24 Jan 2017 ·

Version: V3, 1.4.0-B131 ·

Applicant: info@greenrate.com.au

Project number

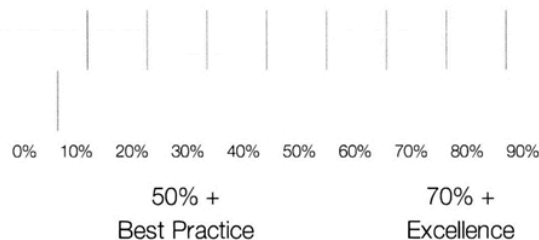
6185

Draft

<http://bess.net.au/projects/6185>

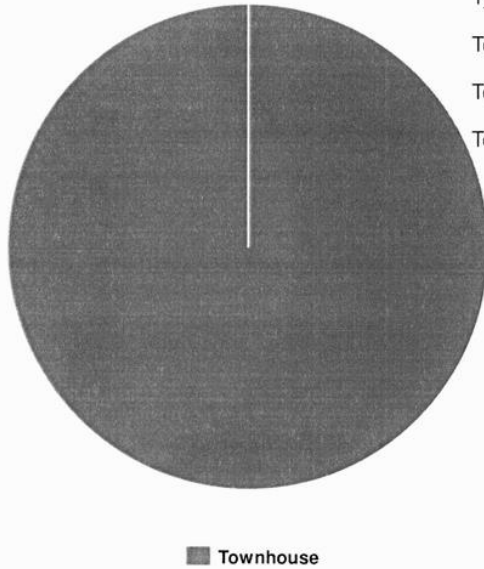
Your BESS score is

+ 50%



% of Total	Category	Score	Pass
0 %	Management	16 %	
6 %	Water	71 %	✓
14 %	Energy	52 %	✓
13 %	Stormwater	100 %	✓
8 %	IEQ	50 %	✓
4 %	Transport	50 %	
0 %	Waste	0 %	
2 %	Urban Ecology	50 %	
0 %	Innovation	0 %	

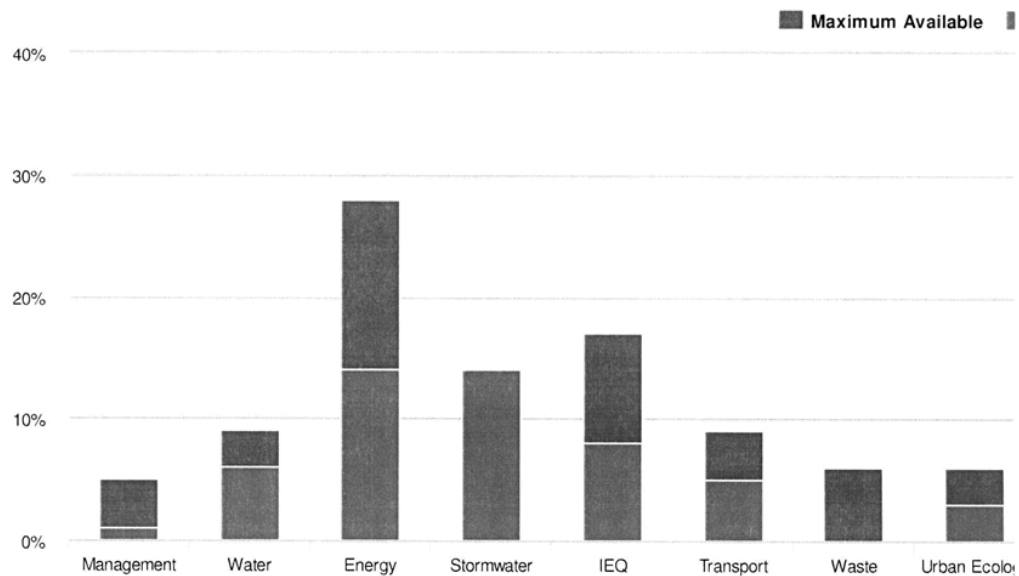
Building Composition



Dwellings

Type	Name	Quantity	Area
Townhouse Dwelling	1	1	153 m ²
Townhouse Dwelling	2	1	164 m ²
Townhouse Dwelling	3	1	162 m ²

How did this Development Perform in each Environmental Category?



How does each section of the building perform?

Management		16% - contributing 0% to overall score
Credit	Disabled	Score
Management 1.1 Pre-Application Meeting	Scoped out	0 %
Management 2.2 Thermal Performance Modelling - Multi-Dwelling Residential	Scoped out	0 %
Management 4.1 Building Users Guide		100 %
Notes	-	
Management 1.1 Pre-Application Meeting		0%
Sustainable Design Assessment	This credit contributes 50% towards this section's score	7 of 29

Aim To encourage the involvement of suitably qualified ESD professionals in the project team from the early design stage.

Questions

Has an ESD professional been engaged to provide sustainability advice from schematic design to construction? AND Has the ESD professional been involved in a pre-application meeting with Council?

No

Management 2.2 Thermal Performance Modelling - Multi-Dwelling Residential

0%

Score Contribution This credit contributes 33% towards this section's score.

Aim To encourage and recognise developments that have used modelling to inform passive design at the early design stage

Questions

Have preliminary NatHERS ratings been undertaken for all thermally unique dwellings?

No

Management 4.1 Building Users Guide

100%

Score Contribution This credit contributes 16% towards this section's score.

Aim To encourage and recognise initiatives that will help building users to use the building efficiently

Questions

Will a building users guide be produced and issued to occupants?

Yes

Water

71% - contributing 6% to overall score

Credit	Disabled	Scoped out	Score
Water 1.1 Potable Water Use Reduction (Interior Uses)			50 %
Water 2.1 Rainwater Collection & Reuse (Additional Uses)			100 %
Water 3.1 Water Efficient Landscaping			100 %

Notes

-

What approach do you want to use Water? Use the built in calculation tools

Do you have a reticulated third pipe or an on-site water recycling system? No

Are you installing a swimming pool? No

Are you installing a rainwater tank? Yes

Jan Rainfall mm -

Feb Rainfall mm -

Mar Rainfall mm -

Apr Rainfall mm -

May Rainfall mm -

Jun Rainfall mm -

Jul Rainfall mm -

Aug Rainfall mm -

Sep Rainfall mm -

Oct Rainfall mm -

Nov Rainfall mm -

Dec Rainfall mm -

Rainwater Tanks

	Tank 1	Tank 2	Tank 3
Name	Tank 1	Tank 2	Tank 3
What is the total roof area connected to the rainwater tank? Square Meters	132.3	124.4	131.0
Tank Size Litres	2000.0	2000.0	2000.0

Sustainable Design Assessment

9 of 29

	Tank 1	Tank 2	Tank 3
Irrigation area connected to tank Square Meters	0.0	0.0	0.0
Is connected irrigation area a water efficient garden?	-	-	-
Other external water demand connected to tank? Litres/Day	-	-	-
Water fixtures, fittings and connections			
	Dwelling 1	Dwelling 2	Dwelling 3
Showerhead	3 Star WELS (> 7.5 but <= 9.0) (minimum requirement)	3 Star WELS (> 7.5 but <= 9.0) (minimum requirement)	3 Star WELS (> 7.5 but <= 9.0) (minimum requirement)
Bath	Medium Sized Contemporary Bath	Medium Sized Contemporary Bath	Medium Sized Contemporary Bath
Kitchen Taps	> 3 Star WELS rating	> 3 Star WELS rating	> 3 Star WELS rating
Bathroom Taps	> 5 Star WELS rating	> 5 Star WELS rating	> 5 Star WELS rating
Dishwashers	> 4 Star WELS rating	> 4 Star WELS rating	> 4 Star WELS rating
WC	> 4 Star WELS rating	> 4 Star WELS rating	> 4 Star WELS rating
Urinals	Scope out	Scope out	Scope out
Washing Machine Water Efficiency	> 4 Star WELS rating	> 4 Star WELS rating	> 4 Star WELS rating
Connected to which Tank	-	1	2
Rainwater connected to: Toilets	Yes	Yes	Yes
Rainwater connected to: Laundry (washing machine)	No	No	No
Rainwater connected to: Hot Water System	No	No	No

Water 1.1 Potable Water Use Reduction (Interior Uses) 50%

Score Contribution This credit contributes 57% towards this section's score.

Aim Water 1.1 Potable water use reduction (interior uses) What is the reduction in total water use due to efficient fixtures, appliances, and rainwater use? To achieve points in this credit there must be >25% potable water reduction. You are using the built in calculation tools. This credit is calculated from information you have entered above.

Criteria Percentage reduction in potable water use

Questions

Percentage Achieved ? Percentage %

%

Calculations

% Reduction in Potable Water Consumption Percentage %

43 %

Water 2.1 Rainwater Collection & Reuse (Additional Uses) 100%

Score Contribution This credit contributes 28% towards this section's score.

Aim What is the additional reduction in potable (mains) water use due to rainwater harvesting? Additional water uses for rainwater include non-potable demands such as irrigation, pools, commercial process uses and taps for washdown. Note: tank water will only be available for additional uses if it not required for internal uses. If the property uses an alternative water source, the alternative water source is deemed to meet 90% of additional non-potable water use requirements. You are using the built in calculation tools. This credit is calculated from information you have entered above in the rainwater tanks section.

Criteria What is the additional reduction in potable (mains) water use due to using rainwater or an alternative water source?

Questions

Percentage Achieved ? Percentage %

%

Calculations

Rainwater collection & reuse (additional uses) Percentage %

100 %

Water 3.1 Water Efficient Landscaping

100%

Score Contribution

This credit contributes 14% towards this section's score.

Aim

Are water efficiency principles used for landscaped areas?
This includes low water use plant selection (e.g. xeriscaping) and specifying water efficient irrigation (e.g. drip irrigation with timers and rain sensors). Note: food producing landscape areas and irrigation areas connected to rainwater or an alternative water source are excluded from this section.

Questions

Will water efficient landscaping be installed?

Yes

Energy

52% - contributing 14% to overall score

Credit	Disabled	Scoped out	Score
Energy 1.2 Thermal Performance Rating - Residential			0 %
Energy 2.1 Greenhouse Gas Emissions			100 %
Energy 2.2 Peak Demand			0 %
Energy 2.3 Electricity Consumption			100 %
Energy 2.4 Gas Consumption			100 %
Energy 2.5 Wood Consumption			N/A
Energy 3.2 Hot Water			100 %
Energy 3.3 External Lighting			100 %
Energy 3.4 Clothes Drying			100 %
Energy 3.5 Internal Lighting - Residential Single Dwelling			100 %
Sustainable Design - Renewable Energy Systems - Solar			12 of 29

Energy 4.4 Renewable Energy Systems - Other

N/A

Notes

-

What approach do you want to use for Energy? Use the built in calculation tools

Project Energy Profile Questions

Are you installing a solar photovoltaic (PV) system?

No

Are you installing any other renewable energy system(s)?

No

Gas Supply

Natural Gas

Dwelling Energy Profiles

		Dwelling 1	Dwelling 2	Dwelling 3
Below the floor is		Ground or Carpark	Ground or Carpark	Ground or Carpark
Above the ceiling is		Outside	Outside	Outside
Exposed sides		4	4	4
NatHERS Annual Energy Loads - Heat	MJ/sqm	110.0	110.0	110.0
NatHERS Annual Energy Loads - Cool	MJ/sqm	28.0	28.0	28.0
NatHERS star rating		6.0	6.0	6.0
Type of Heating System		D Reverse cycle space	D Reverse cycle space	D Reverse cycle space
Heating System Efficiency		std/MEPS	std/MEPS	std/MEPS
Type of Cooling System		Refrigerative space	Refrigerative space	Refrigerative space
Cooling System Efficiency		Current Default / MEPS	Current Default / MEPS	Current Default / MEPS
Type of Hot Water System		I Gas Instantaneous 5 star	I Gas Instantaneous 5 star	I Gas Instantaneous 5 star
% Contribution from solar hot water system		0 %	0 %	0 %
Clothes Line		D Private outdoor clothesline	D Private outdoor clothesline	D Private outdoor clothesline

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	Dwelling 1	Dwelling 2	Dwelling 3
Clothes Drier	A No clothes drier	A No clothes drier	A No clothes drier
Energy 1.2 Thermal Performance Rating - Residential			
			0%
Score Contribution	This credit contributes 31% towards this section's score.		
Aim	Reduce reliance on mechanical systems to achieve thermal comfort in summer and winter - improving comfort, reducing greenhouse gas emissions, energy consumption, and maintenance costs.		
Criteria	What is the average NatHERS rating?		
Questions			
NATHERS Rating ?	Stars		
-			
Calculations			
Average NATHERS Rating (Weighted)	Stars		
6.0			
Energy 2.1 Greenhouse Gas Emissions			
			100%
Score Contribution	This credit contributes 10% towards this section's score.		
Aim	Reduce the building's greenhouse gas emissions		
Criteria	Are greenhouse gas emissions >10% below the benchmark		
Questions			
Criteria Achieved ?			
-			
Calculations			
Sustainable Design Assessment			
Reference Building With Reference Services (BCA only)		kg CO2	14 of 29

30509.0

Proposed Building with Proposed Services (Actual Building) kg CO₂

12113.4

% Reduction in GHG Emissions Percentage %

60 %

Energy 2.2 Peak Demand

0%

Score Contribution This credit contributes 5% towards this section's score.

Aim Reduce demand on electrical infrastructure during peak cooling periods

Criteria Has the instantaneous (peak-hour) demand been reduced by >25%

Questions

Criteria Achieved ?

-

Calculations

Peak Thermal Cooling Load - Baseline kW

41.9

Peak Thermal Cooling Load - Proposed kW

41.9

Peak Thermal Cooling Load - % Reduction Percentage %

0 %

Energy 2.3 Electricity Consumption

100%

Score Contribution This credit contributes 10% towards this section's score.

Aim Reduce consumption of electricity

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Criteria Is the annual electricity consumption >10% below the benchmark

Questions

Criteria Achieved ?

-

Calculations

Reference kWh

23215.5

Proposed kWh

8612.3

Improvement Percentage %

62 %

Energy 2.4 Gas Consumption

100%

Score Contribution This credit contributes 10% towards this section's score.

Aim Reduce consumption of electricity

Criteria Is the annual gas consumption >10% below the benchmark?

Questions

Criteria Achieved ?

-

Calculations

Reference MJ

56158.0

Proposed MJ

36329.3

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Improvement Percentage %

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35 %

Energy 2.5 Wood Consumption

N/A

This credit was scoped out: No wood heating system present

Aim Reduce consumption of wood

Criteria Is the annual wood consumption >10% below the benchmark?

Energy 3.2 Hot Water

100%

Score Contribution This credit contributes 5% towards this section's score.

Criteria Does the hot water system use >10% less energy (gas and electricity) than the reference case?

Questions

Criteria Achieved ?

-

Calculations

% Reduction in Energy Consumption Percentage %

35 %

Energy 3.3 External Lighting

100%

Score Contribution This credit contributes 5% towards this section's score.

Questions

Is the external lighting controlled by a motion detector?

Yes

Energy 3.4 Clothes Drying

100%

Score Contribution	This credit contributes 5% towards this section's score.
Criteria	Does the combination of clothes lines and efficient driers reduce energy (gas+electricity) consumption by more than 10%?
Questions	
Criteria Achieved ?	
-	
Calculations	
Improvement	Percentage %
80 %	

Energy 3.5 Internal Lighting - Residential Single Dwelling

100%

Score Contribution	This credit contributes 5% towards this section's score.
Aim	Reduce energy consumption associated with internal lighting
Questions	
Does the development achieve a maximum illumination power density of 4W/sqm or less?	
Yes	

Energy 4.2 Renewable Energy Systems - Solar N/A

This credit was disabled: No other (non-solar PV) renewable energy is in use.

Score Contribution	This credit contributes 5% towards this section's score.
Aim	To encourage the installation of on-site renewable energy generation
Criteria	Does the solar power system provide 5% of the developments estimated energy consumption?

Energy 4.4 Renewable Energy Systems - Other N/A

This credit was disabled: No other non-solar/wind renewable energy is in use.

Score Contribution	This credit contributes 5% towards this section's score.
Aim	To encourage the installation of on-site renewable energy generation
Criteria	Does another form of renewable energy (not solar or wind) provide 5% of building class's estimated energy consumption?

Stormwater 100% - contributing 13% to overall score

Credit	Disabled	Scoped out	Score
Stormwater 1.1 Stormwater Treatment			100 %

Notes -

Which stormwater modelling are you using? Melbourne Water STORM tool

Stormwater 1.1 Stormwater Treatment 100%

Score Contribution	This credit contributes 100% towards this section's score.
Aim	To achieve best practice stormwater quality objectives through reduction of pollutant load (suspended solids, nitrogen and phosphorus)

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Criteria Has best practice stormwater management been demonstrated?

Questions

STORM score achieved

100

Flow (ML/year) % Reduction

-

Total Suspended Solids (kg/year) % Reduction

-

Total Phosphorus (kg/year) % Reduction

-

Total Nitrogen (kg/year) % Reduction

-

Calculations

Min STORM Score

100

IEQ

50% - contributing 8% to overall score

Credit

Disabled Scoped out Score

IEQ 3.1 Thermal comfort - Double Glazing

100 %

IEQ 3.2 Thermal Comfort - External Shading

0 %

IEQ 3.3 Thermal Comfort - Orientation

0 %

Notes

-

IEQ 3.1 Thermal comfort - Double Glazing

100%

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Score Contribution This credit contributes 50% towards this section's score.

Aim To provide comfortable indoor spaces and reduce energy needed for heating and cooling

Questions

Is double glazing (or better) used to all living areas and bedrooms?

Yes

IEQ 3.2 Thermal Comfort - External Shading

0%

Score Contribution This credit contributes 25% towards this section's score.

Aim To provide comfortable indoor spaces and reduce energy needed for heating and cooling

Questions

Is adjustable external shading provided to east, west and north facing windows?

No

IEQ 3.3 Thermal Comfort - Orientation

0%

Score Contribution This credit contributes 25% towards this section's score.

Aim To provide comfortable indoor spaces and reduce energy needed for heating and cooling

Questions

Are at least 50% of living areas orientated to the north?

No

Transport

50% - contributing 4% to overall score

Credit
Sustainable Design Assessment

Disabled Scoped out Score
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Transport 1.1 Bicycle Parking - Residential	100 %
Transport 1.2 Bicycle Parking - Residential Visitor	N/A
Transport 2.1 Electric Vehicle Infrastructure	0 %

Notes

Transport 1.1 Bicycle Parking - Residential	100%
---	------

Score Contribution This credit contributes 50% towards this section's score.

Aim To encourage and recognise initiatives that facilitate cycling

Criteria Is there at least one secure bicycle space per dwelling?

Questions

Bicycle Spaces Provided ?

3

Calculations

Min Bicycle Spaces Required

3

Transport 1.2 Bicycle Parking - Residential Visitor	N/A
---	-----

This credit was disabled: Not enough dwellings.

Score Contribution This credit contributes 0% towards this section's score.

Aim To encourage and recognise initiatives that facilitate cycling

Criteria Is there at least one visitor bicycle space per 4 dwellings?

Transport 2.1 Electric Vehicle Infrastructure	0%
---	----

Score Contribution This credit contributes 50% towards this section's score.

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Aim To facilitate the expansion of infrastructure to support electric vehicle charging

Questions

Are facilities are provided for the charging of electric vehicles?

No

Waste 0% - contributing 0% to overall score

Credit	Disabled	Scoped out	Score
Waste 1.1 - Construction Waste - Building Re-Use			0 %
Waste 2.1 - Operational Waste - Food & Garden Waste			0 %

Notes -

Waste 1.1 - Construction Waste - Building Re-Use 0%

Score Contribution This credit contributes 50% towards this section's score.

Aim To recognise developments that re-use materials on-site

Questions

If the development is on a site that has been previously developed, has at least 30% of the existing building been re-used?

No

Waste 2.1 - Operational Waste - Food & Garden Waste 0%

Score Contribution This credit contributes 50% towards this section's score.

Aim To minimise organic waste going to landfill

Questions

Sustainable design responses provided for on-site management of food and garden waste? 23 of 29

No

Urban Ecology

50% - contributing 2% to overall score

Credit	Disabled	Scoped out	Score
Urban Ecology 2.1 Vegetation			100 %
Urban Ecology 2.2 Green Roofs			0 %
Urban Ecology 2.3 Green Walls and Facades			0 %
Urban Ecology 2.4 Private Open Space - Balcony / Courtyard Ecology			0 %
Urban Ecology 3.1 Food Production - Residential			0 %

Notes

Urban Ecology 2.1 Vegetation

100%

Score Contribution	This credit contributes 50% towards this section's score.
Aim	To encourage and recognise the use of vegetation and landscaping within and around developments
Criteria	How much of the site is covered with vegetation, expressed as a percentage of the total site area.

Questions

Percentage Achieved ? Percentage %

33 %

Urban Ecology 2.2 Green Roofs

0%

Score Contribution	This credit contributes 12% towards this section's score.
Aim	To encourage the appropriate use of green roofs, walls and facades to mitigate the impact of the urban heat island effect.

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Questions

Does the development incorporate a green roof?

No

Urban Ecology 2.3 Green Walls and Facades

0%

Score Contribution

This credit contributes 12% towards this section's score.

Aim

To encourage the appropriate use of green roofs, walls and facades to mitigate the impact of the urban heat island effect.

Questions

Does the development incorporate a green wall or facade?

No

Urban Ecology 2.4 Private Open Space - Balcony / Courtyard Ecology

0%

Score Contribution

This credit contributes 12% towards this section's score.

Aim

Encourage plants to be grown on balconies and courtyards

Questions

Is there a tap and floor waste on every balcony / in every courtyard?

No

Urban Ecology 3.1 Food Production - Residential

0%

Score Contribution

This credit contributes 12% towards this section's score.

Aim

To encourage the production of fresh food on-site

Criteria

Is there at least 0.25m² of space per resident dedicated to food production?

Questions

Food Production Area Square Meters

-

Calculations

Min Food Production Area Square Meters

3

Innovation

0% - contributing 0% to overall score

Credit

Disabled Scoped out Score

Innovation 1.1 Innovation

N/A

Notes

-

Innovation 1.1 Innovation

N/A

This credit was disabled: Please enter at least one innovation.

Score Contribution

This credit contributes 100% towards this section's score.

Criteria

What percentage of the Innovation points have been claimed (10 points maximum)?

Items to be marked on floorplans

0 / 2 floorplans & elevation notes complete.

Stormwater 1.1: Location of any stormwater management systems used in STORM or MUSIC modelling (e.g. Rainwater tanks, raingarden, buffer strips)

Incomplete

IEQ 3.1: Glazing specification to be annotated
Sustainable Design Assessment

Incomplete
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Documents and evidence

1 / 2 supporting evidence documentation complete.

Stormwater 1.1: STORM report or MUSIC model

Uploaded

StormRatingReport (8).PDF

(<http://2b.bess.prod.s3.amazonaws.com/public/supporting-evidencedd465dc61e9a4f7991b3b4733ff3e351.PDF>) - See attached

IEQ 3.1: Reference to floor plans or energy modelling showing the glazing specification (U-value and Solar Heat Gain Coefficient, SHGC)

Incomplete



APPENDIX B:
STORM REPORT



STORM Rating Report

TransactionID: 425584
Municipality: MOONEE VALLEY
Rainfall Station: MOONEE VALLEY
Address: Lot 75 No. 123 Bradshaw St

Essendon
VIC 3040

Assessor: Green Rate
Development Type: Residential - Multiunit
Allotment Site (m2): 858.40
STORM Rating %: 100

Description	Impervious Area (m2)	Treatment Type	Treatment Area/Volume (m2 or L)	Occupants / Number Of Bedrooms	Treatment %	Tank Water Supply Reliability (%)
Dwelling 2 Roof - Treated	124.40	Rainwater Tank	2,000.00	3	113.90	89.00
Dwelling 1 Driveway & Paving - Not Treated	34.50	None	0.00	0	0.00	0.00
Dwelling 1 Roof - Treated	132.30	Rainwater Tank	2,000.00	3	108.40	88.90
Dwelling 3 Roof - Treated	131.00	Rainwater Tank	2,000.00	2	93.00	96.10
Main Driveway	148.00	Raingarden 100mm	1.40	0	110.40	0.00

Date Generated: 24-Jan-2017

Program Version: 1.0.0

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Office 8, 323 Pascoe Vale Road, **ESSENDON 3040**

P: (03)9008 0253 F: (03) 9374 2444

TOWN PLANNING APPLICATION

123 BRADSHAW STREET, ESSENDON 3040



TOWN PLANNING APPLICATION

Office 8, 323 Pascoe Vale Road, **ESSENDON 3040**
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This **ResCode** Assessment has been prepared for the property situated at **123 Forrester Street, Essendon**. The assessment highlights the development's ability to comply with requirements of the ResCode for Medium Density Housing, 2001.

In preparing the assessment a site inspection was carried out. A detailed site context plan formulated to determine the existing conditions of the site. A design response was prepared to explain how the design proposal derives from the context plan.

NEIGHBOURHOOD CHARACTER & INFRASTRUCTURE

The Site Layout Plan incorporates the information required under the Guidelines of the **ResCode** for Medium Density Housing. In addition to this, the following will address a number of issues considered relevant to this dual-occupancy development.

The subject site is of a rectangular shape with a total site area of 858.43m². The length, width and position of the site offer opportunity for the construction of 3 Double Storey Dwellings with single garages. The site currently has a single storey house. The proposed unit development at **123 Bradshaw Street, Essendon** will increase the diversity in the area by using a variety of textures and architectural treatments, which will compliment and improve the surrounding area.

B1- Neighborhood Character Objectives

The proposed unit development complements the neighborhood character within the immediate area. Through-out the neighborhood there are properties which have similar characteristic and facades in the use of there materials and color selections. Neighboring to the site are sided by side units and similar hip-roofed houses. Materials and landscaping will be chosen to reflect the character of the area. The common street is quite familiar with the proposal as there are many other sites in the immediate area with accompany either Multi-Unit developments or Dual Occupancy Developments.

B2- Residential Policy Objectives

Access to Public Transport: the site is within 4km of Essendon Train station, 100m of local bus routes and 0.5km of local tram routes.

Accesses to Shops: Keilor Rd shopping precinct is located within 2km of the site. This can be access via public transport. Airport West Shopping centre is 3.2km away and is also accessible via transport.

Access to Parklands/Schools:

Kielor heights Primary School – 1.5km
St. Bernards College – 1.23km
Brimbank Park Primary School – 1.6km
Essendon Kielor College – 1.26km

B3-Dwelling Diversity Objectives

Not Applicable



TOWN PLANNING APPLICATION

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B4-Infrastructure Objectives

This area has all necessary services, including gas, sewerage, drainage, and electricity. In light of the level of existing infrastructure, the proposal should not represent unreasonable burden on existing services and facilities. Development will not exceed the capacity of utility services and infrastructure, including road. Development is oriented at the front of the site. The development will maintain the garden and the landscape character of the area. The design of the proposal is innovative and contemporary which makes a positive contribution to the streetscape character of the neighborhood. Some modern infill developments are evident throughout this locality.

B5-Integration with the street objective

The layout of the proposal promotes a balanced site layout with setbacks within each dwelling, which allows efficient use of the site and amenity of residents. The proposal provides adequate vehicle and pedestrian links with each dwelling having a separate identity. Parking and pedestrian accesses are along the front of the property, which is easily identifiable and lit at night.

SITE LAYOUT & BUILDING MASSING

B6-Street Setback Objectives

The proposed unit development has a street setback of 5.25m to dwelling 1. This is the average of the front setbacks of the adjoining dwellings.

B7-Building Height Objective

The proposed dwellings are double storey with hipped roofs. The Building heights (including roof) will be approx. 7.5m along a sloping site, well within recode limits of 9.0m max.

B8-Site Coverage Objectives

If no maximum coverage is specified in the schedule to the zone, maximum coverage is 60%. The intended building site coverage is in the order of 44.91% inclusive. Based on the site coverage achieved, the implications for density of development are negligible.

B9-Permeability Objectives

Minimum of 20% of the site will not be covered by impervious surfaces (Please refer to site plan).

B10-Energy Efficiency Objectives

The dwellings will make use of the sites excellent solar access to aid in achieving energy efficiency. Rooms of the proposed dwelling have limited internal ceiling heights. Main living/meals have direct solar access or direct access to private open spaces, which have good solar access.



TOWN PLANNING APPLICATION

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B11-Open Space Objective

The development will provide sufficient open space for reasonable recreation, service and storage needs of the residents.

The private open space will receive adequate sunlight; there are no shadowing issues to the private open space. The main living room areas will also have direct access to the private open space areas. The open space has sufficient width and dimensions to provide for the planting of trees with extensive canopies providing for the recreational needs of the occupants and site facilities.

The private open space meets the required 40metre square. Each dwelling has been allocated the open space as seen on the plan.

B12-Safety Objectives

All site facilities will be physically convenient and accessible to residents. Ample area is available for secure storage in garages or private open space for each proposed dwelling.

The entries to each dwelling are clearly identifiable. The entries provide shelter and sense of personal address. The entrances incorporate features to enable casual surveillance of visitors and the street.

B13- Landscaping Objectives

Landscaping design and report are to be prepared by appropriate qualified landscaping designer.

B14-Access Objectives

Car parking facilities are convenient to dwellings and secure, allowing surveillance from windows and do not obscure the view between the street and the front windows.

Car parking is efficient with each dwelling having a single car garage. The garages for dwelling 1 measured a minimum 3.5m x 6.0m internally, allowing for one car. The garage for dwelling 2 measured a minimum 3.5m x 6.0m internally, allowing for one car.

Dwelling 3 has The proposed Vehicle Crossing equates to approximately 30% of this elevation. This is well in compliance with the requirements of the ResCode. The driveways do not affect the adjoining properties.

B15-Parking Location Objectives

Car parking is available on site, there is one space in addition to that provided in the single car garages; this is in accordance with Rescode. The entrances incorporate features to enable casual surveillance of visitors, driveway and the street.



TOWN PLANNING APPLICATION

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AMENITY IMPACTS

B17- Side and Rear Setbacks Objectives

Minimum side or rear setback for proposed development is 1.0m plus 0.3m for every meter of height over 3.6m up to 6.9m.

B18-Walls on Boundaries Objectives

Length of the wall along the North boundary equates to 7.69m. The maximum allowable length of a wall on this boundary (42.67) is 18.17m.

Length of the wall along the North boundary equates to 6.46m. The maximum allowable length of a wall on this boundary (42.67) is 18.17m.

This complies with requirements of the ResCode. (10m + 25% of the remaining). Height of the walls on boundary equates to max/avg 3.2m.

B19-Daylight to Existing Windows Objective

No overshadowing concerns for proposed development.

B20-North Facing Windows Objective

Proposed dwellings have been set as per rescode requirement. The development will not impact north light access to any windows. This complies with requirements of the ResCode.

B21-Overshadowing Open Space Objective

The proposed private open space is able to receive a minimum of four hours direct sunlight between 9.00am and 3.00pm on the 23 September - 21 March. The **shadow analysis** indicates that the adjoining properties to the north, east and west will receive minimum of four hours of direct sunlight on the 23 September - 21 March. Shadows from existing and proposed fencing will not affect the existing or proposed private open space.

B22-Overlooking Objective

The dwelling has been designed to minimize the number of habitable windows, which contain windows with direct outlook to habitable windows, or private open spaces of adjoining properties. This will ensure that the privacy of adjoining properties is maintained.

There are no overlooking concerns in relation to private open spaces of adjoining properties.

There are no other overlooking concerns or invasion of privacy.

Overlooking will be also prevented with fencing and appropriate landscaping where applicable.

B23-Internal Views Objective

No overlooking concerns, as any over looking concerns will be treated appropriately. (**Refer elevations**)

B24-Noise Impact Objectives

The proposed development is to be constructed of brick. This will help accommodate any noise concerns and constructions should comply with F (%) of the Building Code of Australia.

The internal layout of the dwellings and the location of the garages ensure that the emission of noise from occupants or their vehicles will not detract from the amenity of adjoining residents.

No external plant equipment is proposed for this development.



TOWN PLANNING APPLICATION

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ON SITE AMENITIES & FACILITIES

B25-Accessibility Objective

The proposed dwellings are easily accessible to people with limited mobility. And can be further modified if necessary.

B26-Dwelling Entry Objective

Entry of proposed dwellings is easily identified and visible from the street. It provides shelter and a sense of personal address.

B27-Daylight to New Windows Objective

Rooms of the proposed dwellings have limited internal ceiling heights. Main living/meals have direct solar access or direct access to private open spaces, which have good solar access.

B28-Private Open Space Objectives

Width of private open space measures minimum of 3.0m. Areas of the private open space are 40m square minimum. This complies with **ResCode** regulations.
Refer to floor plan for areas of private open spaces.

B29-Solar Access to Open Space Objectives

The proposed unit developments private open spaces, is located east side but still maintains enough solar access as the building height does not impact on this objective. Size of the open space is in range of **ResCode** regulations (refer to plan).

B30-Storage Objectives

Adequate storage facilities, has been provided for proposed dwelling. Size of the storage complies with **ResCode** regulations (refer to plan).

DETAILED DESIGN

B31-Design Detail Objective

The proposed development is similar to the streetscape character with the neighboring dwellings. Through-out the street there are properties which are similar in the front design and the selection of material. The proposed dwellings will improve the look of the area. Materials and landscaping will be chosen to reflect the character of the area. The surrounding dwellings are of brick construction and pitch roofing. The windows are generally aluminium for most dwellings. The area is a fairly new for unit development. The material and textures have been selected is in keeping with the streetscape character of the area. The design is compatible in scale to dwellings on adjacent and nearby allotments. Refer to architectural drawings for materials and finish.

B32-Front Fences Objective

Not Applicable



TOWN PLANNING APPLICATION

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B33-Common Property Objectives

Not Applicable

B34-Site Services Objective

Development provides sufficient space for services to be installed and maintained including existing easement. All site facilities will be physically convenient and accessible to residents.

Ample area is available for secure storage in garages or private open space for each proposed dwelling. It would be reasonable to assume that any bins will be in the rear of the sites and located to the front of the properties on collection days only.

The mailboxes will be integrated into the fence in accordance with Australia Post requirements.

As a part of assessment, the following development summary has also been provided;

Development Summary

- Site Area: 858.43m² square meters approximately
- Number of Dwellings: 3
- Site Density: 1:286.14 square meters approximately
- Building Site Coverage: 44.91%
 - Secluded Proposed useable private open space:
 - Dwelling 1: 42.75m²
 - Dwelling 2: 73.93m²
- Parking on site:
 - Dwelling 1: Single Car Garage and one car space
 - Dwelling 2: Single Car Garage and one car space
 - Dwelling 3: Single Car Garage
- Permeable surfaces:
 - Total Site: 29.96%