<table>
<thead>
<tr>
<th><strong>THE LAND AFFECTED BY THE APPLICATION IS LOCATED AT:</strong></th>
<th>4 Bank Road, EDITHVALE VIC 3196</th>
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</thead>
<tbody>
<tr>
<td><strong>THE APPLICATION IS FOR A PERMIT TO:</strong></td>
<td>Develop the land for the construction of five (5) dwellings (double storey with a basement)</td>
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<tr>
<td><strong>THE APPLICATION REFERENCE NUMBER IS:</strong></td>
<td>KP-2018/786</td>
</tr>
<tr>
<td><strong>THE APPLICANT FOR THE PERMIT IS:</strong></td>
<td>Marwal Nominees Pty Ltd</td>
</tr>
</tbody>
</table>
| **YOU MAY LOOK AT THE APPLICATION AND ANY DOCUMENTS THAT SUPPORT THE APPLICATION AT THE OFFICE OF THE RESPONSIBLE AUTHORITY:** | City of Kingston Municipal Offices  
Cheltenham Office: 1230 Nepean Highway,  
Cheltenham 3192  
During office hours 8.30am - 5pm  
OR  

Any person who may be affected by the granting of the permit may object or make other submissions to the responsible authority.

**An objection must:**
- be made to the Responsible Authority in writing,
- include the reasons for the objection, and
- state how the objector would be affected.

The responsible authority must make a copy of every objection available at its office for any person to inspect during office hours free of charge until the end of the period during which an application may be made for review of a decision on the application.

| **THE RESPONSIBLE AUTHORITY WILL NOT DECIDE ON THE APPLICATION BEFORE:** | 08-July-2019 |

If you object, the Responsible Authority will tell you of its decision.

Privacy Notification: The personal information provided in a submission/objection is collected for planning purposes in accordance with the Planning & Environment Act 1987 (the Act). The public may view an objection or submission in accordance with Section 57 of the Act whilst the planning application is current. In accordance with the “Improving Access to Planning Documents” Practice Note dated December, 1999, a copy of your submission will be made available on request. If you fail to provide contact details your objection may not be considered. For information regarding access to Planning documents please contact Council’s Planning Department on 1300 653 356.
Application to Amend a Planning Application currently under assessment.

Use this form to:

- Amend a current planning permit or current amendment application; under section 50 and section 57A of the Planning and Environment Act 1987 and to provide the information required by regulation 16 of the Planning and Environment Regulation 2005.

Prescribed fee is required to be submitted with this form if advertising of your application has already taken place.

If you need help to complete this form or to discuss the specific requirements of this application please contact the Planning Department on 9580 4131. Insufficient or unclear information may delay your application.

Please note questions marked with an (*) are mandatory and must be completed.

1. The Land
   Address of the land. Complete the Street Address and one of the Formal Land Descriptions

   **Street Address** *
   Unit No.: 
   St No.: 4
   St Name: BANK ROAD
   Suburb: EDITHVALE
   Postcode: 3196

   **Formal Land Description** *
   Complete either A or B. This information can be found on the certificate of title.

   **A**
   Lot No.: 10
   On Lodged Plan, Title Plan or Plan of Subdivision No.: PS004920

   **OR**
   Crown Allotment No.: 
   Section No.: 

   **B**
   Parish/Township Name: 

2. Planning Application Details

   Planning Application number? *
   Planning Application No.: KP -2018-786

3. Cost of Building and works / permit fee

   State the cost of works with respect to the proposed changes only. *

   Costs
   $ NIL

   Write 'NIL' if the cost difference is $0.00
   Write 'N/A' if the permit does not allow development

   You may be required to verify this estimate.

Application to Amend A Current Planning Application under Assessment (Updated 12/1/2018)
4. The Amended Proposal
You must give full details of the amendment being applied for. Insufficient or unclear information may delay your application.

What is the amendment being applied for? *
Indicate the type of changes proposed to the plans/documents.

Why is the amendment required?
State the reasons for the change. If the space provided is insufficient, attach a separate sheet.

| Details: | REFER TO ACCOMPANYING SUBMISSION. |
| Reasons: | TO RESPOND TO COUNCIL INITIAL CONCERNS AND TO IMPROVE AMENITY OF DEVELOPMENT. |

5. Title Information
Encumbrances on title?*  
Does the proposal breach, in any way, an encumbrance on title such as a restrictive covenant, section 173 agreement or other obligation such as an easement or building envelope?

- Yes (if 'yes' contact Council for advice on how to proceed before continuing with this application)
- No
- Not applicable (no such encumbrance applies)

Council must not grant an amendment to a permit that authorises anything that would result in a breach of a registered restrictive covenant (section 61 (4) and 62 of the Planning and Environment Act 1987).
7. Declaration

This form must be signed by the applicant *

I declare that the information contained in this application is true and correct, and the owner(s) of the property or the owner(s) of the land to which the application relates has been advised of this application.

Remember it is against the law to provide false or misleading information, which could result in a heavy fine and cancellation of the permit.

8. Information checklist

Have you:

☐ Filled in the form completely?

☐ Paid or included the application fee? (Contact council to determine the appropriate fee).

☐ Attached all necessary supporting information and documents, Please provide one set of plans in A3?

9. Lodgement

Lodge the completed and signed form and all documents with:

Council Name: Kingston City Council
Council Address: 1230 Nepean Highway, Cheltenham
Council Address: PO Box 1000, Mentone, Victoria, 3194
For help or more information
Telephone: 9581 4131
Fax: 03 9581 4500
Email: info@kingston.vic.gov.au

Privacy Notice

Your application and the personal information on this form is collected by the City of Kingston for the purpose of the Planning and Environment Act 1987 (PE Act). If you do not provide your name and address, the City of Kingston will not be able to consider your application. Your application will be available at the City of Kingston office for any person to inspect and copies may be made available on request to any person for the relevant period set out in the PE Act. You must not submit any personal information or copyright material of third parties without their informed consent. By submitting the material, you agree that the use of the material as detailed above does not breach any third party's right to privacy and copyright. Personal Information includes:

• The name, address or contact details of any third party
• Photographs of a third party or their property
• A third party's opinion about the planning application or related issues

If you have any concerns or wish to request access to your personal information please contact Council’s Planning Department on 9581 4131.
REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958
VOLUME 06322 FOLIO 250

LAND DESCRIPTION
Lot 10 on Plan of Subdivision 004920.
PARENT TITLE Volume 03902 Folio 269
Created by instrument 1730913 16/05/1939

REGISTERED PROPRIETOR
Estate Fee Simple
Sole Proprietor
MARWAL NOMINEES PTY LTD of 280 NEPEAN HIGHWAY EDITHVALE
H434566 06/03/1979

ENCUMBRANCES, CAVEATS AND NOTICES
Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

DIAGRAM LOCATION
SEE TP655234G FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS
NIL

------------------------END OF REGISTER SEARCH STATEMENT------------------------

Additional information: (not part of the Register Search Statement)
Street Address: 4 BANK ROAD EDITHVALE VIC 3196

DOCUMENT END
The document following this cover sheet is an imaged document supplied by LANDATA®, Land Use Victoria.

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The document is invalid if this cover sheet is removed or altered.
Description of Land / Easement Information

All that piece of land, delineated and coloured red and blue on the map in the margin being Lot 10 on Plan of Subdivision No. 4920—lodged in the Office of Titles and being part of Crown Allotment Seven, Parish of Lyndhurst, County of Mornington—Together with a right of carriage way over Bank—

ENCUMBRANCES REFERRED TO.

As to the land colored blue—

TAX EASEMENT created by Instrument No. 1419255
in the Register Book—

COLOUR CODE

R = RED  BL = BLUE

THIS PLAN HAS BEEN PREPARED FOR THE LAND REGISTRY, LAND VICTORIA, FOR TITLE DIAGRAM PURPOSES AS PART OF THE LAND TITLES AUTOMATION PROJECT

COMPILED: 18-10-2000

VERIFIED: A.D.

LENTHS ARE IN FEET & INCHES

Metres = 0.3048 x Feet
Metres = 0.201168 x Links
MPL: Application for Metropolitan Planning Levy Certificate

Tracking Code: RBVXN6DV

Receipt

Receipt information

Application ID

MPL11037

Submission Date

19 Sep 2018 3:54:22 PM

Payment method

Electronic Funds Transfer

Payee: State Revenue Office
MPL Payable: $ 2405
Lodgement reference: MPL11037
BSB: 033 222
Account Number: 000197
4 BANK ROAD
EDITHVALE

DEVELOPMENT OF FIVE
RESIDENTIAL TOWNHOUSES

Submission to accompany
Application for Planning Permit

W S C Planning PTY. LTD.
PLANNING AND DEVELOPMENT CONSULTANTS
Unit 9, 102 Jolimont Road East Melbourne VIC 3002
Telephone: (03) 9650 4155 Facsimile: (03) 9650 7344
E-mail: mail@wscplanning.com.au

September 2018
Amended February 2019
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1.0 Introduction

This submission is to amplify an Application for Planning Permit for development and use of five two storey townhouses.

It describes the site and environs, relevant planning controls and policies, the proposed development, and addresses planning issues arising.

This development would complete the overall redevelopment of the former Gales Marine commercial boat sales site, extending between the Nepean Highway and Turakina Avenue.

2.0 Site and Environs

2.1 Site

The site was previously known as 2 Bank Road.

The site is located on the south-east side of Bank Road approximately 36m west of the Nepean Highway. It has a frontage of 14.33m to Bank Road and side boundaries of 44.96m.

The site comprises one lot (Lot 10 PS4920) which is presently vacant, with overall area of 644.30sq.m.

There is a drainage easement 0.61m wide extending along the north-east boundary for 33.37m from the frontage.

The site slopes down approximately 0.40m from north-east to south-west, and is currently vacant except for a metal clad storage shed at the rear of the lot. The site does not contain any vegetation.

There is an existing crossover on the frontage.

2.2 Environs

The site abuts the rear of the strip of commercial properties which front the south-western side of the Nepean Highway.

It is part of the functional area of the Edithvale neighbourhood shopping centre (Edithvale Village).

Bank Road terminates at the foreshore reserve approximately 60 metres to the south-west.

The Edithvale railway station is approximately 100 metres to the north-east across Nepean Highway, on the northern corner of Edithvale Road.

There is generally two-storey residential development (detached houses, townhouses, and apartments) on the
north-west side of Bank Road and south-west side of Turakina Avenue adjacent to the site.

The site abuts on its south-east side a site containing a two storey townhouse at No.3A Turakina Avenue, and the rear of two storey dwelling at No.284 Nepean Highway, and also abuts on its north-east side the rear of a two storey dwelling (one of three townhouses) at No.282 Nepean Highway. It also abuts the rear boundaries of Nos. 278-279, and Nos. 280-281 Nepean Highway, the former site on the corner of Bank Road having been approved for a two storey retail and residential development up to the common boundary with the site.

The site abuts on it south-west side, No. 6 Bank Road (corner Turakina Avenue), upon which the development of 16 apartments in a two storey building plus basement is currently in progress.

1. Aerial View of site and environs
   Source: [www.nearmap.com](http://www.nearmap.com) accessed on 29.08.2018
2. Aerial View of site and environs (closer view)

Source: [www.nearmap.com](http://www.nearmap.com) accessed on 18.03.2016
3. View of the south-western site boundary with current apartment development at No. 6 Bank Road beyond (September 2018).

3a. View of the site and context with No. 6 Bank Road apartments, now under construction.

4. View of the north-west site boundary (frontage) with development across Bank Road beyond.
4 Bank Road, Edithvale, Residential Townhouses
Submission to accompany Application for Planning Permit.

5. View of the north-east site boundary with the vacant land on the corner of Bank Road and Nepean Highway (nos. 278-279) to be developed for retail and residential, and rear of shop/dwellings at Nos 280-281, and first floor balcony of No 282.

6. View of site frontage from opposite side of Bank Road, looking south-east.

7. View of southern site boundary (shed to be removed), and No. 3A Turakina Avenue two storey townhouse beyond.
8. View of two storey townhouses at No. 282 Nepean Highway, driveway, garages and first floor balcony, looking south-west.

9. View of No. 282 townhouses showing first floor balcony abutting rear of north-eastern site boundary, from No. 280, looking south.
10. View of brick wall to rear yard of No. 3A Turakina Avenue which will be retained and incorporated in the proposed development.

11. View of roofed and enclosed deck to No. 284 two storey dwelling and small rear yard behind boundary brick wall, looking east.
12. View of rear yards of nos. 3A and 3B Turakina Avenue townhouses behind boundary brick wall being retained, looking south-east.

13. View of Nepean Highway frontages of properties to the north-east, i.e. Nos. 278-279, 280-281, 282-284, and showing proximity to local activity centre.

2.3 Neighbourhood and Site Description

The key features are as follows:

- The former commercial site is part of the functional Edithvale neighbourhood activity centre, located at the transition between the commercial properties fronting Nepean Highway to the north-east, and the residential area to the north-west, south-west, and south-east.

- The site is relatively flat, with a significant slope down towards the foreshore (south-west), and cleared of buildings, except for a large storage shed to be
demolished, and has no remaining vegetation, so that it has no major constraints to redevelopment.

- The site is very accessible to:
  - the shops and other services in Edithvale Village activity centre
  - the Edithvale Rail station within 100m
  - the Port Phillip Bay foreshore within 60m
  - the Nepean Highway within 40m
  - Edithvale Primary School within 500m to the north-east.

- The existing adjacent development comprises:
  - To the north-west across Bank Road there are two-storey apartments and town houses directly opposite, and single storey townhouses further south-west. (Refer Photo 4)
  - To the south-west, the abutting site at 6 Bank Road (formerly 4-6 Bank Road) is currently being developed with a two storey building for apartments. (Refer Photo 3)
  - Further to the south-west across Turakina Avenue, there are two storey blocks of apartments, and two storey house. (Refer Photo 3)
  - To the south-east there are the rear yards of two storey townhouses (Nos. 3A & 3B Turakina Avenue), and No 284 Nepean Highway. (Refer Photo 7)
  - To the north-east fronting Nepean Highway there is a vacant site (Nos.278-279), two storey shop and dwellings/offices (Nos. 280 & 281) and two storey apartments (No.282). (Refer Photo 5)

- There is a mix of design styles and external materials in adjacent residential developments, and mix of fence treatments. Roof forms comprise both tiles and steel deck, generally hipped forms.

- There are views down Bank Road of the foreshore and Bay beyond. There will be good views of the Bay available over the development at No. 6, and on the opposite side of Turakina Avenue, from the proposed roof decks.
3.0 Planning Controls and Policies

3.1 Planning Policy Framework

The following policies are relevant:

- Cl.11.02 Managing Growth
- Cl.11.03 Planning for Places
- Cl.13.01 Climate Change Impacts
- Cl.15.01 Built Environment
- Cl.15.02 Sustainable Development
- Cl.16.01 Residential Development

3.2 Local Planning Policy Framework

- Cl.21.02 Municipal Profile
- Cl.21.03 Land use challenges for the new millennium
- Cl.21.04 Vision
- Cl.21.05 Residential land use
- Cl.21.06 Retail and commercial land use
- Cl.22.11 Residential development

3.3 Zoning

The site is part of the Commercial 1 zone (C1Z) which covers commercial properties along the south-western side of the Nepean Highway, and the lots comprising the site and No. 6 Bank Road, which front the south-east side of Bank Road through to Turakina Avenue.

The specific purposes of the C1Z are:

"To create vibrant mixed use commercial centres for retail, office, business, entertainment and community uses."

and

"To provide for residential uses at densities complementary to the role and scale of the commercial centre."

Properties opposite the site on the north-west side of Bank Road, and the south-west side of Turakina Avenue are within an extensive General Residential zone Schedule 2, General Residential Areas A (GRZ2), which extends through to the foreshore.

The foreshore is a Public Park and Recreation zone (PPRZ).
Fig. 14 Zoning Map (18/9/2018)

Under Cl.34.01, within a C1Z a “Dwelling” is a Section 1 – Permit not required use, however on condition that any frontage at ground floor level must not exceed 2 metres.

As this condition is not met, the use is a Section 2 – Permit required use.

A planning permit is also required for buildings and works, and the application is not exempt from giving notice, or review by VCAT, as the site is within 30m of the GRZ2.

The application does not qualify as a VicSmart application due to the same proximity to the GRZ2 and development cost exceeding $500,000.

Under Cl.34.01-5 an application for multi-unit residential development in the C1Z must include a Neighbourhood and Site Description and Design Response, in accordance with Cl.55.01.
3.4 Overlays

The site is subject to two blanket overlay controls related to the Port Phillip Bay foreshore environs.

These overlays both cover the area between the foreshore and Nepean Highway.

3.4.1 Design and Development overlay Schedule 1, Urban Coastal Height Control Area (DDO1)

The design objectives are:

“To protect and enhance the foreshore environment of Mentone, Parkdale, Mordialloc, Aspendale, and Chelsea, and adjacent areas including Port Phillip Bay.

To ensure that new buildings, works, renovations and extensions, are compatible with surrounding buildings and natural features, and sympathetic to the surrounding natural landscape and environment.

To relate building heights, building bulk and setbacks to adjoining sites so that they are compatible with and enhance the appearance and character of the immediate locality.”

Under Cl.43.02-2 a planning permit is required for buildings and works.

Under the DDO1, a building must not be greater than 2 storeys in height (not including a basement car park with a maximum height of 1.2m above natural ground level).

A permit can not be granted to vary this requirement.

3.4.2 Design and Development overlay Schedule 7, Urban Coastal Foreshore Setback Control Area (DDO7).

The design objectives are:

“To protect and enhance the visual and aesthetic appearance of the foreshore area.

To encourage new buildings and works which are sympathetic to the surrounding foreshore environment.”
A planning permit is required under Cl.43.02-2 for buildings and works.

Under the DDO7, a permit must not be granted to construct a building or works within 4.5m of the foreshore boundary.

The site is not within this specified distance, being some 90m from the foreshore reserve, and thus not affected by this overlay control.

3.5 Particular Provisions

3.5.1 Cl.52.06 Car Parking

The proposed five dwellings will require two (2) car spaces per dwelling as they contain three (3) bedrooms.

There is also a requirement for one (1) car space for visitors.

Therefore a total of 11 car spaces are required.

3.5.2 Cl.53.34 Bicycle Facilities

As the development is not of four or more storeys, then no bicycle facilities are required.

However if owner/occupiers have bikes, there is dedicated parking, or they can be parked in the individual store rooms for each dwelling, in the Basement.

3.5.3 Cl.55 Two or more Dwellings

The site is not within a residential zone, and is not required to comply with the various objectives and standards of this clause.

However an application in the C1Z for multi-unit residential development must include a Neighbourhood and Site Description and Design Response, in accordance with Cl.55.01.

The Council must also consider the objectives, standards, and decisions guidelines of Cl.55 as one of the decision guidelines for development in the C1Z.
3.5.4 Cl.58 Apartment Developments

The proposed development in the C1Z is not for "Apartments" as defined, as they are for single vertical occupancy dwellings, and are not subject to this clause.

3.6 Area of Aboriginal Culture Heritage Sensitivity

This site is within the nominal 200m of the foreshore and included in this blanket area.

A previous assessment was undertaken in 2012 by Andrew Long and Associates of the overall land at 278-281 Nepean Highway and 2, 4, and 6 Bank Road Edithvale, previously occupied by Gales Marine, with total area of 3,022 sq.m, in the context of proposed medium density residential development.

The report notes that this occupant for over 40 years can attest to building removal and modification of ground surface to form level areas for boat display.

Although the construction of 3 or more dwellings is a designated "high impact activity", the report concluded that the land has been subject to significant ground disturbance, and therefore the activity area is not an area of cultural heritage sensitivity, and thus a Cultural Heritage Management Plan is not required.

(refer Expert Witness Statement by Jonathan Howell-Meurs attached)

4.0 Proposed Development and Use

4.1 Use

As noted in 3.3 the use of the land for five Dwellings is a discretionary (Section 2) use, however this use is wholly appropriate in the Commercial 1 zone (C1Z) as detailed in section 5.

4.2 Development

The five large dwellings in the form of townhouses (2 storey, single vertical occupancies) with floor areas from 135 sq.m to 137 sq.m, for Dwelling 2, 3, 4, 143 sq.m for Dwelling 1, and 148 sq.m for Dwelling 5, will be in a row down the site.
- **Crossover**
  The existing crossover would be replaced by a new crossover 3.5m wide with splays at the north-eastern end of the frontage, leading to a ramp down to basement floor level.

- **Basement**
  A basement level, with a maximum height above ground level of 1.2m, as permitted, will accommodate 10 car spaces, i.e. 2 per dwelling, plus 1 visitor car space, i.e. total 11 car spaces.

  The ramp will transition in gradient from the frontage down to 1:14, to 1:8, 1:6, and 1:10 before the basement floor level.

  In addition the basement will include:
  - Individual private storage rooms for each townhouse
  - Bin storeroom for waste and recycle bins adjacent to the ramp up to street level
  - Bicycle storage
  - A main stair form the basement area to the front site entry gate for access to the walkway
  - A stairway up to the common property access pathway at ground level at the rear of this level for Dwelling 5, for access to all Dwellings
  - A private stairway up to Dwelling 5
  - A lift for Dwelling 1

- **Ground Floor**
  The ground floor building footprint would have the following setbacks to boundaries:
  - Front (North-West side), 4.0m to Dwelling 1
  - North-East side, 2.0m for Dwellings 2, 3, 4 and 5, with Dwelling 1 setback 1.8m.
  - South-West side, 2.0m for all Dwelling

  The Dwellings 2-5 would include front entry door to a hall, and a combined kitchen, dining, and living room, and stairs to the first floor above a toilet.

  Dwelling 1 would have two bedrooms plus a study/bedroom and bathroom.

  Dwelling 5 would have its main bedroom at this level.

  All dwellings would be accessed from a common property walkway on the south-west side of the building with gateway to Bank Road. The walkway would have a timber slatted ramp and balustrade, in the front setback, to make up height difference between street level and dwelling entry level.
Dwelling 1 would have its private open space at first floor level.

Dwellings 2, 3, and 4 would have 22 sq.m courtyards, and Dwelling 5 a 18 sq.m courtyard, in the north-eastern setback area off the living/dining areas.

- First Floor
  Dwellings 2, 3, and 4 would have three bedrooms, and Dwelling 5 two bedrooms at this level.

  Bedroom 1 would have an en-suite bathroom.

  Bedrooms 2 and 3 would share a separate bathroom.

  The north-east facing Bedroom 1 and 2 windows of Dwelling 2 and 3 would have privacy screens up to 1.7m high.

  Dwelling 1 would have a 23 sq.m terrace directly off the northern corner of the living/dining area.

  There would be stairs to the Roof Deck above.

  The setbacks to boundaries for this level would be
  - North-West, 4.00m
  - North-East, 1.20m and 2.00m, with privacy screens to east-facing window to Dwelling 4
  - South-West, 2.30m with privacy screens to all south-west-facing windows of Dwellings 2, 3, and 4, and obscure glazing to windows of Dwellings 1 and 2
  - South-East, 3.00m, with privacy screen to light court of Dwelling 5

- Roof Deck
  Each dwelling would have a roof deck area recessed from all its boundaries.

  Dwelling 1 would have 40.00sq.m, and setback from the front edge of the roof by 1.20m and from the south-west edge of the roof by 4.70m, and 1.10m from the north-eastern edge. It would be 2.30m from the boundary. It would have a 1.80m high privacy screen on the east side.

  Dwellings 2, 3, 4, and 5 would have 17.00sq.m decks all setback 1.80m from the north-eastern edge of the roof (3.50m from the site boundary) and 1.30m from the south-western edge of the roof (4.70m from the site boundary).

  These four dwelling decks would have 1.80m high privacy screens on the north-east and south-east
sides.

The south-western side of the roof decks, with views to the Bay, do not need privacy screens because any potential view down to windows or private open spaces of No. 6 Bank Road, at first floor level, are beyond 9.0m, and at ground floor level are cut off by the intervening roof edge.

Dwelling 5 would also have an outrigger screen 2.0m high to prevent south-eastern views out from the light court window at first floor level, towards the rear of 3A Turakina Avenue.

- **Landscaping / Open Space**
  The footprint of the development will enable at ground level:
  - Private open space (terrace) for Dwelling 1 on the north-west and north-east sides
  - Private open space (courtyard) for Dwellings 2, 3, 4, and 5 on the north-east side, adjacent to living/dining areas.

All these areas will have good access to sunlight with the northern and eastern orientation, and will enable planting of trees and shrubs especially in the front (north-west) setback to Bank Road for Dwelling 1, and shrubs in private courtyard areas of Dwelling 2, 3, 4, and 5.

There will also be a planting strip along the south-western boundary for espaliered plants in the common property access pathway area.

- **Fencing**
  The majority of the frontage will be open, with the timber access ramp and balustrade, leading to the south-west side security gate and common walkway. The front wall to the garden of Dwelling 1 will be setback 2.00m from the frontage will comprise the steel grill roller door 3.30m wide to the basement ramp.

The south-west boundary will have a concrete block wall rendered and painted, 3.2m high which also makes up for the 0.9m level difference down to ground floor level of No. Bank Road. The remaining length of the north-east boundary will have open steel mesh 2.0m high to enable vertical planting to act as a screen between properties, extending this existing fence type.

The south-east boundary is to the existing brick wall will be re-built along the full length of the boundary and which extends up to the proposed eave line of the ground floor.
4.3 Design Response

The design responds to the site and neighbourhood, as follows:

- The site is located in the functional area of the local Edithvale activity centre, with a Commercial 1 zoning. It is at the transition between the commercial and residential uses to the west, north, and south, where it is appropriate to have higher density multi-unit dwellings, and which can take advantage of shops and other services, and rail station access.

- The two storey townhouse form of multi-unit development will respond well to the commercial strip, as well as the mix of houses and units in Bank Road and Turakina Avenue adjacent to the site.

- The common entry pathway for the townhouses will be appropriate as it achieves a secured separate entry to each unit off a landscaped setback area.

- The vehicle access off Bank Road will be the sole vehicle access, in similar position to and replacing the existing crossover to the site, with vehicle access via a short section of Bank Road direct to Nepean Highway.

- The two storey built form will respond well to the prevailing two storey scale of adjacent dwellings.

- The provision of a roof deck, facing north-east and south-west, will enable good views of Port Phillip Bay, which is a major amenity feature of this site.

- All of the five townhouses will be generous size three bedroom units with floor areas of 135 sq.m, to 148 sq.m, and will provide for a variety of household types.

- The townhouse (Dwelling 5) adjacent to the boundary No.3A Turakina Avenue, will be setback 3.0m at first floor level and with privacy screening to the sole light court window facing that boundary, to ensure the amenity of that dwelling, and the rear yard of No. 284 Nepean Highway are not adversely affected.

- The existing brick wall (4.21m high) on the boundary with No.3A Turakina Avenue, will be rebuilt, which enables the south wall of Dwelling 5 partly to abut it without any amenity impact on the rear yard of that property.

- The north-east elevation first floor windows of Dwelling Nos. 4 and 5 will not have windows facing the boundary, and Dwelling 3 will have privacy screens on windows, to
protect the amenity of rear balcony of No. 282 Nepean Highway.

- The north-eastern sides of roof decks to Dwelling 1-4, and north-eastern and south-eastern sides of decks to Dwelling 5 will have 1.80m high privacy screens to prevent views to rear of adjacent properties.

- Each townhouse will have two dedicated car spaces and a visitors space to ensure a high level of parking demands will be met off-street.

- The site has previously (Dec. 2012) been approved for eight (8) apartments in a two-storey building, which was a much more intense development.

### 5.0 Planning Issues

#### 5.1 Planning Policy Framework

- **Cl.11.01 Victoria**

  The development is to be on a site which is a functional part of the Edithvale Village neighbourhood activity centre, and is at the transition between the commercial and residential uses in the C1Z and GRZ2 respectively.

  The development and use will be directly supporting the strategy for developing a network of activity centres, including vibrant major and neighbourhood activity centres, of varying size, role, and function.

- **Cl.11.03 Planning for Places**

  The development will directly support the objective for activity centres to encourage the concentration of major retail, residential, etc, developments into activity centres.

  It will particularly support the strategies for providing different types of housing including forms of higher density housing, and is connected by transport.

- **Cl.12.02 Coastal Areas**

  The development will not affect the objective for conservation, and enhancement of coastal area, and the strategy for protection and enhancement of coastal biodiversity and ecological values, as the site is well separated by approximately 90m from the coastal strip by intervening residential development.

- **Cl.12.05 Significant environments and landscapes**
Similarly, the development will not affect the objective to protect and conserve environmentally sensitive areas, including Port Phillip Bay and foreshore.

- Cl.13.01 Climate Change Impacts

The development site is well back from the foreshore, such that coastal erosion will not be an issue and the site is set well above the predicted levels for coastal inundation.

- Cl.15.01 Built Environment

The development will be consistent with Cl.15.01-2S Building Design objective and strategies.

In particular it will respond to the scale and form of its location, not detrimentally impact on adjacent properties, and enhance the amenity of the public realm, and public safety. Currently the large vacant site detracts from its setting and the amenity of adjacent commercial and residential uses.

- Cl.15.02 Sustainable development

The development will achieve the strategy for consolidation of urban development, and integration of land use and transport, being on a large site in a local activity centre served by a rail station.

Walking and cycling to local shops and other services will be very easy and direct.

- Cl.16.01 Residential development

The development will be in accordance with the strategies under Cl.16.01-2S Location of Residential Development, by increasing the proportion of new housing in an established urban area, and on a site well located in regard to services and transport.

It will also be consistent with the strategies under Cl.16.01-2R Housing Opportunity Areas – Metro. Melbourne, by developing additional housing in a neighbourhood Activity Centre and very near an existing railway station.

It will also directly support the strategies for Cl.16.01-3S Housing Diversity, with regard to:

- respecting neighbourhood character
- improving housing choice
- making better use of existing infrastructure
- improving energy efficiency of housing
5.2 Local Planning Policy Framework

The proposed development and use will be consistent with the following policies.

5.2.1 Municipal Strategic Statement

- Cl.21.03 Land Use challenges for the new millennium

  The policy notes the ageing population in the municipality, and the need to providing suitable housing stock. The townhouses will assist the stock of multi-dwelling units in an area with a high proportion of single dwellings.

  The location, at the interface with the commercial uses in the Edithvale activity centre, will enable it to be consistent with its mixed character, and also that of the adjacent residential area.

- Cl.21.04 Vision

  The Strategic Land Use Framework Plan identifies locations for promotion of medium to high density housing opportunities.

  The area around the Edithvale neighbourhood activity centre is shown as an: “Area for promotion of Increased Housing Diversity” as well as part of the “Foreshore/Residential Environs Area”. The development will reinforce this policy, by providing more medium density dwellings.

- Cl.21.05 Residential Land Use

  The policy notes the changing demographics and need for greater housing diversity, and for accommodating more households. The policy also recognises areas of the municipality that are suitable for redevelopment taking account of local conditions.

  The site is part of an “Increased Housing Diversity area” where new medium density housing with a variety of housing types and layouts will be promoted, whilst being sensitive to the existing residential context.

  The proposed development is wholly in line with this policy.
With regard to the specific policy objectives, it is noted that the development will:

- contribute to the range of housing types, recognising the encouragement for development of transitional sites such as this on the periphery of the commercial uses in the activity centre

- respect the local neighbourhood character which varies from the commercial strip along Nepean Highway to the residential area between the activity centre and the foreshore, and will be of a high quality design

- not require any vegetation impact, given the site is currently cleared

- through its design, contribute to energy efficiency and environmental sustainability, and provide medium density housing adjacent to the Edithvale train station

- not effect the more sensitive Bay foreshore area, being screened by intervening residential two storey development

- be able to take advantage of existing urban infrastructure, and provide for all normal off-street parking, and usable private open space areas for each townhouse

- be able to take advantage of existing commercial and social infrastructure in the Edithvale activity centre, including direct access to the rail station.

- Cl.21.06 Retail and Commercial Land Use

The strategic directions for the Edithvale Neighbourhood Activity Centre includes:

"Promote a wider mix of commercial, retail, residential, and community facilities to enhance their attractiveness as local community centres."

The site is well suited for such complementary residential use, and not required for commercial use, being away from the centre’s prime retail and office frontage to Nepean Highway.

- Cl.21.08 Foreshore
Key issues include increased pressures for development adjacent to the foreshore, and need to protect environmentally and visually sensitive areas from inappropriate development.

The development will be well setback by approximately 90m from the sensitive foreshore area, and screened by intervening two storey development.

5.2.2 Local Policies

- Cl.22.11 Residential development

The policy highlights the required criteria of access to activity centres and public transport for the designated “Increased Housing Diversity” areas, including the site and immediate environs.

These areas under the Kingston Residential Strategy 2000 offer the most scope for development in established urban areas to meet increased housing needs.

The site is within the Increased Housing Diversity areas, which encourage increased residential densities and wider diversity of housing types, which are within convenient walking distance of activity centres and public transport. The development will fit within a mixed character context being a transition site between the commercial and residential uses.

The proposed two storey built form will integrate well with the prevailing two storey houses, townhouses and apartments in the immediate environs. The development will include measures to avoid overlooking of adjacent residential development.

The required level of on-site car parking will be met for the five townhouses.

Only one crossover will still be needed.
5.3 Zoning

The Commercial 1 zone (C1Z) would allow a large range of commercial uses, including retail and office-type uses, in accordance with the primary zone purpose to create vibrant mixed use commercial centres.

The proposed residential use will avoid potential conflicts associated with commercial uses, which could otherwise be developed on this site, at the interface with the extensive residential area.

The proposed use and development will be directly in line with the other specific purpose to provide for residential uses at densities complementary to the role and scale of the commercial centre, with the two storey townhouses being wholly consistent with this neighbourhood activity centre.

Although the Dwelling use is Section 2 – Permit required in this application, this is only because it is not part of the C1Z retail frontage (where only doorways to residential uses are permitted), where it would otherwise be in competition with shopfronts, and has greater freedom for ground level frontages.

In terms of its suitability, it should be regarded as a Section 1 use, in the C1Z.

As noted, the policy framework strongly supports higher density residential use in, or peripheral to, existing activity centres.

5.4 Overlays

- DD01 Urban Coastal Height Control Area

  The proposed development will be two storeys.

  There will also be rooftop terraces for all townhouses, with covered stairwell access, which is not counted as a separate storey. The development thus complies with the mandatory height requirement, in order to protect and enhance the foreshore environment.

- DD07 Urban Coastal Foreshore Setback Control Area

  The site and proposed development will be well setback from the foreshore boundary some 90m to the west, and thus will not be affected by this control, which relates to a required foreshore boundary building setback of 4.5m

With regard to the decision guidelines for use and development in the Commercial 1 zone (C1Z), it is noted as follows:
5.5 Interface with adjoining zones

The site frontage and both side boundaries are adjacent to properties within the C1Z. The only abuttal to a GRZ2 comprises the rear site boundary to short sections of the properties at 284 Nepean Highway, and 3A Turakina Avenue. Privacy measures have been proposed in relation to these rear yard areas.

5.6 Land Use

As noted, although technically a discretionary use in the Commercial 1 zone (C1Z), the site is surrounded on three sides by existing, and proposed (No. 6 Bank Road) residential development.

The site could potentially be developed and used (subject to permit) alternatively for e.g. office, shop, trade supplies, hotel, convenience restaurant, etc., and in the context of its previous commercial use. Clearly residential use would be the least impact option on the neighbourhood.

5.7 Connection to Services

The site is well provided with a full range of engineering services (water, sewer, drainage, power, gas, & telecom) and which the development can take immediate advantage of.

5.8 Traffic Generation

The proposed five townhouses, each with two car spaces, will generate significantly less traffic than an alternative commercial development of the site, and anyway at a relatively low level.

The overall car ownership and traffic generated will be mitigated by the close proximity to the Edithvale rail station.

The only vehicle access point will be to Bank Road, within the C1Z activity centre, and only a short distance of approximately 35m from Nepean Highway. Consequently traffic will not conflict with traffic around the intersection of Turakina Avenue with Bank Road.
5.9 Pedestrian and Cycle Movements

The townhouses will have individual entries directly off the secure common property walkway.

All entries will be off the ramped walkway from ground level, and meeting mobility impaired user requirements with no steps.

Bicycles can access the Basement level and be stored in the individual townhouses' storage rooms, or bike racks as provided.

5.10 Waste Storage and Removal

All waste and recycle bins would be kept in a separate bin store room in the Basement, and which would be wheeled via the ramp to the kerbside of Bank Road, for collection by Council truck.

5.11 Car Parking

The provision of two (2) car spaces for each of the five townhouses plus one visitor car space, will fully comply with the requirements of Cl.52.06.

The car spaces and aisle dimensions will also meet the requirements of this clause.

If required, a traffic signal could be installed at the start of the ramp down to the basement to ensure no conflicts between entering and exiting vehicles.

5.12 Streetscape and Fencing

The proposed development will be at the transition between the commercial character of the activity centre, and the residential area to the north and west.

It will contribute a residential character reinforcing that of the apartment development at No. 6 Bank Road, and the residential streetscape opposite and to the west.

It will have a two storey built form similar to existing adjacent two storey houses, townhouses, and apartments.

The front setback will include a 2.0m wide significant landscaped area with shrubs extending above the front wall, and the timber walkway ramp 2.0m wide to complement front gardens of opposite dwellings, and to reinforce the residential character of the streetscape to the south-west.
There will not be a fence on the front boundary, rather most of the frontage will comprise the timber walkway ramp and balustrade, which will result in a porous interface with the street. The vehicle access grille roller door will only be 3.30m wide, or 23% of this frontage.

5.13 Responsibility for Maintenance

The townhouses and accessory car spaces will all be on separate title, with responsibility for maintenance of all built and landscaped areas within each lot resting with the individual owners.

The area of common property on the north-west and south-west sides of the site, to accommodate a pedestrian walkway deck, and appurtenant landscaping, the car park ramp, visitor car space and basement aisle, will be the responsibility of the Owners Corporation to maintain, funded from Owners Corporation fees paid by owners, with work carried out by private contractors.

5.14 Cl.55 Objectives and Standards

As previously noted, this application is not subject to Cl.55 objectives and standards as the site is not within a residential zone, however Council must give consideration to them as part of the decision guidelines.

The following Cl.55 matters are considered the most relevant:

- Neighbourhood Character (B1)

  The site is located in a transition area within the western part of the activity centre, with commercial buildings along Nepean Highway, and the residential area between the commercial strip and the foreshore.

  The existing character is thus quite mixed with both commercial and residential elements.

  The development will reflect the residential character consistent with the GRZ2 containing mainly two storey dwellings (houses, units, and townhouses) to the north-west, south-east and north-west.

- Residential Policy (B2)

  (Refer (5.1 & 5.2)
• Dwelling Density (B3)

The proposal for only five large (135 sq.m – 148 sq.m) 3 bedroom townhouses is a relatively low dwelling density compared with the previously approved eight apartments on this site, (Planning Permit in 2012, KP893/2010) and the 16 apartments being constructed at No. 6 Bank Road which is twice the site area.

Such density is entirely appropriate to its activity centre location, and with recognition that the two storey limit imposes a significant constraint on development.

• Integration with the street

The site is only 14.325m wide, thus any development will have a relatively limited presentation to the street.

The front elevation will be setback 4.0m and include the pedestrian access ramp and balustrade at ground floor, and first floor terrace and windows to provide strong articulation.

Ground floor front gardens will provide landscaping to soften the footpath/building interface. The front wall beyond the pedestrian ramp will be a fence maximum 2.40m high and only occupying 49% of the frontage width.

• Street Setbacks (B6)

The 4.0m street setback will be appropriate given the relatively small setback of the approved development to the north-east at 278-279 Nepean Highway, and No. 6 Bank Road which will have a 3.0m setback. (Refer TP 2.1)

It will be consistent with the general residential area setbacks of houses and multi-unit residential development opposite and to the south-west.

It is also noted that the site is essentially a transition site between the commercial strip where smaller or nil setbacks apply, and the residential area.

• Building Height (B7)

The height to the flat roof top in the centre of the Bank Street frontage would be 7.9m to parapet level and roof deck level above the first floor, well below the 9m standard, although recognising that the height limit is set by DDO1 at two storeys.

The roof terrace access structures for the five townhouses will rise to 10.60m, however these will only be narrow protrusions above the roof level, and occupying a
relatively small footprint on the roof, well recessed from roof edges and the street frontage and dwelling / site boundaries, and will not be major elements in the overall building form.

- Site Coverage (B8)

The overall site coverage will be 70%, in excess of the 60% standard, however with recognition of the transition nature of the site, with adjacent commercial properties having higher site coverages.

- Site Permeability (B9)

The site permeability will be 77% confined basically to the front setback area. The basement level extent will limit balance of the site permeability.

- Safety (B12)

All townhouses will have their own entry doors via the secured common walkway on the south-west side of the development, which will require intercom access.

There will be a secured remote controlled gates at the basement entry for access to the dedicated car spaces.

There will be direct internal access from the basement car park to the dwelling entries, including direct access for Dwelling 5.

- Landscaping (B13)

There is no remnant vegetation on this former commercial site. The setback areas included in the private front garden and courtyards for all dwellings, and the common area walkway, will enable planting on all three sides of the development, including medium size shrubs.

- Vehicle Access (B14)

The sole access crossover 4.0m wide to Bank Road (including splays), will replace an existing crossover and represent only 30% of this frontage width, which will be below the 33% standard.

- Parking Location (B15)

All parking spaces will be provided in the secure Basement. The private car spaces will have direct access to the common walkway to dwelling entries on the ground floor, including directly to Dwelling 5.
Side and Rear Setbacks (B17)

It is noted that this site in the C1Z could be developed for a commercial use without building setbacks. The principal role of setbacks is to assist on-site amenity for residential use.

The general 2.0m setback to the west boundary at ground floor level and 2.30m setback at first floor level will meet the standard of 3.0m at ground floor level (which is above natural ground level).

The first floor will be setback 2.30m which will meet the standard up to the eave line and opposite the setback of 3.0m on the two storey apartment building at 6 Bank Road (under construction). There will therefore be quite adequate building separation for daylight/sunlight for both residents amenity.

The setback of 1.20m/1.80m to the east boundary for Dwelling 1 will not comply, but will be opposite rear yard car parks for commercial properties facing Nepean Highway (Nos. 278/279 and 280/281) where there will not be any amenity issue of visual intrusion or shading.

There will be only a relatively small length of Dwelling 1 (5.0m) at the first floor level with the remainder being the open terrace. All other dwellings will have a 2.0m setback at first floor.

The 3.00m setback of the first floor level of Dwelling 5 form the south boundary will comply with the standard of 3.0m (refer South-West Elevation Drawing).

Walls on Boundaries (B18)

The existing wall on the north-east boundary with No. 282 Nepean Highway, and the walls on the south boundary with No. 284 Nepean highway and 3A Turakina Avenue, has facilitated the ground floor level of Dwelling 5 being able to be partly built up to these boundaries, without affecting these abutting properties outlook or amenity.

The only part of the new development which will be built up to these walls on boundary will be Bedroom 1 of Dwelling 5 (3.6m x 4.0m)

There will not be any new lengths of walls on these boundaries.

The standard therefore is not really relevant in this case.

Daylight to existing windows (B19)
• North Facing Windows (B20)

Given the existing walls on boundaries as described above, and the existing south-east boundary wall being opposite the rear yards of No. 284 Nepean Highway and No. 3A Turakina Avenue rather than its north facing windows, there will not be any change in daylight.

• Overshadowing Open Space (B21)

The extent of shading to the south-east will be generally determined by the height of the existing boundary walls with regard to rear private open spaces of No. 284 Nepean Highway and No. 3A Turakina Avenue.

The usable rear yard and amenity of No. 284 is basically within the roofed and enclosed deck, rather than small open areas.

The shading to the east will be partly across the rear car park areas of Nos. 278/279 and 280/281 Nepean Highway.

The first floor balcony of No. 282 will still receive good sunlight exposure due to its elevated position relative to the proposed first floor and its setback 2.0m from the east boundary.

There will be some shading to the west of ground floor terraces and first floor balconies of units on the east side of No. 6 Bank Road, however this side setback area 3.0m wide has a northerly orientation and the south-western elevation of the proposed development stepped back away from this boundary, so will receive good sunlight exposure around late morning/early afternoon.

• Overlooking (B22)

To the north-east the site abuts rear yard car parks of No. 278/279 approved development, and the car parks and shop/dwelling buildings at Nos. 280/281 Nepean highway, which are setback approximately 18m, so that there will be no impact on the amenity of these dwellings at first floor level due to overlooking or visual intrusion.

The rear balcony of No. 282 Nepean Highway will be protected from overlooking by the lack of any windows to Dwelling 5 north-east wall and windows of Dwelling 4 facing north-west so that no views towards this adjacent balcony will be possible.

To the south there will not be any windows to Bed 2 or Bed 3 of Dwelling 5 at first floor level, to prevent overlooking of rear yards of Nos. 284 and No. 3A Turakina Avenue.
The windows the light court of Dwelling 5 will have a privacy screen 2.0m high in front of the light court to prevent views out.

To the south-west, all the windows at first floor level on this proposed building elevation will have privacy screens up to 1.7m high or obscure glazing of windows to prevent views down to the ground floor terraces and to first floor balconies of No. 6 Bank Road apartments.

At ground floor level there will be a 3.2m high boundary fence to prevent any views into the terraces and windows of the ground floor of No. 6.

This is necessary to accommodate the existing 900 ground floor level difference with No. 6 so that the fence will be 2.3m high on the site south-west boundary.

- Internal views (B23)

The individual townhouses courtyards in the north-eastern setback area will have 2.0m high screens between them to prevent views between abutting courtyards.

- Noise (B24)

Air conditioning/heating condenser units will be located on the roof decks, and screened from view.

These roof deck locations will be well removed from other adjacent dwellings, which will significantly reduce potential noise. Such equipment is anyway subject to EPA Residential Noise Regulations.

Any incidental noise associated with vehicle movements will be contained within the enclosed Basement level.

- Accessibility (B25)

All dwellings will be single vertical occupancy, and all will have at-grade ground level direct access from the street via the low gradient ramp to the south-western walkway, with no steps to negotiate.

Dwelling 1 will also have direct lift access to all levels.

- Dwelling Entry (B26)

All dwellings will gain access via the south-western walkway, which will still have a prominent and secured entry gate at the top of the ramp, which will be easily identified on the Bank Road frontage. All dwelling entry doors will be directly off that walkway.
- Daylight to new windows (B27)

Dwellings 2 – 4 will have daylight from two sides, with good east / west orientation, and Dwelling 5 will also have northerly daylight at the ground and first floor level.

Dwelling 5 will also have daylight from two sides at ground floor level, and from the south-east side at ground and first floor level. All windows will be of a generous size for good daylight penetration.

- Private open space (B28)

All dwellings will have a good supply of private open space.

Dwellings 2 – 4 will have 22 sq.m courtyards at ground level, off living areas marginally less than the 25 sq.m standard. Dwelling 1 will have a 12 sq.m front garden area off Bed 2 and Bed 3, and a 23 sq.m terrace off the living area at first floor level.

Dwelling 5 will have an 18 sq.m courtyard off the living area and 8.0 sq.m light court at first floor level.

A secluded private roof deck will also be available to all dwellings for an elevated view towards the Bay, and additional private open space, of approximately 17 sq.m, with Dwelling 1 to have 40 sq.m.

This represents a generous supply of private open space, even by residential zone standards.

- Solar Access to Open Space (B29)

Given the general north-south orientation of the row of townhouses, they will receive sunlight to windows and courtyard open spaces particularly around late morning / early afternoon, and sunlight to the roof decks throughout the day.

- Storage (B30)

Each townhouse will have a separate storage room in the Basement.

- Site Services (B34)

All building services will be concealed.

The mailboxes and meters for site services will be provided in the off-street area at the entry point from the street. A water tank will be provided in the Basement for integration of the front garden area.
All waste and recycle bins will be stored in the separate and enclosed bin store room in the basement outside collection times.

6.0 Conclusions

The proposed use and development will be wholly in accordance with the planning policy framework, and C1Z zone purposes, in that it will be a higher density residential development within the functional Edithvale neighbourhood activity centre, with excellent access to services and transport.

It will generally comply with Cl.55 objectives and standards, as if it were in the adjacent residential zone, and will complement the apartment development next door at No. 6 Bank Road.

It will not have any adverse amenity effects on adjacent residential uses, and will fully comply with car parking requirements.
SUSTAINABLE DESIGN ASSESSMENT

Client: Marwal Nominees
Project: 4 Bank Road, Edithvale
Subject: Sustainable Design Assessment

Date: 28/02/2019
Project Number: GIW18114
Revision: B
Introduction

The following Sustainable Design Assessment (SDA) has been prepared for the proposed multi-dwelling residential development at 4 Bank Road, Edithvale. This assessment responds to City of Kingston sustainability objectives and obligations.

The development has been assessed using the Built Environment Sustainability Scorecard (BESS) tool. The BESS tool addresses nine key environmental categories as follows:

- Management
- Water
- Energy
- Stormwater
- IEQ
- Transport
- Waste
- Urban Ecology
- Innovation

Sources of Information

The Sustainable Design Assessment (SDA) is based on the following documentation:

Architectural Drawings by: Vladimir Chernov Architect
Job/Project No: -
Drawing No: TP3A-TP6A

Revision History

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Report Prepared by:
Project Consultant

Ines Buskermolen
ESD Consultant

Report Approved by:
Project Team Leader

Gary Wertheimer
Director
ESD Assessment

The project achieves a total BESS score of 54% with no mandatory category (IEQ, Energy, Water, Stormwater) below 50%. The proposed development can therefore be defined as achieving ESD ‘Best Practice’ (50%-69%). Refer Appendix C – BESS Assessment.

The following ESD initiatives will be implemented in the proposed development at 4 Bank Road, Edithvale. All initiatives are to be suitably incorporated in the project documentation i.e. architectural, landscape, hydraulics and civil engineering.

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<th>BESS Category</th>
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| Management    | • A Building User’s Guide will be provided to the residents explaining the correct use of installed fittings and fixtures, equipment and building systems.  
• Electricity, gas and cold water metering is to be provided to each townhouse. |
| Energy        | • The proposed development will target an average 6.0 Stars NatHERS rating with no unit achieving below 5 Stars. Refer Appendix A – Preliminary Energy Rating Results.  
• External lighting will be controlled by motion detectors.  
• Artificial lighting is to be generally high efficiency LED type.  
• Lighting power density shall be as follows:  
  • Dwelling: No greater than average 4W/m²  
  • Veranda/balcony/terrace: No greater than average 3W/m²  
  • Back of house and indoor car parks: No greater than average 5W/m²  
• Hot water is to be provided via individual instantaneous gas hot water systems. The efficiency of the gas water heater should not be less than 80%.  
• High performance thermal envelope in conjunction with high efficiency HVAC systems and lighting systems reduce energy demand at peak times.  
• Inverter split system units are to be installed and sized to maintain conditions of the main living areas. Systems are to be within 1 star of the best available under the post April 2012 Minimum Energy Performance Standards (MEPS).  
• The proposed development is to be provided with outdoor clothes lines on each roof deck. |
| Water         | • Water efficient fixtures are applied throughout:  
  • WELS 4 Star Toilets  
  • WELS 6 Star Taps |
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|               | • WELS 4 Star Showerheads  
|               | • WELS 5 Star Dishwashers  
|               | • Options for a ≥3 Star Washing Machine will be included in the building user guide  
|               | • Water collected from the roof areas will be directed into a 13,000 litre rainwater tank connected to all WC’s. Refer Appendix B – WSUD Response. |
| Stormwater    | • A 101% STORM score is achieved. Refer Appendix B – WSUD Response for mark-up of collection and impervious areas, STORM Report and maintenance manual. |
| IEQ           | • Double glazing or better will be applied to all windows.  
|               | • Shading strategy:  
|               | • North-east oriented windows at ground floor will be shaded by the overhanging floor above.  
|               | • North-west oriented windows at ground floor will be shaded by a combination of the overhanging roof and privacy wall and landscaping.  
|               | • North-east oriented windows at level 1 will be shaded by screens and wing walls.  
|               | • North-west oriented windows at level 1 will be shaded by the overhanging roof.  
|               | • North-west oriented windows at level 2 will be shaded by 1.2m deep roof overhang.  
|               | • All of the living areas will be oriented to the north-east or north-west.  
|               | • All of the development’s living and bedroom areas are naturally cross-ventilated with windows on opposite or adjacent facades or effectively single sided ventilated. |
| Transport     | • 5 secure bike parking spaces are located at basement.  
|               | • The proposed development is in close proximity of Edithvale train station and buses 706 and 858. |
| Waste         | • General and recycling waste options will be accessible to all occupants.  
|               | • The builder will implement a waste management plan to ensure that at least 80% of construction and demolition waste (by mass) is recycled. |
| Urban Ecology  | • 10% of the development site will be covered by vegetation. The majority of vegetation provided is to be of native species.  
<p>|               | • All townhouse POS will be provided with an outdoor tap at ground floor courtyard and roof terrace. |</p>
<table>
<thead>
<tr>
<th>BESS Category</th>
<th>ESD Initiatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation</td>
<td>• Shutdown switches are to be provided to all townhouses. The shutdown switches are to be connected to all lighting.</td>
</tr>
</tbody>
</table>
Appendices

Appendix A – Preliminary Energy Rating Results

The National Construction Code (NCC) Class 2 – Sole Occupancy Unit(s) residential building component is to be designed in accordance with NCC Section J (2016) NatHERS requirements. The residential units must achieve a minimum 6 Star rating. The sample ratings below demonstrate the ability to achieve the required star rating.

<table>
<thead>
<tr>
<th>Townhouse No.</th>
<th>ACE Total MJ/M²</th>
<th>ACE Heating</th>
<th>ACE Cooling</th>
<th>ACE NCFA</th>
<th>Star Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit 1</td>
<td>148.2</td>
<td>112.1</td>
<td>36.1</td>
<td>130.3</td>
<td>5.4</td>
</tr>
<tr>
<td>Unit 2-4</td>
<td>105.3</td>
<td>82.9</td>
<td>22.4</td>
<td>121.7</td>
<td>6.6</td>
</tr>
<tr>
<td>Unit 5</td>
<td>149.8</td>
<td>124.6</td>
<td>25.3</td>
<td>126.1</td>
<td>5.4</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>122.8</strong></td>
<td><strong>97.1</strong></td>
<td><strong>25.7</strong></td>
<td><strong>124.3</strong></td>
<td><strong>6.1</strong></td>
</tr>
</tbody>
</table>

Construction assumptions for preliminary FirstRate ratings are listed below. Note, these assumptions are based on the sample of townhouses assessed and may vary throughout the development. These assumptions are not to be relied upon for any other purpose beyond Town Planning assessment.

<table>
<thead>
<tr>
<th>Element</th>
<th>Material</th>
<th>Insulation Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floor</td>
<td>Suspended Concrete Slab</td>
<td>R2.5</td>
</tr>
<tr>
<td>Floor (where exposed below)</td>
<td>Timber Framed</td>
<td>R2.5</td>
</tr>
<tr>
<td>External Walls</td>
<td>Concrete</td>
<td>R1.8</td>
</tr>
<tr>
<td>External Walls</td>
<td>Lightweight</td>
<td>R2.5</td>
</tr>
<tr>
<td>Roof</td>
<td>Metal Framed Deck</td>
<td>R4.1+R1.3</td>
</tr>
<tr>
<td>Fixed Windows</td>
<td>Aluminium framed, Double glazed, Argon filled, Low-E, Clear</td>
<td>Total System:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- U-Value: 2.71</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- SHGC: 0.58</td>
</tr>
<tr>
<td>Sliding Doors</td>
<td>Aluminium framed, Double glazed, Argon filled, Low-E, Clear</td>
<td>Total System:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- U-Value: 3.19</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- SHGC: 0.48</td>
</tr>
<tr>
<td>Awning Windows</td>
<td>Aluminium framed, Double glazed, Argon filled, Low-E, Clear</td>
<td>Total System:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- U-Value: 4.52</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- SHGC: 0.31</td>
</tr>
<tr>
<td>Opaque Windows</td>
<td>Aluminium framed, Double glazed, Argon filled, Low-E, Opaque</td>
<td>Total System:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- U-Value: 2.71</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- SHGC: 0.34</td>
</tr>
</tbody>
</table>
Appendix B – WSUD Response

Site layout Plan

The following architectural mark-up illustrates the rainwater collection and impervious areas of the proposed development site.

![Site layout Plan](image)

**Figure 1 - Mark-up of water catchment and impervious areas**

**STORM Rating Report**

A STORM rating of ≥100% can be achieved by implementing the following initiatives:

- Rainwater collection off the roof areas is to be directed into a 13,000 litre rainwater tank connected to all WC’s and landscape irrigation.

Melbourne Water has developed the Stormwater Treatment Objective- Relative Measure (STORM) Calculator as a method of simplifying the analysis of stormwater treatment methods. The STORM Calculator displays the amount of treatment that is required to meet best practice targets, using WSUD treatment measures.

The best practice standards have been set out in the Urban Stormwater Best Practice Environmental Management Guidelines (Victoria Stormwater Committee, 1999) for reduction in total suspended solids (TSS), total phosphorus (TP) and total nitrogen (TN) loads.
The STORM Result is provided below:

**STORM Rating Report**

- **Transaction ID:** 734823
- **Municipality:** KINGSTON
- **Rainfall Station:** KINGSTON
- **Address:** 4 Bank Road, Edithvale

**Edithvale**

**Vic 3196**

**Assessor:** GIW

**Development Type:** Residential - Multiunit

**Allotment Site (m2):** 644.30

**STORM Rating %:** 101

<table>
<thead>
<tr>
<th>Description</th>
<th>Impervious Area (m²)</th>
<th>Treatment Type</th>
<th>Treatment Area/Volume (m² or L)</th>
<th>Occupants / Number Of Bedrooms</th>
<th>Treatment %</th>
<th>Tank Water Supply Reliability (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roof</td>
<td>356.10</td>
<td>Rainwater Tank</td>
<td>13,000.00</td>
<td>15</td>
<td>167.20</td>
<td>82.80</td>
</tr>
<tr>
<td>Roof Terraces</td>
<td>118.50</td>
<td>None</td>
<td>0.00</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>GF Impervious</td>
<td>114.80</td>
<td>None</td>
<td>0.00</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

**WSUD Strategy**

The development will include the provision of a 13,000 litre rainwater tank and associated pump in the basement garage. The rainwater tank is to be connected to all WC’s and landscape irrigation.
Rainwater Reuse

Inputs

- Catchment Area: 356 sqm
- Number of Bedrooms: 15
- Bin Washout: No
- Irrigation Area: 63 sqm
- Tank Capacity: 13,000 Litre

Outputs

- % Served by Rainwater: 69.2%
- % Harvested Rainwater Used: 89.1%
- Total Potable Water Saved: 75,785 Litre

Rainwater Balance (Monthly Averages)

<table>
<thead>
<tr>
<th>Month</th>
<th>Rainwater Harvested (L)</th>
<th>Irrigation Demand (L)</th>
<th>WC Demand (L)</th>
<th>Bin Washout (L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>8,353</td>
<td>9,747</td>
<td>9,300</td>
<td>0</td>
</tr>
<tr>
<td>Feb</td>
<td>10,400</td>
<td>8,830</td>
<td>8,400</td>
<td>0</td>
</tr>
<tr>
<td>Mar</td>
<td>9,691</td>
<td>4,529</td>
<td>9,300</td>
<td>0</td>
</tr>
<tr>
<td>Apr</td>
<td>10,115</td>
<td>4,336</td>
<td>9,000</td>
<td>0</td>
</tr>
<tr>
<td>May</td>
<td>9,570</td>
<td>4,474</td>
<td>9,300</td>
<td>0</td>
</tr>
<tr>
<td>Jun</td>
<td>10,049</td>
<td>2,039</td>
<td>9,000</td>
<td>0</td>
</tr>
<tr>
<td>Jul</td>
<td>7,681</td>
<td>2,077</td>
<td>9,300</td>
<td>0</td>
</tr>
<tr>
<td>Aug</td>
<td>9,421</td>
<td>2,077</td>
<td>9,300</td>
<td>0</td>
</tr>
<tr>
<td>Sep</td>
<td>10,657</td>
<td>5,960</td>
<td>9,000</td>
<td>0</td>
</tr>
<tr>
<td>Oct</td>
<td>10,831</td>
<td>6,072</td>
<td>9,300</td>
<td>0</td>
</tr>
<tr>
<td>Nov</td>
<td>13,479</td>
<td>5,922</td>
<td>9,000</td>
<td>0</td>
</tr>
<tr>
<td>Dec</td>
<td>11,009</td>
<td>9,823</td>
<td>9,300</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>121,257</td>
<td>65,886</td>
<td>109,500</td>
<td>0</td>
</tr>
</tbody>
</table>

% Harvested Rainwater Used: 89.1%

Equivalent STORM tool: 9

Total Potable Water Saved: 75,785 Litre

Tank Sizing

Supply-Demand

<table>
<thead>
<tr>
<th>Supply</th>
<th>Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rainwater Harvested</td>
<td>121</td>
</tr>
<tr>
<td>WC Demand</td>
<td>66</td>
</tr>
<tr>
<td>Irrigation Demand</td>
<td>110</td>
</tr>
<tr>
<td>Bin Washout</td>
<td>0</td>
</tr>
</tbody>
</table>

Ref: GIW18114
Site Management Statement

Prevention of litter, sediments and pollution entering the stormwater system in the construction phase is to be addressed through introduction of the following initiatives:

- Buffer strips to pervert stormwater runoff.
- Gravel sausage filters at stormwater inlets to prevent silt, mud or any other site contaminant from entering the stormwater system.
- Silt fences under grates at surface entry inlets to prevent sediment from entering the stormwater system.
- Temporary rumble grids to vibrate mud and dirt off vehicles prior to leaving the site.
- The site is to be kept clean from any loose rubbish or rubble.
- Introduction of offsite construction for building elements where deemed appropriate.

The builder is to include these initiatives in the construction management plan and address these during site induction of relevant contractors.

Maintenance Program

The following maintenance requirements are to be programmed to ensure the rainwater tank operates effectively:

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Maintenance Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gutters and downpipes</td>
<td>Eave and box gutters are to be inspected and cleaned to prevent large debris from being washed into rainwater tank.</td>
<td>3 monthly</td>
</tr>
<tr>
<td>First flush system (as applicable)</td>
<td>Inspect and clean excess sediment from diverter chamber to prevent blockages.</td>
<td>3 monthly</td>
</tr>
<tr>
<td>Tank contents</td>
<td>Siphon the tank to inspect contents. If sludge is present, a plumber will be required to drain tank contents and clean the tank.</td>
<td>2 to 3 years</td>
</tr>
<tr>
<td>Tank structure</td>
<td>Inspect tank externally for leaks</td>
<td>Yearly</td>
</tr>
<tr>
<td>Pump system</td>
<td>Inspect pump wiring, plumbing and check for smooth operation.</td>
<td>6 monthly</td>
</tr>
<tr>
<td>Plumbing</td>
<td>Plumbing and fixtures connected to the rainwater tank is to be inspected for leaks.</td>
<td>Yearly</td>
</tr>
</tbody>
</table>
Appendix C – BESS Assessment

Your BESS score is +54%
Your BESS score is

+ 54%

50% + Best Practice

70% + Excellence

<table>
<thead>
<tr>
<th>Category</th>
<th>Score</th>
<th>Pass</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stormwater</td>
<td>100%</td>
<td>✓</td>
</tr>
<tr>
<td>IEQ</td>
<td>75%</td>
<td>✓</td>
</tr>
<tr>
<td>Transport</td>
<td>33%</td>
<td></td>
</tr>
<tr>
<td>Waste</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Urban Ecology</td>
<td>37%</td>
<td></td>
</tr>
<tr>
<td>Innovation</td>
<td>10%</td>
<td></td>
</tr>
</tbody>
</table>

Building Composition

Dwellings

<table>
<thead>
<tr>
<th>Type</th>
<th>Name</th>
<th>Quantity</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Townhouse</td>
<td>TH 1</td>
<td>1</td>
<td>143 m²</td>
</tr>
<tr>
<td>Townhouse</td>
<td>TH 2-4</td>
<td>3</td>
<td>135 m²</td>
</tr>
<tr>
<td>Townhouse</td>
<td>TH 5</td>
<td>1</td>
<td>148 m²</td>
</tr>
</tbody>
</table>

How did this Development Perform in each Environmental Category?
Sustainable design commitments by category

The sustainable design commitments for this project are listed below. These are to be incorporated into the design documentation and subsequently implemented.

### Management

50% - contributing 2% to overall score

<table>
<thead>
<tr>
<th>Credit</th>
<th>Disabled</th>
<th>Scoped out</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management 2.2 Thermal Performance Modelling - Multi-Dwelling Residential</td>
<td></td>
<td></td>
<td>100 %</td>
</tr>
<tr>
<td>Management 4.1 Building Users Guide</td>
<td></td>
<td></td>
<td>100 %</td>
</tr>
<tr>
<td>Management 2.2 Thermal Performance Modelling - Multi-Dwelling Residential</td>
<td></td>
<td></td>
<td>100%</td>
</tr>
</tbody>
</table>

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?
Management 4.1 Building Users Guide

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

<table>
<thead>
<tr>
<th>Credit</th>
<th>Disabled</th>
<th>Scoped out</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water 1.1 Potable Water Use Reduction (Interior Uses)</td>
<td></td>
<td></td>
<td>50 %</td>
</tr>
<tr>
<td>Water 2.1 Rainwater Collection &amp; Reuse (Additional Uses)</td>
<td></td>
<td></td>
<td>100 %</td>
</tr>
<tr>
<td>Water 3.1 Water Efficient Landscaping</td>
<td></td>
<td></td>
<td>100 %</td>
</tr>
</tbody>
</table>

Water Approaches

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

Project Water Profile Questions

Are you installing a swimming pool? Yes
Are you installing a rainwater tank? Yes

Water fixtures, fittings and connections

<table>
<thead>
<tr>
<th></th>
<th>TH 1</th>
<th>TH 2-4</th>
<th>TH 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Showerhead</td>
<td>3 Star WELS (&gt; 6.0 but &lt;= 7.5)</td>
<td>3 Star WELS (&gt; 6.0 but &lt;= 7.5)</td>
<td>3 Star WELS (&gt; 6.0 but &lt;= 7.5)</td>
</tr>
<tr>
<td>Bath</td>
<td>Scope out</td>
<td>Scope out</td>
<td>Scope out</td>
</tr>
<tr>
<td>Kitchen Taps</td>
<td>&gt; 5 Star WELS rating</td>
<td>&gt; 5 Star WELS rating</td>
<td>&gt; 5 Star WELS rating</td>
</tr>
</tbody>
</table>
**Rainwater Tanks**

<table>
<thead>
<tr>
<th>What is the total roof area connected to the rainwater tank?</th>
<th>356.1 Square Metres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tank Size (Litres)</td>
<td>13000.0</td>
</tr>
<tr>
<td>Irrigation area connected to tank (Square Metres)</td>
<td>63.0</td>
</tr>
<tr>
<td>Is connected irrigation area a water efficient garden?</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**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**

**Annual Water Consumption (kL) (Reference)**

867

**Annual Water Consumption (kL) (Proposed)**

607
### Water 2.1 Rainwater Collection & Reuse (Additional Uses)

<table>
<thead>
<tr>
<th>Score Contribution</th>
<th>This credit contributes 28% towards this section's score.</th>
</tr>
</thead>
</table>

**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

<table>
<thead>
<tr>
<th>Score Contribution</th>
<th>This credit contributes 14% towards this section’s score.</th>
</tr>
</thead>
</table>

**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

<table>
<thead>
<tr>
<th>Credit</th>
<th>Disabled</th>
<th>Scoped out</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy 2.1 Greenhouse Gas Emissions</td>
<td></td>
<td></td>
<td>100 %</td>
</tr>
<tr>
<td>Energy 2.3 Electricity Consumption</td>
<td></td>
<td></td>
<td>100 %</td>
</tr>
<tr>
<td>Energy 2.4 Gas Consumption</td>
<td></td>
<td></td>
<td>100 %</td>
</tr>
<tr>
<td>Energy 2.5 Wood Consumption</td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Energy 3.2 Hot Water</td>
<td></td>
<td></td>
<td>100 %</td>
</tr>
<tr>
<td>Energy 3.3 External Lighting</td>
<td></td>
<td></td>
<td>100 %</td>
</tr>
<tr>
<td>Energy 3.4 Clothes Drying</td>
<td></td>
<td></td>
<td>100 %</td>
</tr>
<tr>
<td>Energy 3.5 Internal Lighting - Residential Single Dwelling</td>
<td></td>
<td></td>
<td>100 %</td>
</tr>
</tbody>
</table>

## Dwellings Energy Approaches

What approach do you want to use for Energy?

- Use the built in calculation tools

## Project Energy Profile Questions

<table>
<thead>
<tr>
<th>Gas Supply</th>
<th>Natural Gas</th>
</tr>
</thead>
</table>

## Dwelling Energy Profiles

<table>
<thead>
<tr>
<th>Below the floor is</th>
<th>TH 1</th>
<th>TH 2-4</th>
<th>TH 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground or Carpark</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Above the ceiling is</td>
<td>Outside</td>
<td>Outside</td>
<td>Outside</td>
</tr>
<tr>
<td>Exposed sides</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NatHERS Annual Energy Loads - Heat MJ/m²</th>
<th>TH 1</th>
<th>TH 2-4</th>
<th>TH 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>112.1</td>
<td>82.9</td>
<td>124.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NatHERS Annual Energy Loads - Cool MJ/m²</th>
<th>TH 1</th>
<th>TH 2-4</th>
<th>TH 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>36.1</td>
<td>22.4</td>
<td>25.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NatHERS star rating</th>
<th>TH 1</th>
<th>TH 2-4</th>
<th>TH 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5.4</td>
<td>6.6</td>
<td>5.4</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Heating System</th>
<th>TH 1</th>
<th>TH 2-4</th>
<th>TH 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>E Reverse cycle ducted</td>
<td></td>
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<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Heating System Efficiency</th>
<th>TH 1</th>
<th>TH 2-4</th>
<th>TH 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Star</td>
<td></td>
<td></td>
<td>3 Star</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Cooling System</th>
<th>TH 1</th>
<th>TH 2-4</th>
<th>TH 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refrigerative ducted</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Cooling System Efficiency</th>
<th>TH 1</th>
<th>TH 2-4</th>
<th>TH 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Stars</td>
<td></td>
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</tr>
</tbody>
</table>

ADVERTISED PLANS
Documentation May Be Subject to Copyright
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Aim</td>
<td>Score Contribution</td>
<td>This credit contributes 10% towards this section’s score.</td>
</tr>
<tr>
<td>Criteria</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10%</td>
<td>1836.2</td>
<td>Proposed Building with Reference Services (BCA only) kg CO2</td>
</tr>
<tr>
<td>55%</td>
<td>4248.8</td>
<td>Reference Building with Reference Services</td>
</tr>
<tr>
<td>% Reduction in GHG Emissions Percentage</td>
<td>10%</td>
<td>Are greenhouse gas emissions &lt;10% below the benchmark</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Questions</th>
<th>Criteria Achieved?</th>
<th>Energy 2.3 Electricity Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aim</td>
<td>Score Contribution</td>
<td>This credit contributes 10% towards this section’s score.</td>
</tr>
<tr>
<td>Criteria</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Annual energy consumption &gt;10% below the benchmark</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Type of Hot Water System**

J Gas Instantaneous J Gas Instantaneous J Gas Instantaneous 6 star

**Clothes Line**

A No clothes dryer A No clothes dryer A No clothes dryer

**Clothes Dryer**

A No clothes dryer A No clothes dryer A No clothes dryer

**D Private & Associate**

A No clothes dryer A No clothes dryer A No clothes dryer

**Be Subject to Copyright**
| Calculations |  
| Reference kWh |  
| 32192.6 |  
| Proposed kWh |  
| 13503.8 |  
| Improvement Percentage % |  
| 58 % |  

Energy 2.4 Gas Consumption

| 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 |  
| 81465.9 |  
| Proposed MJ |  
| 55848.0 |  
| Improvement Percentage % |  
| 31 % |  

Energy 2.5 Wood Consumption

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

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
Reference MJ
22629.4

Proposed MJ
15560.6

Improvement Percentage %
31%

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 dryers reduce energy (gas+electricity) consumption by more than 10%?

Questions
Criteria Achieved?
Calculations

Reference kWh
3256.7

Proposed kWh
651.3

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

Stormwater 100% - contributing 13% to overall score

Credit Disabled Scoped out Score

Stormwater 1.1 Stormwater Treatment 100 %

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)
Criteria: Has best practice stormwater management been demonstrated?

Questions
STORM score achieved

101

**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**

75% - contributing 12% to overall score

<table>
<thead>
<tr>
<th>Credit</th>
<th>Disabled</th>
<th>Scoped out</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEQ 3.1 Thermal comfort - Double Glazing</td>
<td>100 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IEQ 3.3 Thermal Comfort - Orientation</td>
<td>100 %</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**IEQ 3.1 Thermal comfort - Double Glazing**  100%

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 3.3 Thermal Comfort - Orientation 100%

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?
Yes

Transport 33% - contributing 2% to overall score

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Transport 1.1 Bicycle Parking - Residential</td>
<td></td>
<td></td>
<td>100 %</td>
</tr>
</tbody>
</table>

Transport 1.1 Bicycle Parking - Residential 100%

Score Contribution  This credit contributes 33% 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?
5

Calculations
Min Bicycle Spaces Required
5
### Urban Ecology

37% - contributing 2% to overall score

<table>
<thead>
<tr>
<th>Credit</th>
<th>Disabled</th>
<th>Scoped out</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Ecology 2.1 Vegetation</td>
<td></td>
<td></td>
<td>50 %</td>
</tr>
<tr>
<td>Urban Ecology 2.4 Private Open Space - Balcony / Courtyard Ecology</td>
<td></td>
<td></td>
<td>100 %</td>
</tr>
</tbody>
</table>

#### Urban Ecology 2.1 Vegetation

50%

- **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 %
- **10 %**

#### Urban Ecology 2.4 Private Open Space - Balcony / Courtyard Ecology

100%

- **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?
- **Yes**
Innovation

Credit

Innovation 1.1 Innovation

10% - contributing 0% to overall score

Innovations

Shutdown Switches

Description

Shutdown switches are to be provided to all townhouses. The shutdown switches are to be connected to all lighting.

Points Targeted

1

Innovation 1.1 Innovation

10%

Score Contribution

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

Criteria

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

Questions

Criteria Achieved?

-

Items to be marked on floorplans

Do not upload your floorplans and elevations into the BESS tool. Instead, please ensure the items below are marked on the plans and provide a document / page reference number in the comments field.

0 / 9 floorplans & elevation notes complete.

Documents and evidence

Based on the information you have entered, the following supporting evidence is required. You can choose to upload supporting documents directly to BESS, or submit a printed version as an appendix to your BESS report. Use the comments field to provide a reference (e.g. page number) if relevant.

0 / 5 supporting evidence documentation complete.
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GROUND FLOOR PLAN

existing conditions plan and proposed development plan of properties adjoining the subject development site
ADVERTISED PLANS
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FIRST FLOOR PLANS

existing conditions plan and proposed development plan of properties adjoining the subject development site
**DESIGN RESPONSE PLAN**

**PROPOSED FIVE DWELLINGS**

**AT**

4 BANK ROAD,
EDITHVALE 3196

**Date:** 2.7.18  **Scale:** 1:400

- Five individual townhouses all having ample private outdoor living areas at ground level & roof decks
- Basement parking 2 cars/dwelling and 1 visitor park
- Basement generous storage areas & bike racks
- Strip planting along eastern & western boundaries and landscaped north courtyard to dwelling 1.

Vladimir Chernov Architect
P.O. Box 3008, Prahran East 3181
m: 0421606683 e: lou.vlad2@bigpond.com
Bank Road elevation

Date: 31/1/93  Scale 1:200  Proposed Five Dwellings

Vladimir Chernov Architect
P.O. Box 3008, Prahran East 3181
M:0421606683 e:ou.vlad2@bigpond.com

4 Bank Road,
Edithvale 3196
PROPOSED FIVE DWELLINGS
AT
4 BANK ROAD,
EDITHVALE 3196

ELEVATIONS
Date: 30-11-79 Scale: 1:100 AT A/D

Vladimir Chernov Architect
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DRAWING NO. T P 6A