

VICTORIAN CIVIL AND ADMINISTRATIVE TRIBUNAL

ADMINISTRATIVE DIVISION

PLANNING AND ENVIRONMENT LIST

VCAT REFERENCE NO. P1997/2009 & P1998/2009
PERMIT APPLICATION NOS. 1432/2008 & 1372/2008

CATCHWORDS

Section 82 *Planning and Environment Act* 1987; Greater Geelong Planning Scheme; Residential 1 Zone; Design and Development Overlay; Two dwellings on each of two lots; Neighbourhood character; Amenity impacts; Proximity to Barwon River; Coastal hazard vulnerability assessment; *Victorian Coastal Strategy* 2008; General Practice Note *Managing coastal hazards and the coastal impacts of climate change* December 2008.

APPLICANT	D Cooke & Ors (P1997/2009) B O'Shannessy & Ors (P1998/2009)
RESPONSIBLE AUTHORITY	Greater Geelong City Council
RESPONDENT	Urban Edge Consultants Pty Ltd
SUBJECT LAND	74 & 76 Carr Street, Barwon Heads
WHERE HELD	Melbourne
BEFORE	Bill Sibonis, Member
HEARING TYPE	Hearing
DATE OF HEARING	2 November 2009
DATE OF ORDER	20 January 2010
CITATION	Cooke & Ors v Greater Geelong CC [2010] VCAT 60

DIRECTIONS

- 1 Leave is given to the permit applicant to prepare a coastal hazard vulnerability assessment for the review sites. The assessment must be undertaken by a suitably qualified coastal engineer or coastal processes specialist and must also consider the implications of the assessment's findings for the proposed developments, including any recommended modifications to the siting and/or design.
- 2 The matter is adjourned for an administrative mention on 5 February 2010. By that date, the permit applicant must advise the Tribunal in writing:
 - whether a coastal hazard vulnerability assessment will be prepared and, if so, the length of time required to prepare the assessment.
 - whether a further directions hearing or mention is requested.

No attendance is necessary.

- 3 Any party may request that the administrative mention be converted to a Practice Day Hearing. The party making the request must file and serve a Practice Day Request in accordance with Practice Note PNPE6 – Practice Day.
- 4 If the permit applicant elects not to prepare a coastal hazard vulnerability assessment, the decisions of the Responsible Authority in Planning Applications 1372/2008 and 1432/2008 will be set aside and no permits will issue.

Bill Sibonis
Member

APPEARANCES

For Applicants	Ms Shelly Fanning, Town Planner and Solicitor of Great Ocean Road Coastal Planning.
For Responsible Authority	Mr Matthew Payne, Town Planner of CPG Australia Pty Ltd.
For Respondents	Mr Peter Barber, Town Planner of Urban Edge Consultants Pty Ltd.

INFORMATION

Description of Proposal	<p>It is proposed to construct two, two-storey attached dwellings on each of the properties at 74 and 76 Carr Street, Barwon Heads.</p> <p><u>74 Carr Street</u></p> <p>Each of the dwellings is proposed to accommodate a living room, three bedrooms, two bathrooms and laundry at the ground floor level and a kitchen/living/meals area, study and a powder room at the upper floor level. On-site car accommodation is to be in the form of a double garage for each dwelling.</p> <p>Secluded private open space for Unit 1 is shown as an enclosed area within the front setback, accessed from the ground floor living room, and a large upper level balcony/deck accessed from the first floor living area.</p> <p>Secluded private open space for Unit 2 is to take the form of a ground level courtyard to the rear (east) of the dwelling and a large upper balcony/deck. Both areas are accessed from adjoining living areas.</p> <p>The dwellings are to have a maximum overall height of 7.992 metres. Construction materials include vertical timber cladding, render finish and colorbond roofing.</p>
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76 Carr Street

Both dwellings on this lot are to accommodate three bedrooms, living room and two bathrooms at the ground floor level and a combined kitchen/living area and powder room at the first floor level. On-site parking for each is to be in the form of a double length garage that can accommodate two car spaces in tandem. Open space provision is similar to that proposed at 74 Carr Street, with areas at both the ground floor and upper floor levels, including an enclosed area within the front setback.

A maximum overall height of 7.926 metres is proposed. Construction materials are consistent with those proposed for the dwellings at 74 Carr Street.

A number of existing trees proximate to the site frontage are proposed to be retained.

Nature of Applications

Section 82 *Planning and Environment Act* 1987.

Zone and Overlays

Residential 1 Zone

Design and Development Overlay (Schedule 14)

Reason(s) Permit Required

cl 32.01-4 (construction of two or more dwellings on a lot)

cl 43.02-2 (construction of buildings and works)

Land description

The review sites are located on the east side of Carr Street, Barwon Heads, south of Frost Mews. The lots are slightly irregular and each display an area of 684 square metres. Both sites are vacant and No. 76 supports a number of established trees located toward the frontage of the property. The sites are generally flat and display an approximate 1.0 metre fall from the north-west corner to the south-east corner.

To the east are two single-storey dwellings. These form part of a larger multi-dwelling development comprised of five dwellings. To the south is a single storey detached dwelling sited on a large allotment that extends eastward beyond the review site.

To the north, on the opposite side of Frost Mews is a substantial allotment that supports a single dwelling. To the west, on the opposite side of Carr Street are detached single dwellings.

The review sites are located within a residential neighbourhood comprised of dwellings of both a single and two-storey scale. The locality displays a wide variety of architectural styles with development ranging from traditional 'beach houses' through to more recent contemporary forms. The immediate neighbourhood has an obvious landscape character formed by established vegetation both within the public realm and on private properties.

Site Inspection

I undertook a site inspection subsequent to the hearing.

REASONS¹

INTRODUCTION

- 1 Urban Edge Consultants Pty Ltd applied to the Greater Geelong City Council for planning permits to construct two, two-storey attached dwellings on each of the lots at 74 and 76 Carr Street, Barwon Heads.
- 2 Notice of the applications was given and objections were received from a number of persons, including the owners of adjoining land.
- 3 The Council determined to approve the developments and issued corresponding Notices of Decision.
- 4 Mr David Cooke, Mr Barry O'Shannessy and others have applied to the Tribunal for a review of the Council's decisions on grounds relating primarily to neighbourhood character and the impact of the developments on the amenity of adjoining residential properties.
- 5 Having regard to the submissions and evidence of the parties, the relevant planning policies, provisions and guidelines of the Greater Geelong Planning Scheme and the context of the review sites, the Tribunal must decide whether the developments represent an acceptable planning outcome.

IN SUMMARY, WHAT ARE THE PARTIES' POSITIONS?

- 6 Mr Payne, on behalf of the Council submitted that the developments are appropriate as they will contribute to a diversity of housing in the area, are well located in terms of services and facilities, and will be respectful of the neighbourhood character of the area. He submitted that, subject to the conditions detailed in the Notices of Decision, the developments will not have an unacceptable impact on the amenity of adjoining properties by way of overlooking, overshadowing or the presentation of visual bulk.
- 7 On behalf of the review applicants, Ms Fanning submitted that the proposed dwellings will dominate the streetscape and will be at odds with the low density character of the area. It was further submitted that the attached nature of the dwellings results in a long, bulky built form extending the length of the lots, which is contrary to the pattern of development in the neighbourhood. Concerns were also raised in respect of the overall height of the development, inadequate landscaping and the proposed erection of high fences in the front setback areas.
- 8 Ms Fanning also stated that there is potential for overlooking from the rear balconies and expressed concerns regarding the appropriateness of the proposed vehicular access arrangements.
- 9 In support of the proposals, Mr Barber made similar submissions to those of Mr Payne. He submitted that the dwellings respond acceptably to the

¹ I have considered all submissions and accompanying material, assisted by my inspection. I do not recite all of the material presented as all documentation is retained on the Tribunal's file.

provisions of the Council's urban character study, are well articulated, incorporate a variety of materials and result in an acceptable density of development on the sites. Mr Barber also referred to the provision of front and side setbacks, the retention of existing trees and the incorporation of opportunities for landscaping as evidence that the developments will be adequately respectful of the neighbourhood character.

- 10 Mr Barber stated that the overshadowing impacts are within the parameters of Clause 55 and that any overlooking issues can be addressed through the inclusion of appropriate screening measures.

IS THE DEVELOPMENT AN ACCEPTABLE RESPONSE TO THE NEIGHBOURHOOD CHARACTER?

- 11 The Council's Residential Character Study notes that the neighbourhood is distinctive due to its mixture of architectural styles and building materials and higher development which is a response to the river edge location. It also notes that development is highly visible and that vegetation cover varies from low level to substantial gardens that support trees. Key characteristics include a variety of architectural styles ranging from Late Victorian through to post 1980s; frequent double storey development; variable front setbacks, side setbacks from at least one side boundary; and a variety of building materials, fence heights and styles.

- 12 The preferred character statement reads:

The area's seaside character will be strengthened and the cohesion of the area enhanced by:

- Encouraging development that respects the general 1-2 storey scale of development in the area ;
- Ensuring development is off-set from at least one boundary ;
- Encouraging the use of lighter looking materials;
- Encouraging the retention and planting of native vegetation; and
- Discouraging high front fences

Avoid:

- Removal of existing native vegetation.
- Large bulky buildings that are built boundary to boundary.
- A predominance of exposed brick buildings.

- 13 The review sites are located within Precinct 6 of the Residential Character Study. Specific guidance for development within this precinct is provided by the design guidelines. In summary:

- Buildings should be sited and designed to support substantial vegetation, including trees.
- Buildings should be set back from at least one boundary.

- Hard surface site coverage (including outbuildings, swimming pools, tennis courts, driveways and all non-permeable surfaces) should not exceed 55%.
 - Buildings should not exceed 7.5 metres in height.
 - New buildings should be designed to respond to the dominant characteristics of the area and the site. Large bulky buildings with unarticulated front and side wall surfaces are to be avoided.
 - Timber and other non-masonry sheeting or cladding materials are to be used where possible. Exposed red or orange brick and urban period reproduction styles are to be avoided.
 - Either no front fence or an open-style front fence to a maximum height of 1.2 metres.
- 14 I consider that the proposed developments generally respond well when assessed against the above character statement and guidelines. Exceptions to this are the dominance of the garage associated with Unit 1 at 74 Carr Street, the provision of landscaping opportunities on both lots and the provision of an enclosed secluded private open space area within the front setbacks.
- 15 My observations are that the locality is characterised by a variety of architectural styles ranging from the more traditional ‘beach house’ through to 1970s & 1980s suburban style dwellings and more contemporary development in the form of double storey multi-dwellings. Two-storey development is common and there are examples of dwellings that incorporate substantial upper floor elements.
- 16 Within this broader context, the development will not be out of character. I acknowledge Ms Fanning’s concerns regarding the extent of the first floor levels in particular, and the associated perception of visual bulk. The upper levels, however, are well articulated by the proposed balconies and the setbacks from the boundaries. Of particular note are the setbacks from the southern boundaries of the lots, which range between 4 metres to in excess of 7 metres. The use of timber cladding on the walls and glass balustrades on the balconies further reduces the presentation of visual bulk. The scale and style of buildings proposed here is not dissimilar to other existing dwellings within the wider neighbourhood and they will therefore not appear as discordant elements, nor will they detract from the established (or emerging) character.
- 17 The garage of Unit 1 at 74 Carr Street presents as a dominant element in the façade of this dwelling. It is not recessed behind the main building line and its width is equivalent to almost half of the overall ground floor western elevation. In addition, there are negligible opportunities for the provision of landscaping along the northern side of its driveway, further accentuating the dominance of this component of the dwelling.

- 18 Garages are generally not a prominent feature of dwellings in this streetscape or wider neighbourhood. Where provided, they are typically situated to the rear of dwellings or otherwise recessed behind the front façade. Overall, car accommodation presents as a subservient element to the dwelling. Although exceptions to this do exist, they do not characterise the neighbourhood.
- 19 I consider that the garage needs to adopt a more recessive appearance and that greater landscape opportunities need to be provided along its driveway. To achieve this, the width of the garage should be decreased. This will reduce the dominance of this feature and provide the opportunity for the creation of a landscape strip (which should be a minimum 750mm wide) between the driveway and the northern property boundary. While this will result in only one vehicle being able to be accommodated within the garage, there is adequate scope to accommodate a second vehicle in the driveway area in a tandem arrangement.
- 20 Sufficient space is provided within the front setback and courtyard areas of No. 76 Carr Street for the retention of existing trees and planting of new vegetation. This is not the case, however, in respect of the driveway area of this development. This area is characterised by extensive paving and minimal landscaping opportunities. To address this issue, the building footprint will need to be reduced to provide for greater landscaping along the driveway. A minimum 1.0 metre wide strip is to be provided adjacent to the living room and bathroom of Unit 1 and the landscape strip that extends along the southern boundary should be increased in width to at least 750mm, except in areas where this would compromise vehicle manoeuvrability. The opportunity for the planting of a small canopy tree in the driveway area should be provided.
- 21 No. 74 Carr Street provides less opportunity for landscaping throughout the site. This is due to the provision of two driveways and the extensive building footprint. Again, the landscape strip along the driveway should be increased to a minimum of 750mm on the south side and 1.0 metre on the north side where it abuts the living room and bathroom of Unit 1. In addition, an increase in the rear setback to a minimum of 3.8 metres, as proposed for the adjoining development at 76 Carr Street, will provide greater opportunity for landscaping in this part of the site. I also note that landscaping, including a canopy tree, could be accommodated to the south of the living room of Unit 2, as not all this area is required to allow adequate manoeuvring space for the vehicles utilising the garage of this dwelling.
- 22 The partial enclosure of the front setback area for use as secluded private open space is not acceptable. This is not an appropriate response to either the existing or preferred character of the area. The front setback area should be developed as a landscaped front garden which is open to view from the street in order to make a contribution to the visual amenity of the public realm.

- 23 While I acknowledge the applicant's desire to have a ground level secluded private open space area, the enclosure of the front yard for this purpose will not enhance the neighbourhood character. The adopted design clearly places the open space areas at the upper level, providing a 'reverse living' arrangement whereby the primary living areas are positioned on the first floor. There is no need, therefore, for the additional area at the ground level. If the applicant desired a courtyard as the secluded private open space area, then an alternative design should have been prepared.
- 24 A detailed (coloured) schedule of external finishes and colours has not been provided. I consider that the use of light coloured materials and finishes as recommended by the character study will assist in the development's integration into the streetscape and neighbourhood.
- 25 The development exceeds the 7.5 metre height nominated in the Design and Development Overlay (DDO14) that applies to the site. Although a permit may be granted to exceed this height, I queried the justification for this, noting in particular the significant floor to ceiling heights at both the ground floor and upper floor levels. I also commented that, notwithstanding that the nominated height is not mandatory, it nonetheless creates an expectation regarding the height of development in this area and should not be departed from without good reason. After consulting with his client, Mr Barber confirmed that the permit applicant would accept a condition that restricted the overall height of the dwellings to not more than 7.5 metres in order to comply with the Overlay.
- 26 Mr Payne advised that the Council had prepared Amendments C129 and C159 to the Greater Geelong Planning Scheme. He advised that, in respect of the review sites, Amendment C129 proposes the rezoning of the land to Residential 3, and proposes the variation of Clause 55 Standards via the Schedule to the Zone as follows:
- Standard B8 - Site coverage: 55%
 - Standard B28 - Private open space
- Private open space consisting of:
- An area of 60m² with one part of the private open space to consist of secluded private open space area at the side or rear of the dwelling or residential building with minimum area of 40m² with a minimum dimension of 5 metres of secluded private open space with convenient access from a living room.
- 27 I note that Standard B28, as proposed to be varied by the amendment, would continue to allow for the provision of open space in the form of an 8m² balcony or 10m² roof top area. The development would comply with the Standard.
- 28 The site coverage of the proposed developments is 49% (74 Carr Street) and 46% (76 Carr Street).

- 29 This amendment has been adopted by Council and has been submitted to the Minister for Planning for approval. It is therefore considered to be a seriously entertained planning proposal.
- 30 The development complies with the height, site coverage and open space requirements of the proposed Residential 3 zone and associated Schedule.
- 31 Amendment C159 to the planning scheme seeks to implement the Barwon Heads Structure Plan and introduce a Significant Landscape Overlay (SLO9) which would affect the review sites. In summary, the overlay seeks to ensure that dwellings do not dominate the landscape; sufficient space is provided between buildings for planting; provision is made for sharing of views; and development is respectful of the riverfront setting.
- 32 The proposed Schedule proposes a permit requirement for:
- the construction of buildings and works. Exemptions are included for buildings that do not exceed 7.5 metres in height; buildings with one side boundary setback of at least 2.0 metres; and buildings set back at least 5.0 metres from a property boundary adjacent to the river.
 - the removal, destruction or lopping of vegetation, unless it is dead, an environmental weed, less than 3 metres in height, or having a single trunk circumference of less than 0.5 metres measured 1.0 metre above the ground.
- 33 A Panel Hearing in respect of the Amendment was scheduled for 24 November 2009. Mr Payne submitted that, in Council's view, the developments achieve a satisfactory level of compliance with the proposed Overlay control.
- 34 I have concluded that, subject to the reduction in the overall height; the reduction in the width of the garage of Unit 1 at 74 Carr Street; the provision of additional landscaping; deletion of the fences in the front setback; and the use of appropriate materials, the development will represent an acceptable response to the character of the neighbourhood.

WILL THE DEVELOPMENT HAVE AN UNACCEPTABLE IMPACT ON THE AMENITY OF ADJOINING PROPERTIES?

Visual bulk

74 Carr Street

- 35 Unit 1 will be sited opposite the front setback area and driveway of the property to the south. Given the non-sensitive nature of this interface, I am satisfied that this dwelling will not have an unreasonable impact on the amenity of this land. Although Unit 2 is located proximate to the secluded private open space area of this neighbouring property, the proposed 3.0 metre ground level setback and 6.7 metre upper level setback from the southern boundary will ensure that unreasonable visual bulk is not presented. This is particularly so when consideration is given to the

substantial size of the neighbouring back yard space. As I note in a later section of these reasons, the screen proposed to be erected above the southern garage wall should be relocated northward to reduce the visual impact of this structure on the neighbouring property.

- 36 Unit 2 is located adjacent to the secluded private open space area of the dwellings at 5/78 and 6/78 Carr Street, which adjoin the review site to the east. While I find that the minimum 3.0 metre ground level setback from this boundary is acceptable from a visual bulk perspective, I am not satisfied that balcony setback (ranging between 2.8 metres and 3.2 metres) is sufficient to protect the amenity of these neighbouring spaces. The proposed setback does not satisfactorily acknowledge the sensitivity of these adjoining areas, with the consequential proximity of the upper level to these courtyards having an unreasonable impact on their amenity.
- 37 I consider that the balcony should be set back a minimum of 5.0 metres from the eastern boundary of the land. This will reduce the impact of the built form on the neighbouring courtyards without compromising the useability or amenity of the balcony space, given its generous proportions.
- 38 Units 1 and 2 both incorporate walls that are proposed to be constructed on the common boundary with the adjoining review site at 76 Carr Street. As these walls exceed 4.0 metres in height, they do not comply with Standard B18 at Clause 55.04-2. Although this may be acceptable if the adjoining land is developed as shown on the plans that form part of that application – as the walls will abut a driveway area - there is no guarantee that development will, in fact, proceed. In that instance, the result will be that the walls will represent an unnecessary constraint on the development of that site. I consider that these walls should be lowered in height to meet the Standard and provide an acceptable outcome, regardless whether the adjoining land is developed as is currently proposed.

76 Carr Street

- 39 The upper level of Unit 2 is to be sited adjacent to the blank wall and driveway area of the neighbouring dwelling to the east and will not affect the amenity of that property. The boundary wall of the proposed garage will largely abut a portion of the neighbouring private open space area that supports a clothesline, and appears to be utilised more as a utility area than for recreation purposes. The proposed boundary wall is to have a length of 4.3 metres and an average height of 3.0 metres. These dimensions comply with Standard B18 and will not, in my view, present unreasonable visual bulk – particularly given that the greater portion of the wall will not directly abut the primary secluded private open space area.

Overlooking

- 40 The raised ground floor levels and the two-storey nature of the development give rise to the potential for overlooking of adjoining land.

74 Carr Street

- 41 At the ground floor level, the living room window of Unit 2 has the potential to overlook the secluded private open space area to the south. As the floor level exceeds 800mm above natural ground level and the existing boundary fence is 1.61 metres in height, unreasonable overlooking from this window may occur. This may be addressed by the erection of a higher fence on this boundary.
- 42 It is proposed to erect a screen above the southern wall of the living room of Unit 2 to restrict southward views from the balcony. The screen is separated from the southern edge of the balcony by a distance of 3.6 metres. It is evident that the intention of this design response is to avoid the enclosure of the balcony, to provide for the amenity of the dwelling's occupants, while preventing unreasonable overlooking to the south. This proposed screening is acceptable, although I consider that it should be set back further from the southern boundary to reduce the impact of this structure on the amenity of the property to the south, as it effectively increases the height of the living room wall to 6.0 metres.
- 43 The upper level south facing windows are to be provided with either a 1.7 metre sill height or fixed obscured glazing to 1.7 metres above finished floor level. This treatment will not have an unacceptable impact on the internal amenity of the associated habitable rooms as an outlook to the adjoining balcony area is provided from glazed bi-fold door units in other elevations.
- 44 Screening is also shown as being applied to the north-east corner of the balcony of Unit 2 to prevent overlooking of the private open space areas to the east. This is acceptable and the screen is sited in such a manner that it provides a partially open eastern aspect, for the benefit of occupants, without allowing for overlooking.
- 45 In reference to overlooking of the adjoining proposed development, the north facing upper level windows of Unit 2 and the north side of the balcony do not require screening as:
- they will primarily have an outlook to the garage and driveway area of the proposed adjacent development;
 - direct views into a south facing ground floor window will not be possible; and
 - the first floor south facing windows of the proposed dwellings at 76 Carr Street are to have high sills.
- 46 If this neighbouring site is not developed as shown in the present application, the land will remain vacant and any future development on that property will need to respond to the site context as it exists at that time.
- 47 The ground floor north facing windows of both dwellings have the potential to allow views into the south facing windows of the proposed development

to the north. A fence of an appropriate height on the common boundary of the sites will address this issue.

- 48 The first floor balcony of Unit 1 has the potential to allow views into a south facing living room window of the proposed development on the adjoining property. Rather than require the screening of the balcony, as this will have a detrimental effect on the amenity of this space, I consider that the affected living room window should be fitted with obscured glazing. This can be done without unreasonably affecting the amenity of this room as it has west facing windows that look out over the front setback area of that development.

76 Carr Street

- 49 The siting of the garage and store/shed of Unit 2 on the eastern boundary will prevent views from the ground floor windows into the adjoining secluded private open space area to the east. The south facing ground floor windows face the other review site and, as stated earlier, the provision of a fence on the common boundary will prevent unreasonable overlooking at ground floor level.
- 50 At the first floor level, all the south facing habitable room windows are provided with high sills and unreasonable overlooking will not occur. This measure will not have an unacceptable impact on the amenity of the affected rooms as they all have other windows and glazed doors that provide unscreened northerly, easterly or westerly outlooks.
- 51 To the east, the proposed first floor balcony of Unit 2 will largely face the blank side wall of the neighbouring dwelling, its driveway and front setback area. A portion of the secluded private open space area of this property may potentially be overlooked. This can be addressed by requiring the screen to be extended partly along the eastern edge of the balcony. The remainder of this balcony, and that of Unit 1, are unscreened as they provide outlooks to either Frost Mews or Carr Street.

Overshadowing

- 52 The development will cast shadows on the secluded private open space areas of the adjoining dwellings to the east during the late afternoon period. The extent of shadow is limited and within the parameters of Standard B21 at Clause 55.04-5. It is therefore acceptable and will not unreasonably affect the amenity of this open space.
- 53 The shadow cast by the proposed development at 74 Carr Street will not affect the secluded private open space area of the adjoining property to the south during the equinox period.

ARE THE PROPOSED ACCESS ARRANGEMENTS ACCEPTABLE?

- 54 Ms Fanning submitted that the vehicle access arrangements for Unit 1 at 74 Carr Street are potentially unsatisfactory, due to the proximity of the

driveway to the bus stop. It is not an uncommon arrangement to have vehicles reverse out of properties onto the adjoining roads. I note that the carriageway of Carr Street is in excess of 5 metres from the property frontage. This distance provides sufficient opportunity for sightlines to ensure that drivers are able to view any pedestrians accessing the bus stop.

IS A COASTAL HAZARD VULNERABILITY ASSESSMENT REQUIRED?

Background

55 An objective of Clause 15.08, Coastal Areas, is to plan for and manage the potential coastal impacts of climate change. Strategies for implementing this policy are:

Planning to manage coastal hazards and the coastal impacts of climate change should:

- Plan for sea level rise of not less than 0.8 metres by 2100, and allow for the combined effects of tides, storm surges, coastal processes and local conditions such as topography and geology when assessing risks and coastal impacts associated with climate change.
- Apply the precautionary principle to planning and management decision-making when considering the risks associated with climate change.
- Ensure that new development is located and designed to take account of the impacts of climate change on coastal hazards such as the combined effects of storm tides, river flooding, coastal erosion and sand drift.
- Ensure that land subject to coastal hazards are identified and appropriately managed to ensure that future development is not at risk.
- Avoid development in identified coastal hazard areas susceptible to inundation (both river and coastal), erosion, landslip/landslide, acid sulfate soils, wildfire and geotechnical risk.

56 This policy is derived from the *Victorian Coastal Strategy* 2008.

57 The General Practice Note on *Managing Coastal Hazards and the Coastal Implications of Climate Change* (December 2008) confirms that a coastal hazard includes flooding of land by ocean waters or river catchments. It also states that the frequency, extent and magnitude of inundation is likely to be altered by climate change over time and through the combined interactions with sea level rise, tide ranges, storm surges and other coastal processes.

58 As noted earlier, the review sites are proximate to the Barwon River and its floodplain.

59 At the hearing of the Applications, I raised the issue of the potential implications of climate change for the development of the review sites,

given the sites' proximity to the Barwon River and associated floodplain. The parties were unable to provide me with detailed submissions on whether a coastal hazard vulnerability assessment is required and I reserved my decision on this matter.

- 60 I then undertook an inspection of the site and reviewed the relevant planning policy context of the Planning Scheme, the General Practice Note on *Managing Coastal Hazards and the Coastal Implications of Climate Change* (December 2008) and the *Victorian Coastal Strategy* 2008.
- 61 I also considered Ministerial Direction No.13 (Managing Coastal Hazards and the Coastal Implications of Climate Change) which applies to any planning scheme amendment that provides for the rezoning of non-urban land for urban use and development of all land abutting the coastline or coastal reserve, and if land is less than 5 metres Australia Height Datum within 1 kilometre of the coastline. Although not strictly applicable in this instance, the Ministerial Direction is of assistance as it provides an indication of the types of areas that may be vulnerable to coastal hazards.
- 62 As a consequence, I noted that:
- A coastal hazard includes river flooding or inundation;
 - The land is approximately 60 metres from the Barwon River;
 - The levels of the subject site are less than 4.0 metres to the Australian Height Datum; and
 - Land adjacent to the river is relatively low lying.
- 63 As detailed above, it is policy that the precautionary principle be adopted in decision making when considering the impacts of climate change. The Practice Note defines this precautionary approach as:
- The precautionary approach is an accepted principle in coastal decision making. It requires decision makers to act having regard to the best available science, knowledge and understanding of the consequences of decisions and in the context of increasing uncertainty, to make decisions that minimise adverse impacts on current and future generations and the environment.
- 64 Having inspected the review sites and surrounds, considered the relevant policies and the General Practice Note, I concluded that a coastal hazard vulnerability assessment may be required. A directions hearing was convened to allow the parties the opportunity to make submissions on this issue.
- 65 In accordance with my directions, the Council sought advice from the relevant floodplain management authority (Corangamite Catchment Management Authority - CCMA) and the Department of Sustainability and Environment (DSE).

Submissions of the parties

66 Both the Permit Applicant and the Council relied upon the advice of CCMA the DSE. Before proceeding to consider the submissions of the parties, it is appropriate, therefore, to detail the responses received from these authorities.

Corangamite Catchment Management Authority (CCMA)

67 In summary, the CCMA advises that:

- The review sites are in an area that is subject to flooding associated with a flood generated by the Barwon River catchment and by flooding associated with a tidal surge.
- Based on available ground level data, the review sites and their egress paths are not expected to be affected by a 1% Annual Exceedance Probability (AEP) tidal/river flood.
- The 1% AEP tidal surge level applicable to the properties is 2.7 metres Australian Height Datum. This level takes into account the likely effect of a rise in sea level of 0.8 metres by 2100.
- The average existing ground level of the review sites is approximately 3.00 metres AHD – 3.50 metres AHD, which is at least 300mm higher than the applicable 1% AEP flood level. The CCMA does not expect the proposed development to be affected by the 1% AEP river or tidal flood and would not expect increased water levels associated with wave run up to reach the property.
- In providing its advice the CCMA has not considered the likely consequences, if any, of changes to existing barriers created by sand dunes in the area and recommended that the views of DSE be sought.
- The CCMA has no information regarding the vulnerability of the site to other coastal processes and cannot confirm whether or not long term changes associated with erosion or sand deposition will alter flooding within the Barwon River Estuary.

Department of Sustainability and Environment (DSE)

68 The DSE advised as follows:

...

The river bank shoreline adjoining the site is vegetated with mangrove and saltmarsh. The mangrove vegetation in particular shows typical patterns of sediment capture and associated slow, progressive shoreline accretion, as opposed to erosion, under current conditions. These conditions are related to the relative protection from ocean waves provided by the Ocean Grove spit. This set of circumstances may have prevailed continuously since stabilisation of sea levels at their current level following the last ice age (8-10,000 years ago). Mangrove systems are thought to have some adaptive capacity to slow

and progressive sea level rise, especially where sediment supply is plentiful, however the long term resilience of this vegetation community and physical shoreline to sea level rise is unknown.

The spit is formed of unconsolidated sand, formed by prevailing wave refraction around the Barwon Heads Bluff, stabilised by existing largely native vegetation. Sand supply in this outer coast system is plentiful, and erosion events which do occur on the spit are quickly reversed through the same process. Coastal engineering reviews commissioned by VicRoads in association with the Barwon Heads Bridge redevelopment project indicate that the general alignment of the spit outer shoreline is governed by parameters other than sea level, in particular the dominant wave direction and supply of sediment in the coastal system from the west. ...

Expert evidence of erosion patterns within the river is lacking. Anecdotally, significant sand bank movement and shoreline erosion events witnessed within the river have been associated with flood events following extended rains across the catchment. A review of the river's overall shape suggests the opposite bank may be under more erosion pressure than the Barwon Heads bank near the application site.

Accordingly the Department regards the risk of increasing coastal erosion at this site associated with climate change and sea level rise as low. However, it may increase confidence in decision making if a coastal hazard vulnerability assessment were commissioned to provide a comprehensive expert opinion on the gaps in this understanding, and on the combination of these factors with inundation risk factors canvassed by the CCMA.

- 69 The Council's submission basically duplicated the advice of the CCMA and the DSE and concluded that a coastal hazard vulnerability assessment is unlikely to reveal a higher coastal hazard risk to the review sites than the low risk that has been identified. The submission, however, acknowledged that the current policy platform requires a precautionary approach when considering the impact of climate change.
- 70 The Permit Applicant commissioned Water Technology Pty Ltd to review the issue of the review sites' coastal vulnerability having regard to the advice provided by the CCMA.
- 71 The advice of Water Technology Pty Ltd states:

Water Technology has a similar view to the CCMA in that it is not possible with the available information to provide an informed assessment of the likely evolution of the Lower Barwon estuary and entrance due to mean sea level rise to the end of the century at this point in time.

The Lower Barwon and Lake Connewarre form a complex and dynamic morphological environment. The basin comprises a mixture of unconsolidated Pleistocene and Holocene deposits of both fluvial and marine origin. Increases in mean sea level will increase the tidal

range and tidal prism within the system (the volume of water that enters and leaves the system over a tide). Increases in the tidal range of less than 0.5m will potentially engage a large area of the adjoining salt marsh and swampy areas. It is likely that these changes to the tidal dynamics of the system will cause morphological adjustment to the estuarine channel system that may result in enlargement and/or migration of these channels. These changes may result in erosion hazards at locations within the vicinity of the existing estuarine system and associated salt marsh and swampy areas at Barwon Heads.

Available references indicate that the property is located in the older Pleistocene dune calcarenite, close to the boundary with younger, Holocene estuarine and marine deposits associated with the Lower Barwon estuary. Dune calcarenite is generally partially consolidated and therefore more resilient to erosive action of water and waves. This is likely to reduce the extent to which the enlargement and migration of the estuarine channels due to sea level rise can impinge on the property in the future.

- 72 Having regard to the advice of the CCMA and Water Technology, the Permit Applicant submitted that “a vulnerability assessment is not required as the subject land is not considered to be at risk”.

Consideration

- 73 Coastal hazard vulnerability has been considered in a number of Tribunal decisions². In respect of the policy imperative to consider the implications of climate change, I consider the following comments found the *Owen* decision to be pertinent:

This permit application is one of many that will raise the same question; is a coastal hazard vulnerability assessment needed? The permit application was lodged before Amendment VC52 was introduced into all Schemes. It seems the design has not been informed by any information relating to impacts of climate change although it was modified through the application process to address the floor level specifications of Melbourne Water.

The Tribunal’s decisions in *Myers* and *Ronchi* have drawn attention to the Scheme’s obligation to consider and assess risks arising from inundation from ocean waters and/or river catchments with an expectation of impacts from processes such as sea level rise, varied tide ranges and storm surges. Even though the Intergovernmental Panel on Climate Change may identify an upper limit of sea level rise of 0.8 metre by 2100, Clause 15.08 of the Scheme refers to a sea level rise of “*not less than 0.8 metre by 2100*”. The level in the Scheme is that to be adopted for our purposes at this time.

² see for example *Myers v South Gippsland SC* (includes Summary)(Red Dot) [2009] VCAT 1022; *Myers v South Gippsland* (No.2) (includes Summary) (Red Dot) [2009] VCAT 2414; *Ronchi & Anor v Wellington SC* (includes Summary) (Red Dot) [2009] VCAT 1206; and *Owen v Casey CC* (includes Summary) (Red Dot) [2009] VCAT 1946.

As I said in *Ronchi*, changes to State policy through Amendment VC52 place a much more significant onus on both permit applicants to consider risks in design and on decision makers to take climate change into account.

The General Practice Note *Managing coastal hazards and coastal impacts of climate change* provides guidance with respect to an assessment of applications for permits as well as rezonings.

A coastal hazard vulnerability assessment for small scale unit developments or a two lot subdivision can seem unduly onerous for a proponent. Assessments will add to time and cost. Changes to proposals may be needed although it is clearly preferable for plans to be prepared after an assessment so that the design response can be informed by the findings.

These considerations do not, however, mean that a coastal hazard vulnerability assessment should be avoided even where a permit application has pre-dated VC52 and the application has yet to be determined. Rather, State policy makes it clear that the wider risks and consequences for the community demand this matter to be addressed in permit applications and in decision-making. There are uncertainties with respect to coastal and river hazards but the risks are such that the Scheme has sought to direct decision-makers via Clause 15.08. Actual impacts will vary dependent on a range of factors including local geology, topography and hydrology.

In the same way as aboriginal cultural heritage assessments are now more common place, coastal hazard vulnerability assessments will too become more routine in the planning process. They are likely to be one measure in a suite of planning responses to climate change. Assessment models can be expected to be refined over time and, as indicated by the *Victorian Coastal Strategy* and the General Practice Note, State policy may be reviewed as more scientific data becomes available. Development controls and/or policies can also be expected to emerge to hopefully provide clarity and guidance in the local context, achieving consistency in approach. In the meantime, and even though the form of an assessment may still be embryonic, it is necessary to proceed on the best available information.

74 I agree with these statements.

75 Having reviewed the advice of CCMA, DSE and Water Technology Pty Ltd, I cannot agree with the Permit Applicant that the subject land is not at risk. The advice does not state this. It states that, at best, the review sites are at 'low risk' of increasing coastal erosion associated with climate change and sea level rise. I also note that:

- Expert evidence of erosion patterns within the Barwon River is lacking;
- There is insufficient information available to provide an informed assessment of the likely evolution of the Lower Barwon estuary and entrance due to mean sea level rise to the end of the century; and

- The DSE considers that a coastal hazard vulnerability assessment would increase confidence in decision making.
- 76 The information provided to date is not definitive in respect on the effects of climate change and sea level rise on the review sites. The reliance I place upon it, therefore, must necessarily be limited.
- 77 I have determined that a coastal hazard vulnerability assessment should be prepared for the review sites and that this be done prior to deciding this application.
- 78 The coastal hazard vulnerability assessment must be prepared by a suitably qualified coastal engineer or coastal processes specialist and must address the implications of the assessment's findings for the proposed developments, including any recommended modifications to the siting and/or design.

CONCLUSION

- 79 Subject to the modifications detailed in these reasons, I consider that the proposed developments would represent an acceptable response to the neighbourhood character, would not have an unacceptable impact on the amenity of adjoining properties and would provide a satisfactory level of on-site amenity for occupants.
- 80 As detailed above, however, the potential implications of climate change for the proposed developments remain unresolved and I am not prepared to decide the applications without further information on this issue.
- 81 I will therefore provide the opportunity for the Permit Applicant to prepare and submit a coastal hazard vulnerability assessment for the review sites. If the Permit Applicant decides not to undertake this assessment, I will refuse the grant of the permits. If the assessment is prepared, I will provide the parties with the opportunity to present further submissions on this issue.

Bill Sibonis
Member