Great Ocean Gulf

The story of a strategic planning fiasco

John Spencer

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Waves breaking over the sand berm

The large 2-3 metre waves created by strong westerly winds, plus a very high tide, meant waves entered the estuary with great force and at the same time built up a sandbar already blocking the river mouth. With the water unable to exit at the river mouth and a huge amount of seawater entering the estuary with the large swell, the estuary experienced its highest recorded sea flood. (p. 148)

To our third generation – May they have the opportunity to wonder at the natural world

Acknowledgements

Nothing is written without support and encouragement. It can come from many sources and in many forms. I would say that the community at large, though clearly not everyone, encouraged me (and others) in the pursuit to have the *Great Ocean Green* project stopped or at least severely modified. I would like to start with my colleagues who assisted me in our joint submission to the first planning panel session of June 2006; namely Janine Coles, Russell Dawe, Allen Hokin, Ted Stuckey and Carol Wilmink. Others who contributed to our discussions over a period of many months included, Gary McPike, Murray Champion and Tony Webber.

Reference must be made to those Councillors who opposed the development and particularly those who made a personal sacrifice, when they were dismissed. I am referring to Crs Brian Crook, Stuart Hart and Geoff Higgins. Later they were to be joined again with Cr Stephen Hart who had also opposed the project in an earlier Council.

With the risk of omission I would like to mention the following folk who both supported and encouraged me: Cate Cousland, Carol Barnes, Andrew Buchanan, Peter Filmore, Dot and John Garrett, Robin Gray, Rob Kanngieser, Max Leorke, John Marriner, Fiona Nelson, Kurt Seeberg, Ngaira Smith, Clare Smith, David Smith, Terry Redmond, Robert Telford, and Dirk Verwoert.

I would like to pay a special tribute to Dirk Verwoert, who passed away in October, 2009. Dirk was a fellow Civil Engineer who reviewed my opinions on the engineering aspects of the proposed developments, especially those expressed in Chapter 8.

Finally and most importantly, I want to thank my wife Jill. Jill has shared the journey in many ways, certainly by sharing my views and also by tolerating the repeated argument against the development that I would raise with both friends and family (and anyone else who would listen!)

John Spencer, January 2010

GREAT OCEAN GULF

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Preface

My wife and I moved to Apollo Bay in 1998. Two years later, the prospect of a large scale integrated housing estate and golf course on the flood plain of the Barham River began to be discussed around town. Thus began an involvement that would take me through the following ten years and lead me to write this book. Hindsight is a wonderful thing and I can now say what an experience and revelation it has been. The pain has disappeared and now it is only pleasure. We won! The writing of course started well before I decided to commit to a formal record in November 2007. I now write this with a great deal of pleasure and I hope you will permit me some indulgence. There are still a few things I yet want to say. Firstly however, let me stick to the script of a preface.

Those of you who are familiar with Apollo Bay and the local events of the first decade of the 21st Century can skip immediately to Chapter 8 and, if you are in a hurry, then read Chapters 10 and 11. Chapter 1 can be seen as scene setting and an introduction to Apollo Bay and its place in the scheme of things. Chapters 2 to 7 then take the reader through the chronological order of events up until the matter was in the hands of the Minister for Planning. Chapter 9 is (as is explained in its introduction) different from the others in that it takes a look at climate change in some detail, before considering how the proponents intended that the consequences of climate might have been dealt with. There is, as is sometimes noted, some repetition in the chapters. Largely this enables Chapters 8, 9, 10 and 11 to stand alone to some extent. In any event I don't think the repetition is a burden.

This is not a book about climate change or sustainability, although both topics receive attention. The project was, in my opinion, rightly rejected on grounds not directly related to either of those topics. However in the course of events my attention was drawn to climate change and sustainability. I have now read two of Tim Flannery's books, *The Weather Makers* and *The Future Eaters*; Paul Kennedy's *Preparing for the Twenty-First Century*; Thomas Homer-Dixon's *The Upside of Down*; *The Limits to Growth*, by D.H. Meadows et al; *Fixing Climate The story of climate science and how to stop global warming*, by R. Kunzig & W. Broecker and, most recently and not yet entirely read, *Heat* by George Monbiot. Collectively

and singularly these books have had a profound effect on me and this is where my indulgence comes in. You may now prefer to skip this and start with the Prologue.

I want you to imagine that *Great Ocean Green* went ahead and was successful in the terms of the developer. I need to make quite a few assumptions here that anyone may dispute. Let us suppose that ten years have gone by and 400 homes have been built and sold. A 5 star luxury resort style hotel has been opened along with all the attendant facilities; and there is a golf course. The homes are 50 per cent permanently occupied with the rest being used as 'holiday homes'. Typically the homes have three bedrooms and two bathrooms, air-conditioners and many have spas. (At this stage you can accuse me of being a hypocrite since my home has four bedrooms and three bathrooms, a spa bath but no air conditioning. I will just have to take that on the chin.) Where am I going with all this?

The underlying thread in all that reading I mentioned is that we are all living beyond our means, using up the world's resources and creating a deficit that will someday have to be met. We have all heard the figures or seen the references to images like: 'If we all lived to the excesses of the rich western nations we would need the resources of four earths.' But we only have one! Did we really need *Great Ocean Green*? Do we really need all those homes just sitting there empty for perhaps 80 per cent of the year? Do we really need to continue to provide playgrounds for the wealthy? At a personal level, I believe that it is nonsense to suggest that we can adequately tackle climate change and still maintain an expansionist approach to our living standards. In fact I believe that we have to be prepared to drop our living standards; many will regard this as absolute heresy! We have failed in our stewardship of the earth and, as a Christian and as a human being, I am saddened by this.

> Genesis 1:28 (NIV) says: '…Be fruitful and increase in number, fill the earth and subdue it. Rule over the fish of the sea and the birds of the air and over every living creature that moves on the ground.'

Then from my NIV Study Bible the following expansion was found: 'He [mankind] is steward of God's creatures. He is not to exploit, waste or despoil them, but to care for them in the service of God and man.

Prologue: The Storm

The small fishing boat left the Apollo Bay Harbour at 4.00am with a young skipper and a deck hand on board. The early morning was still with calm seas and only a gentle swell to greet the boat as it crossed the bar at the harbour entrance. The skipper had high hopes of a successful three days fishing to the west of Cape Otway. It was rather rare these days for a fishing boat to be out for three days, but the skipper had listened to his father's many adventures and he was determined to experience something of a similar nature. By midday they had passed around the tip of Cape Otway, close to where the towering cliffs of the Cape prevented them from seeing the lighthouse above them. Late afternoon saw them setting the long lines and settling to their task. From the lighthouse the views along the coast were spectacular with bright sunshine, and a deep blue sea. To the casual observer on the cliffs, the fishing boat appeared tiny and vulnerable in a vast body of water stretching away to the horizon. They were well equipped, and with modern instruments of navigation and the ability to receive weather updates, the skipper and his mate felt secure.

The day after the fishing boat left Apollo Bay, a few old wise heads around town began to observe the signs of an unexpected change in the weather pattern that suggested a significant rain event. A low was developing on the NSW coast and, as a consequence of this, easterly winds were likely to press onto the beaches of Apollo Bay. Storm clouds were gathering out at sea to the east of Cape Otway and picking up huge quantities of water as they headed toward the coast. One of those wise heads was Peter Carpenter, the father of Michael, the young skipper on the boat 'Maria'.

By mid afternoon he tried to contact his son on the fishing vessel, but the weather conditions conspired against him. In the meantime, Michael too had begun to realise that conditions could

deteriorate, but he had another problem. The engine was not responding as well as it should and a partially blocked fuel line was suspected. Under normal conditions this would not be much of a problem; just a matter of shutting down and clearing the line. However by now, conditions were not normal, and the concern was to run for shelter. A possibility was to run down the coast away from the approaching storm. It would be a long trip since the next safe harbour in such conditions was Port Fairy, a distant 150kms to the west. The alternative was to head back into the storm in the hope of making Apollo Bay before its full fury was reached. Michael decided on the latter and they set a course back along the coast towards Cape Otway again, not realising the extent to which that Cape was shielding them from the storm at that moment.

At about the same time as the 'Maria' set a course for Apollo Bay, rain began falling in the hills behind the town. High in the hills the small streams feeding into the east and west branches of the Barham River, quickly changed from placid trickles into steady flows. As news of the weather change and its nature spread, older residents up in the Barham River Valley viewed the rain with some concern and they feared the worst. They had seen it all before, or so they thought. The valley was quite short as valleys go, only about 15 kilometres, and relatively narrow with the sides rising very quickly to the ridges above. Not the sort of place to be in the event of any flood. In more recent years, farming in the valley had become a distant memory or just one that was pursued as a hobby. Tourist retreats and a few 'tree changers' were now to be found along the road that essentially paralleled the river. Recent arrivals, Lou and Julie Stevens were proud of what they had done on their small holding, particularly in the way of re-vegetation along the river banks. They had plans too for the gully behind their house that ran back for a few hundred metres before the rising ground took off to the ridge. Grazing had left it rather bare and erosion was evident. Lou and Julie had no real concerns about flood events. They realised, just as many people do, that living in a near-to-nature environment includes the risk of floods and indeed fire. Some storms had come and gone in the time that they had been resident

and they were used to rain on the iron roof and the sound of the wind soughing through the trees and down the valley. In fact, Julie rather liked it and for some reason felt reassured by the effect at night as they slept. This night was going to be different but they were blissfully unaware of that as the day drew to a close.

As they approached the tip of Cape Otway in the late afternoon, it was apparent to Michael and his deckhand that they had underestimated the strength of the approaching storm. Its potential fury was clear as the boat, still struggling under half power, rounded the Cape and into rising seas as they set a more direct course for Apollo Bay. Now it was a race against time and the failing light. Realistically, they couldn't call for assistance. They were in no immediate danger and the real risk would only come when they sought to make the entrance to the small harbour on the southern flank of the bay from which the town took its name. Apollo Bay had sheltered many ships in the past, but not one of their small size and especially not when an easterly was on when a boat was more likely to be driven ashore.

By early evening and in steady rain now and strengthening winds they were in sight of the bay. 'What's the plan?' asked the deckhand of Michael. 'We will come in with the weather behind us and turn in the bay to head back into the wind as close as possible to the breakwater and the entrance. Then, at the last minute, go hard to starboard and hope we can slip through without finishing on the rocks!' replied Michael. Under normal conditions, a boat such as theirs would simply line up the entrance and come straight in. Such action under these conditions would put a boat broadside on the increasingly mountainous waves traversing the entrance. Watchers had collected on the shore now and in the gathering gloom, Peter Carpenter realised what his son was going to attempt. There was nothing he could do except pray and hope. The minutes dragged by as the boat slowly made the turn in a wide sweeping arc. Peter saw the struggling boat seemingly making little head way as it looked to be heading back to sea after the turn with mountainous waves crashing over the bow. Then suddenly, just as it came along side the entrance, it swung violently to starboard and shot through

the entrance and into the safety of the harbour. On board, Michael had instinctively pushed on the throttle as he brought the boat about. Miraculously, the engine suddenly responded with full power, enough to push them through in an action like a cork out of a bottle.

Meanwhile, in the hills the rain intensity had picked up and the steady trickle in the mountain streams had turned to relentless flows. The river levels up stream rose quickly and the river became a torrent. In some places, where the banks were constrained by rock, walls of water began to rush along. Silt and debris was picked up by the water. Trunks of giant mountain ash that had lain fallen over the river bed for many years began to move. And still the rain persisted. By 9.00pm a small drama unfolded in the gully behind the Stevens house in the Barham Valley. It was one that was repeated in many places along the valley that night. Unnoticed, and under the impact of the constant heavy rain, a small landslip occurred and blocked the gully, which by now had been carrying a steady stream of water down to the river. The water quickly built up behind the barrier that the land slide had created and debris from further up the hillside pushed into it.

Residents tried to settle into what was going to be a difficult night. As the storm developed further, the intensity of the rain increased and an incessant staccato beat drummed on the roofs. In her valley retreat, Julie found it impossible to sleep and the sound of the rain was only matched by the howling of the wind, this time coming up the valley. The power went off and there was nothing they could do except sit it out.

Daylight brought no relief. The storm had well and truly hit the coast. Downstream on the Barham River flood plain, below the confluence of the east and west branches, and just before it entered the sea, the river level had risen alarmingly overnight. It frightened those residents who had built on the flood plain under the aegis of the developers of an ambitious golf course and housing estate project. Among them were Sam and Mary Withers who had only been in residence for a month and had their two grandchildren staying with them. They were unaware that their house was in a

most vulnerable position. Of all the massive earth mounds, as large as several football fields, that had been built up on the flood plain to take over 500 houses; theirs was in the direct line that flood waters would take once the river had burst its banks. The river broke over its confining banks and spread quickly across the flood plain. The flooding was relatively calm at first but much worse was yet to come.

At first light, Lou Stevens ventured out into the pouring rain and sensed, rather than saw, that something was wrong. The gully behind the house seemed different. Just as he realised what was wrong, there was a sudden roar above the sound of the pelting rain and a wall of water, mud and debris rushed headlong towards the house. His scream alerted Julie and they both barely had time to scramble for higher ground as the mass of material and water slammed into the side of their house. Similar incidents occurred up the valley and the combined effect made the river a force powerful enough to move those trunks of mountain ash that had been lying, as if placed as giant 'pick-up sticks,' in the upper reaches of the river for generations. The river became a raging torrent and the debris and logs began to swirl downstream.

Having crossed the flood plain from Apollo Bay, the Barham Valley Road first crossed the river with a bridge, near what was known locally as 'Ned's Corner', and then turned sharply to enter the valley proper. As the river passed under the bridge it also took a sharp turn. It was here that the swollen turbulent river burst through its banks with a roar to forge a new path across the road. The energy released tore into the road embankment and carried it away along with tonnes of other material and the tumbling, twisting heavy timbers from way up in the valley. It left the bridge intact but useless with the approaching embankment torn away. By the time this new surge reached the Great Ocean Road Bridge, the flood level was up to the underside of the bridge beams. The bridge featured a central pier with two openings for the water to pass through. However, now the timbers in the swirling mass of water struck the bridge piers, caught on one of the openings and caused an immediate further rise in the level. The water continued on its

frantic attempts to reach the sea, frustrated by the wall of ocean water created by the high tide and the storm surge. Pressures amounting to hundreds of tonnes were pushing inexorably on the 60 year old structure.

In the meantime, just upstream from the dramatic events occurring at the bridge site, other events were terrifying the residents who had been persuaded to build on the flood plain. 'It's OK, flood modelling has shown it will work, the earth mounds will be built up to 600mm above design flood level,' the developers had said with charm and assurance. The trouble was the design flood had been well and truly exceeded in this event. Further, the actual rise in sea level due to climate change far exceeded that used by the planners in doing the flood modelling.

Storm surges in ocean levels were not unknown but this was unprecedented. The combination of high tide and the storm surge meant that rolling waves were sweeping up the estuary pushed by the easterly off shore winds and against the flood waters in their relentless push to the sea. One mound in particular, the one that included the home of Sam and Mary Withers, was under combined attack, exposed on one side to the fury of the ocean, and the other to the raging flood waters. This housing pod was in real danger. Road access had been cut and the group of houses now stood as an island surrounded by the swirling waters. The rain had saturated the earth mounds and the raging flood waters eroded the structures around their bases. With a terrifying roar, one whole section, complete with ten houses, started to slip. Residents screamed in disbelief. Escape was impossible since access roads were now covered with metres of water. They could only try to retreat towards the centre of their mound. The slipping earth accelerated as it went and houses were tossed around as in a child's toy village being broken up in a tantrum. Still the wind and rain persisted and rescue was impossible.

Back at the bridge, water was now spilling over the Great Ocean Road. Authorities had long since closed the road and the community to the south west was cut off from the town. The old structure began to show signs of weakness. Although one waterway

was still open, the pressures from the debris piled up against the other were beginning to take their toll. The bridge beams moved. Then with a resounding explosive roar, they gave way and were swept downstream taking half the roadway and decking along into the now choked river.

At the football field and adjoining Caravan Park alongside the Great Ocean Road, just near the now collapsed bridge, other dramas had been unfolding. Water had been rising steadily since the rain began. People were evacuated as the water rose above the floor of cabins. Where possible, caravans were pulled to higher ground. However, as the full wild fury of the onset was realised, panic set in and there was a mad scramble for higher ground. Caravans unable to move in the chaos began to float. Three were swept out to sea. By this time the golf course had long since been buried in a mass of silt and debris and the once thriving new trees, were torn out by the roots.

It was a flood like no other that had been recorded, but it was not one that had not been seen before. Nature has no notion of design flood levels. A thousand years ago, such a flood had occurred, but it was not observed by a people who had a written record. Six people paid the ultimate price in this disaster. Others paid for decades to come. Sewer and water mains were broken and when the waters finally subsided, the stench was over powering. Development had over stepped nature's boundaries. A gulf had developed between those who saw an opportunity to make money and to cash in on the 'sea change' phenomena that had swept along the coastline, and those who urged caution. It was a *Great Ocean Gulf* of a very different kind. Now who was to take the responsibility?

The dateline is the year 2020 and of course this is just a story. However, some credence to the story can be gained from the following eye witness account of a 1923 flood in the Barham River:

> One day a great wind, accompanied by extra heavy rain, came in from the east and deluged the catchment area with a seven inch fall in a few hours. The Barham River could not handle all

> the water, the valley was filled, roads were covered, bridges were washed away and much harm was done. During these hours of flood and continual rain the spring tides were at their highest and the wind increased to a sixty-mile gale. With the sea piling up and retarding the flow at the river mouth, and the gale pushing the floodwaters back at the same time, the handicap was beyond the river's strength. The flood waters piled higher than ever known. We witnessed the strange sight of the sea waves turning themselves yellow and racing inland to cover thousands of acres of pasture with the tumult of ocean waves.
>
> An eye witness account by Mrs Jean Berry, from *Under the Coolibah Tree* by G.F.Young

For almost ten years, since 2000, the threat of such an outcome as given in the story was very real. An ambitious plan for a golf course and housing estate on the flood plain of the Barham River at Apollo Bay had been launched. In spite of community protests, the plan proceeded through submissions and argument, eventually getting all the approvals until it ended up on the desk of the Minister for Planning. To that point, the supporters had ignored the advice of E. B. White (US Author & Humorist, 1899-1985) who said:

> *I would feel more optimistic about a bright future for man if he spent less time proving that he can outwit Nature and more time tasting her sweetness and respecting her seniority.*

Fortunately, common sense prevailed when in June of 2009 the Minister for Planning announced that he was rejecting, at the final stage, the planning amendment and the project that was known as *Great Ocean Green*. What follows now is the story of a proposed development that was taken through the planning process over more than six years; a project that should never have got as far as the possibility of that final approval. It is a story that asks questions and demands answers; many of which are put forward.

Chapter 1 – Apollo Bay and the Great Ocean Road

The Great Ocean Road, Victoria, is an icon of Australia and is internationally rated as one of the most scenic coastal roads in the world. It has a proud history from its beginnings as a project to assist people during the great depression of the 1930s. In particular the work was available to, and carried out by, almost 3000 returned servicemen from the first Australian Imperial Forces, following World War 1. In this respect the Great Ocean Road is also regarded as the world's largest war memorial. The road starts south of the provincial city of Geelong and travels along the south west coast of Victoria to terminate close to another provincial town in Warrnambool. About half way along its length of 250 kilometres it passes through what was the small fishing, forestry and farming village of Apollo Bay.

The last thirty years or so have seen significant changes to the small village nestled on the coast at the base of the foothills of the Otway Ranges rising up behind it. The fishing industry has all but collapsed. There are only one or two working farms in the immediate vicinity and the forestry industry has all but closed down; a familiar tale no doubt. However, the tourism industry is thriving along with 'sea changers' and retirees moving to the coast. In spite of this, the permanent population has remained essentially static at around 1000, even as holiday homes and holiday accommodation facilities have flourished.

The town boasts a small but significant harbour with an adjacent 9-hole golf course and generally provides well for residents and visitors alike. At any one time perhaps as many as 3000 people

are in Apollo Bay for the night and during the peak holiday seasons estimates of the numbers range from 10-20,000 people.
The main street along which the Great Ocean Road passes, offers a tasteful streetscape with shops one side and a wide foreshore on the other. Long time residents will tell you that the water's edge was initially just across the street and at times of very high tides waves could wash over the road. However this has all changed with sand movements building up a wide foreshore so that the dunes behind the beach are now 50 metres or so away from the road. Indeed the dunes are now so high that they block a direct view of the water's edge. There is some contention about the causes of this geomorphological change, with many suggesting that it commenced with the construction of a breakwater to form the Apollo Bay Harbour in the 1950s.

There are numerous accounts of historical interest about the early life in Apollo Bay. The early European settlers arrived around the 1850s, although the area was explored earlier than that when there was a need to establish a lighthouse on the tip of Cape Otway along the treacherous shipwreck coast. Many sailing vessels came to grief as they tried to 'thread the needle' coming through Bass Strait between Cape Otway and King Island to the south. The lighthouse was finally built in 1848, following rather heroic efforts by Charles La Trobe, then Superintendent of the Port Phillip District, to reach the Cape by an overland route. The bay from which the town takes its name played a very important role in that early history since the primary means of travel between Apollo Bay and other centres such as Melbourne was by ship. There were a number of jetties or piers built over the years, initially to facilitate the loading of timber and eventually to provide for more general cargo and passenger traffic.

The steamer, 'Casino' was a regular visitor. In a major disaster, following some years of service, the Casino sank in the bay during a storm. The last town pier was dismantled in the 1950s when the harbour breakwater was built. The bay was much deeper then and anecdotal evidence suggests that it has gone from a depth of over five metres to one of less than two. A possible explanation

for this can be put forward once the layout of the coastline in the immediate vicinity of Apollo Bay is understood. The town is indeed on the shore of a modest bay, 'Apollo Bay', looking out to the east. The bay is largely formed by the curving coastline to the north and a spit of land to the south known as Point Bunbury. This affords shelter to the bay from the southerly directions of Bass Strait. On the other side of Point Bunbury and immediately to the south is a smaller shallower bay known as Mounts Bay.

It is here that the most significant river in the immediate area, the Barham River, discharges into the sea. In general terms it is a small river, with no navigable length and a mouth that is frequently blocked by sand movements. At the southern end of this bay in turn is the small residential community of Marengo. (Marengo is essentially part of the Apollo Bay Community, but nevertheless separated from it by an open coastline of 1-2 kms.) The Great Ocean Road leaves Apollo Bay at the Barham River Bridge, at the start of Mounts Bay, and continues on a primary sand dune behind the beach to Marengo. After that it rises rapidly up a steep hill and turns away to the west towards Cape Otway, Lavers Hill and Port Campbell.

Inland from the primary sand dune and the Great Ocean Road is the Barham River Flats and the flood plain of the Barham River. It is interesting to speculate that over many centuries past the river must have moved back and forth across its now wide flood plain in order to create it. Perhaps at sometime it discharged into the ocean at the southern end of Mounts Bay, rather than at the northern end as it now does. Long-term residents will tell you that 20-30 years ago, camping on the sand dunes at Mounts Bay between the Great Ocean Road and the beach was very popular. It was quite easy to drive off the road there and find suitable camping spots. This is not possible today since the coastline here has receded. Sand movement is north from Mounts Bay, past Point Bunbury and into the harbour and the bay beyond, that is, Apollo Bay. Some suggest that this is a cyclical process and eventually the beach and the sand dunes at Mounts Bay will build up again. In recent years however, coastal recession has been experienced at Mounts Bay and

is in fact threatening the Great Ocean Road on the primary sand dune and this will be explored further as the story unfolds. For the moment it is time to return to the changing nature of the bay at Apollo Bay and its impact on the use of the harbour.

The harbour at Apollo Bay is formed on its southern flank by Point Bunbury, a breakwater, running north from the end of Point Bunbury and the harbour infrastructure (piers and moorings) essentially running from the shoreline in an easterly direction towards the end of the breakwater. Of course a small entrance is left there for boats to enter and leave the harbour. Due to sand build up at the entrance, this is virtually being continually dredged with an old dredger permanently at Apollo Bay. In the past, the depth of water available to boats outside the harbour meant that they had a choice as to how they approached the harbour entrance in a run into a safe harbour. Local fishermen tell the story that this is now not possible and there is only one way to line up for the run in. If the weather conditions for this are unfavourable, as is often the case, then boats cannot enter the harbour. To attempt to do so would involve a risk of life and limb. Conditions are often made even worse by the south easterly swells that sweep past the end of the breakwater and run across the path of the incoming vessel as it tries to enter the harbour. Apollo Bay Harbour is also a gazetted port and there are certain responsibilities that come with this. It is the only such port between the entrance to Port Phillip Bay and Portland in the State's far west – effectively the distance of half of Victoria's entire coastline. It is supposed to always be available to boats seeking refuge.

While activity at the harbour has declined in respect of fishing, there is no doubt that it plays an important role in the life of the community of Apollo Bay in the 21st Century. Recreational fishermen use the harbour and the boat ramp extensively. Tour operators provide cruises to the seal colony just off Marengo and fishing charters further afield. There is a very active sailing club and there is still some commercial activity and boat repair facilities. There is also scope for improvement and enhancement of the harbour and its attendant facilities. There has been a gradual

decline in the range of facilities for the fishing industry. For example, the slipway initially had a 100 tonne capacity but this is now reduced to 50 tonne. And the slow silting up of the harbour continues.

Point Bunbury itself is the home of the Apollo Bay Golf Club (ABGC) established more than 81 years ago by locals who were passionate about the game. The story goes that they cleared up the blackberries and other invaders and essentially built the course themselves. It is a 9-hole golf course with no par five fairways. Testament to the changing local geomorphology is the fact that where the current first and second holes are, was once essentially the ocean. They are there now by virtue of the sand build up on the foreshore reclaiming the sea. The problem is that the course was built on crown land and the Golf Club leases the land from the Department of Sustainability and Environment (DSE). The lease is due to expire in 2016 and the DSE has informed the club that its policy is to move all non-foreshore related activities from a foreshore. This has caused much consternation amongst the members of the club, particularly those with responsibilities on the committee. The golf course itself is a picturesque one with arguably some of the most magnificent coastal views available to players of any course in Australia.

In the late 1990s, the ABGC committee became active in seeking to purchase land for a new 18-hole golf course. After investigating a few likely sites with the help of professional golfers, they settled on the purchase of Garrett's Farm a few kilometres behind Apollo Bay on the Barham River Valley Road. The farm has some low lying areas subject to flooding but also some good high ground and was selected as being most suitable for the development of a golf course in the future. The purchase was initiated in 2000 and the Garretts struck a very good deal with the golf club in agreeing to sell for $1million, with a deposit of $500,000 and the balance payable over ten years at $50,000 per year with no interest. Over all its years the club had built up a significant bank balance against the eventual need to purchase a property. Much of the income comes from green fees paid by visitors over the busy

summer period. The Garretts retained the ownership of their immediate house block on the farm and looked forward to a tranquil life in retirement there surrounded by a golf course.

The Barham River Flats

We now need a closer look at the Barham River Flats. Any visitor to Apollo Bay will immediately notice the foothills of the Otway Ranges behind the town. They are usually green and although farming in the historical past stripped them of the trees, there is a lot of re-vegetation going on. The hills result in numerous steep sided valleys with small creeks, rising among the ridges of the Otways, running through them. Prominent among these are the east and west branches of the Barham River. Both branches rise among the higher ridges above Apollo Bay and wind their way along narrow valleys with ridge lines often covered in Mountain Ash and the more sheltered areas bearing Blackwood trees. In many more places, giant tree ferns and other cool temperate rain forest plants abound. The Otways are known for having the most western pockets of any cool temperate rain forests in Australia. They consist of Blackwood and Myrtle Beech trees with the surrounding forest being predominately wet Sclerophyll Eucalyptus. Within a few kilometres of Apollo Bay the two branches combine to form the Barham River which then breaks out of the narrow valley into a broad flood plain or what is simply known locally as 'The Barham River Flats'. The Department of Primary Industries (DPI) Victoria is a little more precise in describing the river flats and refers to part of them as the Barham River Lagoon. The DPI provides a web site through Victorian Resources Online (VRO). Looking at the section, *Corangamite, Barham Lagoon (Site 25.2*)[1] the following quotes will be found:

> Significance: State. These are the largest abandoned tidal meanders of any stream in Western Victoria. The sequence of barrier, lagoon, bluff, infilled estuary and meanders demon-

> strates a classic case of river infilling and modification by marine and estuarine processes.
> Management: Class 2. The meanders should not be reclaimed or infilled as this would reduce the interest in the sequence discussed above.

The Council also had a view on the Barham River Flats as expressed in an *Apollo Bay Structure Plan* (we used to call such things, town plans, and the associated activity town planning!). There was a problem however; the Council had never taken the appropriate steps to have it incorporated into the *Colac Otway Shire Planning Scheme*. Effectively it had no legal status even though it existed. The plan is contained in the document *Colac Otway strategic development master plan* [2] and it is convenient to describe it as the *Apollo Bay Structure Plan 2001 (ABSP, 2001)*. It had a number of meritorious features and in particular it had this to say on the matter of the Barham River Flats:

> The Barham River flats, situated between Apollo Bay and Marengo, are another feature of the area. They are sparsely covered with vegetation and the Barham River meanders down from the foothills to the ocean. The river flats play an important role as a green wedge and visual separation between Apollo Bay and Marengo. Any development of this land is constrained, as it is low-lying and subject to flooding. Accordingly, Council has placed the area in the appropriate Land Subject to Inundation Overlay.

The Colac Otway Shire was formed basically from the previous Colac Shire and Otway Shire (where Apollo Bay was the principal town) in 1994, when the then Liberal Government in Victoria introduced Council amalgamations and reduced the total number of shires in Victoria. The two major population areas in the new shire were then Colac (12,000) and Apollo Bay (1,000). The obvious disparity in size continued in the primary interests of both centres. Colac has remained a provincial service town based on a large dairy

district and local timber industries, now mainly based on plantation pine. Apollo Bay on the other hand was, and is, a growing community where tourism, accommodation development and holiday homes are its mainstay to the decline of all else. Popularity with 'sea changers' and a growing tourist market saw a rise in house and land prices in Apollo Bay and many believed that the Colac dominated Council of seven members saw Apollo Bay as a 'cash cow' for the Shire. The evidence of this was in the rate rises around 2001. They caused such a public outcry that a town meeting was called. Although nothing much was achieved in the long run, the public certainly vented their anger and the Mayor and Council Representatives were given a hard time. Perhaps the roots of disquiet were planted on this occasion since the Council has been widely criticised by the Apollo Bay Community ever since, at least up to the 2008 Council Elections.

In essence then, we have a description of the features of Apollo Bay and the prevailing circumstances around the year 2000, when rumours of a large development project involving a golf course and the Barham River flood plain were about.

About this book

This book gives an account of the proposal to develop a golf course/housing estate essentially on the flood plain of the Barham River Valley at Apollo Bay in a project, initially estimated to cost $200 million, known as *Great Ocean Green*. The story is one of the rather tortuous paths of the planning process often confronting large scale developments and a community, who in the main, doesn't want to see such development. It describes in some detail how the community responded in this case and gives an account of the planning panel hearings and discusses their conclusions. Particular attention is given to strategic planning documents and their shortcomings. Following the actual account of events, the issues are discussed in a broader context in the hope that the wider community can gain from this experience. For the reader who is

unaware of the broad nature of the planning process, it would be helpful to take a look at *A Brief Outline of the Planning Process in Victoria* as provided in the box.

I am not a Town Planner; rather I trained as a Civil Engineer and spent most of my career as an academic. Since retirement however, I have become active in the community over a number of issues but particularly in respect of what I perceive as unsustainable development.

Up until June of 2009, the issue of the *Great Ocean Green* development remained unresolved. It had taken at least eight years to get to a resolution that was in fact, finally against the project. This illustrates one of the major dilemmas facing planning agencies and developers. That is, the long lead time between ideas and implementation giving scope to all sorts of intervention, changing circumstances and conditions. There is also the need to be open to the public and to allow community scrutiny of the project along the way. There are several issues that need exploring and this book attempts to address them.

Is there an alternative approach to the one that was taken here? I believe there is and I shall develop my case. I eventually learnt that the planning amendment being sought for the development was what is known as a 'site specific' amendment. This was largely because it lay outside of the town boundaries as recognised in the local planning scheme at the time. It will be argued that site specific amendments have no place in planning procedures. Strategic planning should be far more prescriptive and binding. The main subject of this book could be described as a case study in the planning process and an illustration of how a community needs to be vigilant in maintaining the township it wants. The work particularly explores changing circumstances that have occurred over the period involved. The most significant of these is the question of climate change and its impact on coastal communities. Briefly at this stage, I would suggest that in 2004, most people would have thought that IPCC perhaps stood for *Imperial Packaging Case Company*. In late 2008, I doubt that any

A Brief Outline of the Planning Process in Victoria

The following outline is based on my experience and is not intended as an authoritative statement. The purpose is to introduce the process to those who have no familiarity with it.

Responsibility for planning has been widely handed to local government under specific guidelines from the State Government through the Department of Planning and Community Development, (DPCD). The starting point is for the Council to have a planning scheme. Ultimately however, the power lies with the Minister for Planning who must approve the initial planning scheme and any amendments that are made to it. In this case we have the *Colac Otway Planning Scheme* with the Colac Otway Shire Council as the 'responsible authority.' Various planning zones are declared throughout the shire, both in the towns, settlements and in rural areas, generally describing what activities can go on there. The most obvious zone that most people are familiar with is a residential zone.

The statuary authority for all this is expressed in a *Municipal Strategic Statement (MSS)* and supported by various laws including the *Planning and Environment Act, 1987*. If a proposed land use is contrary to the current zoning of that land, then a planning amendment must be sought. A proposal could be initiated by the Council or a developer and an application is made to the responsible authority. An amendment proposal, once accepted, then goes on public exhibition for a period of about eight weeks and submissions are invited from all interested parties. Following the exhibition period, the Council must consider the submissions and either act on them or, as is most likely, refer them to a planning panel set up to adjudicate on the merits of the proposal and make recommendations to the Council. A planning panel is appointed by the State Government through the Minister for Planning and acts as an independent party. The Panel has a quasi-legal status, with direction hearings and formal sessions. Planning panels are administered through *Planning Panels Victoria* and have both full and part time persons to call on.

Following the release of a planning panel report, Council is required to consider that report and its recommendations and pass on its consideration to the Minister for Planning for the final decision.

For further information visit www.dpcd.vic.gov.au

reasonably informed person would not be aware of the activities of the Intergovernmental Panel on Climate Change. There has been an explosion of information on climate change into the public consciousness along with the very slow realisation that we are in danger of ruining our environment.

The planners will say that the matter of climate change has been addressed along with all of the environmental issues. Further it can be argued that you 'can't keep changing the goal posts.' I have some sympathy with this argument and can certainly see the point. Decisions and judgments can only be made on the basis of the rules that apply at the time; otherwise there would never be any progress. However, there is still a real need for the decision makers to be forward looking, particularly when the decision puts something in place for the next 50 to 100 years. I also believe that I can demonstrate that the decision making, up until the point of reaching the Minister's desk, was flawed. In addition to costing the developer several million dollars, the taxpayer and the community has not escaped without cost, both financially and emotionally.

Chapter 1 - References

1 *Corangamite, Barham Lagoon (Site 25.2*) available at: www.dpi.vic.gov.au/dpi/vro/coranregn.nsf/pages/corangamite_landform_barham_river_lagoon

2 Colac Otway (Vic.). *Council. Colac Otway strategic development master plan / prepared by PPK Environment & Infrastructure Pty Ltd for Colac Otway Shire, 2001*

Chapter 2 – The Preliminary Rounds

Planning is a top down process. It usually commences with strategic planning setting a framework from which the details can eventually be worked out. In this case the most significant strategic planning document is the *Great Ocean Road Region Strategy* [1], *(GORRS, 2004)* - a land use and transport study prepared by DSE and released in November 2004. While this was a seminal document, it had its precedents in that it was work shopped and developed over two years before its release in a draft form in November 2003.

I personally attended a community workshop in Apollo Bay and recall one of the main objectives was to try to define what characterised Apollo Bay; something like, 'the wide open beaches and the rolling green hills behind the town and a sense of space', was the answer. Of course the Great Ocean Road itself featured prominently in the document with the aim of both protecting and enhancing the road, primarily to maintain its status as an icon and major tourist attraction. Indeed in November 2007, the 75th anniversary of its opening in 1932 was celebrated all along the coast with some calling for world heritage listing for the road.

The Victorian Coastal Council and its strategies

Before considering *GORRS, 2004* in more detail, a second relevant strategic planning document is introduced. This is the *Victorian Coastal Strategy* [2] *(VCS)* and a related document that is the *Coastal Spaces Recommendations Report* [3]. Some comments on the *VCS* serve to introduce the Victorian Coastal Council and its associated and devolved bodies, a number of coastal boards of which the Western Coastal Board is one. The Western Coastal Board will come into some prominence in later chapters.

The *Victorian Coastal Council* was set up under the *Coastal Management Act 1995* as the peak body for the strategic planning and management of the Victorian Coast. The first *VCS* was released in 2002, but I had scant knowledge of it until my attention was drawn much later to the *Draft VCS 2007*, released for comment in November of that year with submissions open until 31 January 2008. The strategy was finally released in December 2008 as *VCS, 2008*. (The nature of the *VCS* and its influence on the *Great Ocean Green* development will be discussed in later chapters.) In the meantime, the related *Coastal Spaces Initiative* and its report had become available. The *Coastal Spaces Initiative* was released in August 2004 as a joint project between the Victoria Coastal Council and the Department of Sustainability and Environment with the support of both the Minister for Planning and the Minister for Environment.

It had the very understandable aim of assisting coastal councils retain the character of their townships and protect the open spaces between settlements along the coast. In this respect it could be seen as a tool of the *VCS* and in fact it ultimately resulted in *Planning Practice Notes* being issued. From this experience the manner in which strategic planning moves down to grass roots decision making in planning emerges. A strategic document is work-shopped; a draft version is released and made available for comment; the document is then reviewed in the light of comments received before the release of a strategic plan that includes initiatives, action plans and directives. A logical and fairly obvious procedure, as would be expected.

The Coastal Spaces – Recommendations report was released in April 2006 and followed on from a *Coastal Spaces Inception* report of May 2005. Both reports can be seen as a natural derivative of the *Victorian Coastal Strategy, 2002* and it is possible to trace a progression of planning documents in that top down approach. My observations lead me to comment that there is a lot of rhetoric and a lot of repetition, perhaps understandably in the case of the latter, since most of the documents can be read in isolation. The recommendations provided by the *Coastal Spaces* report: 'seek to improve and clarify strategic planning and tools for managing

sustainable coastal developments….' On the matter of climate change the following quotes are taken from the report:

> Taking a more precautionary approach to land use and development in areas likely to be more vulnerable is the prudent course of action. Proactive intervention to direct long-term development and use away from likely vulnerable areas is strongly recommended.
>
> Climate change is expected to produce more intense low-pressure systems off Victoria's coast that will lead to a greater number of extreme storm events and storm surges. Particular parts of Victoria's coast are more vulnerable to storm surge events, with low lying, sandy shorelines, and low lying areas adjacent to estuaries and waterways most at risk.

While noting the need for further study, the report had the following to say: 'it should be considered standard practice to adopt a precautionary principle approach when planning for areas likely to be more vulnerable to climate change effects, such as estuaries, sandy shore lines and other low lying sites.'

The report was released in April 2006 and prior to the commencement of the panel hearings for the *Great Ocean Green* project. Reference was also made to 'sea level rise of up to 55cm by 2070'. I will subsequently draw the reader's attention to the changes made in respect of sea level rise, even during the life of the panel hearings for the *Great Ocean Green* project. The quotes are given as an illustration of the language being used and also to be drawn on later when assessing outcomes for the *Great Ocean Green* development. An emphasis in the *Coastal Spaces* report is on the need to establish settlement boundaries and to ensure that they are incorporated into the local planning scheme. While this may seem to be an obvious thing to do, that apparently has not been the case. While the Colac Otway Shire had an *Apollo Bay Structure Plan* in 2000, it had never been incorporated into the necessary documentation to make it effective as a planning tool. Another key

element of the report was to discourage linear urban development along the coast.

The *Coastal Spaces Initiative* also introduced the *Coastal Spaces Landscape Assessment Study* and refers to a subset, namely the *Great Ocean Road Region Landscape Assessment Study, 2004 (GORRLAS, 2004)* with the comment that the implementation of such studies into local planning schemes is critical. The term 'green break' or 'non-urban break' is used to describe the interval between settlement boundaries and, along with the expression, 'significant visual landscape'; the importance of maintaining these breaks is stressed.

As can be seen there is no shortage of frameworks, position papers and strategies coming from Government departments and agencies and it is possible to identify even broader strategies sitting above those that have been mentioned. Of itself, this is not a criticism; what is important is how effective these strategies are, and that will be explored in later chapters.

Before leaving the *Coastal Spaces Recommendations* report, I noted a comment in that report on changes to the *Planning and Environment Act 1987*. An amendment to the act came into effect on 23 May 2005 (well after the application for a planning amendment to facilitate the *Great Ocean Green* project) which now requires a Council to obtain the Planning Minister's authorisation to prepare a planning scheme amendment. This is known as 'prior authorisation' and is apparently designed for an assessment of the project against the broader Government planning policies. In my view this is an important change and an advance in the planning process.

The Great Ocean Road Region Strategy

Returning to the *Great Ocean Road Region Strategy* it was, and is, an important strategic planning document. However, it is not without its shortcomings since it leaves a lot to interpretation and a number of issues in this regard will be addressed. The strategy recognised

the importance of the Great Ocean Road to the region and the pressures that are on coastal areas, in population growth, increasing tourism numbers and the impact on the environment as well as the difficulties in providing services. A clear objective was to try to prevent the strip development along the coastline that now characterises much of the coastline of northern NSW and South East Queensland.

This could be achieved in two ways. Firstly by identifying areas that had some potential for growth and secondly by establishing town boundaries or 'settlement boundaries' as they are called in the strategies. Throughout the region, three towns were nominated, namely Torquay, Apollo Bay and Warrnambool. Of course there were the usual platitudes about how this growth should be appropriate and the word 'sustainable' was used extensively. (This word needs closer examination and will be discussed more fully later on.) More detail with respect to Apollo Bay will be presented later but for the moment attention is focused on setting the scene. Suffice to say that *GORRS, 2004* stated:

- Under strategy 2.2: 'Direct urban growth to townships where it can best be accommodated and limit growth elsewhere,'
- Then clause 2.2.2 and its initiative: 'develop Apollo Bay as a preferred coastal township for residential and visitor accommodation growth and community services.'
- And the action: 'Develop a structure plan for Apollo Bay' [Town plan]

The action here is significant since there were to be two projects, essentially going on at the same time, that were to attract the attention of the Apollo Bay Community.

The combination of the words, 'Apollo Bay' and 'growth' was probably enough to trigger the imagination of developers; and this occurred well ahead of the release of *GORRS, 2004*. Formal dates can take the history of the strategy back to 2001, and earlier knowledge would not have been hard to find. This meant that the

developers were way ahead of the game. The initiative on the part of the ABGC in securing Garrett's Farm was well known in the community and certainly did not escape the attention of the developers.

In order to achieve their objectives the developers had to first buy up (or at least secure options on) land on the Barham River Flats, essentially below and in front of Garrett's Farm. The fact that the land was even in private hands and available for purchase was really down to a quirk of history. Current thinking would not have had titles running out to the centre of rivers as occurred during the early settlement of Apollo Bay. The history of Apollo Bay shows that the flats were attractive to the early arrivals since minimum clearing of the land was involved and eventually the first farms were established there.

Having stitched up their deals, the developers had next to negotiate with the ABGC for a mix and match between the lands of Garrett's Farm and the less favourable lands on the rest of the flood plain. The deal was plainly attractive. The club would get an 18-hole championship standard golf course and a new $1m clubhouse plus some financial incentives. About nine holes would be on the superior land of Garrett's Farm and the balance would be further down the flood plain. The community would benefit since the degraded lands of the Barham River Flats would be restored, albeit with a golf course, and re-vegetated.

Since the flats have been in private hands for so long and used extensively for grazing cattle, it can certainly be argued that they are degraded. However the solution proposed was not the only possible solution for improvement. The subject site comprised a number of different lots and titles, but particular attention must be drawn to three parcels of land within the boundaries. The first of these is the land always retained by the Garretts in their arrangement with the Apollo Bay Golf Club. It is simply their house allotment and access driveway from the Barham Valley Road, excised from the farm. The second is a relatively small house lot on a bend in the road about half way across the flood plain and known locally as 'Martin's Corner.' The owners

simply decided not to sell to the developers. The third and final piece of land is that owned by the Council and designated 'public open space'. It was created during the development of the Heathfield Estate in the 1990s. Each one of these parcels of land feature in the unfolding story.

The Proposal for Great Ocean Green

A proposition for a $200 million dollar project would be expected to have some substance, as indeed it did have in this case. Significant work must be put into the plans and documentation and many criteria have to be met. Such is the nature of planning legislation that law firms have planning lawyers. Documentation is drawn from a wide range of professions, especially when it comes to a presentation to a planning panel hearing as will be seen. The public doesn't have a chance to see the submission until the exhibition stage and may then be somewhat overwhelmed by several volumes of paper work and a folio or two of drawings. However, while the detail is important, the essence of the project can usually be gauged by what might be described as a set of concept drawings or layout plans. This may extend to schematic views and artist's impressions from a design studio or even a computer aided 3d 'walk through'.

From an individual's point of view, comprehension of what is proposed would commence with absorbing the boundaries of the site and getting some orientation with what is already on the ground. In the case of the *Great Ocean Green* project, the Barham River, the Great Ocean Road and the Barham Valley Road quickly bring the proposal into focus. Some knowledge of the site and a simple description can encapsulate it. An integrated 18-hole championship style golf course and housing estate of up to 537 homes, a clubhouse, convenience store, hotel and accommodation facilities, a driving range, roads, walking tracks and public access and open space were all featured predominately on the flood plain of the Barham River.

The concept plan is shown in Figure 2.1 and was taken from the web site www.greatoceangreen.com.au. The legend is not shown since it is more relevant to the coloured plan, however the pertinent details are fairly self-evident. There are four major elements namely: the golf fairways, the housing zones, landscaped and vegetated open space and lastly, the clubhouse, accommodation and facilities area known as Precinct 3. The only one that needs a little explanation is Precinct 3, shown in a light shade and diagonally cross hatched as shown lower right. Attention should also be drawn to the Barham River and the Barham Valley Road, as both cross the site and the flood plain. It may be of some use to the reader who in unfamiliar with Apollo Bay to have a look at Figure 7.1 in Chapter 7; a version of the *Apollo Bay Structure Plan* that shows the flood plain in a broader context. Of course neither figure gives any indication of the topography of the land around Apollo Bay. Suffice to say at this stage that the Otway Ranges rise up very quickly behind the town. In so far as it affects the story, the topography will be presented in more detail later.

Prior to the more formal exhibition stage, preliminary plans for the *Great Ocean Green* development were exhibited at the clubhouse of the Apollo Bay Golf Club and the public was invited to view the plans and discuss various points with representatives of the developers. An immediate reaction was, 'How can you build houses on a flood plain?' Well there is an answer; you simply build up the ground on which the houses are to be built.

No small feat of engineering as will be seen. 'But what happens to the flood water? If I put a brick in a bucket of water the level rises up or the bucket overflows!' 'Well, yes, but here we have a complex flood modelling situation with interaction between the ocean, sea level rise due to climate change, tides, rates of flow, other changes to the terrain and the likely flood events. At the end of the day the flood modelling will show that it will work with little change and the flood will dissipate quickly as it always does.' That some change was at least expected was later evidenced by the small dilemma that the owners of the land known as 'Martin's Corner'

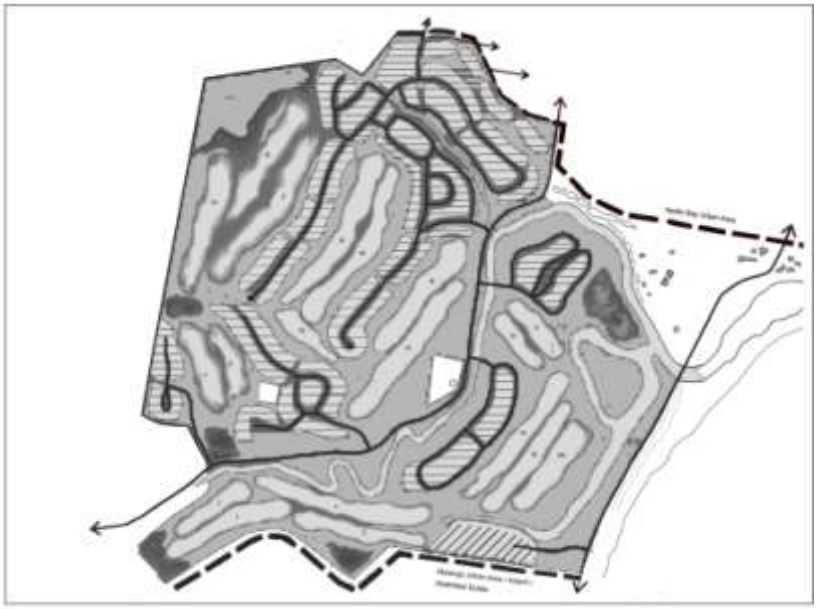

Figure 2.1: Great Ocean Green Landscape Concept – Golf Overlay

presented perhaps for themselves as well as for the developer. As mentioned earlier the land is about half way across the flood plain with access from the Barham Valley Road. It is recognised as a local high spot on the plain and has survived many a flood over the years. If the ground was to be built up to protect assets on the flood plain, what would happen to 'Martin's Corner'? Well it transpired that the property would simply have to be protected by a 'bund' or levee bank all round its boundaries. It was the flood modelling that ultimately became the major divisive issue of the project leading to some drama among the Councillors of the Colac Otway Shire.

The battle lines are drawn

We are now close to where the battle lines were to be drawn for the first time. Piece by piece the ideas of the developer and the golf club had leaked out to the community of Apollo Bay. One early rumour had a canal style development occurring similar to those on the Gold Coast in Queensland. A rather fanciful idea, since the Barham River mouth is frequently and seasonally blocked by a sand bar and there are effectively no navigable sections over its length. Clearly discussions were held behind closed doors between the Council, the developers and representatives of the ABGC. Indeed a *Heads of Agreement* document between the golf club and the developer, Urban Property Corporation, emerged from these discussions in the lead up to the formal submission to Council for a planning amendment. The involvement of a local businessman also emerged.

While known to some, it was certainly at the local Council Elections in 2004, that Mr Joe Di Cecco came to prominence in the community's eye. Joe Di Cecco had grown up in Apollo Bay, but his most recent business as a Consulting Structural Engineer, had been in the Ocean Grove area. However he moved back to Apollo Bay contested the Council Elections and became Cr Di Cecco, the second of two Councilors to represent the Otway Ward (which included Apollo Bay) of the Colac Otway Shire. The other representative was Cr Stuart Hart who was re-elected. It soon became apparent that Cr Di Cecco was a director of Urban Property Corporation, the developers of *Great Ocean Green*. Not only that, but he was also a director of another company involved in a planning amendment application for re-zoning to develop a 100+ home site estate and tourist accommodation to the north of the town. This project was known as *Marriners Vue* and the planning amendment to affect this was designated as *Amendment C17*.

On 4 April 2003, the Urban Property Corporation submitted an application to the Colac Otway Council to amend the *Colac Otway Planning Scheme* to permit the development of *Great Ocean Green*. The Council eventually resolved to place the proposed amendment to

the planning scheme, to be known as *Planning Amendment C29*, on public exhibition from 18 November 2004 until 18 February 2005. Prior to arriving at that resolution, Council had gone through a couple of iterations that suggested outside interference in its activities as will be seen shortly. So now we have the situation where for more than a year the proposal was before the Council without formal action being taken. This is partially understandable since Council would also have been aware of the draft *Great Ocean Road Region Strategy* and the need for an *Apollo Bay Structure Plan (ABSP).*

In the interests of clarity, the position the community found itself in by early 2005, with regard to possible developments and planning, needs to be summarised. (See Timeline box at chapter end) At this time the public was well aware of the *Great Ocean Green* project and it had gone through its exhibition stage and was open to receive submissions. The *Apollo Bay Structure Plan* was also drawing public interest and Council had engaged consultants to prepare the plan. Eventually this was to be issued as the *Draft Apollo Bay Structure Plan* and to also be open to submissions. A third planning process was also progressing and attracting some community concern. This was the *Marriners Vue* development and the associated *Planning Amendment C17,* briefly referred to earlier. No one could say the Council, its planners and the community didn't have anything to do! However, there were long periods of apparent inactivity when the ball was not in the community's court.

Planning Amendment C17 had progressed through its exhibition and submission stages and in March 2005 a planning panel was appointed to consider its merits. The hearing was held in Apollo Bay in July of 2005. While there was strong opposition from a small group, many in the community were not particularly opposed to this development which was certainly far less controversial than *Planning Amendment C29*. The hearing was largely uneventful, although it did give many in the community, including myself, some insight into such proceedings. There were valid objections to the project but there was not a ground swell of public opposition. In late September 2005, the Panel Report was released with the

recommendation that *Planning Amendment C17* should be abandoned. This rather dramatic statement needs some qualification although the details will not be explored here. In essence, the strategic merits of the project had not been clearly expressed but the Panel retained 'in principle' support for the project. The amendment really needed the clarity that the *Apollo Bay Structure Plan* would bring. Accordingly, in October 2005 the Colac Otway Shire Council received the Panel Report and directed that it be: 'referred to the consultants preparing the *Apollo Bay Structure Plan* for consideration in preparing the structure plan.' They also agreed to: 'defer consideration of the panel report…' and 'make a decision…' '…when the *Apollo Bay Structure Plan* identifies whether the land subject to *Amendment C17* is suitable, partly suitable or not suitable for residential development.'

In the meantime Council had received public submissions with regard to *Planning Amendment C29 (Great Ocean Green)* following its exhibition period. In June 2005 the Council Planning Committee passed the following recommendation: 'Council defers making a decision about submissions in accordance with sections 23(1) and 23(2) of the *Planning and Environment Act 1987*, until such time as the *Apollo Bay Structure Plan* is substantially completed, specifically identifying whether the land subject to *Amendment C29* is suitable, not suitable or partly suitable for residential development.'

While I remained a staunch opponent to *Great Ocean Green*, I could understand the frustration that the developers must have felt with little progress in their plans. Recalling that their application was made in April of 2003 and it was now more than two years later. It is understood that at a State Government Community Cabinet meeting held in Colac in July 2005, the proponents of *Great Ocean Green* made a submission, apparently in an attempt to speed up the process. The response was swift since in October and presumably in response to that submission, Prof. Lindsay Neilson (then Secretary, DSE) wrote to the Council advising 'that he expected the amendment to be referred to a panel with minimal delay.' Page 54 of the agenda document of the Planning Committee

meeting of 19 October 2005 says that in his letter to Council, Professor Lindsay Neilson states that:

> Progressing *Amendment C29* now will not pre-empt the outcome of the Apollo Bay Structure Plan but will enable it to be brought to the same procedural point as *Amendment C17*. While the C17 Panel recommended that this amendment be abandoned, it should be noted that the Panel does give its in-principle support for the *Marriners Vue* development proposal. Council's decision-making on these two amendments will be guided by the respective Panel reports and the work on the new Structure Plan, even before the formal completion of the Structure Plan process.

Subsequently a Council Planning Meeting discussed Prof. Neilson's recommendation that the amendment be referred to a panel. Three councilors expressed grave concerns that pressure was being applied to the Council to rescind the previous motion, but in the event it was rescinded and the decision was taken to refer the submissions to a planning panel. The key dates showing the progress of *Amendment C29* and the *ABSP* are shown in Table 2.1.

The parallel story of the *Apollo Bay Structure Plan* continued and by late 2005 there was some progress. I wrote the following slightly 'tongue in cheek' letter that was printed the local News Sheet.

> *Dear Editor*
> I am writing to express my disappointment at the lack of information on the progress of the *Apollo Bay Structure Plan*. Particularly since the review seemed to commence with the issue of 'Community Bulletin No.1' September 2005 under the mast head of *Apollo Bay Structure Plan* promising much. The bulletin proudly states: 'Your ideas and views are important in helping to decide the future direction and priorities in your local area.'
>
> Workshops were held in Apollo Bay in late September and in Melbourne in early October. Couldn't we expect Bulletin

No.2 to give a summary report on those workshops? Are there to be any follow up workshops? Our further contribution could be molded by knowing what other people are thinking about. Like many others, I was unable to attend either workshop although I made a written submission. How many were received? What is the collective view?

On a second point, the worst kept secret in Apollo Bay is the membership of the steering committee, particularly the names of the 'selected' community members. Why has this not been publicly announced by the Shire? If these people are our community representatives, what are their views and how do we contact them?

The problem is one of no confidence that any proposition can be carried out. History tells me we cycle through the following steps:

1. *Develop a plan for the next 20 years. Include community input and consultation.*
2. *Don't enforce any requirements of the plan and spend as little as possible.*
3. *Five years later, when very little has actually been done, revise the plans again. This time ignore previous consultation and override previous decisions, especially where unfavourable to developers.*
4. *Re-do all the plans and try to build up public confidence again. Restate the obvious and introduce as much spin as possible.*
5. *Repeat very five years – go to 1 above.*

A little background and a minor diversion are appropriate here. This was not the first public consultation exercise that I and others had been involved in. There had been a Neighbourhood Character study and a Car and Bus Parking study and a number of Apollo Bay Harbour studies, including what was known as *The Sand Study*, since sand movements on and along the beaches were causing problems. Nothing had come of them.

Date	***Amendment C29***	***Apollo Bay Structure Plan***
April 2003	Submitted to Council	
November 2003		Draft *GORRS, 2004* released
November 2004 February 2005	Exhibition period	*GORRS, 2004* released; consultants engaged for draft
June 2005	Council action deferred	
September 2005		Report to community on *ABSP*
October 2005	To Planning Panel	
December 2005	First Directions Hearing	
January 2006		*Draft ABSP, 2006* released
March 2006	Further Directions	
June 2006	Panel Hearing (First Session)	*ABSP Recommended Changes Report* released
April 2007	Panel Hearing (Second Session)	Final *ABSP, 2006* passed by Council
July 2007	Panel Report released	
April 2008	Passed by Council	

Table 2.1 Key Dates for *Amendment C29* and *ABSP*

The Community is stirred

We need to return to the exhibition period of November 2004 to mid February 2005. That allowed many in the community to see the plans and documents associated with the *Great Ocean Green* project for the first time. The call for public submissions aroused a lot of interest and chat in the coffee shops of Apollo Bay. Ideas were shared informally and people started to prepare their submissions. Of course activity was complicated by the fact that the development of the *ABSP* was going on at the same time, dividing people's attention.

It is most important at this stage to emphasise the role of a free press. It may seem a rather melodramatic statement to make but clearly the existence of a local weekly news sheet for Apollo Bay was pivotal in raising public awareness. The Apollo Bay News Sheet is run by a team of volunteers. It is an incorporated body and has developed expertise amongst the members to produce a 24 page, A4 format publication each week for 50c a copy. The News Sheet has more than a 25 year history and a current circulation of around 800. While it started with humble beginnings it now uses modern computer technology and reasonably advanced printing machines. It is supported by the Council to the extent that its office is located in a small portable building on the back of the local Shire Offices in Nelson Street in Apollo Bay.

The News Sheet hasn't always avoided criticism; however there is a concerted effort to present both sides of any discussion. Its main vehicle for this is in the 'Letters to the Editor'. Revenue comes mainly from advertising from the increasing numbers of trades and services that are available in Apollo Bay. From time to time the News Sheet is able to make grants, in support of various community bodies, that are very well received. Such a service is not uncommon in small communities that cannot support a regular professional newspaper. The community is also served by *The Colac Herald,* a three times a week newspaper based in Colac. While taking in a much broader readership, *The Colac Herald* maintained an interest in the affair of the *Great Ocean Green* project from its

beginnings through to the end. No doubt it will continue to report on Apollo Bay developments.

The battle to save the Barham River Flats from unsustainable development had hardly begun when the first heavy shot across the bows of the community was fired. It came from an unexpected source in the form of the Minister for Planning. The community was barely aware that it had been fired and it came to prominence much later than the time of the shot. It was in the form of the waiving of the environmental effects statement.

In January 2003, the then Minister for Planning, Mary Delahunty waived the *Environmental Effects Statement,* stating that an EES was not necessary for the *Great Ocean Green* development in Apollo Bay. Reasons given included:

- That the environmental impacts of the proposed development were considered to be of regional rather than state significance.
- That the proposed development is dependent on an amendment to the *Colac Otway Planning Scheme* and that any amendment process will allow public scrutiny of the proposal and review by an independent panel of the issues raised.

Community response to the *Great Ocean Green* project

By the time of the formal closing date for submissions, some 175 objections had been lodged from both the local and wider community. Submitters shared their views with each other and there was general speculation as to when the panel hearing would be held. As previously mentioned, the *ABSP* was also progressing and submissions were being called for that as well.

About mid 2005, a group of residents had begun meeting on a weekly basis to discuss planning issues and developments. Initially the group focused on the *Apollo Bay Structure Plan* and sought to present a common view. However, the *Great Ocean Green* project and the *Planning Amendment C29* quickly started to dominate the discussions. There was little formality in the group. The meeting

was held in the same place at the same time each week and generally people came and went as they could. The fact that there was a regular meeting meant that people didn't have to be contacted each week with time and place information. As the year worn on, five or six consistent attendees emerged from the group and we decided to make a joint submission to the panel whenever the formal hearing was held. The basic idea was to eliminate repetition (of which there would have been plenty in the earlier written submissions) and allow individuals to concentrate on one aspect.

A brief explanation of the part that submissions play in the planning amendment process is appropriate here. Following exhibition of the amendment, submissions are invited from any interested persons up until the closing date of the exhibition period. They may range in nature from a simple statement of support or opposition for the amendment, with or without reasons, to a rational and professional style submission with supporting argument requesting changes or abandonment of the amendment. Council, as the planning authority, is required to consider all the submissions and either change the amendment as requested or refer the submissions and the amendment to a planning panel. While a brief outline of the planning amendment process has been given in Chapter 1, an excellent summary that includes the flow chart reproduced in Figure 2.2, has been provided by the Municipal Association of Victoria[4] in a document called *Fact Sheet 7 – Overview of the planning scheme amendment process*. Consideration of the flow chart will show that there are a number of options available to Council, although in general terms it would be expected that an amendment and the submissions received would be referred to a panel. It should also be noted that outcomes will not necessarily be a case of yes and no, or accept and reject. Panels may recommend changes while endorsing an amendment in principle and beyond that, Council's may abandon or adopt an amendment with or without changes. As indicated earlier, ultimately however, the power lies with the Minister for Planning, presumably acting on the advice of the Department of Planning and Community

Development. (Previously, part of the Department of Sustainability and Environment)

Subsequently, as the panel hearing date approaches, submitters are invited to give notice of an intention to present their case at the panel hearing. If they accept the invitation they have an opportunity to present further to their earlier submission and to call expert witnesses on their behalf if they so desire. Of course, most often submitters are members of the local community with limited resources and only about ten per cent accept the invitation to appear at the hearing.

Returning to the informal group, I became the de facto Chair, having once declared that I thought that someone should and I would be happy to take the role. We didn't keep formal minutes but rather simply agreed at the start on the points we would discuss that evening and then worked our way through them. Over the next few months and towards the end of 2005, a document began to emerge. It finished up with eight chapters, each exploring a particular point of opposition to the *Great Ocean Green* development and generally reflecting the particular view and interest of at least one of the contributors. It ran to 45 pages in an A4 format and was desk top published by the group.

I also took some editorial control although drafts were always circulated to everyone for comment. It was an interesting experience and it was not without some minor clashes of personalities. There were also some frustrating times when individuals did not meet agreed deadlines. Deadlines were made all the more difficult for everyone since there was no indication as to when the panel hearing would be held. Our problems were also compounded by the fact that we were nearly all retired and often took trips away. We simply had to guess a date and strive to be ready. Of course in the meantime, other individuals and more formal groups were preparing their submissions. Prominent among the latter was the *Apollo Bay – Kennett River Public Reserves Committee of Management.* This group was ably led by Gary McPike and he frequently attended our meetings.

Figure 2.2: Summary of the Planning Scheme Amendment Process

Gary was often a source of information to us since he was in regular contact with Council Officers. Gary was also a nominated member of the community steering group for the *Apollo Bay Structure Plan*.

The initial directions hearing of the C29 Planning Panel was finally held on 20 December 2005. This minor event set the hearing for commencement on 27 February 2006. I shouldn't be dismissive of this directions hearing. We did meet the panel members and people were invited to suggest suitable dates and given an

opportunity to say when they would be available. At this point it is worth noting that an initial optimistic view put to the ABGC was that they would be playing on the first nine holes of the new course in early 2006! That the State Planning juggernaut is really a lumbering leviathan probably worked in our favour. As time went by we became more knowledgeable and continued to access more and more information. In any event we were more or less ready for February 2006.

Early in the New Year word leaked out that the applicant wanted a postponement to July or August 2006. A second directions hearing was held on 14 March 2006 and the panel hearing was then set to commence on 5 June 2006 and expected to take about ten working days. Very few members of the community attended the directions hearings but for those that did our education into the trappings of a planning panel commenced. I personally had had no experience in such matters although I think it is fair to say that procedures are modelled on those of a court of law. The battle would really be engaged at the planning panel hearings and we were looking forward to the engagement.

Chapter 2 - References

1 Department of Sustainability and Environment, *Great Ocean Road Region – A land use and transport strategy*, 2004

2 Victorian Coastal Council, *Victorian Coastal Strategy*, DRAFT October 2007 and
Victorian Coastal Council, *Victorian Coastal Strategy*, 2008

3 Department of Sustainability and Environment, *Coastal Spaces Recommendations, – April, 2006*

4 Municipal Association of Victoria, *Fact Sheet 7 – Overview of the planning scheme amendment process,* available at:
http://www.sustainability.mav.asn.au/content/upload/files/publications/Local-Government-and-NRM-Fact-Sheet-7-Planning-Scheme-Amendment-Process---March-20075495.pdf

Chapter 3-The First Panel Session

With the panel hearing date finally settled there was a flurry of activity on the part of our group to complete the submission. By late April the submission had been prepared complete with colour photographs and a simple binding and the necessary copies were presented to the Panel when the hearing commenced on 5 June 2006. Before giving an account of the panel session, it is appropriate to make a few comments about the community of Apollo Bay; after all, this is a story from a community perspective. At the time we thought the panel hearing would last ten days and that would be that. Little did we know that it would adjourn for nearly twelve months, before resuming for another ten days, and (as will be seen) that we would also be involved in a related panel hearing, taking the hearings alone over three years.

The Community – its structure and groupings

I would suspect that Apollo Bay is similar to many small communities across Victoria and indeed throughout Australia. There is a group of residents today who are direct descendants of the early settlers. Many can be readily identified by comparing their names with the street names. So that there are: the Costin's, the Telford's, the Ferrier's, the Cawood's and others. They are rightly proud of their heritage and will fiercely defend it. The local Historical Society is very active with descendants well represented on the committee. They run the Apollo Bay Museum in the Old Cable Station, important to the first links of telephone communication between Victoria and Tasmania via an undersea cable. This is not an aloof group; they are warm and welcoming of new comers to town. They

played an important role in our fight in that they often provided historical data and insight through accounts passed on through local families.

Another readily identifiable group is the holiday home owners, many of whom have now retired and made Apollo Bay their permanent home. Many in this group have a history of over forty years of ownership with large families passing through the holiday home and growing up to love Apollo Bay.

An associated group is the retired or semi-retired people from all walks of life having moved here in more recent times; professionals, farmers, trades people and business people. What all these groups have in common is their willingness to contribute to the community. There are support groups to the local Otway Health and Community Services which includes the hospital and many other services. There are avenues of support for things such as the Country Fire Authority and ambulance service, service clubs, Church groups and of course there is the local Apollo Bay Golf Club (ABGC) and the Bowls Club. Finally there are the trades people, the business community and the traders all contributing to a vibrant community.

The balance of the community includes those who have holiday homes in Apollo Bay but have not yet retired. They can be described as absentee ratepayers and they are often provided for when the Colac Otway Shire also holds information meetings in Melbourne. Visitors and tourists at any one time complete the list.

The make-up of the community is important and the objective in describing it is to give a sense of the range of people who both made written submissions to *Amendment C29* and later made presentations at the hearing. The individual presentations ranged from 30 minutes to an hour of professional argument, to a few minutes of an impassioned plea from a very nervous (but brave) teenager. What we all had in common was a passion for what we believed in and a dogged determination to see this through. On this last point, that was no mean feat. The formal proceedings alone –

that is the actual C29 Panel Hearing – started on 5 June 2006 and did not end until a formal declaration in May 2007. Coupled with the initial starting date of having become aware of the development perhaps as far back as the year 2000, the entire process has taken more than eight years. The word stamina springs to mind. It was certainly never going to be a sprint; always a marathon. A large number of people showed tenacity, courage and perseverance, along with a belief in themselves and in what they were fighting for against the pressures of an unpopular development.

Proceedings of the Session

Some indication of the nature of a planning panel hearing has already been given. It is time now to set the scene for the first act. The location was the Krambrook Room of the Apollo Bay Hotel, right in the middle of town and on the Great Ocean Road. It is a pleasant enough room adjoining the normally busy bistro area. There were no particular trappings of a court room and none were expected. However precedence was given over to the convenience of the Panel (Chairman and two other members) the Barrister and Solicitor for the proponent, Council Officers and the witnesses as called. This may well be as it should be but the public gallery came last. The formal tables, arranged in a large open rectangle, took up half the room. The Panel sat at one end with the back wall behind them; on their left was the proponent's legal team and on their right were the Council Representatives. Directly in front of the panel, on the other side of the rectangle was the place where the witness sat to present his or her evidence. The only concession to 21st century technology was a portable projection screen and a data projector, if the witness chose to provide it. The screen was off to one side and convenient for the panel, but almost no one else, to see. Behind the witness area, chairs were arranged for the gallery.

I have taken some time to describe the layout since I think it reflects the Panel's attitude to the gallery and ultimately to public submissions. The witnesses necessarily had their back to the gallery and since there were no microphones, it was often very difficult for the gallery to hear. From the outset, and on several other occasions when different people were in the gallery, the public expressed annoyance at this and asked that something be done. Nothing was done, other than for the Chairman to ask witnesses to speak up. The more persistent among the gallery simply moved their chairs closer and into a more favourable position.

There were about six or seven members of the community who attended every day of the ten days of sittings. One or two could even take perverse pride in saying that they sat through every session. I was not one of them, having skipped the odd session here and there. The Panel kept gentlemen's hours and the coffee was good. Winter sunshine brightened our day and the local cafes were good for lunch. Over the course of time, those of us who persisted throughout became quite friendly, with exchanges between the Barrister, the Panel members and ourselves during the breaks.

The Chairman quickly put us all at ease and continued to do so throughout all the hearings. I believe it was he who drew parallels to a court of law but he emphasised the more informal nature of these proceedings. He certainly didn't expect to be called 'Your honour' and no one was there to do the 'all rise!' In fact he was quite lenient and patient with submitters asking questions of expert witnesses that were bordering on cross examination. The rule was that submitters could ask questions but not cross examine witnesses. He frequently had to curb the enthusiasm with which some people asked questions that also bordered on their making a submission. He did this by gently reminding them that their turn to make a submission would come.

The above notwithstanding, it is a little intimidating at first to see the barrister for the proponent and his attending solicitor and

the panel members, all well groomed and presented, and all surrounded by piles of documents. Apart from the room being a familiar one in the local hotel, the scene was reminiscent of any good television court room drama. We on the other hand were generally casually dressed in the style of retired seaside dwellers. Actually it became a bit of a joke since we wondered who among us would be wearing our 'chook buying' jacket when our turn came to speak to our submissions. A story had been shared among us of a Matron who, in running a small boarding school, always dressed up in a jacket when going to the local market to buy a chook to grace the dinner table. A surprising number of 'chook buying' jackets did in fact appear.

There were about 27 individual community members, opposed to the *Great Ocean Green* project who requested to be heard at the 2006 panel hearing. As mentioned previously, they were able to submit further material following their initial objection after the exhibition stage. There was some controversy surrounding the number of initial written submissions received by the Panel. It was originally reported as around 175; virtually all in opposition. When the ABGC became aware of this, it wrote to all its members with an enclosed letter of support for the project for them to sign and forward (in a stamped addressed envelope) to the Panel. The membership at the time was around 400 and about 220 additional written submissions, all in favour, were then received by the Panel. The controversial issue was whether or not they had been received by the due date. My recollection is that this was discussed at the second directions hearing and the Chairman ruled in favour of accepting them.

With the scene set we can now go on to the actual proceedings in some detail. The Chairman, Mr Lester Townsend, introduced himself and his two associates: Mr Michael Kirsch and Mr Pat Meehan. Each made a brief biographical statement covering their professional backgrounds. Mr Jeff Morgan introduced himself as representing the Colac Otway Shire and the Barrister, Mr

Adrian Finanzio and the instructing solicitor Ms Yvonne Maglitto, for the proponents also introduced themselves.

Following some brief discussion as to how matters might proceed, Jeff Morgan, a Planning Officer with the Shire Council, briefly outlined the case for *Amendment C29* to the *Colac Otway Planning Scheme* setting out what it intended to achieve. Over the next few days, Adrian Finanzio presented the *Great Ocean Green* project on behalf of the proponents, Urban Property Corporation. There is no intention to present that here, chapter and verse, except to note that there were some legal technicalities explored and the community's education on the concept of a *Comprehensive Development Zone (CDZ)* began. This was the first time such a zone had been proposed for the *Colac Otway Planning Scheme* and it took a fair bit of comprehending – pun intended! Of course expert witnesses were called in support of Urban Property Corporation's argument and the pattern of play emerged to the gallery. Over the course of the sitting days the size of the gallery varied, but the hard core of six or so locals remained steadfast in their determination to see it through.

Having dispensed with the legal formalities, and as the panel hearing got underway, it was fairly clear as to how the proponent was going to argue the case. Early in the presentation a landscape architect was called to present the visuals and discuss the design approach from that point of view. Subsequently experts were called to discuss and present data on matters such as:

- population growth and the demand for land in Apollo Bay;
- flood modelling to show how the proposed development would impact on floods in the valley;
- urban design features showing the nature of the provision of roads and services and the handling of storm water runoff;
- the likely impact of the presence of acid sulphate soils;
- and
- geotechnical investigations that had been carried out.

It is not necessary to present all this in the form of all the reports that were tabled at the hearing. Suffice to say that a voluminous amount of reports soon stacked up, not all of which were readily available to the public. However it is appropriate to highlight some of the issues that proved to be more contentious.

The only expert witness called by the Council was a town planner who had prepared a report on projected land demand and supply data. His evidence claimed that, based on current use, there was a 12.5 year supply of residential land available. On the other hand, the proponent had tabled a report indicating a three year supply. It may seem at first that these figures are not reconcilable. However, in fact there are a number of debatable assumptions that have to be made to come up with any figure. (The C29 Panel Report[1] released in July 2007 discusses this in some detail for those wanting to pursue it further.) To my mind this illustrates the nature of a planning exercise; we are not dealing with a precise science and subjective judgments often have to be made. It also became clear as the sessions progressed, that each expert witness was acting in his or her own capacity and according to the brief presented to them by the developer. This is probably not surprising but there was no overarching control being expressed by anyone for the developer, apart from legal counsel.

How does a community respond to the organised machine that the developer presents as a total package to the Panel? The answer is, with some difficulty! Unless a community is very highly organised, an expert witness acting on the community's instructions is not going to be available. This was indeed the situation we were in, and at no stage, were any expert witnesses called by opponents to the development. In a point scoring exercise, this was pointed out in the document, *Submissions in Reply on Behalf of the Proponent*, by their advocate. I formed the view that, in the absence of using expert witnesses, opposing submissions were heavily discounted by the Panel. Indeed, when the Western Coastal Board, a subset of the Victorian Coastal Council, made a submission strongly

opposing the development based on the nature of the site, it was criticised for not presenting any expert witness.

Following any presentation by an expert witness, each of the Panel members was invited to ask questions of the witness. Jeff Morgan, representing Colac Otway Shire, was also invited to ask questions and then it was the turn of the gallery. The Chairman invited the gallery members to give their name if they wished to ask a question and they were then taken in order. As the days progressed it was obvious where the gallery questions were going to come from and at times they bordered on both a submission to the Panel and cross examination of the witness. In good spirit, the Chairman cut a fair bit of slack but reminded the gallery from time to time that questions could not be in the form of cross examination nor could they turn into a statement from a submission. In other cases the Chairman sought to help the speaker frame the question in the interests of clarity. By way of illustration the issue of the presence of acid sulphate soils on the flood plain is presented in some detail.

Acid Sulphate Soils – A Particular Issue

> *'Acid sulphate soils underlie large areas of Australia's coastline where the majority of Australians live. These soils were formed long ago, underwater, when the ocean level was much higher. As the seas receded, these soils remained and today can be found under low lying coastal areas like coastal plains, wetlands and mangroves.'*
>
> *'…when disturbed and exposed to oxygen through drainage or excavation, these soils produce sulfuric acid in large quantities.'*
>
> *'The impacts of coastal acid sulphate soil runoff come at a significant environmental, economic and social cost to coastal communities.' 'Acid discharges also damage town services and structures like pipes, foundations, drains, bridges and flood controls.'* - (an extract from the National Strategy for the Management of Coastal Acid Sulphate Soils)

Before examining this particular issue in detail, a comment on how issues arise and how they are dealt with in the panel process is appropriate. There are four aspects that generally arise with each issue, assuming the proponent is aware of it beforehand. (Even if this was not the case, it is highly likely that the Panel would ask for a submission from the proponent anyway.) They are:

- The issue, in this case the impact of acid sulphate soils (ASS) is raised by the proponent and presented by an expert witness who explains how the developer will deal with it.
- Council Officers, on behalf of the Council concerned may express some views.
- The Panel may question the witness, seeking clarification and understanding.
- One or more of the public submissions may raise the issue.

Our group became aware of the possible problems of dealing with ASS in the early stages of our discussions. We were fortunate enough to have people who were prepared to search the internet looking for that 'rare and endangered southern spotted grass frog' that would end all possible development on the site. We were familiar with the possible issue of ASS and it was no surprise then when the proponent raised the issue, tabled reports and presented an expert witness on the topic. It is not necessary to present those reports in this study since the essence of the argument can be gained from what is presented here.

While Council's representative, Jeff Morgan, did comment on aspects of ASS, it is my view that the Colac Otway Shire was caught on the back foot on this and had to quickly assume a position with regard to ASS. Along with Panel members and the public he was able to question the expert witness, Ms Anna Swanepoel. However, the public had to sit patiently through other expert witness submissions on other topics over several days before anyone could formally challenge the issue of ASS in their own submission.

In the meantime there was a rather significant development that says a lot about the preparedness, or rather the lack of it, on the part of the developer. The exhibited plans showed the extensive use of ornamental lakes built on the floor of the flood plain for a number of reasons:

- Excavation would provide valuable fill material
- The lakes could form part of the flood mitigation
- They would provide a level of storm water treatment through filtering of water through reed beds etc. as a primary stage of a proposed recycling scheme.

However, as Ms Swanepoel progressed through her presentation, it quickly became apparent that the concept of excavation to provide the ornamental lakes presented a hazard.

A brief explanation is necessary here. It was agreed that there was evidence of acid sulphate soils on the site but of a variable nature both in location and intensity. Victoria, in spite of being signatory to the *National Strategy on Coastal Acid Sulphate Soils* did not have a code of practice for dealing with such soils. However, it was clear that any policy would:

- seek to avoid disturbing acid sulphate soils in the first place (avoidance)
- where it can't be avoided, disturbance should be minimised (minimisation)
- where disturbed, such soils should and can be treated to neutralise the acid content (treatment)

This is also a convenient time to introduce both the *Great Ocean Green Comprehensive Development Plan* and an associated schedule. As an interested but uninformed party on the finer points of planning, I had noted how the Chairman and the proponent's advocate, often had a by-play between themselves making reference to *the Schedule* and the *Comprehensive Development Plan*. The remarks were along the lines of, 'such and such ought to be included in ….' Eventually I

realised that both documents being referred to would become an important part of the way in which the project would be carried out. Jointly they would specify a range of plans and procedures that must be met as the project went into a detailed design phase and a construction phase. For example, there would be a *Construction Management Plan* and an *Environmental Management Plan*. Ultimately, there were requirements for the approval of about eight such plans.

Confronted with the evidence, it was clear that any general disturbance of the ground on the flood plain was likely to lead to problems with acid sulphate soils. Virtually overnight the plans were changed – there would be no ornamental lakes and soil disturbance would be restricted to cutting service trenches as required. To my mind this showed up a weakness in the developer's background and company structure – they had no serious engineering support of their own. I have subsequently learnt that this is not unusual and developers simply rely on calling on consulting engineers, environmentalists or any other group to give them specific advice. The consultants are given a brief and they stick to it, unlikely to bite the hand that feeds them. A weakness in such a system is that no broad overview is being held and monitored by anyone. Of course my engineering bias is coming out here.

This sudden change in plans was announced by Mr Finanzio as the barrister presenting the applicants case. It caused a minor stir with charges that it put the flood modelling in question. The Panel was assured that it was always intended for the lakes to remain full all year round and that the success of flood mitigation was not dependent on the lakes acting as retention ponds.

The way in which this issue was handled is indicative of how all the major points were raised and discussed. However it is important to note that, not unexpectedly, the proponent and the expert witnesses for the proponent get the first crack at the issues. It was not until the second week of the hearing that opposing submissions would be heard. In many cases this meant that the

issue had been well and truly explored and unless a submitter could come up with a new line on the topic, there was little to be gained from going over the same ground, except to express disagreement with one or more points.

We did have a section on acid sulphate soils in our joint submission, but when it came to the presentation of the submission, I spent very little time on it. The matter had been well canvassed and the proponent had reacted quickly to a perceived problem (albeit showing a weakness in their studies) and it was shown that it is possible to handle ASS. The only emphasis I could give was to create a sense of uncertainty over the issue. 'What if the management plans failed to adequately deal with acid sulphate soils?'

Although design guidelines and construction management plans may be nominated in the schedule, the details are not. This means that very often, when a question is asked the answer can well be – 'that is matter for detailed design' or 'the detail of the construction management plan will take care of that.' My response has always been: 'What happens if the plan can't take care of that?' This is where a question of risk comes in. So it is with ASS. The community is being asked to accept this in good faith. There are plenty of examples where a management plan has failed with disastrous consequences for the environment.

The Opposition – submissions from the Community

As indicated earlier there were approximately 27 submitters who chose to speak at the panel hearing. This included some representative bodies as well as individuals. I have chosen not to go through each of the submitters arguments line by line or even present them in summary, except for that of our own group. This is not because I think we were superior in any way, but rather because

I have ready access to our own material. In any event, as one would expect, there was a lot of repetition in the submitter's arguments. Some idea of the approach taken can be seen in the contents page of the Group Submission[2] discussed earlier. I have altered it slightly to give expanded sub headings where I thought it would be helpful and it is shown in the following box. There is no expansion of the contents for the first four chapters since they dealt largely with procedural matters although they are nonetheless important. Some brief comment on each of the chapters, more in terms of the objectives, can now be made.

Chapter 1 set out in point form what the proposed *Amendment C29* was intending to do. In essence this was a restatement of the formal introductory section of the exhibited amendment. Chapter 2 simply made comments on each of the points of Chapter 1 arguing that in many cases the objective could be achieved by other means. Chapter 3 was more specific and related directly to the outlined *Great Ocean Green* project. After all, once the re-zoning had occurred it may not be the *Great Ocean Green* project that is developed. It could actually be some other development meeting the new zone requirements. Chapter 4 argued that in many cases the amendment did not comply with strategic planning guidelines as presented in various State documents. It particularly attacked the waiving of the environmental effects statement, as was mentioned previously, and also the difficult and conflicting relationship between the developing *Apollo Bay Structure Plan* and the proceeding C29 Panel Hearing. Other more specific illustrations of a failure to follow due process were presented. Chapter 5 argued that there was no demonstrated demand for such a large increase in the supply of house lots even over a ten year period. In fact the opening paragraph said:

> It is contended that *Planning Amendment C29* is unnecessary since there is an adequate supply of residential land based on a more realistic interpretation of the Council's own figures.

There is simply no need to build on a floodplain.

The chapter then went on to examine the demographic data prepared by various consultants. As one would expect, such data is subject to some interpretation and we would say we were able to show that the existing and projected land supply from developments well advanced in their planning was sufficient to meet growth without a 537 lot subdivision. There was a clear link between chapters 5 and 7 and this can be seen in the following extract from Chapter 5:

> It is highly likely that one of the driving forces for the proposed two major residential developments in Apollo Bay (*Planning Amendments C17 and C29*) either had their genesis, or were greatly encouraged, by the flagging of Apollo Bay in the *Great Ocean Road Region Strategy* where it is stated under Strategy 2.2 that: 'Urban growth will be managed by directing substantial new development to Torquay, Warrnambool and Apollo Bay (once structure planning for this area has been undertaken). Apollo Bay has been identified as a strategically located coastal settlement with the capacity for growth beyond its current boundaries. To manage this growth, a blueprint for the future growth and development of the Apollo Bay region over the next 20 years will be jointly developed by Colac-Otway Shire Council and the Department of Sustainability and Environment, taking into consideration issues of accessibility, efficiency, amenity, safety, sustainability and infrastructure provision. This presents an opportunity to create best practice future urban form that responds to the landscape around it.'
>
> Thus the *GORR, 2004* does not give carte blanch license to development in Apollo Bay – as stated in its own case for best practice, any development is subject to issues such as adequate infrastructure provision. The town is only too well aware of our inadequate water supply managed by Barwon

Water.

Contents of the Group Submission to Panel Hearing Amendment C29-Colac Otway Planning Scheme

> The fact that a Government designates an area for development does not mean that the people naturally follow. Various Governments have tried this in the past with decentralisation proposals that have not been successful. There is no doubt that Apollo Bay is a very attractive area and has a lot to offer and growth is, and will continue, occurring. However we do not enjoy the climate of the North Coast of NSW or South East Queensland. A huge population increase is unlikely to occur since most of the homes will remain as holiday homes rather than permanent residences.

Chapter 6 argued for the retention of the flood plain and the landscape looking up the Barham River Valley from the Great Ocean Road as primarily a natural landscape. In our view, it was one of those 'significant landscapes', as flagged in the *Coastal Spaces* report. Although the flood plain had been farmed since the beginning of European Settlement and it was not in a 'natural' condition, it still retained a certain charm and solutions other than a golf course/housing estate were available. Two other aspects of the chapter are worth noting. The first of these was the response to acid sulphate soils and the second was a comment on engineering failures. Some detail on the matter of acid sulphate soils was presented earlier and it really became a non event as part of our submission, except for the issue of risk. This lead on to the question of engineering failures, the objective was to point out that engineers don't always get it right! The flood modelling could be in error. Building the earth mounds on alluvial silts could prove too costly. Acid sulphate soils could cause serious damage to the river health. It is all a matter of risk.

Chapter 7 asked the question as to whether or not the infrastructure could cope with such a massive expansion of the town. Again it is pertinent to quote from the document:

In December 2004 a National Seachange Taskforce, made up of 70 Councils from around Australia, met to consider strategies to cope with the dramatic consequences of the 'Seachange phenomenon'.

There has, according to a University of Sydney study[3], been significant movement of people from metropolitan areas and regional cities to non-metropolitan and especially coastal areas since the 1960s.

That study indicated that retirees had not, in the past, been the major drivers of the coastal population growth. 'As the baby-boomer generation is expected to start retiring later this decade, the number of retirees moving to the coast …. is likely to rise again, contributing to an overall increase in the rate of population growth of the total population'.

The Conference report[4] commented that;

'Unlike growth corridors in outer metropolitan areas, these [Australian coastal] areas have not been planned with the objective of accommodating high growth rates. Coastal councils do not have the resources to meet the continuing demand for infrastructure, such as roads, mains water supply, sewerage, and power. High growth coastal communities also experience a lack of essential services, such as public transport, health care, emergency services and education facilities.'

Arising largely from that December 2004 conference, throughout January 2005 *The Age* newspaper presented a series of articles that raised concerns about infrastructure costs necessary to keep pace with rapid coastal developments. An article on 15 January 2005 states:

'The National Sea Change Taskforce, made up of 70 councils around Australia, is desperately seeking extra revenue to service a booming tourism market and coastal population growth 50 per cent higher than the national average. 'This rate of growth is unsustainable,' the Task Force says in a

> report. 'It poses a significant risk to coastal communities and to the fragile coastal environment.'

The remaining aspects discussed in Chapter 7 are rather obvious and no further comment will be made here. Chapter 8 tackled the very vexed issue of flooding of the Barham River. Indeed this issue was argued very strongly right throughout the entire proceedings of the Panel and beyond that in subsequent forums. The issue meant that even after the release of the Panel Report in July 2007, peer reviews of the flood modelling were done and perhaps it is only nature that will have the final say. At issue for the most part had been the accuracy and relevance of rainfall data and the projected sea level rise and storm surge effects that add to flood levels with full tides. Finally it is considered appropriate to present the concluding chapter in full as follows:

> This submission has examined and commented on each of the seven listed points that the *Colac Otway Shire Planning Amendment C29* addresses. It has found that these points are either not necessary or quite inappropriate in terms of precedent that they would set.
>
> It has also examined a total of seven specific points of the *Great Ocean Green* proposal with a summary comment on each one before leading into a more detailed argument opposing *Planning Amendment C29*.
>
> Considerable concern has been expressed over the way in which the *Planning Amendment* complies with planning guidelines and strategies from various sources and how the process has been handled.
>
> Of the proposed development itself, significant questions have been raised about:
>
> - the demand for such a huge increase in the housing land stocks of Apollo Bay;

- the impact such a development would have on a stressed and fragile coastal environment such as the Barham River Estuary;
- the pressures that the development would place on already under resourced infrastructure; and
- the impact and consequences that flooding of the Barham River would have on the project.

The Panel is urged to recommend that *Planning Amendment C29* be abandoned.

Speaking to a Submission

Submitters to a panel hearing are invited to nominate how much time they would like for their presentation. Typically, 30 mins is nominated but it could be as little as five minutes or an hour or more. In the case of our group submission we collectively nominated three hours, although we actually used less than this. I acted as the 'anchor man' and introduced each of our speakers as we progressed through the presentation that was complete with power point slides.

In presenting a submission, many submitters do simply stick to their script and read it through. However, the speaker is not confined to the text of the submission. This is just as well since the submission is likely to have been written months before the hearing and the information coming out during the hearing could well alter the thrust of an argument. As a team we were aware of this possibility and had agreed beforehand that at least one of us would be present at all times. My own experience illustrates this point and I shall present it in some detail with what I believe is a very pertinent example.

Earthworks and a question of financial viability

A matter of some particular interest to me came up during the expert witness presentation of Mr Kevin Hunter, a civil engineer

who was addressing the matter of the *Water Cycle Management and Wetland System.*

At the time of the initial announcement of a possible development on the flood plain of the Barham River, there was a lot of speculation as to how much fill would be involved. Figures suggested ranged up to 1 million cubic metres to be brought onto the site. Up to this stage of the panel hearing however, the developer had not given any indication of the amount of earthworks involved and the issue was not discussed in any documentation. Since we were able to question expert witnesses, I had the opportunity of asking Mr Hunter, as a civil engineer, whether or not he had any estimate of the earthworks for the *Great Ocean Green* development.

The answer was no; that was a matter for further design. I then asked if he had had experience with other projects of a similar nature and he offered the following data with respect to the *Sanctuary Lakes* project on the western side of Port Phillip Bay near Point Cook. The project involved 2200 house lots and a golf course and required a total of 725,000 cubic metres of fill. The bulk of it was 'balanced', that is to excavate here (cut) and fill there, as this is the most efficient way of dealing with earthworks. That is to try to achieve a balance between the amount of cut and the amount of fill in changing the landscape. However there was a need for 220,000 cubic metres of imported fill which came from a nearby location with a haul distance of 1 to 2kms.

I thanked Mr Hunter and worked on the figures overnight and of course ahead of my presentation. As an engineer, I was used to making quick calculations to provide estimates and a check on more rigorous calculations. A respected engineering friend of mine once said, 'You need to be able to do calculations on the back of an envelope!' My 'back of the envelope calculations' were quite simple.

Of the 170ha site of *Great Ocean Green*, the housing zones would take up 25ha. (They were in about five main groups of say 120 houses and became known as housing pods.) Assuming an

average height of fill on each pod of two metres (this being necessary to keep the houses above flood level) this led to:

Earthwork fill required = 25 x 10,000 x 2 cubic metres
= 500,000 cubic metres

Of course there were assumptions here; the main one being that there would be no cut available to offset the fill. (There was the problem of acid sulphate soils and surely any high ground would be at a premium.) *Great Ocean Green* proposed 537 house lots, so that for each lot produced there would be 931 cubic metres of fill required. This figure can be compared with the equivalent one for the *Sanctuary Lakes* project where for each lot produced the amount of earthwork involved was 330 cubic metres (725,000 divided by 2200). In other words there would be nearly three times the amount of fill required for each lot on the *Great Ocean Green* project as compared to that of *Sanctuary Lakes*. What was possibly more significant was that the source of the imported fill was unknown and could have a haul distance of from ten to even hundreds of kilometres. Surely this information should bring the financial viability of the project into question?

Subsequently, it was seen that the *Preliminary Cut and Fill Schematic Plan* (when it finally appeared after the close of the second session of the panel hearing) did include cutting into what little high ground was there. This reduced the amount of imported fill, but the total fill figure was 975,000 cubic metres (my rough guess at the average depth of fill was too low; it was closer to 3.5 metres and my figure of three had to be adjusted to a factor of 5.5). For the time being though, I had to sit on my figures for several days to await my turn at a presentation.

In accordance with a request by the Panel our submission was handed in at the start of the proceedings even though we were not scheduled to address the submission until the second week. Being a part of the public gallery and listening to the proponent's

presentation and the expert witnesses was most important and, for my part at least, had a large bearing on what I actually said in my presentation. It was possible to table further material, and of course I had gone ahead with my figures on the earthworks and challenging the financial viability of the project. Unbeknown to me at the time another party had effectively raised this last point, but that had to wait until the Panel Report was released in July 2007 and I shall return to this at a later time.

During my presentation to the Panel, based on *Chapter 6, Environmental Impact*, of our submission, I was able to introduce the earthworks comparison with that of *Sanctuary Lakes*. Since many people would not appreciate what a volume of 500,000 cubic metres would be like, I translated it into truck loads. It would take 20 heavy truck and trailer combinations each day, working 365 days a year, 3.5 years to deliver that amount of fill. I challenged the financial viability of the project and asked in a rhetorical sense, where the fill would be coming from, given the nature of the surrounding country to Apollo Bay. Of course there was no response but I had clearly touched on a sensitive topic and had made my point. The reason for this conviction was that the Barrister for the proponent, Adrian Finanzio, in summing up at the close of the sittings, acknowledged that it 'was a very big project and the earthworks could occur over ten years.' Further when Jeff Morgan, on behalf of the Shire, also made some concluding remarks he had this to say:

> Other issues to be addressed in more detail include rerunning flood modelling (as stated by the CCMA [Corangamite Catchment Management Authority]) on final designs, confirmation of how much fill is required and the impact on traffic/roads of importing fill and indeed consideration of the overall financial viability of the proposal.

His questions remained unanswered even when the Panel finally closed nearly a year later. As mentioned, the developer eventually

released a *Preliminary Cut and Fill Schematic Plan* that showed that the earthworks would be 975,000 cubic metres, but because of proposed cuts now being introduced, the imported fill necessary would be 275,000 cubic metres. I shall bring the matter of these cuts and questions about the earthworks in general into a final analysis of the Panel Report in Chapter 8.

A significant number of the opposing submissions, as well as our own, argued that the infrastructure to support such a large project was simply not available. Prominent among the missing was an adequate water supply.

Infrastructure and the Barwon Water Fiasco

Early in the proceedings, the Chairman expressed his disappointment that Barwon Water, as a major infrastructure provider, had failed to make a submission to the Panel and they were not listed to appear. The importance of this was not lost on the community.

The township of Apollo Bay has been on water restrictions for some years now. The supply is provided through a 125ML storage basin at Marengo and this is fed from a small weir on the West Barham River. The responsible authority is Barwon Water. The ageing pipeline, running through difficult country, carries 1ML of water per day to the Marengo basin. More recently the flow from the pipeline has been supplemented by pumping from a pool on the Barham River much closer to town although this is strictly regulated and dependent on stream levels. The fact is that 125ML of storage is not enough even for the present size of the town, let alone future developments. What is necessary is a new 250ML storage basin to store water during the higher winter flows to carry the town through summer. The problem was where should this new storage be located? Even before I became fully aware of the situation, Barwon Water had been investigating possible sites and

believing they had found one, the Shire and Barwon Water embarked on a planning amendment (*Amendment C31*) to allow for its construction. Somebody didn't do their homework correctly and the amendment was abandoned when an expert witness acting for the land owners, successfully rebutted the Barwon Water case that the site was suitable! The C31 Panel reported:

> During the hearing, Barwon Water also conceded that the authority had not been as prepared in its infrastructure planning as it could have been and has been embarrassed by the need for restrictions.

Amendment C31 was abandoned for geotechnical reasons following detailed independent investigations. (This experience may go some way to explain why Barwon Water still, in mid 2009, had not come up with an approved site for the water storage.)

The community, the Shire Council and the Panel were well aware of all this. There was considerable interest then when it was announced that Barwon Water had contacted the Panel and requested a late inclusion into the program in the second week. By the time a representative was scheduled to speak it was a case of a packed gallery. Paul Northey as the Senior Strategic Planner did the presentation with power point slides. It started off in the expected manner with an explanation of the need for a 250ML capacity off line storage basin to meet both current and future needs. Stream flow data, population and demand trends were all presented along with conservation measures and so on. Then came the big announcement! Having considered various sites around Apollo Bay, the preferred and only acceptable site was on the subject land, that is, the site of the *Great Ocean Green* project.

There was an audible gasp from the room. It only became worse when the footprint of the proposed storage basin was shown on the screen, 'It would take up that much space?' The Chairman quipped to the Baron Water representatives, 'Did you leave the car engine running?'

The Chairman then asked for a few minutes private discussion with the other two members of the Panel and they went into a huddle. The result was that in spite of the shock announcement, the Panel would continue as planned ignoring the 'elephant in the room.' I also recall the very distinct comment made by Barwon Water that, due to the geotechnical nature of the ground conditions in and around Apollo Bay; it would cost twice as much to build the storage basin here as it would, for example, in the Colac area.

In writing this I have the distinct advantage of being able to go forward to the second session of the panel hearing held in April of 2007, about ten months later. In the interim, the widely circulating story was that the developer was negotiating with Barwon Water to find alternative sites or to look at other solutions to providing potable water to the development or any other development for that matter. It eventually transpired that even the idea of a desalination plant was raised. However in the event, when the Panel reconvened in April 2007 it was a case of déjà-vu. Barwon Water could have saved a lot of trouble by simply doing the June 2006 presentation again! Unbelievable at it might seem their position had not changed in spite of spending hundreds of thousands of public dollars in the meantime.

Barwon Water now announced that they had re-visited up to eight sites doing further testing in some cases and still remained adamant that the preferred and only site was on the subject land. But wait, there was more. The Officer calmly announced that they were doing a 'desk top' investigation on a ninth site that could not be disclosed since the property owners had not been approached. This comic saga continued with no advance on the case until February 2009 when Barwon Water announced yet another site as will be seen in Chapter 10. Who has been paying for all this? The taxpayer! I have some first-hand experience of the efforts involved since they explored the use of a family farm on a property opposite where I live. Drilling rigs taking soil samples were there for several

days at a time over several weeks. The process caused some consternation to the family before Barwon Water finally announced that it would not be a suitable site.

The Panel adjourns

On the final day of the June 2006 sittings the Chairman made his closing remarks, suggesting that the hearing could:

- be closed by letter to all parties,
- issue further directions,
- release an interim report, or
- take some other action following the Panel's deliberations on the matter.

My own view was that the major difficulty was Barwon Water's revelation that the, preferred and only acceptable site, for a 250ML off stream storage basin was on the Golf Club land, taking up 20ha of the subject land of the *Great Ocean Green* proposal. (That was their position at the time.) We had completed nine days of the hearing in which the *Great Ocean Green* proposal was put forward, along with expert witness statements for the developer and the Colac Otway Shire's supporting position, over the initial five days. From the Tuesday of the second week, public submissions were heard along with the views of statutory authorities. Of these, the Western Coastal Board and the Apollo Bay - Kennett River Public Reserves Committee of Management opposed the amendment while the CCMA did not object and Barwon Water recommended a deferment pending an outcome of the water storage issue.

The letter sent to all participants was a little more precise and the comments were echoed in the introduction to the *September 2006 Directions Report* [5]. Referring back to the panel hearings of June 2006, the report states:

> ...It was commonly accepted at the close of the hearing that the exhibited form of the Amendment was inadequate. …. the Panel was adjourned pending a decision on whether, and how, changes to the documentation of the proposal might be effected. - (p. 2 September 2006 Directions Report)

I believe the Panel was more concerned about some of the finer points of what was necessary in the *Comprehensive Development Plan* and its associated *Schedule*. At that time my understanding of this documentation was limited and it hadn't attracted much attention on my part. Rather I was thinking that an option could have been to go back to square one by abandoning the amendment and suggesting that the developer start again. But this was just my wishful thinking. We were about to go into recess from our point of view, although work continued behind the scenes.

Chapter 3 - References

1 Colac Otway Planning Scheme Amendment C29 *Great Ocean Green Development Panel Report*, July 2007
Note details on:
http://trove.nla.gov.au/work/32511805?selectedversion=NBD42262275

2 Coles, J., Dawe, R., Hokin, A., Spencer, J., Stuckey, T., & Wilmink, C., *A Group Submission to the Independent Panel Hearing*, Amendment C29 to Colac Otway Planning Scheme, June 2006

3 Gurran, N., Squires, C., & Blakely, E. J., *Meeting the sea change challenge: best practice models of local & regional planning for sea change communities,* report no. 2 for the National Sea Change Taskforce, University of Sydney, January 2006

4 National Sea Change Taskforce; *The Challenge of Coastal Growth*, December 2004

5 C29 Planning Panel, Colac Otway Planning Scheme Amendment C29 *Great Ocean Green Development, September 2006 Directions*

Chapter 4 - Intermission

It would not be correct to suggest that the panel hearing of June 2006 ended in confusion; uncertainty, disappointment or bewilderment might be more appropriate terminology. In any event the interested parties and the community simply had to wait to see what would develop next with regard to *Great Ocean Green*. The Panel had simply adjourned and time was available to return to the issue of the *Apollo Bay Structure Plan*. As indicated earlier, the Council had engaged the town planning consulting firm, Planisphere, to prepare a draft *Apollo Bay Structure Plan*. Council had invited community submissions both at the outset of the exercise and on the release of the draft plan in late January 2006. Submissions commenting on the latter were to be received by the Council by 6 March 2006.

In announcing the release of the first draft for public comment, the Council stated:

> It addresses important issues including preserving the fishing village character and promoting a vibrant town centre in Apollo Bay, protecting the natural environment and the idyllic views and vistas, defining physical limits to urban expansion and height limits for new development, increasing the ecological sustainability of new development, ensuring efficient use and adequate provision of physical infrastructure, improving accessibility, and defining principles for the redevelopment of the working harbour and Point Bunbury.

It is tempting to be dismissive and cynical of a statement like this, which is really an expression of the objectives of the exercise. However, they are important and eventually can provide a basis for a measure of the resulting structure plan. Not always a simple task of

course, since many opinions are quite subjective. How, for example, do you measure the success of 'preserving the fishing village character?' On the other hand the 'adequate provision of infrastructure' is a much easier assessment to make.

Over 420 submissions were received on the draft *Structure Plan* with a summary of them being provided by the Council. The most frequently raised concerns included:

- the capacity of infrastructure and water supply for an increased population
- the impact of development on the Barham River flood plain
- car and bus parking
- location of the urban boundary
- impacts of climate change, and
- the retention of the harbour as a working port.

The parallels between the submissions for *Planning Amendment C29* (*Great Ocean Green*) and the *Apollo Bay Structure Plan* can be seen here and in fact the issue defied resolution for many months to come.

Consideration of the submissions by Council Officers and the consultants resulted in quite a lengthy and comprehensive document known as the *Apollo Bay Structure Plan Recommended Changes Report* [1]. The report was accepted by Council in May and later released to the public in June 2006 about the same time as the C29 Panel Hearing was proceeding. Although it may well have been available, I was unaware of the report until after the adjournment of the panel hearing. (As a matter of course, Councillors did not attend the sessions of the hearing with only a brief appearance by the Mayor and a couple of other Councillors. Whether or not the Panel was aware of the report during the session, I am unable to say. Certainly, attention was not drawn to the report by any party.) However, when I finally did see the report I found to my delight that it contained some significant recommendations that impacted directly on the *Great Ocean Green* project and *Planning Amendment C29*. With the benefit of hindsight, I now consider myself to have been extremely naïve in my assessment of the strength of those

recommendations, but for a time at least I felt someone was taking a reasonable course of action.

The *Apollo Bay Structure Plan Recommended Changes Report* took the form of summarising the main points of the submissions received under various headings; commenting briefly on those points and then responding with recommended changes. It is important to recall that this was the work of planning consultants through the firm Planisphere, no doubt in discussion with Council Officers and others. It is also relevant to recall that back in 2005 Council had elected to proceed with a determination as to whether or not the site of the *Great Ocean Green* project was 'suitable, not suitable or partially suitable for residential development.'

Under the heading of: *Proposed developments: Great Ocean Green and Marriners Vue,* came the predicable expressions of concern that these proposals were driving the *Structure Plan*. The response was rather supportive of this view and muted in its support for *Great Ocean Green* in particular by suggesting that the proposed residential component needed to be scaled back. The latter point was pursued more specifically in what could be recognised as the answer to the question of the suitability of the land for development. In particular, the report had this to say:

> All of the lower lying land to the south of Apollo Bay and east of the Barham Valley Road should remain undeveloped, therefore development should only take place to the west of the road, and not between this road and the river. - (p. 43 Apollo Bay Draft Structure Plan: Recommended Changes Report, Planisphere 2006)

Quite an unequivocal statement! As I said, the recommended changes report was considered and endorsed by Council in May 2006 and Council directed that the C29 Panel be advised of this decision.

The lower lying land in question was approximately one half of the total site of *Great Ocean Green*, with about ninety per cent of it at or below, 2.5m AHD (Australian Height Datum). It does not include any of the Garrett's Farm which was the subject of the

initial land purchase by the ABGC. The Barham Valley Road roughly bisects the site from mid point on the Northern boundary to the South West corner. The proposal had called for about 150 homes on this land.

Clearly the decision was that not all the land of the *Great Ocean Green* site was suitable for residential development. However this advice was ignored by the C29 Panel and later by the Council itself as will be seen. The recommended changes report also commented on the concept of staging the release of urban land for development. Foreshadowing the final plan the report advised:

> The final plan will include details for the phasing of release of new land within the proposed urban boundary, achieving a balance between encouraging infill development and the efficient use of existing infrastructure, and ensuring a supply of land to meet demand and maintain affordability.

Submissions from the Western Coastal Board

It may be recalled that the Western Coastal Board is one of several such boards set up under the Victorian Coastal Council, and that it can be seen as a more localised body charged with engaging with the community in the implementation of the planning strategies of the VCC. The Western Coastal Board therefore took an active role in *Planning Amendment C29* and the development of the *Apollo Bay Structure Plan*, making submissions to both. They were of course similar in nature as far as the implications for the *Great Ocean Green* project were concerned. However it is the submission to the *Apollo Bay Structure Plan* that will be discussed here, with passing reference back to the C29 Planning Panel.

For my own part in considering the future growth of Apollo Bay, I have often thought in terms of an island. The encircling ring of hills together with the ocean provides the same limitations as if we were indeed an island. An extract from the Western Coastal

Board's submission to the draft *Apollo Bay Structure Plan* expresses it more succinctly:

> ..it is clear that Apollo Bay cannot sustain unlimited growth as its topography and coastal position already impose spatial restrictions that do not exist in the other major growth areas of Torquay and Warrnambool identified in GORRS, 2004 …
>
> The *Apollo Bay Structure Plan* raises many important issues of coastal planning and provides an exciting opportunity to lead strategic solutions to these issues, particularly climate change.

To my mind there is no doubt that the Western Coastal Board recognises its role as an implementation arm of the VCC and the *Victorian Coastal Strategy* in particular. Indeed the opening remarks of the submission said as much and reiterated aspects of the Hierarchy of Principles for Coastal Planning and Management as set out in the *VCS*. A reading of the submission quickly gives the impression that the Western Coastal Board was opposed to the *Great Ocean Green* development as presented to the C29 Panel. This was the view publically expressed at the Panel Hearings and in private conversations between some Board members and myself.

I would make the observation however, that what I would term, 'politically correct' language is used in written submissions from government agencies and we are often left with subjective judgments. For example, another extract from the submission states:

> …development … should be directed by a sound and strategic consideration of relevant social, economic and environmental issues. It is therefore of particular concern to the Board that disproportionate consideration has been given to the *Great Ocean Green* proposal throughout the plan. Indeed, the level of consideration verges on promotion and is considered highly inappropriate in a document aiming to provide an objective position to guide the future sustainable development of the town.

A few comments should be made here. Firstly, as a group my colleagues and I always felt that the *Apollo Bay Structure Plan* should precede the consideration of any specific development. My recollection is that we and others expressed this view at the initial directions hearing of the C29 Panel (only to have it rejected) and of course some Councillors had reservations about processing *Planning Amendment C29* ahead of the *Structure Plan* in any event. The argument against this as I recall, was that 'each could inform the other.' Of course it transpired that the traffic was decidedly one way; as will be seen, every decision made by the *Structure Plan* that might have been seen as an impediment to *Great Ocean Green* was ultimately overturned.

Two other points of view in the submission were completely in line with my own thinking. They concerned the visual landscape of the Barham River Valley from the Great Ocean Road Bridge and the long term future of the alignment of the Great Ocean Road itself. The Western Coastal Board submission expressed the opinion that, as presented, the *Structure Plan*: 'envisages the spread of built forms from Marengo to Skenes Creek on landscapes that are visually extremely sensitive.' It continued to argue that the plan should actively discourage development that would effectively link all three settlements of Skenes Creek, Apollo Bay and Marengo resulting in a 'highly undesirable larger settlement that sprawls along the coastline.' The submission points out that this is contrary to a clearly stated objective of both the *VCS* and *GORRS, 2004*. (To be fair, I don't actually agree with the statement that suggests built forms extending to Skenes Creek; the plan clearly showed a possible extension that would result in the northern boundary of the settlement being at Wild Dog Creek, some kilometres from Skenes Creek.) However, in the case of Apollo Bay and Marengo, the sensitive landscape that is referred to is the estuary and flood plain of the Barham River. This is where we start to get into, 'Well, that's a matter of opinion!' Ultimately, the C29 Panel Report [2] argued quite strenuously that it was maintaining a 'green break' between Apollo Bay and Marengo and meeting the requirements of the

strategic planning documents in recommending the proposed development.

The second issue raised the question of the alignment of the Great Ocean Road as it approaches Apollo Bay from the north and on through to Marengo in what the submission describes as a 'coastal hazard zone.' It may seem at first to have little bearing on the *Great Ocean Green* project but, as will be seen, this is far from the case. One of the requirements of *GORRS, 2004* was that the *Apollo Bay Structure Plan* should investigate an alternative route for the Great Ocean Road.

Taking the statement at face value and accepting climate change, particularly with regard to sea level rise, as a reality, I would suggest that most observers would accept that in a 50 to 100 year timeline a significant re-alignment of the Great Ocean Road around Apollo Bay would be necessary. The only other alternative would be a defensive one; the building of sea walls. The most obvious route would be to start at the northern approach to town and take the road out to the base of the foothills in a wide arc to the west. It would then cross the Barham River and the flood plain at its western extremity and rejoin the current alignment as it rises significantly through Marengo. As mentioned earlier, long time residents will tell you that, prior to the breakwater being constructed to form the harbour, at times of high tides and sea surges, ocean waves had been known to wash over the road in front of the shops facing the foreshore. The relatively recent development of the large sand dunes and increased width of foreshore now prevents that. In 2005 a well documented condition of high tide and storm surge, caused waves to wash over the Great Ocean Road for a length of about 500 metres, immediately to the north of the town centre. Coupled with the knowledge that between Apollo Bay and Marengo, the Great Ocean Road is on the primary sand dune at the head of Mounts Bay, a realignment seems inevitable.

I pursued this view with considerable vigour in the many submissions that I made and I wrote to VicRoads on two occasions to detail my concerns. Surely, I argued, it would at the very least be prudent to consider a road reserve (I would even settle for a line on

a map!) to avoid having to acquire properties in the future. The response from VicRoads follows shortly.

Under the heading of *Threatening Coastal Processes*, the Western Coastal Board argued in a similar vein as I did but was less specific. Perhaps, as I suggested earlier, they felt constrained to using all the correct language. The submission repeated all of the introductory statements relating to the impact of climate change on coastal planning as presented in the strategic documents discussed in Chapter 3. At the risk of tiring the reader, I should mention there was yet another strategic document cited. This time it was the *Central West Estuaries Coastal Action Plan (August 2005).* One brief extract from a list of recommendations for the management of estuaries says:

- Implement appropriate planning scheme policies and overlays which control development from occurring in zones which are sensitive to predicted risk from sea level rise.

There has certainly been no shortage of advice to those who want to take it. Therein lays the planning problem; all wisdom and no bite!

VicRoads position on the alignment of the Great Ocean Road

As I mentioned, I twice wrote to VicRoads expressing my concern for the long term viability of the alignment of the Great Ocean Road through Apollo Bay.

I suggested that an interpretation of the *GORRS, 2004* strategy 3.1 for a long term alternative route around Apollo Bay could be taken at face value as literally meaning 'around Apollo Bay.' The response I received was that it was VicRoads understanding that this strategy refers to the use of an existing parallel route within the township, namely Pascoe Street, one block back

from the current alignment. In other words a shopping centre by-pass and not a very effective one at that, since Pascoe Street is designated as within the CBD! This rejection notwithstanding, I kept up the argument raising the impact of climate change and coastal recession together with the support from the submission of the Western Coastal Board. In particular I raised something that had been troubling me since it was first raised at the June 2006 panel sessions.

Various aspects of the flood modelling were widely canvassed at the 2006 panel sessions with a number of expert witnesses. Any mathematical model requires assumptions and boundary conditions. In a submission on behalf of the Corangamite Catchment Management Authority, Tony Jones[3], referred to the role the Great Ocean Road plays, in its alignment on the primary sand dune across the head of Mounts Bay, as a 'barrier' protecting the flood plain. He actually suggested he was assuming that the Great Ocean Road there would be protected by infrastructure, presumably a sea wall. (More particularly of course it is the primary sand dune that must remain.) On page 4 of his submission he states:

> It is assumed that the Great Ocean Road will remain in its current location and will be strengthened if threatened by raising [rising] sea levels. This road embankment acts as a barrier to protect the floodplain from an encroaching sea.

When confronted with this, the VicRoads response was that comments attributed to Mr Jones are an accurate account of the current position, 'that the Great Ocean Road will remain in its current location.' In my second assault on the issue I was armed with photos of the 2005 storm surge that swept ocean waves across the Great Ocean Road just on the edge of town. An extract from the reply is as follows:

> It is expected that any impacts on the Great Ocean Road as a result of climate change would continue to be addressed using engineering treatments to protect the road asset rather than realigning the road. There is no proposal to develop a new

> alignment for the Great Ocean Road between Apollo Bay and Marengo in response to climate change and rising sea levels. (VicRoads letters Ref: COY 203 08-09 and RBS07/2977)

The comment referring to 'engineering treatments to protect the road asset' can only be interpreted as the building of sea walls as a defensive action and this approach to climate change is discussed in more general terms in Chapter 9.

No submission relating to a new alignment for the Great Ocean Road elicited a positive response. It seems it was rejected outright. Putting this response from VicRoads to one side for the moment (it actually came much later than the *Recommended Changes Report* for the *Structure Plan*) I continued with a degree of ill placed optimism and confidence in the ability of the Council to support its own arguments.

The September 2006 Directions Report

Following the adjournment of the June Panel Hearing and a further directions hearing in August (that must have escaped my attention!) the Panel released a comprehensive 76 page report entitled *September 2006 Directions: 6 September 2006* [4]. It had the stated purpose of setting out directions for the proponent to revise the plans and supporting documentation for *Planning Amendment C29*. Prior to this, in correspondence with all parties concerned, the Chairman had expressed the view that, as presented, there were shortcomings in the proposal for the *Great Ocean Green* development. The phrase that was used repeatedly was: 'It was commonly accepted at the close of the hearing [16 June 2006] that the exhibited form of the Amendment was inadequate.'

Of course as an opponent I would agree with that but probably for very different reasons to those that led the Chairman to make that remark. I do not presume to know the Panel's thinking but I would suggest that the 'inadequacy' had to do with matters of

detail and further investigation and nothing to do with the broad concept. In fact the Panel reported:

> We have reached the conclusion that residential and recreational development in the Barham River Valley has broad policy support in the *Colac Otway Planning Scheme* and the draft revised Structure Plan for Apollo Bay.
> (Sept. 2006 Directions)

I find this an interesting statement and one that completely ignored the 'no development of land to the south and east of the Barham Valley Road', as Council had endorsed in accepting the *Recommended Changes to the Apollo Bay Structure Plan* report.

The evidence that the Panel had already made up its mind was startling and this was in spite of the fact that the Panel was yet to re-convene for the April 2007 sittings. Yet I still remained naively optimistic!

Before leaving the *September 2006 Directions* report, it is probably useful to comment on the way in which it was set out. With the benefit of hindsight, I can say that it took the form of the C29 Panel Report when it was released in July 2007. I have no doubt that the format and style is consistent in all planning panel reports. I have no issue with that and in fact applaud the approach that is concise and easy to read. As would be expected the report went from a formal introduction to the salient points of the proposed amendment to strategic justification then onto the more specific matters. Chapter headings were often couched in the form of a question. For example: 'Is there strategic justification for the amendment?' and 'Is development feasible?' To take this a little further I want to examine one issue in some detail: that of the water supply. The headings are enough to illustrate my point:

- Water
- Potable water supply
- What is the issue?
- Evidence and submissions
- Discussion

- Panel conclusion and direction

I shall leave the reader to reflect on what would be found under each of the headings, given that the issue has been discussed in Chapter 3 and we are not finished with it yet! With one exception: what of the conclusion to the water supply problem? Well it was only a conclusion to this time and it was that:

> Consideration of the Amendment should continue but the development should not commence until water supply issues are resolved. ….The revised Amendment documentation:
> - Include a provision that development not commence until potable water can be made available to the development.

The task presented to the Panel was a formidable one. They needed to accept and process countless submissions and volumes of documents and then in the end present their case in a succinct and concise manner. There are a lot of advantages in being able to access and absorb a panel report simply because it does bring it all down to one document. Where are the weaknesses in the process? My experience has shown me that after the release of the report, I want to have another go! This is because I can now see the line of argument the Panel may be using in coming to its conclusion and I want to refute that. But I am getting ahead of myself and need to return to the orderly run of events.

The balance of 2006 passed relatively quietly for the community sitting outside of the activity that was before the developer. However as the year drew to a close, participants were invited to a further directions hearing held on 18 December 2006 in Geelong. It transpired that the developer was seeking clarification of some points raised in the *September Directions Report*. For the community it turned out to be a non event. That is apart from the realisation on our part that the Panel had no intention of taking any notice of the Council's expressed view of 'No development south and east of the Barham Valley Road' and that the outcome of the panel process was a foregone conclusion.

It was at this stage that I finally 'lost my innocence.' Prior to this I was naïve enough to think that Council Officers meant what they said. This was largely due to the inaction of the Council Officers who sat through the December directions hearing without saying a word, while the Panel and the Barrister for the proponent debated some finer points of the road layout on the land south and east of the Barham River. I later challenged them on this and was told I didn't understand the purpose of a directions hearing – it was not the place to raise objections. Unfortunately, I retained some of my naivety in the very mistaken belief that Council would raise this issue when the formal hearings resumed.

The realisation that defeat was looming spurred us on to think of some kind of action – any action – we needed to get some publicity and a decision was taken to hold a Public Protest Rally. The plan was simple – if twenty people were contacted and asked to contact at least ten each from their circle, then we should have a minimum of 200 people at the rally. The rest was easy. Organise a place, time and date. Get a band for a bit of entertainment and make up some placards etc. People were encouraged to bring along homemade placards with appropriate slogans. The local sign writer gave me a useful tip on making a banner – paint some old sheets with a white acrylic paint then take a suitable brush and just go for it, stitch up a hem to take a rope and you are in business. We selected a Saturday morning, 27 January 2007 on the foreshore near the Saturday Market. In our view it was a great success and we had a crowd of around 300. It was styled as a rally for Sustainable Development, our argument being that *Great Ocean Green* was unsustainable, and we had a couple of speakers and a great band to support the effort. A collection tin passed around the crowd covered our expenses which included paying the band nominally and paying for red balloons with the slogan, 'Stop Great Ocean Greed.' Publicity did follow with all the local papers and the *Geelong Advertiser* picking up the story. However, in spite of all our efforts, at this stage we had still not managed to attract the attention of the Metropolitan Press. We were nonetheless satisfied that a significant

proportion of the community was against *Great Ocean Green*: not exactly a Great Ocean Gulf but a good start.

It was about this time that Justin Madden, MLA, was appointed Minister for Planning in the Bracks Government. He was the third Planning Minister to hold the position since the beginning of the project and the application for a planning amendment. I wrote to Minister Madden, congratulating him on his appointment and seeking an opportunity for him to visit Apollo Bay to see the nature of the *Great Ocean Green* proposal. My letter initiated a positive response in the first instance, with an email exchange from his office. Unfortunately this quickly dissipated and all requests for him to either visit Apollo Bay or receive a community delegation were rejected. I personally would have sent a minimum of twenty items of correspondence to the Minister for Planning, including copies of that directed to others. I know that I was not alone in this and his office must have received hundreds of letters on the matter of *Planning Amendment C29*.

On Sustainability

If we were to support 'sustainable development', and by inference suggest that the *Great Ocean Green* project was unsustainable, we needed to have some idea of what was a 'sustainable development.' I would suggest that to date, the word 'sustainable' is the most misused word of the 21st Century. It is a century where our attention has been focused more than ever on the importance of the environment, the limitations of our resources and the demands of population pressures.

History shows that deep thinkers and philosophers have long recognised the importance of the environment to the well being of mankind. Tor Hundloe[5] in his book, *From Buddha to Bono – Seeking Sustainability*, explores this history in particular detail and enunciates the basis of sustainability and the five principles of sustainable development. Hundloe points out that sustainable development, or simply sustainability, draws on the three modern disciplines of

economics, ecology and ethics and finds some expression in the relatively recent concept of the 'triple bottom line' in evaluating a business proposition. He lists the five principles of sustainability as:

- The fundamental ecological necessity of protecting biodiversity.
- The basic ethical principle of first intergenerational equity – justice within generations.
- The basic ethical principle of second intergenerational equity – fairness between generations.
- The fundamental truth that a healthy economy requires a healthy environment.
- The principle of deliberate risk aversion in decision making, otherwise known as the precautionary principle.

History also shows us that, very often, there are significant time lapses between the heralding of an important concept and its eventual recognition for what it is and its implementation – a time lapse of up to 150 years. In my own experience of initial training in the late 1950's, I doubt that the word 'environment' would have registered and certainly the word 'ecology' would not have. It wasn't until the 1980's that environmental science began to emerge as a discipline in its own right, and the word 'sustainability' didn't come into common usage until much later again. Some crude measure of the arrival of these terms in the public eye can be gained by noting the changes in the titles of government departments charged with the management of public lands. In Victoria, for example, there was the Department of Crown Lands to be followed much later by the Department of Conservation, Forests and Lands, the Department of Natural Resources and Environment (DNRE) and then later (and currently) the Department of Sustainability and Environment (DSE). Of course one hopes there was always more to this than a change of name, and I think that has been the case. Even so, changing the culture of any organisation has been found to be no simple task.

Some would suggest that the term 'sustainable development' is an oxymoron; that is to suggest that no development can be sustainable. While this is an extreme view held by some activists, it is not a realistic one in the face of the World's population increases. Interestingly, *The Australian Oxford Mini Dictionary (Third Edition 2006)* says: 'sustainable adj. that can be sustained; (esp. of development) which conserves ecological balance by avoiding depletion of natural resources.' While briefly, 'sustain' may be read as support, especially for a long period. I say, interestingly since there is no expansion of the word, sustainable, in *The Australian Concise Oxford Dictionary (Second Edition, 1992)* of 1992, supporting the idea that sustainable development is recent jargon, although certainly not a new concept.

So where does this leave us? I don't believe that we can come up with a simple definition since we are dealing with a complex issue. Hundloe has already told us of its dependence on the three 'e's' of ecology, ethics and economics and of the five principles of sustainability. However, I think it is useful to suggest some simple ideas to guide our thinking. Many of us might start with a process such as agriculture where there is a natural cycle through the seasons of say, planting, growth and harvesting. There is an element of 'take' and 'replace' in such a cycle. Whether or not it is sustainable depends on many factors, including how the land is cared for and treated. Generations of farmers have both been successful in some instances and made many mistakes in others. One of the most notable failures would have to be farming practices that have led to the degradation of farm lands due to problems of salinity. Clearly such practices were unsustainable and steps have been taken both to avoid the problem and to recover the land. It is possible then to describe sustainable farming practices and unsustainable ones. A more extreme view of sustainability might be to put it into a closed cycle, that is, one with no external inputs. Those that seek a measure of self-sufficiency by growing their own food and generating their own power can achieve this to a greater or lesser extent. While this activity is usually on a small scale, there

are active community groups who hold the view that local action along these lines will be necessary in the face of climate change.

The Transition Town Movement

'How can our community respond to the challenges, and opportunities, of Peak Oil and Climate Change?' This is not my question; it is one that is asked by people behind a movement based on social conscience that has become known as 'Transition Towns' or a 'Transition Initiative.' My source of information is the internet based Wikipedia, but the movement was drawn to my attention when a local activist, Fern Rainbow, presented her submission to another planning panel dealing with *Amendment C55* in June of 2008 of which more will be said later. The Panel did not comment on the submission in its report. However, a few comments are offered here since it is my conviction that ultimately, communities and planning bodies may well need to embrace the concept more widely and willingly.

A second question (drawn from the same source) that a community could well ask is: 'For all those aspects of life that this community needs in order to sustain itself and thrive, how do we significantly increase resilience (to mitigate the effects of Peak Oil) and drastically reduce carbon emissions (to mitigate the effects of Climate Change)?' It is not my intention to fully explore the concepts here. Rather, it is to raise awareness and perhaps redirect some of the conventional thinking in planning issues. Take, for example, the concept that a community should strive to increase its self reliance so that, 'food metres', and not 'food kilometres' lie behind its provisions. Community gardens already exist but the ad hoc approach could be more strongly developed to put such activities (or similar ones) on a commercial basis. Currently, fresh seasonal fruit and vegetables are available at the local Saturday market in Apollo Bay. Suppose this was extended, not in the form of a mono-culture product over hundreds of hectares, to have that single item transported to markets hundreds, or thousands, of kilometres away, but in the form of a diverse market garden perhaps

over tens of hectares. How would our planning bodies react to this?

Residential estate development usually includes some concession to the community in the form of public reserves or public open space. Why not include productive elements that could be leased out? To some extent, the historical concept of the English 'common' must have had this in mind. Historically also, the Barham River Flats had a very productive life with records showing that both onion and potato crops were grown there. I am not suggesting a return to the nineteenth century, but we could look to the past to take those elements of it that present an opportunity in response to the challenges we face in the 21st century. Of course people are taking a renewed interest in growing vegetables and are installing rainwater tanks. But not everyone has the space, time, or interest to pursue these things. If a community wide approach is taken on a commercial basis then the opportunities might be endless.

In the latter half of the twentieth century, attention focused on regeneration of public lands with native plants and indigenous ones at that. Why not give over some portion of such lands for productive use by the community? A critic of what I am saying would surely say that I am talking about standard farming practices, so leave it up to commercial interests. But we are dealing with some new thinking where a community has to take the lead and needs to be supported by local government and planners. Another idea that is surely worth exploring is a logical extension to micro-cogeneration of energy as expressed in a home owner setting up solar photovoltaic panels, that is, to set up a community system on community land.

Sustainability and the *Great Ocean Green* Project

What about the proposition that there can be 'sustainable' growth in urban boundaries and presumably then, 'unsustainable' growth? On the face of it this is a piece of nonsense since the land is a resource that is being used up and cannot be replaced. We need then to

measure the development against criteria of more substance and our three 'e's': economy, ecology and ethics as well as the five principles of sustainability.

The *GORRS, 2004* strategy encourages growth for Apollo Bay, '…taking into consideration issues of accessibility, efficiency, amenity, safety, sustainability and infrastructure provision. This presents an opportunity to create best practice future urban form that responds to the landscape around it.'

I cannot resist commenting on the second sentence; so many reports, strategies and recommendations these days use this type of language that doesn't really amount to anything but 'spin' – a word that I reluctantly use. It is rather like the statement: We will introduce 'world's best practice'! Then there is the overlap in the list of issues; surely the infrastructure provided should be accessible, efficient, safe and itself sustainable, but perhaps I am being a bit picky! I am prepared to accept that accessibility, amenity and infrastructure can all be provided (the water issue not withstanding) but I question matters of efficiency, safety and sustainability. Putting aside the safety issue for the moment (the proposal was to build on a flood plain after all) and accepting that efficiency is related to economy, we now need to examine sustainable development more closely.

Placed in an unsuitable location, a housing development may have a disastrous effect on the environment (ecology) the rights of some individuals and future generations may be threatened (ethics) and it may simply not be economical when compared with alternatives. It should be remembered that the Golf Club agreed to purchase the Garrett's Farm and proposed to develop a golf course there, prior to Urban Property Corporation taking an interest in adjoining land and eventually coming to an agreement with the Golf Club. In other words, site options were already being dictated by an earlier decision.

On the matter of economics, I have already raised the question of the financial viability of *Great Ocean Green*. This is largely based on two factors: the massive amount of earthworks involved in terms of the number of house lots produced, and the

engineering difficulties associated with construction of the housing pods on an alluvial flood plain. There is also the question of the strength of the perceived market. I return to construction issues in Chapter 8. For now I simply assert that, economically, *Great Ocean Green* was not a sustainable development.

On the matter of ecology I concede that I don't have a strong argument. To be fair, the project involved restoration of the riparian vegetation along the Barham River and promised public access to the banks of the river and other public walkways. Nevertheless there was considerable debate about the nature of the re-vegetation proposed and this is discussed in the detail of the second panel session presented in the following chapter. Of more concern to me is what I would describe as the 'rape of the land form' surrounding the Garrett's Farm house and their excised property that is not part of the project site. The house is well located on a rising knoll above the Barham River Valley Road. When the preliminary earthworks plan was finally released, a cut of up to 13.5 metres both around and over the private property of the Garretts was clearly shown. To my mind, this raised all sorts of questions from an engineering and ethical point of view. It conjures up images of the 1960s of the supermarket carpark surrounding the resistant and persistent owner of a small weatherboard cottage that had been there for the past fifty years! The developers apparently believed that they could exert enough pressure on the Garretts to make them sell out. 13.5 metres is a significant depth; a four storey building could be placed in such an excavation and not be seen! The engineering aspects of this excavation are discussed later. The detail is mentioned here in the context of ethics in a sustainable project. What right did the developers have to assume that they could acquire the Garrett's home when they had expressed their clear intent to stay there in retirement?

This leads me on to the principles of sustainability and in particular to the principle of second intergenerational equity – fairness between generations, and the last principle, that of deliberate risk aversion in decision making, otherwise known as the precautionary principle. There are several planning strategies,

already mentioned, that urge caution and recognition of the precautionary principle. (For those who are unfamiliar with the concept a brief explanation is given in the box at the end of the chapter.) In order to remain with sustainability, I need to look ahead to the next chapter where it will be seen that, in a letter to participants advising of the resumption of the panel hearings, the Chairman said in part:

> ….Applying the precautionary principle to stop this development in response to the extreme global forecasts of some commentators and the untested suppositions as to what this will mean for the coast in this location, cannot be supported as a fair and responsible decision under current planning policy.

Of course the precautionary principle can be exercised without rejecting a proposal since it may be decided that the risk involved can be managed. In the Panel Report of July 2007, the Panel repeatedly stressed that it had applied the precautionary principle but it chose not to mention it in connection with coastal recession as discussed in Section 6.7 of the report. Under the heading of 'What is the Issue?' the report states:

> The issue of climate change on the flood characteristics of the site has been discussed. Concern was also raised on the potential for coastal recession to impact on the development.

I have already expressed my own view on the dependence of the alignment of the Great Ocean Road remaining on the primary sand dune along Mounts Bay and mentioned its role, or rather that of the dune system itself, in the flood modelling. Other submitters supported my view, particularly the Western Coastal Board. In the discussion that followed in Section 6.7, I want to highlight one of the six bullet points that came after the following paragraph:

> We think there are too many assumptions (beyond the reasonable assumptions of sea level rise) that have to be adopted to reject this proposal on the grounds of the potential

impacts of coastal recession. …. [We would need to assume that..]

- there will be no public response to preserve the dune system and the Great Ocean Road by protection works or beach renourishment,

And the conclusion that followed is relevant to my argument, namely: 'The proposal will not increase coastal recession and is not directly exposed to immediate threats from coastal recession.'

The Panel is asserting that there is no immediate threat to the project from coastal recession but is also assuming, that if there were to be a threat in the future, then the public will respond and insist on protective works. Surely this acknowledges the possibility of a threat and it is violating the principle of second inter-generational equity – fairness between generations. I shall use some more direct language: 'let's not worry about a problem we might create for a future generation. They can pick up the tab and pay for the protection works if and when they are needed.' My reading of the science of climate change and the lack of action on the part of governments, tells me it won't be 'if'; it will just be a matter of 'when'. To not apply the precautionary principle here and to impose a cost on future generations, underscored the unsustainable nature of this proposal.

The Precautionary Principle

In the paper, *The Precautionary Principle – Its Origins and Role in Environmental Law,* (Cole, 2005) David Cole states:

The precautionary principle in the context of environmental protection is essentially about the management of scientific risk. It is a fundamental component of the concept of ecologically sustainable development (ESD) and has been defined in Principle 15 of the Rio Declaration (1992):

Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

It is expressed in the positive in the C29 Panel Report (p.14) as:
The precautionary principle is an approach to decision making that states that where there may be serious or irreversible environmental damage if a certain course is followed (or no action is taken) complete scientific certainty of the adverse outcome is not required.

I might express it more simply as:
'If you are unsure of the environmental consequences of your action, err on the side of caution.'

Chapter 4 - References

1 Colac Otway (Vic.). *Apollo Bay Structure Plan Recommended Changes Report,* prepared by Planisphere for Colac Otway Shire, 2006

2 Colac Otway Planning Scheme Amendment C29 *Great Ocean Green Development Panel Report*, July 2007
Note: details on:
http://trove.nla.gov.au/work/32511805?selectedversion=NBD42262275

3 Jones Tony, *Colac Planning Scheme Amendment C29 CCMA Panel Submission*, June 2006

4 *C29 Planning Panel, Colac Otway Planning Scheme Amendment C29 Great Ocean Green Development, September 2006 Directions*

5 Hundloe Tor, *From Buddha to Bono – Seeking Sustainability,* JoJo Publishing, 2008?

Chapter 5 - The Second Panel Session

The activity of January 2007 drew to a close and we were advised of yet another further directions hearing. In short it resulted in an announcement that the Panel would resume its hearing with ten sitting days in April 2007. Previous submitters were invited to make further submissions and to lodge a request to be heard. Our group held a few meetings to discuss the general approaches we could take, but rather than make a joint submission, it was left up to each individual to decide what to do. The majority of those that had made presentations decided to do so again and the stage was set for a resumption of the panel hearing. Following the *September Directions* report, the proponent had made a new submission in mid February 2007, and it was available to the participants of the first panel session. From our point of view it was little different from the original submission. The most striking difference was that, as a concession to the 'green break' philosophy, there was a 350 metre set back from the Great Ocean Road and a height limit placed on houses immediately adjacent to that zone. However the housing development on the lower lying land south and east of the Barham Valley Road remained. Of course certain other detailed requirements as specified in the *September Directions* report and related to the *Comprehensive Development Plan* and its associated *Schedule*, were met.

In advising participants of the hearing dates the Chairman had a few comments to make, possibly wanting to head off some issues. In a letter he stated: '..we have formed a view on the strategic justification of the Amendment and submissions on this issue can serve no useful purpose.' With regard to climate change the letter continued:

> The Proposal will deliver a range of ecological benefits: we do not see these benefits being transformed into disbenifits by the effects of climate change.
> .....Applying the precautionary principle to stop this development in response to the extreme global forecasts of some commentators and the untested suppositions as to what this will mean for the coast in this location, cannot be supported as a fair and responsible decision under current planning policy.

A Personal Submission

We were undaunted by the Chairman's remarks and proceeded to prepare submissions. I took the following line making three points:

- Failure on behalf of the proponent to show how the engineering associated with the construction of the housing pods will be effectively carried out.
- Failure on behalf of both the Panel and the proponent to address current community attitudes towards Climate Change.
- Failure on behalf of both the Panel and the proponent to take full cognisance of community opinion, especially with respect to the *Apollo Bay Structure Plan*.

Construction of the housing pods

A major feature of the proposed *Great Ocean Green* project was the importing of earth fill to create residential housing zones on a flood plain. These housing zones have variously been referred to as pads or pods and were described as requiring up to two metres of fill to raise the proposed houses above flood level. (It was later seen that in some places up to 5 metres of fill would be required.) The housing zones comprised a total of 25ha of an overall 170ha site. It had been acknowledged, that due to the presence of acid sulphate soils, a 'cut and fill' approach to earthworks was not an option (later

ignored and not discussed again). This meant that suitable fill would have to be brought onto the site. When asked at the June 2006 hearings if there was an estimate of the amount of fill required, a response from a design engineer was that it was not possible to calculate this since final design levels were unknown and a full topographical survey had not been carried out. (This would appear to be at odds with being able to do the flood modelling and it would seem that the different consultants were not able to access the same data base.) However it was possible to obtain a simple estimate from simple calculations. I had previously done this and shown the material to be of the order of 500,000 cubic metres. (This figure had not been challenged by the proponent, and the amount of fill remained an unknown until the last day of the hearing.)

I would again note, that in his closing remarks to the June 2006 Panel session on behalf of the Colac Otway Shire, Jeff Morgan said: '[There is need for] confirmation of how much fill is required and the impact on traffic/roads of importing fill and indeed consideration of the overall financial viability of the proposal.'

That the matter of the amount of fill required, had not been taken up by the parties was, in my opinion, an unacceptable position. There were far too many unanswered questions on the topic to allow a sound judgment to be made. The Panel in its further directions to the proponent could have easily asked for this matter to be addressed. I challenged the Panel to explain how they could make a rational and reasonable judgment on the proposal in the absence of some explanation as to where the material was to come from and what its nature would be. I had already indicated that the amount of imported fill would be of the order of 500,000 cubic metres. Such very large volumes of earthworks are usually associated with a major earth and rock fill dam and require specialist engineering knowledge in the selection of material, its transportation and its subsequent consolidation. In such projects, haul distances are usually a matter of mere kilometres from a quarry or borrow pit in the general vicinity of the work site. To do otherwise would be to bring into question the cost effectiveness of the whole project. The analogy can be taken further since graded

material will be necessary to create the housing pods. Starting with a substantial rock base, the material would need to be progressively graded up to the final top soil. Further the battered slopes of the pods would need to be protected from the impact of flood waters. In short a range of materials would be required, not necessarily coming from the same source.

The unanswered question here was, where was such a quarry or quarries to be found? In any event, to source such large quantities would almost certainly require new quarries to be opened up, an action that would require a planning permit and/or planning amendments.

Expressed in its simplest terms, the *Great Ocean Green* project must be seen for what it is. That is, a developer is proposing to fill up a flood plain with vast earth mounds up to two metres high and covering the area of about ten to fifteen football fields. In explaining this to any rational person not connected with the project the usual incredulous response was, 'They want to do what?' That the proponent had not addressed this issue of earthworks was beyond my comprehension and I again questioned how such a proposal could have been costed in even a preliminary sense. I also failed to see how a responsible Panel could disregard this matter.

Current community attitudes towards Climate Change

In June 2006 the question of the likely impact of climate change, while well known in scientific circles had barely made it into the public consciousness. A lot has changed since that time. On a scale of one to ten, if June 2006 had it at a level of 2 or 3 it is now at a level of 8 or 9. Previous comments from the Panel on not addressing old ground notwithstanding, I would argue that the Panel was doing the community an injustice in not revisiting this issue. I was particularly concerned that the Panel was relying on 'current planning policy' and not being bold and realistic enough to recognise a need to change. If I am correct that the last IPCC report to be formally recognised in planning circles was the 1996 report, I would point out that there have been two other reports since then, the latest due for final release as the year of 2007

unfolded. That governments were showing concern for the matter was evidenced by the fact that the recently returned Bracks Government in Victoria had appointed a Minister for Climate Change. Chief amongst all the concerns of climate change is the reality of rising sea levels. Surely this was relevant to a case where an open estuary is involved and the preservation of a fragile coastline is central to the success of a proposal.

On 2 February 2007 *The Age* newspaper reported on climate change with the headline, 'Seas rise at rate of panel's gloomiest forecast' and went on to report that since 1973 sea levels have risen by almost nine centimeters. In the same newspaper on the same day under the heading 'The Weather Watchers' CSIRO scientist, Donna Green, following a trip to the Torres Strait to observe the effects of rising sea water first hand, was quoted as saying:

> That trip to the Torres Strait Islands reminded me of walking along Aspendale beach near the CSIRO's atmospheric research office and looking at all the multi-million dollar houses being built just behind the sand dunes. I was always amazed that our planning codes still allow people to build so close to the shore and on such low lying land.

Dire predictions have been made with respect to climate change and the sceptic's view can also be acknowledged. In any event however, the *Great Ocean Green* project would be expected to have a life of at least 90 years taking us to the end of the 21st century. If the Panel chose to stand by the statement to the effect that: 'Applying the precautionary principle to stop this development cannot be supported as a fair and responsible decision under current planning policy.' Then I could only say, 'be it on their head.'

Community opinion of the *Apollo Bay Structure Plan*

To be able to adequately address this issue it is necessary to put certain things in chronological order. Firstly, the need to revisit the need for the *Apollo Bay Structure Plan,* that was signaled in the *Great Ocean Road Region Strategy (GORRS, 2004).*

Strategy 2.2.2 (p. 21) states: 'Develop Apollo Bay as a preferred coastal township for residential and visitor accommodation growth and community services,' with this action to be carried out by the Colac Otway Shire and the DSE. As we all know the matter is proceeding.

There had been previous discussion with the Panel on the question of any conflict between the processing of the *Apollo Bay Structure Plan* and *Amendment C29* at the same time. In the event it was decided that each could learn from the other. However it now appeared that the Panel had chosen to ignore the *Apollo Bay Structure Plan* and all of the attendant community opinion, presumably on the grounds that they knew better than the community.

The Panel Session – April 2007

The personal submission outlined above was forwarded to the Panel prior to the hearings re-opening. As explained earlier, the oral presentation was not limited to anyone's written submission, although in this case I stuck fairly closely to what I had written, while trying to emphasise my points.

In many respects the second Panel Session was a rerun of that held in June 2006. The venue was different (this time we were at the Apollo Bay Bowling Club) but everything else was set up in the same way – even down to the difficulty of hearing the witnesses and not being able to readily see the visuals; that is from the public's position. Once again, irate members of the public gallery complained, but to no avail. Superficially it was difficult to see the difference in the proposal of 2007 to the proposal of 2006. Of course there were changes, but in essence things remained the same. It was still a case of 537 houses built on a flood plain with an integrated 18-hole championship style golf course and an undisclosed hotel and accommodation complex alongside a club-house.

By now we were familiar with the Panel proceedings and once again the session commenced with the proponent's Barrister, who

outlined the case for the development and introduced the changes that had been made. As I said, the major features remained the same and it was really just a matter of detail.

The Mystery of the Disappearing Hotel

I shall digress slightly to explain as best I can the matter of the hotel, other accommodation facilities and the clubhouse. In order to understand this tale a little more clearly some further detail of the Barham River Flats needs to be presented. Some introduction to the land form was given in Chapter 1 but particular attention now needs to be drawn to the immediate surrounding land form with a little repetition to help the focus.

Mounts Bay is a smaller bay formed as the mouth of the Barham River discharges into the ocean and the coastline curves around to a headland at Marengo. It affords a long sweeping beach with a large primary sand dune behind it. Beyond the dune the vista is of the relatively short but wide flood plain of the Barham River. The Great Ocean Road runs across the primary sand dune for about 1.5kms from near Point Bunbury to the Marengo headland giving an idea of the width of the flood plain. At the limits of the flood plain there is a series of natural terraces. To the north, these lead to the higher ground of the Apollo Bay Township as a ridge line extends out to Point Bunbury. To the south a similar ridge runs out to the cliffs at Marengo. At the base of these cliffs is a tidal rock ledge and beyond that are reefs that support a healthy seal colony. The reefs are the remnant sandstones of small islands and are known as Henty and Little Henty reef. The immediate vicinity is now a declared Marine Park known as the Marengo Reefs Marine Sanctuary.

Within less than 2kms from the coast and to the west, the Barham River flood plain also rises in terraces before reaching the foothills of the Otway Range. Standing on the crest of the sand dune of Mounts Bay, the Barham River flood plain stretches away to the west over an area of approximately 300ha. No doubt on a geological timescale the river carved its way to the sea, creating firstly the narrow valley that brought it down from the ridges and then the flood plain as, perhaps over millions of years, it had various

paths from the valley entrance to the ocean. Indeed, the river would have both scoured out and filled the flood plain as, over many centuries, it took up new positions to flow from the hills to the sea. At the present time, with the picture of a rectangle in mind, the river enters the flood plain at the south west corner and almost moves on the diagonal to the north east corner to reach the sea at the northern end of the beach at Mounts Bay. At some time or other in the past, the river would have meandered everywhere across the plain so that drilling into it would reveal old water courses. Short of the diagonal, the river hugs the northern terrace and forms a natural edge to the Apollo Bay Township. The first terrace on the south side is perhaps 500m short of where the Marengo headland rises abruptly. This gives rise to a significant area of raised ground which now accommodates an airfield and a low density housing estate, known as the Heathfield Estate.

No doubt due to the history of land ownership, the northern boundary of the Heathfield Estate occurs before the terrace that it is on drops down onto the flood plain and the back water. This results in a small raised area that is prominent in the landscape and within less than two hundred metres of the Great Ocean Road. It forms part of a property known locally as the 'K Farm'.

In describing the development of *Great Ocean Green* the *Comprehensive Development Plan (CDP)* defined three precincts:

- Precinct 1 – Golf Recreation with landscape and access works
- Precinct 2 – Residential development with integrated landscape works
- Precinct 3 – Sites for tourist and leisure activities including clubhouse facilities, residential hotel, serviced apartments and mixed use activities

It is Precinct 3 that now deserves some attention. The plans referred to in the *CDP* were concept plans accompanied with the statement: 'Development should be generally in accordance with the concept plans.' Precinct 3 was shown as the small prominent area of

land immediately adjacent to the Heathfield Estate as just described. In fact it could be described as a remnant rump on the very edge of the Heathfield Estate. It is an area of approximately 3.4ha that reduces to about 2.5ha when the access across a gully and an intermittent waterway are taken into account. The entrance, after crossing the gully, is 160 metres from the Great Ocean Road on the now oft mentioned primary sand dune at Mounts Bay. Within this highly restricted precinct, with only one access road, the intent was to have the clubhouse facilities, residential hotel, serviced apartments and mixed use activities, as mentioned above, plus car parking and services and a 'potential acoustic fence'. Along the southern boundary are six private properties of the Heathfield Estate, with the nearest house having its back wall within 26 metres of the boundary. The residents of that estate were justifiably upset when the plans for *Great Ocean Green* were released and made appropriate submissions to the Panel. The estate itself has about 65 house lots of varying size but typically about 0.5ha (5000m^2); low density living in a peaceful spacious environment. *Great Ocean Green* proposed to concentrate all of the action of a golf resort onto about 28,000m^2 or the equivalent of about 5 lots of the adjacent estate.

To my mind it was patently absurd to push all this activity into such a restricted site, with zero possibility of expansion, limited access and all in the overall context of Apollo Bay and its surrounding undeveloped land! Of course it all came down to who owned what land and planning should not be a matter of land ownership.

The issue of the commercial development and in particular the residential hotel had been raised by a number of submitters at the Panel sessions of June 2006. I have chosen to raise it now since the *September 2006* directions report made a specific reference to the location of Precinct 3 which was completely in accord with my own views. The report states:

> We feel obliged to record our view that Precinct 3 may not be the most suitable location for the proposed activities. ….. we believe that the types of commercial activities proposed for

> the Precinct might be better located elsewhere on the site where they better assist in consolidating and reinforcing the existing Apollo Bay urban area. In our view, the creation of a relatively isolated commercial area is not an ideal planning outcome. – (p. 51 September 2006 Directions Report)

The rejection of this suggestion was swift. My recollection is that through their Barrister, the developers simply said there was no other site and no more was said. I consider this to be a weakness on the Panel's part and evidence of the power of the developer to call the shots. With a measure of sarcasm I called this aside, 'The Mystery of the Disappearing Hotel.' Of course it didn't disappear; rather it was just pushed off the radar and out of discussion even after the release of the C29 Panel Report. The matter can be concluded by some comments on that report with respect to Precinct 3.

The Panel report acknowledged that 'no definitive plans have been developed for the resort component' and then went on to add to the list with a conference facility, tennis courts, swimming pool and gymnasium. All of this somehow squeezed into the 2.8ha site! But it is the 'escape clause' that the Panel used that interests me: it would need to be subject to a planning permit. The C29 Panel Report in describing the proposal says of Precinct 3:

> It is proposed to construct the golf clubhouse and a tourism and hotel/serviced apartment development on the elevated south portion of the site adjacent to the Heathfield Estate. The proposed uses in this precinct are to be subject to a permit and third party objection rights would apply.

Indeed this was clearly stated in the *Schedule* that went with the *Great Ocean Green Comprehensive Development Plan*. So it would have been necessary to engage in the battle again. Council Planning Officers seemed to delight in telling me that passing *Amendment C29* did not include the hotel. Presumably this extended to the clubhouse as well. A fact that might well have surprised some members of the golf club: they were under the very strong impression that their deal

with the developers said, 'Nine holes and a clubhouse before anything else.'

Landscape and Layout

High on the list of detail at the resumed hearing was more evidence of the landscape and layout planning and the planned stages of the development. Much of the first few days of the April sittings were given over to presentation of these matters by two consultants to the developer. New drawings were presented including typical elevations and projected views of the project. There was considerable discussion about the precise nature of the plants to be used to provide the screening of various aspects. The issue of whether or not the plants specified would in fact grow in the environment created by the earth mounds was raised and rates of growth were questioned. In fact it was pointed out that while a certain soil type might be required to build the earth mounds from an engineering point of view, another soil type may well be required to grow the plants. The flood modelling was revisited and a predicted sea level rise of 80cms [previously 55cm] was acknowledged. A comment here – in the space of less than twelve months, an accepted figure for sea level rise had increased by forty five per cent.

Ecological Vegetation Communities (EVC's)

A considerable amount of time was taken in discussing the nature of the re-vegetation programs proposed for the Barham River Flats as part of the *Great Ocean Green* project. This involved both expert witnesses on the part of the proponent and submissions from the public. The acronym EVC's was freely bandied about and it is worth taking a brief look at what this means (it was a new one to me).

According to the *Australian Concise Oxford Dictionary*, 'ecology is that branch of biology dealing with the relations of organisms to one another and to their physical surroundings'. Presumably then a

study of EVC's would investigate the relationship between various plants in the community and to the soils and climate. There was some discussion about pre and post EVC's, that is, pre-European conditions and post-European conditions. To my mind pre-European EVC's would suggest the range of indigenous plants while post-European EVC's would admit almost anything! To be fair the objective would seem to be to re-establish vegetation that enhances the environment and approaches something like its pre-European EVC. A few words about the current state of the Barham River Flats are now appropriate.

As I have said, the first European settlers in Apollo Bay, around the 1850s, found it very convenient to farm on the Barham River Flats. (Given the nature of the surrounding heavily treed steep hills this is not surprising.) This resulted in land grants either side of the river and, for whatever reason, title was given essentially to the centre of the river. The land has passed through generation to generation and although some changes have occurred, the most significant part of the low-lying land of the Barham River Flats is still in private hands. Stock have grazed on the land since that time and still do. Over all the years, crops, including potatoes and onions, have been successfully grown there. The result of this activity is that the land has been stripped of all pre-European EVC's and can be described as degraded. However even in this state it still has a certain charm and certainly provides a clear long vista from the Great Ocean Road across the flood plain to the gently rising hills in the background. Birds are attracted to the area particularly as it floods regularly and is subject to inundation as the mouth of the Barham River closes naturally from time to time. There was some suggestion that the flats were originally covered in a light scattering of small shrubs similar to tea-tree and it would have certainly supported grasses and sedges. It was doubtful that there was ever a riparian forest as there still is further upstream, although some larger trees would probably have been located along the river banks.

The experts described in some detail the type of plants they had in mind. This information was subsequently vigorously attacked

by a number of locals, who were familiar with indigenous plants and what would successfully grow in the area. Prominent among these was Judi Forrester who runs a successful plant nursery in the hills behind Apollo Bay and clearly has a lot of local experience. Judi was ably supported by other locals, also involved in the industry. It is fair to say that local experience is rather wide spread since Landcare groups and government incentives have seen a lot of re-vegetation in the nearby hills as small farms have become uneconomic.

At no stage did Council raise the question of its previous recommendation of 'no development south and east of the Barham Valley Road'. Actually the Panel seemed satisfied it had solved this issue by requiring a 350 metre buffer zone from the Great Ocean Road across to the west. This they argued, would provide the 'green break' between Apollo Bay and Marengo necessary to retain Apollo Bay and Marengo as separate entities. This is despite the fact that the fairways and a driving range and the entrance to the Clubhouse, hotel and other accommodation facilities, would all be off the Great Ocean Road between Apollo Bay and Marengo. By their very nature, a driving range attracts the eye since they often have high protective fences, markers and targets and of course advertising signs, at the very least to announce that they are there!

A Supplementary Submission

On the eve of the last day of the scheduled sittings, the Chairman informed everyone that the proponent would be releasing some further landscape drawings and a *Preliminary Cut and Fill Schematic Plan* for the proposed earth works. Due to the fact that this material was presented so late, the Chairman directed that all submitters should receive a copy of this material by certified mail and would be invited to make yet another submission based on the presentation of this late material. Once more, an opportunity to argue a case, but this time it was to be a written submission only. I feel that I must question the motives of the developer (and even the

Panel who could have easily called for the plan much earlier) in presenting the *Preliminary Cut and Fill Schematic Plan* on the closing day of the Panel Session. The released drawing had the date of 26 February 2007 on it. Why did it take until mid April to get to the Panel, especially since it had been discussed in June 2006? It meant that there was no effective debate on the topic and although written submissions were received there was no opportunity for an exchange of views or questions and answers on the subject.

As has been seen, the actual preliminary earthwork figures were astounding and the maximum depth of cut on the site was given as 13.5 metres. With the close of the April 2007 hearings, the relationship between the Panel, the developer and we of the opposition finally came to an end. So I thought at the time. However, we were to take up our positions once more, although somewhat reduced in number, as the *Apollo Bay Structure Plan* and its relationship with *Planning Amendment C29* was subjected to another panel hearing, this time under an amendment designated *C55*, that introduced changes to the *Municipal Strategic Statement*. Before coming to that however, an edited version of what was now about my fifth or sixth submission is presented.

The *Preliminary Cut and Fill Schematic Plan*

The plan showed the total amount of fill required as 976,899 cubic metres; virtually, 1 million cubic metres. The total cut was given as 703,535 cubic metres, requiring a balance of imported fill of 273,364 cubic metres, close to 300,000 cubic metres. With a bulking factor of 1.25 this would put the figure of 273,364 cubic metres well in excess of 300,000 cubic metres of carted fill. So we are dealing with a significant amount of material to be sourced off site and transported over public roads. My original questions on this matter remain unanswered.

- How much fill is required? – Well I was happy to argue accepting a figure of 273,000 m^3 of imported fill.
- What impact will the haulage have on our roads?
- What is the financial viability of the project?

Only the first of the three questions had been answered in the most recent material put before the Panel so that I was left to speculate on the other two.

Impact of haulage on our roads

Unless the fill is taken from up the Barham River Valley, the haul route would include the streets of Apollo Bay and the Great Ocean Road. The Barham Valley Road is a narrow winding road in poor condition and it is a no through road used by local residents and tourists. Apart from that, it would take 20 truck and trailer haul units a day, running for 365 days a year, 1.75 years to cart the amount of material required. These figures can be expressed in another way. I put the information in the hands of a local earthmoving contractor with many years of experience. He estimated that the fuel consumption involved in moving 300,000 m^3 of fill would be 17,300 litres for every kilometer of the haul distance to the site. This represents an enormous cost to the environment in the production of green house gases.

Returning to the truck movements, the damage this will do to the Barham Valley Road is obvious. I would even question if some of the bridges on the road have load limits restricting the size of haul trucks. Similar comments apply to haulage via the streets of Apollo Bay and the Great Ocean Road, which is of course an important tourist road. There are not many options and it is clear that local roads must be damaged.

The financial viability of the project

A reworking of my figures on the amount of earth works involved when compared to the *Sanctuary Lakes* Project showed that two significant figures could be drawn from the preliminary earthworks data. The first is that the amount of imported fill per lot on *Great Ocean Green* is five times that of *Sanctuary Lakes* and the second is that the total amount of earthworks moved on *Great Ocean Green* is 5.5 times that of *Sanctuary Lakes*. It is now reasonable to assert that on the basis of earthworks alone, the *Great Ocean Green* project is at least five times more expensive than the *Sanctuary Lakes* project.

Given that the land would have to retail at a similar competitive price, I again asserted that the financial viability of this project had to be in question.

Form of excavated areas

The proposed cuts are extensive and will in themselves have a considerable impact on the landscape – this does not seem to have been recognised in the submission of the Landscape Consultant, Mr Dance. Furthermore, as the indicated cut areas seem to have been an afterthought, their geotechnical feasibility remains doubtful. Local farmers state that some of the lower slopes consist of old landslides. Engineering of the uphill slopes created by the cuts could be expensive and unsightly. The maximum depth of cut is shown to be 13.5 metres over the low rising hills to the west of the site. This is quite a significant depth and there is no indication of what effect this will have on the landscape. Given that the existing landscape, which is one of a flood plain with the slowly rising hills running up to the Otway foothills behind the plain, is much valued in Apollo Bay, shouldn't we have some idea of how it will now look? Were there to be a golf course alone in that area, the cuts could doubtless be reduced and the hills could be preserved (by putting the fairways in a shallow cutting where necessary) rather than removing them all together.

I have walked over the home property of the Garretts, basically walking over the hill that the *Preliminary Cut and Fill Schematic Plan* shows will be cut up to a maximum depth of 13.5 metres. Has the Panel walked over the site? If you haven't I fail to see that you can make a responsible decision on *Amendment C29*. The plan shows a white blocked out area in a sea of red. This is the private property of the Garretts and will remain so. Are we to assume that it will be excavated all around to leave an 'Island'? I put it to you that the proponent has conveniently chosen to ignore this problem in the hope that it might go away or that the Garretts can be forced off their property. Walking over the site shows that while the ground rises up to the home, behind the house the ground does not fall away and in fact is generally flat running over to an adjacent private

property. Were this cut to be carried out, it would be necessary to terminate it in a cut face to the property boundaries. I say this as opposed to other options that might simply take a top off a hill. Leaving a cut face up to 13.5 metres high will have all the stability problems that the area is noted for. Land slips abound in the hills around Apollo Bay.

Geotechnical properties of filled areas

The developer's submission to the panel decries the unwillingness of Barwon Water to release their geotechnical investigation data to the developer – thus emphasising the developer's own apparent ignorance in this important engineering aspect. Without knowledge of the properties of either the borrowed material or the subsoil on which it is to be placed (an essential in the feasibility study for any normal public infrastructure) how can a technically feasible project be assumed?

Given the nature of the site, namely alluvial silts subject to rising and falling water table, any engineer would expect to have difficulties in establishing stable earth mounds for housing. I would remind you that Paul Northey, for Barwon Water, has already stated to the Panel that any water storage basin built on the site would cost twice as much as usual due to unstable ground conditions. As an engineer I have to tell you that there are many similarities between building a stable embankment to contain water, that is, a water storage basin, and a stable earth mound to support housing and fend off flood waters. There is no reason to suppose that contractors building the earth mounds will have any fewer problems than those faced by Barwon Water. More cost has now been added to the project in comparison to similar ventures on more stable ground. Any engineer considering the proposal would expect settlement of the underlying material under the weight of the fill placed up to five metres in depth. The question is; how much settlement will occur? Anecdotal evidence suggests that this could be quite significant and only a matter of 300mm will have a huge impact on the fill figures increasing them by as much as 15 per cent. More cost! Settlement of the fill may continue for years after it has

been placed putting the house lots at further risk of flooding. In an attempt to offset this it may be tempting to preload the fill sites by a temporary increase in fill depth which would eventually be removed. More earthwork movements equal even more cost. It is highly likely that the only method of providing suitable foundations for houses built on the mounds will be by driving friction piles – introducing yet further costs to the project

Flood levels and velocities:
In addition I have again reviewed the proponent's further submissions on floods (including the additional work of Mr Jempson) and wish to add the following comments:

- It is admitted in the submission that the hydraulic properties of the river banks and the floodways across the golf course (with their proposed extensive re-vegetation) are assumed not to change due to the accumulation of flood debris. Considering that human life could be at stake, and that massive debris accumulation has been observed in previous floods at this and neighbouring sites, the no-debris assumption would seem to be naïve. Inadvertent failure to adequately clear or thin the re-vegetated areas after decades of growth could also exacerbate this effect.
- Given its low clearance above even regular inundation events, blockage of at least one span of the Great Ocean Road Bridge by debris could also be expected. Has this prospect been taken into account?

In summary, I return to the unanswered questions. Haulage routes for fill will necessarily use local roads that will suffer damage. With earthwork volumes expressed as an amount per lot yielded at least 5 times those of a comparable project and expected geotechnical difficulties with the site, the viability of the project must be seriously questioned. You may argue that this is not part of your brief. However I have always felt that the greatest risk to this community

will come from a project that might start but will end in financial ruin, leaving the community and the Council to clean up the mess.

Another break was upon us now and a startling turn of events was about to unfold.

Chapter 6 - The Dismissal of Councillors

While not of the same ilk of that other famous dismissal in Australian political history, the local community was nevertheless shocked when it learnt of the dismissal of three of the seven Councillors of the Colac Otway Shire in late 2007. The lead up to this event needs to be considered.

The *Apollo Bay Structure Plan* at Council

Following the closure of the second panel session, the Council meeting of 26 April 2007, only days later, was the next significant event. This meeting was held in Apollo Bay and the agenda included an item to approve the final draft of the *Apollo Bay Structure Plan*. As presented at the meeting, it had taken a sudden and unexpected change in that it did not now exclude development 'south and east of the Barham Valley Road', as had previously been recommended and adopted. The new document made a complete capitulation to meet the requirements of *Planning Amendment C29* even before the Panel report had been released. This final version was not publicly available until a few days before the meeting took place and I don't recall seeing it until the day of the meeting when it was with the agenda papers.

The gallery at the meeting, which happened to be held in Apollo Bay that month, was a hostile one as people realised what was happening, and the debate was vigorous. Cr Di Cecco had declared his pecuniary interest and retired from the meeting, leaving six Councillors present as the vote was taken. The initial result was tied 3-3 and the motion was passed on the casting vote of the

Mayor. There were outcries of the need to preserve the status quo and accusations of the improper use of a casting vote, but legally the Mayor had the right to do what he did. The hostility referred to was on the part of the largely Apollo Bay gallery who were opposed to the *Great Ocean Green* development and dismayed at the sudden change in the *Structure Plan* without reference to the community.

In subsequent discussion with the Council CEO, I learnt that the matter had been 'work-shopped' with further deliberations, presumably with interested parties, and so the change was introduced. I was assured that this was normal practice and the right to make changes to a final document before its presentation was always reserved. The most striking thing I recall of the vigorous debate from both sides was when Cr Stuart Hart, speaking against the motion for adoption of the *Structure Plan*, produced a pamphlet that he had found on the internet. It was an announcement on the part of the Burbank Group of Companies advertising the *Great Ocean Green* project and showing the layout over the flood plain. All this for a development that had not yet been approved by Council; the Panel Report had not been released and the *Apollo Bay Structure Plan* had not been finalised. Apparently it is not at all that unusual for companies to make this type of preliminary announcement.

With the motion passed reference to the document became, *Apollo Bay Structure Plan 2006 (ABSP, 2006).* Not fully realised by all, however was the fact that the plan still had a long way to go. It would be another year before it reached its consideration in another panel hearing as part of the mechanism of incorporating it into the *Colac Otway Planning Scheme* through the *Municipal Strategic Statement*.

Council action on *Amendment C29*

The winter of 2007 could hardly come quickly enough for me. My wife and I had planned a caravan trip to Darwin and North Queensland and we finally left on the first of June. Five months travelling and resting was great for the soul and we even managed to

largely forget about *Great Ocean Green*. Our peaceful existence was punctured however when, in early July, the word from down south was that the Panel was going to recommend that the *Great Ocean Green* development should go ahead. Well there was not much that we could do from several thousand kilometres away so we put it to one side and resumed our travels. The report was duly released on 17 July 2007 and did indeed recommend that the project should proceed.

From my point of view the next event was a few days after our return to Apollo Bay on 22 October 2007. I had deliberately kept a low profile, hoping to somewhat ease back into the battle by gradually picking up the pieces again and getting some detail of events during our absence. Curiously, I played golf on 24 October and was unaware of the drama that was unfolding that afternoon in Colac. Council had previously formally received the Panel Report as it was required to do before making it public. It was now to vote on the amendment and, if passed, to direct it to the Department and so to its consideration by the Planning Minister for the signing of *Planning Amendment C29*. It was in its final steps. The following day I learnt of the events of that previous afternoon.

The three Councillors who had opposed the vote on the *Apollo Bay Structure Plan* in April had walked out of the Council Chamber, depriving the meeting of a quorum and so preventing a vote on *Amendment C29* from being taken. It was a stunning move that they had carefully planned, and one that threw the meeting into uproar. It may have been an unprecedented action but the *Local Government Act* had a procedure to deal with such an event. The first option was to seek mediation between the Councillors. However, ignoring this the CEO took immediate action for a *Special Council Meeting – Call of the Council,* for the following Monday 29 October. This had some legal ramifications that are not particularly relevant to the story apart from the fact that a procedure was being followed. I had the opportunity to attend the meeting along with many others from Apollo Bay and we had a packed gallery in Colac. There was only one item on the agenda and that was consideration of *Planning Amendment C29*. It was quite an experience with some

extraordinary scenes again of uproar and confusion. It is interesting to describe it in some detail since I think it expresses the depth of passion on both sides of this debate.

The meeting opened in a tense atmosphere and went through a series of formalities that are a part of every Council Meeting. Events moved quickly to the putting of the motion and Cr Di Cecco left the chamber. Immediately two of the Councillors collected their papers and walked out while Cr Stuart Hart tried to move a point of order to explain their departure. In this short space of time while he remained present, the Mayor attempted to put the motion claiming a quorum. A couple of hands went up; there was uproar from the gallery with people shouting out; Cr Hart was trying to be heard and after what seemed like an eternity to me, he left the room. Amid the confusion the CEO and the Mayor could be seen in conversation and, as some level of calm was restored, the gallery was cleared.

We of the gallery gathered in our joint confusion, unsure of whether or not a vote was deemed to have been taken. We waited some thirty minutes or so trying to guess an outcome and plan a strategy should the vote be declared valid, before being called back into the chamber. To the credit of the Mayor, the confusion and uncertainty over the vote was acknowledged and we were advised that it would be put again. This was virtually a re-run of the previous episode, but this time Cr Hart moved quickly with the other two Councillors in leaving the chamber. The meeting was left without a quorum and then abandoned. No vote was taken or declared.

'Stateline' Publicity

The repeated walk out of the three Councillors was big news locally, but it also made the pages of the Melbourne papers along with a reference to the now acknowledged controversial *Great Ocean Green* development. The project itself had made the papers previously and it was in fact a leaked story in *The Age* that first reported on the Panel's approval. As a group, we had previously tried to get some

media attention in addition to what we received when we ran the public rally for sustainable development as mentioned earlier. Our results were mixed, with plenty of local coverage but not much more. I was delighted then when I heard that the ABC TV program, *'Stateline'* was interested in doing a story in early November. Cr Stuart Hart had made the contacts and I was invited to participate. Following a few phone calls, arrangements were made for filming on Monday, 3 November, with the crew and presenter to come directly to our home in Apollo Bay. On the weekend before it rained and rained! A moderate flood occurred cutting the Barham Valley Road in several places and of course inundating all the lower areas of the site. By Monday morning, most of the flood water had passed and it was a beautiful sunny day. The few minutes of film that Stuart and I featured in were taken on the hill of the Garrett's property and took up most of the morning! The crew stayed on in town to get balance from the other side that included shots on the existing golf course and comments from the Golf Club President, the Mayor and Cr Di Cecco.

The program went to air on the same day that the Victorian Coastal Council released its *Draft Victorian Coastal Strategy 2007*. Of course the strategy brought into question the wisdom of coastal development on low lying land and could be interpreted as ruling out developments such as *Great Ocean Green*. This was the line that was taken by the 'anchor' person of *'Stateline'* in introducing the segment. The introduction highlighted the threat of rising sea levels posing problems for coastal towns facing the twin pressures of coastal flooding and increased population and described the project as a massive development that had divided the town and left three Councillors facing the sack. It was a well balanced presentation that canvassed the issues, including the need to resolve the water issue before the development could proceed. Stills of the flood of the previous weekend were shown along with some 1983 footage of a more significant flood event. An assurance from the Corangamite Catchment Management Authority that the project could cope with floods was also mentioned. The vision included views across the

flood plain and aerial shots showing the site. *'Stateline'* certainly did our cause no harm and we were glad of the publicity.

In the weeks that followed the Council drama of October, all sorts of rumours circulated as to what was to be the next step. These included the erroneous idea that the matter would now go directly to the Planning Minister and the one that proved to be correct; that the three errant Councillors would be sacked. It took some time for the latter to occur but on 7 December 2007 the three were summarily dismissed. My information was that they were advised to be near a 'phone and a call from the Minister for Local Government ended their tenure. They had to leave office that day. It made talk back radio that morning and the metropolitan press the next day. The community was outraged. Numerous letters of protest were sent to both the Planning Minister and the Minister for Local Government, but to no avail. In the cold light of reality, the Minister had little choice but to dismiss the Councillors, although perhaps a more extensive inquiry could have been held as to why the Councillors took such drastic action. Of course the question was what would happen now with a Council of four?

Primarily the three Councillors took their action over a concern that the Council, and indirectly the ratepayers, would be liable in the event of a flood causing damage to the houses built on the raised earth mounds on the flood plain of the Barham River. Their fears may well have been realised and there are examples where less than prudent developments have lead to councils, homeowners and developers having to pay for damage done. I understand that a case in point is what occurred in Noosa, Queensland some years back. There a river mouth was relocated to facilitate a development. During a storm, nature decided to revert to the original position of the mouth and the consequent exposure to the sea caused significant damage to the development. The end result was that costs for repairs were shared between the developer, the Council and the homeowners.

Of course the position the Councillors had taken was vigorously debated with much of the debate hinging on the advice given to the Council by their insurers. This said, in part:

> If in hindsight, in the event that a loss did occur, it was proven that all precautions were taken, all professional advice and opinions were sought and acted on, all calculations and computations were taken into account and therefore believed flooding would not occur, then CMP's liability policy would respond to protect Council, subject to the policy terms and conditions.

While this is probably typical 'insurance speak', it seems to me it is well written in favour of 'let out' clauses for the insurance company concerned. Notice the use of the word 'If' and the use of 'all' three times!

Before leaving the matter of the Councillors walkout and their subsequent dismissal, it is interesting to note that the meeting of 24 October (the occasion of the first walkout) had a rather large gallery. Many Colac residents were present to express their grievances over a motion by Council to consider the relocation of the City Library to a joint use facility in a new school. Apparently around 200 people tried to crowd into the gallery. Perhaps to the advantage of our opposition to *Great Ocean Green*, the *Amendment C29* came up first, so that a much larger crowd than might have been present were there to be mystified by the events of the first walk out. Their attention was thus drawn to the matter of the proposed development at Apollo Bay and perhaps ultimately effected their voting at the Council Elections of 2008.

The summer of 2007-08 rolled on and the population of Apollo Bay swelled to its usual summer numbers of perhaps 10 to 15 thousand. The Colac Otway Shire Council wound up its year with its November and December meetings not raising the issue of the *Great Ocean Green* project again. Cr Chris Smith was elected Mayor from among the four remaining Councillors who of themselves constituted a quorum. (Of course it would only be when Cr Di Cecco declared a pecuniary interest that the Council would be left without a quorum.)

Before leaving 2007, a couple of other events should be mentioned. Council Officers had been working for some time on

amendments to the *Municipal Strategic Statement (MSS)* that has briefly been mentioned earlier. From my point of view this is an implementation document that gives legal status to the *Colac Otway Planning Scheme*. A review of the *MSS* is required every few years in any case but in this instance, the implementation of *Planning Amendments C17, C29* and the *Apollo Bay Structure Plan* would need to be expressed in the *MSS*. Since we are now dealing again with an amendment (this time designated *C55*) to the *Planning Scheme*, the whole process of exhibition, submission and a panel hearing had to be gone through. I am not trying to suggest that this is a problem. It is rather to illustrate the point that the community has to be prepared to pursue an issue over a long period of time and remain resilient and determined. Council Officers and other contributing planners can come and go over the period of the many years, and indeed they did. Panels and Council members can come and go, but the issue remains until its ultimate resolution one way or another.

Of course planning issues of this nature are not always before a community, and within the confines of the existing settlement of Apollo Bay life and development, albeit of a much smaller scale, continued.

Planning Amendment C55 (Municipal Strategic Statement)

What Is *Amendment C55*?

> *Amendment C55* to the *Colac Otway Planning Scheme* replaces the existing *Municipal Strategic Statement (MSS)* with a new *MSS*, removes Local Planning Polices and inserts relevant direction and guidelines of the *MSS* and overlays and implements recommendations from the *Colac* and *Apollo Bay Structure Plans, Rural Land Strategy, Planning Scheme Review* and *Great Ocean Road Region Landscape Assessment Study*. – (from the face sheet of the C55 documentation)

Another way of looking at it is that it is the necessary overall planning strategy from which other planning amendments and documents, (such as the *Apollo Bay Neighbourhood Character Study*) are legitimised as legal documents. As exhibited, *Amendment C55* is quite a complex document largely because it is a legally binding document and it is concerned with updating an existing *MSS*. That is, clauses etc are being changed and/or added to. It includes both the *Colac Structure Plan* and the *Apollo Bay Structure Plan* and a number of other things. As presented it is difficult to reference since the pages are not all numbered and where numbering is used it is discontinuous so that a section will start with page 1 of 7, (for example) then another section will start page 1 of 14 and so on. The complication extends to the fact that the *Apollo Bay Structure Plan (ABSP, 2006*) is not presented in the C55 documentation but it is listed as a reference document. This increases the difficulty for anyone determined to make a submission as an objection to aspects of the *ABSP*, *2006* via *Amendment C55*.

Clause 21.03-3 Apollo Bay and Marengo of *Amendment C55* is of course of direct relevance to our community. The headings under that clause give an indication of the approach, namely:

- Overview
- Objectives
- Strategies
- Settlement Character and Form
- The Size of Settlements
- Activities: Business, Tourism, Community and Recreation
- Landscape Setting and Environment
- Access

The last page of this clause then included a map entitled, *Apollo Bay, Marengo and Skenes Creek Structure Plan* with a legend indicating existing and future town boundaries and land use. It is here that conflict appeared to arise. On the matter of the Barham River Flats there was no reference to the *Great Ocean Green* development and the future town boundary shown did not extend to include that

development. Also, it is here unfortunately that the story gets a little messy, largely because we were now dealing with two planning amendments, both having a role in amending the *MSS*. *Amendment C29* does not only seek to introduce a *Comprehensive Development Zone* to facilitate *Great Ocean Green*, it also seeks to amend the *MSS* in order to implement it. (This is standard procedure and is not a problem in itself.) This part of *Amendment C29* also has a *Clause 21* but this time under *Clause 21.04-10 Apollo Bay* it refers to and includes a map entitled, *Apollo Bay Framework Plan* with a legend showing *Great Ocean Green* on the Barham River Flats.

Faced with the conflicting information on two versions of a plan for Apollo Bay's development, a significant number of submissions on the future of the Barham River Flats were received in response to the exhibition of *Planning Amendment C55*. But I am getting a little ahead of myself and need to return to late 2007.

In mid December the Colac Otway Shire ran an information meeting in Apollo Bay to explain the purpose of *Planning Amendment C55*. There were almost more Chiefs than Indians present! It transpired that a town planning consultant had been given the task of preparing the *C55 documentation* and the presentation was largely his although there were four Officers present from the Council Planning Department. The meeting was told in no uncertain terms that what the amendment was not about was site specific amendments such as *Amendment C29*. I was still in my learning phase of the intricacies of the planning process and rather forcefully expressed my dismay and perhaps confusion at what I thought was a ridiculous statement. *Amendment C55* was about the *Apollo Bay Structure Plan*; the *Apollo Bay Structure Plan* was about *Amendment C29*; ergo *Amendment C55* was about *Amendment C29!*

The conflict between two versions of the map of the *Apollo Bay Structure Plan* was also in my mind and the inter-relationship between the two amendments suggested to me that one could not be divorced from the other. Further there remained the significant issue of the provision and location of the water storage basin. In the *Overview* to *Clause 21.03-3* in *Amendment C55* was the statement:

> Water supply is a potential constraint to the future growth of Apollo Bay. The Structure Plan therefore includes a number of different growth scenarios based on the future availability of water to ensure that the future growth of Apollo Bay can proceed subject to the demonstrated availability of an adequate water supply.

In fact there were three growth scenarios; one with the storage basin not on the *Great Ocean Green* site, one with it on the site and the last, no water storage basin at all, therefore no growth! I mention this since it became relevant to the C55 Panel Hearing when that got under way in 2008.

Clearly we had a very sensitive issue here and the response I received was, in my opinion, all spin! The developer's rights were mentioned; the initial submission to Council for the *Great Ocean Green* project was in April 2003 and Council processed matters as they came across them and a decision on *Amendment C29* could and should be made without waiting for *Amendment C55*. In my opinion that was always the intention of the Council and it was only the action of the three Councillors who were dismissed that delayed the process and caused in the final analysis, *Amendments C29* and *C55* to be before the Planning Minister at the same time.

The last month of 2007 saw some action on the filling of the vacancies on Council caused by the dismissal of the three Councillors. Apparently the *Local Government Act* caters for this eventuality and allowed that the position should be offered to the nearest losing candidate in the last election. Of the three positions, two such candidates accepted the position, while the third exercised the right to refuse, largely on the grounds that it was not a democratic process. Consequently a by-election was scheduled for the affected ward which happened to be the Otway Ward that included Apollo Bay. It was scheduled for early March 2008. To the credit of the Council, it was made clear that no further action on the stalemated *Amendment C29* would be taken until Council had regained it full strength of seven Councillors. This did not occur

until the April meeting of Council in 2008 when the drama continued.

The Environment Defenders Office

It is no coincidence that the act controlling planning in Victoria is actually the *Planning and Environment Act, 1987*. Clearly it is understood that a development requiring a planning amendment or even a planning permit will have an impact on the environment. In many cases both the natural environment and the built environment. Contention, when it arises will almost certainly be over the effect a project may have on the environment. In fact for major projects an *Environmental Effects Statement (EES)* is often required as a starting point and it is also often the case that a Minister for the Environment has to sign off on a project. In recent years the *Channel Deepening Project* by the Port of Melbourne Authority and the desalination plant by the Victorian Government have attracted strenuous opposition on environmental grounds by both individuals and community groups, some of which have been able to mount legal challenges – always a costly exercise.

This case study has looked at how a community may respond to a proposed development and has illustrated the planning process that allows for such a response. My experience has led me to believe that it is very much a case of 'David and Goliath' when a community pits itself against a planning panel and a highly organised developer who is using a legal team specialised in planning and environmental law. I have mentioned that it is highly unlikely that an individual or even a community group (in the absence of very wide spread community concern) could afford an expert witness to support their argument. However there is an opportunity for both individuals and groups to seek independent legal advice through the Environmental Defenders Office (EDO).

There are nine such offices throughout Australia and although each is a separate entity they are linked in an Australian Network. A visit to the web page www.edo.org.au/edovic of the EDO explains

their role far better than I could and in part this will show the following:

> The Environment Defenders Office (Victoria) Limited (EDO) is a community legal service specialising in public interest environmental law. It is an independent organisation with a broadly based membership of individuals and interest groups. It commenced operation in 1991, with a grant from the Victorian Law Foundation, to meet a need in the community for a legal service providing planning and environmental law advice and assistance to people who wish to protect the environment and who cannot otherwise afford to pay for private lawyers.
>
> The EDO attempts to redress the considerable imbalance in resources that exists between the public and those who initiate planning and development proposals. The legislation, regulations, guidelines, processes and by-laws in this area of law are complex and can be intimidating. Those initiating planning, development and other proposals that impact on the environment, typically have both substantial financial resources, and ease of access to expert legal and planning advice and representation. Community groups and individuals wishing to contest or modify such proposals, on the other hand, usually have only limited funds and sources of advice and expertise available to them. The EDO makes it possible for individuals and groups who want to protect the environment to pursue public interest conservation issues through the legal and planning systems with expert, professional help.

I first read this last paragraph with much relish and a feeling of, 'Yes, yes that has been my experience exactly!' Well we did visit the EDO and that needs a little introduction.

By the end of summer 2008, it was fairly clear what the new membership of the Colac Otway Shire Council would be and we again energised ourselves for the fray, as the Council prepared to once more put *Planning Amendment C29* to the vote. For some time I had been wrestling with the intricacies of the changes to the *Municipal Strategic Statement (MSS)* as presented in *Amendment C29* and the changes to the *MSS* as presented in *Amendment C55*. After a protracted study over a few weeks of January 2008, I finally had a

clear picture in my mind as to what was going on. I firmly believed that there was a conflict between the two sets of proposed changes and that there was a deliberate attempt to mislead the community. Some of this conflict has already been discussed with the two versions of a map both claiming to be showing the *Apollo Bay Structure Plan*.

Conspiracy theories flashed through my mind as I explained to my colleagues how I saw the arrangements. The *MSS* is a complex, legally binding document prepared for each municipality in Victoria. Many of its clauses are common across the state. *Clause 21* however deals with the local provisions. Both documents could not be correct since they both changed *Clause 21* in different ways. Then I noticed a rider that preceded *Clause 21* in the second set of changes saying something like: – 'firstly replace the entire existing *Clause 21* with … as follows.' (In fact the detail was contained in a table in the C55 documentation that was headed 'List of Changes to the Colac Otway Planning Scheme'. Under Clause 21 was the direction: 'Substitute a new Clause 21 in accordance with ..' and in the comments columns was 'Replaces the Municipal Strategic Statement'.) There was a clear assumption here that *Amendment C29* with its changes to the *MSS* would precede *Amendment C55*. This was because the former fully implemented the *Great Ocean Green* project and gave it the necessary legal status to proceed. Time and again, we had asked, 'Why couldn't the *Apollo Bay Structure Plan* be determined before considering *Great Ocean Green*?' The repeated insistence of Council Officers and others that *Amendment C29* had to be determined prior to *Amendment C55*, simply fuelled my suspicions of a conspiracy. At this time I wrote a rather emotional letter setting out my concerns over Council's handling of both amendments and demanding that an inquiry be held into the matter. I directed the letter to the General Manager of the Department of Planning and Community Development (DPCD) for our region. I eventually received a response, but it was not what I had hoped for. Part of my problem was that I applied logic to the planning process in respect of the *MSS* changes. Why would anyone propose some changes that allowed for the implementation of a project and then,

before the project had even started, eliminate those changes in a later submission? To me it was as if a speed zone had been introduced in an area in response to certain requirements, then having done that, a new set of speed zones over wrote the former.

In the event, as I have noted, *Amendments C29* and *C55* finished up before the Minister at the same time. I never did get a satisfactory answer to what I saw as a dilemma at the very least. I had an opportunity to put this to the *C55* Panel Chairman and got some acknowledgement of the problem but it was dismissed along the lines of, 'Well, the Department will sort that out.'

But I digress and need to get back to the EDO. My colleagues shared my concerns and we contacted the Victorian Environment Defenders Office. A meeting was arranged and three of us duly attended. I found it to be a very useful meeting with well informed people who had a general grasp of the *Great Ocean Green* project. We explained the conflicting presentations of changes to the *MSS* as expressed in the two sets of documents. As much as anything I found the visit to be a cathartic experience. I was among calm and reasonable people who gave us encouragement, patience and understanding. We were advised that there was 'no silver bullet' and that we had probably done all that could be done and we were invited to keep in touch. I later wrote a more rational and reasoned summary of what I still maintain was a conflict between the documentation in *Amendment C29* and that in *Amendment C55* and had the opportunity to run this by the EDO. They encouraged me over what I had written and I later presented it to the General Manager of DPCD at a meeting I had arranged at my insistence. I would like to suggest that departments such as this have a poor image in the public eye. They are Minister's departments and don't have much of a public interface expect over very specific issues. However, once I had broken through as it were, I found the Department to be very well informed on the issue of the *Great Ocean Green* project and its ramifications. I had up to this time, repeatedly tried to get an appointment to see the Planning Minister, Justin Madden, but to no avail.

The Council returns to a membership of seven

In order to complete the story of Council regaining its full membership the outcome of the by-election for the Otway Ward needs to be presented. Nominations were called and three candidates presented themselves. Two of them were outspoken critics of the *Great Ocean Green* development. Namely Carol Wilmink, one of our contributors to the joint submission to the Panel Hearing and a former Councillor, and Neil Longmore, who was a member of the Western Coastal Board and had also made presentations to the Panel on behalf of the Board. The third candidate did not express opposition to the development. In a close contest between the first two mentioned, they took over 86 per cent of the vote and Carol Wilmink narrowly won. Carol was duly sworn in as the seventh Councillor and in this way the Council returned to its full compliment. However, as the community was to learn this was not without incident. A legal officer acting on behalf of the Council informed Carol that she should not vote on the planning amendment facilitating the *Great Ocean Green* project.

This was on the grounds that Cr Wilmink had made a submission to the panel hearing and been active in the community in opposing the project, and so she would not be open to a persuasive argument that *Great Ocean Green* should go ahead. The argument was that having taken such a public stance she should declare a personal interest and not vote. After being so warned, Cr Wilmink issued a press release, explaining the position and apologising to those who elected her, and advising that she could not vote on *Amendment C29* that would be before the April 2008 Council Meeting. In the event, and following public support, Cr Wilmink took a stand for democracy and voted on the issue anyway. As it happened, that Council Meeting was held in Apollo Bay and attracted a large gallery, mostly hostile to the *Great Ocean Green* project. The amendment and hence *Great Ocean Green* was passed in a 4-2 vote, to be then passed on to the Department of Planning and Community Development for the Minister's consideration.

In the meantime, the matter of a Councillors right to vote continued to attract community interest when it became clear that there were proposed changes to the *Local Government Act* that may have limited such rights. An article entitled *Personal issues vote ban* in *The Age, (22/10)* discussed the implications of the proposed change and brought a rapid response, a clarification and an eventual back-down by the Minister for Local Government.

The Emotional Cost

It would be clear to the reader by now that none of the activity and procedures of the rather tortuous path that the *Great Ocean Green* project has taken is without cost. There are of course financial costs to the developer and it is not hard to imagine that these could exceed $1 million. Ratepayers would be bearing a cost since not all Council Officers time would be recouped. But there is a more insidious cost and that is the emotional cost, both to individuals and to the community as a whole.

Issues such as the *Great Ocean Green* project can have a divisive effect on a community. Initially it is always hard to gauge where public opinion lies. Some measure can be given by the response to an issue as seen in 'letters to editors' and attendance at Council meetings. Inevitably however the proponent will start to talk about the vocal minority. Nevertheless the seeds of discontent are often planted with a project that threatens the accepted lifestyle of a community. Just as it takes considerable time for a project to progress from an idea to a proposal to a reality, so it takes time for community angst to become widespread. Opponents eventually unite and a hard core can remain even when the project gets underway. At a State level, one can easily reflect on such things as allowing the motor racing to shape and take over Albert Park Lake – albeit for a short season each year. Perhaps far more contentious was the project of dredging in Port Phillip Bay and at the Heads and the proposed desalination plant on the south east coast.

Of course different groups are affected in different ways. Some people may have a philosophical objection to a project but well realise that the outcome may have little direct effect on them. At the other extreme, livelihoods of groups of people may be threatened and issues of compensation may arise. Whatever the situation there is no doubt that there is an emotional drain on individuals and collectively within a community.

A community's preparedness

In a small community like Apollo Bay (in terms of the permanent population) for those that seek it a strong network exists for communication on issues that have a direct impact on the town. I have already commented on the significant role that the local News Sheet plays in keeping the community informed. However, now is a reasonable time to introduce the Otway Forum. The easiest way to describe it is to say it is a resident's and ratepayer's group, but open to all. It is an incorporated body under the *Associations Act* and most people would be familiar with some form of a resident's and ratepayer's association in their own locality. Apollo Bay was in the Otway Ward of the Colac Otway Shire and this, along with the idea that everyone could speak, explains the name. The ward system of representation for the Colac Otway Shire was abolished in 2008 just before the Council Elections of that year. I have the personal view that now it would be appropriate to change the name of the Otway Forum to the Apollo Bay Residents and Ratepayers Association. There is a shire wide body, CORRA (Colac Otway Residents and Ratepayers Association) but it is understandably, Colac centred.

The Otway Forum has a fairly informal structure and meets monthly on a Sunday afternoon in order to give non-resident ratepayers (holiday home owners) an opportunity to attend. Meeting notes are reported in the News Sheet and Councillors regularly attend the meeting. For the most part the matters discussed are routine and meetings do not attract many people. The important thing however, is that the Otway Forum exists and can be galvanised to act on a specific issue and take an organisational role to get matters discussed. Interestingly, it was formed seventeen

years ago when the Shire introduced its first Apollo Bay Harbour redevelopment plan and the community wanted a common voice. Seventeen years on and another Harbour development plan caused a stir and prompted action through the Forum. Just before explaining that in some detail, a comment on the Forum's role in the *Great Ocean Green* project is appropriate. With regard to the joint submission made to the C29 Panel Hearing of 2006, all six were members of the Otway Forum and *Amendment C29* was regularly discussed at Forum meetings during its long progress. Views were shared and in addition to our submission, the Forum Chairman, Tony Webber, contributed to all the panel hearings on the Forum's behalf.

Apollo Bay Harbour redevelopment

In a project related to *Great Ocean Green*, the Colac Otway Shire Council released a draft *Apollo Bay Harbour Precinct Master Plan* that included harbour re-development and plans for the general precinct given that the Apollo Bay Golf course was to be relocated. The release included community briefing sessions both locally and in Melbourne. It included a brochure and questionnaire and invited people to express their views and return the questionnaire. The proposed *Master Plan* caused such an immediate angry response in the community that the Otway Forum, organised a Public Meeting to discuss the issue on Easter Sunday 2007.

As it happened, I chaired that meeting when approximately 170 people packed into a local hall. The mood of the meeting was palpable. There was anger and distrust in the air. Anger was directed at the attitude of Council Officers in presenting the project at the community sessions and the distrust was over whether or not they would take public opinion seriously. Spokespersons for various community groups, such as the Sailing Club, had stated that their opinions and advice had already been ignored in the reference group meetings that had been held prior to the release of the plan.

A major issue was the proposal for a new access road, ostensibly to better link the Harbour to the town. However it cut through large sections of the foreshore and eliminated three holes

of the golf course; everyone thought it was unnecessary. At the close of the meeting a censure motion against the Council staff who were responsible for the plan was put and passed.

The distrust proved to be well founded. Subsequent to the public meeting the shire released the results of the feedback survey that had the lengthy title of: *Apollo Bay Harbour Precinct Master Plan Feasibility Study – Issues Paper Overview of Stakeholder Feedback.* The Shire received 555 submissions and approximately 500 feedback forms. The consultant then claimed 'Majority support for the Vision.' I wrote to the News Sheet along the following lines:

> In my opinion the truth, rather than the spin, was a little different and comes from a close examination of *TABLE 1 Do you think the Vision is appropriate for the Harbour Precinct?*
> In total 24.3 per cent said Yes and 33.1 per cent said partly, while 42.5 per cent said No. 'Never mind', says the Spin Master, 'Add 24.3 and 33.1 together to get 57.4 per cent, now that's a majority support for the vision.' What the figures were really saying is that 57.4 per cent say the vision is either appropriate or partly appropriate, while 75.6 per cent say it is either not appropriate or partly appropriate.
> On the matter of level of support for individual components, 72 per cent opposed the proposed hotel/visitor accommodation. So do you think they will take any notice of the community? Not a chance!

The matter of the harbour re-development was not raised again until late 2008, this time with more success since the controversial road was dropped.

At the time of writing, a very relevant editorial headed *Planning and community voices go together,* was published in *The Age (*9 February 2008). (See Box) I was particularly taken by the sentence in the editorial that said: 'When faced with strongly united opposition, is local government, for example, using opaque, complicated and legalistic processes as buffers between it and residents who may have little time or insufficient expertise to respond.' To the implied

question here, I answer in the affirmative. This has certainly been my experience in dealing with Council Officers. It is particularly evident in correspondence. A community member can write a reasonable letter expressing a view, asking a question or making a request. Time and again the response is shrouded in bureaucratic language carefully pointing out that such and such has been carried out according to the procedures as set down in regulation etceteras. Of course this is assuming that the letter has attempted to answer the question at all! Unfortunately, it is not only local government that takes this line. The same can be said of State Government departments and Ministers. The main problem here is to get a response. In any twelve month period of the battle against the *Great Ocean Green* development, I would have written at least twenty letters and sent countless emails and yet the responses can be counted on one hand.

On the matter of time and expertise, one simply has to be in a favoured position to be able to respond at all. For my own part I am now retired. I can only say it would have been virtually impossible to push our case so far, if my colleagues and I were not, for the most part, retired. We were also assisted by working members of the community, and I applaud those who have contributed while still employed. As far as expertise is concerned, if I have any, I would have to say experience is a great teacher. Fortunately, my academic background has been an asset and my engineering discipline is not without its connection to planning matters. As an aside I would say that my experience with a planning panel hearing is that expert witness statements are given far more weight than any well argued public opinion.

The Age editorial concludes with a reference to 'those who feel impotent in the face of change being imposed from above.' This brings us back to the question of the emotional cost to the community. A wide range of emotions may be experienced by people involved in public debate over controversial issues.

Planning and community voices go together

The many thousands of St Kilda residents who passionately opposed the $300 million development of their iconic foreshore have wasted little time in embarking on the next phase of their challenge to Port Phillip Council's approval of this contentious project. But they could be forgiven should they pause to reflect on whether the community's voice has been disenfranchised from the planning process. Those residents who vociferously opposed other recent and controversial schemes and developments in Victoria may well be joining them in examining their role in determining the future of the places they call home and are a cherished part of their tradition and environment.

The importance of community consultation in managing change cannot be understated: people need to feel that they are being heard, and that they are not feeling powerless when in conflict with decision makers. Indeed, there are legitimate questions to be asked about what some perceive to be the growing marginalisation of community voices, where what was once proper consultation has become no more than token. When faced with strongly united opposition, is local government, for example, using opaque, complicated and legalistic processes as buffers between it and residents who may have little time or insufficient expertise to respond. Should councils sacrifice the interests of people within their own municipalities in favour of other agendas?

In St Kilda, many local residents may now feel that they are being disposed of their sense of place; that the approval of a new, one-stop entertainment complex is designed more for those who exist outside its boundaries than those who live within it. Elsewhere, there are those who feel impotent in the face of the change being imposed from above. Planning a community is a delicate balancing act, but it is essential that local voices have real and sufficient weight in the debate.

These include grief, anger, and denial but perhaps more often a sense of loss of control over what is happening in their community. Anger can become dominant along with a need to take some action. Obviously the latter leads to protest rallies and demonstrations and ultimately it can lead to violent reaction. Community feeling can be discerned by general street conversation of people meeting each other and, as noted previously, be gauged from letters in local papers. A community can become united or divided over an issue and the ultimate expression may be through the ballot box. However, in the latter case it may come too late to be able to change a decision and so add to a community's frustration. I have made no attempt to put a dollar figure on the cost of emotional involvement, but clearly there is a cost. I have no doubt that experts have written on the topic of well being and how more productive efforts are achieved by those in a good state of mind. A more specific example of emotional cost may come from a case where property values are affected by a proposed development. Uncertainty can be around for many years with people not knowing whether to try to sell or stay. In the case of the *Great Ocean Green* project, a high activity node (Hotel, other accommodation and clubhouse) was proposed for a site adjacent to a well established residential area known as the Heathfield estate. The houses there are on one-acre lots and the whole area has a spacious relaxed charm about it. Residents may well have felt that their lifestyle was under threat, particularly since there was no buffer zone between the high activity node and the residents. Indeed I know that this was the case.

The conspiracy theories emerge

Local councils like to say they are consulting with the community. Reference groups are set up, workshops are held, questionnaires are distributed and opinions sought. However, it is when evidence emerges that public opinion is being ignored or discounted that anger emerges in a community. People then seek rational reasons for the outcome that is so blatantly against them. While it may appear irrational to others, the rationale that a reasonable person

may come up with is a conspiracy theory. For instance it is suggested that some unspecified senior figure in a bureaucracy or in government has said that this particular project must go ahead. Or, some other government agency is pushing hard for this project, and so on. Hard on the heels of conspiracy theories follows the suggestion of corruption. People need answers and in their absence this is what they turn to, in order to explain a certain outcome.

A good illustration of ignoring public opinion comes from the *Great Ocean Green* project. As has now been discussed, the *Apollo Bay Structure Plan* had been proceeding in its development more or less as the panel hearing into the *Great Ocean Green* project was underway. A draft *ABSP* was released for public comment and eventually a *Recommended Changes to the ABSP, 2006* report was released. This report clearly recommended no development on approximately half of the subject site of the *Great Ocean Green* project. There was no ambiguity and the statement was quite strong and in fact the matter was debated in Council and the recommended changes report was adopted.

The Panel was advised of this position and as opponents to the project we took heart from this position of Council, which we believed also reflected public opinion. Some months later, the final *ABSP, 2006* was presented to a Council meeting with the issue of 'no development on half of the subject site' completely dropped. There was no explanation for this sudden change and Council Officers made no attempt to support the previous position of Council in argument to the panel hearing. In fact when challenged on the irrational change of plans, the CEO came up with the statement: 'It is not unusual to amend a draft document.' The evidence was that Council had simply agreed with the planning panel, which by that stage had shown that they would recommend development on the lower part of the site. Remember this was not a change to a first draft, it had gone through public scrutiny via the recommended changes report and the changes had even been passed by Council. This is where the community feels disenfranchised and resorts to conspiracy theories.

Emotional blackmail

Authorities and decision makers often turn to what can only be described as emotional blackmail when confronting opponents to a particular development. It usually comes about in the following way. Most developments, while primarily addressing the issue of profit for the developer, have some concessional benefits to the community. This is at least true in the eyes of the developer and the supporting local council. It may be the restoration of a public building, or the provision of public open space or some other public amenity. In the case of the *Great Ocean Green* project it was put forward as enhancement of the riparian features of the Barham River and public access to the river bank with walking trails along it.

The blackmail is along the lines of, 'Well if you don't accept this project, we can't afford to carry out those improvement works. There is no other way!' Of course the ABGC used this argument extensively by stating that the club could not afford to build an 18-hole championship style golf course and new clubhouse, without the support of a big developer and the trade off that was proposed with the various land titles held by the parties. They argued strenuously that come 2016, when the lease on the Point Bunbury site expired, Apollo Bay would be without a golf course unless the *Great Ocean Green* project went ahead.

Chapter 7 - Another Panel Hearing

Planning Amendment C55 was introduced in Chapter 6 and the manner in which it was processed through its own panel hearing, as far as the *Apollo Bay Structure Plan* was concerned needs to be discussed. *Amendment C55* went on exhibition in December 2007 and was open for submission from the community until 31 January 2008. It was not until April 2008 that the Colac Otway Shire approved *Amendment C29* in a 4-2 vote. This overlap, as well as the information given in the documentation led many submitters on the matter of *Amendment C55* to once again spell out their opposition to any development on the flood plain of the Barham River.

Central to the community angst and confusion in the exhibited *Amendment C55* documentation was the *Apollo Bay Structure Plan* presented as a map and actually entitled, *Apollo Bay, Marengo and Skenes Creek Structure Plan.* A simplified version of this map is presented as Figure 7.1. However, it retains all of the relevant features of the original. There are three main elements to the plan, namely:

- existing townships areas of Apollo Bay and Marengo,
- future urban growth areas, and the
- Barham River Flood Plain.

A fourth element basically surrounding those shown is described as an existing low density residential area. A legend (not shown) accompanies the original plan and appropriate comments have been taken from it. The original also clearly shows that within the existing Apollo Bay Township area, particularly to the north west, residential lots are still available.

The reader will immediately notice that in Figure 7.1, it appears as if a circular 'bite' has been taken out of the plan in the central west. Actually, at the centre of this 'circle' is the local sewage treatment plant and the resulting part circumference represents the limits of a 300m buffer zone around the plant. Immediately to the south east of that zone and overlapping it, is the Garrett's Farm and, at the time of *Amendment C55*, a possible site for the new Apollo Bay Water Storage Basin. There is some point in noting the curved settlement boundary to the north of the mentioned buffer zone. It is basically at the 40 metre contour line representing a break in slope where the foothills start to rise significantly. This is a long held concept for the limits of the urban boundaries in the region, designed to protect the character of Apollo Bay as having a back drop of green hills rising above the town. It is tempting then to suggest that a lower limit could be introduced (which is effectively what has happened with the rejection of *Great Ocean Green*) such as the 4 or 5 metre contour. This may be considered too simplistic but it could be a starting point.

The *Great Ocean Green* development included Garrett's Farm and other land on the north west side of the Barham River and the Barham Valley Road, as well as the land immediately on the South East side. In my opinion, the Barham River flood plain, as designnated by the cross hatching in Figure 7.1, extends further to the north west than that shown. However Figure 7.1 remains consistent with that given in the documentation for *Amendment C55* where the legend for the cross hatched area states: 'Re-vegetate the Barham River Valley, enhance the ecological value of the flood plain and estuary and improve public access.'

The community seemed to take little notice of the advice given at the briefing of December 2007 on what *Amendment C55* was all about. Especially when the *Apollo Bay Structure Plan,* as presented as a map in the *C55* documents, made some outlandish statements in the light of the known proposition of *Amendment C29*. When the submissions formally closed for *Amendment C55*, some 251 had been received. Of those 179, or 71 per cent, referred to 'no

development on the Barham River flood plain'. Quite remarkable when it is also understood that *Amendment C55* canvassed several other important matters apart from the *Apollo Bay Structure Plan*.

At the Council Meeting of 26 February 2008, Council received a report entitled: A*mendment C55 (Planning Scheme Review) - Consideration of Submissions*. On page 71 and under the heading: 'Common themes raised in submissions', the second bullet point was headed:

- The future settlement boundary for Apollo Bay should not include the Barham River flood plain.

The report went on to say:

> The *Apollo Bay Structure Plan* identifies part of the Barham River flood plain as within the coastal settlement boundary and shows the land between the Barham River and the Great Ocean Road as outside the settlement boundary, however the text within the *ABSP* identifies that if residential development is to occur within this location, it should be single story. There is therefore the expectation that development could occur there, but it is acknowledged that this may be unclear and may need to be clarified at a panel hearing.

To maintain the chronological order of events, it should again be noted that on 22 April 2008, the Colac Otway Shire Council adopted the *Amendment C29* (*Great Ocean Green*) and subsequently sent it to the Minister for Planning for final authorisation. It then had the same status as *Amendment C17* (that is adopted by Council but not yet approved) as the C55 Panel Hearing commenced. The C55 Panel was announced in early May with a directions hearing set for 13 May 2008 in Colac. Mr Lester Townsend was nominated as Chairman. Given that he was also the Chairman of the C29 Panel, there were a few objections to his appointment, but that protest was to no avail and quickly dismissed since his experience with *Amendment C29* was deemed to be an advantage by the authorities. The panel hearing commenced in Colac on 16 June 2008 and

reconvened in Apollo Bay to discuss the *Apollo Bay Structure Plan* on 23 June 2008.

Once again there was a real sense of déjà vu, especially since we were back in the same room at the Apollo Bay Hotel two years on from June of 2006. Same room, similar setup, same problems with sound and vision, same Chairman, ostensibly different topic although this largely proved not to be the case. There was however, one other stark difference and that was that there were only three of us in the public gallery at the opening. Namely: Phil Lawson, Dot Garrett and myself. Although others joined us from time to time, we three were the stalwarts.

I would like to make a brief comment about my colleague, Phil Lawson. Phil had been in this right from the beginning (that is, in his opposition to the *Great Ocean Green* development) and he had made his own submissions and presented his case. He particularly attacked the views on the flood modelling that the expert witnesses had presented to show that the development could and would work in this regard. He has the tenacity of a terrier and simply refused to let go. He was instrumental in getting the CCMA to acknowledge some of his points and reviews were undertaken although not to the point that the case was undermined. Phil's point of view can be expressed as a failure by the experts to take local knowledge into account. I am of the opinion that this would strike a chord with other communities fighting against development proposals. Any mathematical modelling is reliant on input data. In the case of flood modelling, the engineering profession recognises a publication entitled, *Australian Rainfall and Runoff,* [1] (*ARR*). It includes a consolidation of rainfall records and a summary of ground conditions for the whole of Australia. Published by the Institution of Engineers Australia, *ARR* provides a guide to flood estimation. In rural areas the recorded data is not as extensive as it is in more populated areas and interpretation of data may be necessary. Local records may exist, but they are discredited by the experts by their

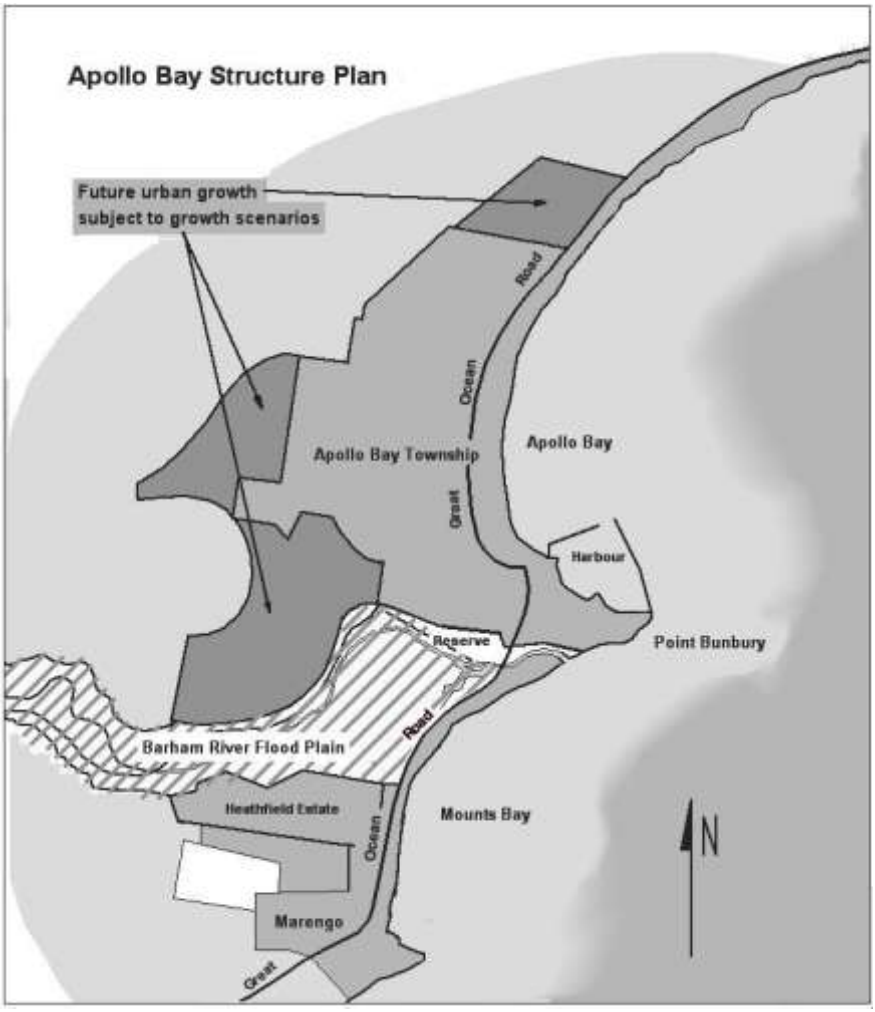

Figure 7.1: *Apollo Bay Structure Plan* (simplified from that presented in the C55 documentation)

lack of official status. In short, Phil consistently argued that rainfall intensity used in the flood modelling did not accord with local data. Phil has also vigorously pursued the effects of a sea flood on the estuary and the flood plain of the Barham River. As was explained

in Chapter 2, the Barham River mouth is often closed by a sand bar causing the river level to rise and usually some localised flooding results. However under some strong sea conditions, with the mouth closed and waves coming over the sand berm and into the estuary, a significant sea flood can result (as opposed to a river flood caused by rainfall.) Such conditions occurred on 26 April 2009 with the result that the Barham River flooded onto the land on either side of the Barham Valley Road. Phil reported this as follows in the *Apollo Bay News Sheet* of 30 April 2009:

> The large 2-3 metre waves created by strong westerly winds, plus a very high tide, meant waves entered the estuary with great force and at the same time built up a sandbar already blocking the river mouth. With the water unable to exit at the river mouth and a huge amount of seawater entering the estuary with the large swell, the estuary experienced its highest recorded sea flood. Midday Saturday the estuary level was 1.86m AHD, Sunday morning it was 1.96m AHD and at 2.20pm Sunday it was 2.275m AHD with water dispersed over a wide area. The previous record was 2.2m AHD in April 2006. The very high tide on Sunday peaked in the middle of the day. As the tide retreated the rising water in the estuary topped the sandbar, opened the river mouth and the flood quickly receded.

I should explain that a river height gauge is mounted just to the seaward side of the Great Ocean Road Bridge as it crosses the Barham River and Phil has been regularly reporting figures to the CCMA. Events such as this again focused attention on the flood modelling for the *Great Ocean Green* project. The modelling recognises the sea as a boundary condition into which the flood is discharging. Unlike other situations where a flood is discharging downstream, here a flood is discharging into a variable 'wall of water' subject to tides and weather conditions. I don't feel competent enough to comment on whether or not this aspect of the

flood modelling has been adequately handled. I simply think that the event, being the highest recorded, was worth noting.

However to return to the C55 Panel Hearing: to his credit the Chairman, Lester Townsend, acknowledged the three of us and we were invited to sit at the arranged tables to better hear and participate in the discussion. The proponent in this case was the Colac Otway Shire represented by a consultant who had prepared the C55 documentation and two Council Officers. The first day was taken up with the presentation of the *Apollo Bay Structure Plan* and the extent to which it was expressed, adequately or otherwise, in *Amendment C55*. It became very evident that there was a significant problem in the limitations of the *Structure Plan* map and its failure to express the impact of *Great Ocean Green* and *Amendment C29*. While the defense that the Shire took over this was that, at the time of draughting, *Amendment C29* was not an approved amendment, the Chairman made is clear that this matter would have to be resolved. Day one and we were well into discussing the site specific *Amendment C29* yet again!

The Company, Planisphere, were the lead authors of the *Apollo Bay Structure Plan* and led by John Keaney for the Shire, Mr Nelthorpe presented the *ABSP*, *2006* as an expert witness. My own submission to the Panel, in respect of *Great Ocean Green* and the *ABSP*, had its basis in the position of the Colac Otway Shire Council prior to the release of the C29 Panel Report. It may be recalled that at that stage, and as expressed in the adopted *ABSP Recommended Changes Report*, the position was for 'no development on the land south and east of the Barham River.' I was able to question Mr Nelthorpe and he agreed that this was also the considered position of Planisphere at that time. Of course Council subsequently changed its view to accord with the C29 Panel Report. Throughout the hearing, Urban Property Corporation was represented by Legal Counsel (Mr Henry Jackson) and they presented a statement to the Panel. Basically their case was one of attacking any timely staging of land release and ensuring that the *Great Ocean Green* proposal was clearly included in a revised map of the *ABSP* to be in *Amendment C55*.

After two days of the hearing, it was apparent that the Panel would find it necessary to make some ruling on the apparent anomalies that existed between the *Apollo Bay Structure Plan* and the expressed intent of Council in passing *Amendment C29 (Great Ocean Green)* in April of 2008. A number of submitters to the Panel made this point, which the Chairman acknowledged. A further difficulty that remained was that Barwon Water had still not nominated a site for the proposed 250ML water storage required for Apollo Bay. Although a draft report had indicated that the storage could potentially be constructed on site 3. (Day's Farm, as will be seen later.) However no site had been ruled in or out.

In spite of the fact that Council Officers had insisted that the site specific *Amendment C29* was not included in *Amendment C55*, more than half of the four days of the hearing were spent discussing *Amendment C29* and *Great Ocean Green*. The Panel acknowledged that the *Apollo Bay Framework Plan* (map) in *Amendment C29* conflicted with the *Apollo Bay Structure Plan* (as a map) in *Amendment C55*. Much of the debate was how this should be set to rights. Jargon adds to the confusion since the *Apollo Bay Structure Plan* is both a document and a map. It was likely that the term *Apollo Bay Framework Plan* would be used to define the map in future, and indeed this is now the case.

Two issues of particular public interest were extensively canvassed. The first concerned the timing or staging of developments (land release) in Apollo Bay. Without being too specific, the position taken by Council was for infill development, then *Marriner's Vue* (*Amendment C17*) then *Great Ocean Green* (*Amendment C29*). Legal Counsel for Urban Property Corporation strenuously argued for staging to be dropped. The central argument was that *Great Ocean Green* would be catering for a different market. However, in their closing submission, Colac Otway Council maintained their position. The second issue was that of the three growth scenarios in the *Apollo Bay Structure Plan* and their dependence on resolution of the water supply problem. Briefly these were based on three possible outcomes from Barwon Water's investigations: No water storage basin, therefore no growth; the

water storage to be on the *Great Ocean Green* site and finally the water storage to be on some other site. Once again, on behalf of Urban Property Corporation, it was argued that no potential water storage site should be shown on the *Apollo Bay Framework Plan*, while this view was opposed by Colac Otway Council.

A couple of less formal observations can also be made of the experience of sitting through this panel and the two previous ones. The first was probably more striking in this case since there was virtually no gallery and we, as community observers, were drawn more closely into the proceedings. It concerns what could be described as an almost incestuous relationship that exists between panel members, the proponent's representatives and some of the expert witnesses. This is in so far as they are all in the profession of Town Planning to some extent and have some personal relationships at least to the extent that they often seem to know one another. On reflection, this is probably true in the more formal legal circles of any law court, so perhaps it is best just left as an observation. The second observation relates to expert witnesses being called by any party. Developers usually engage consultants to prepare a report on some aspect of a development and issue a brief that gives some expectation of what they are looking for. Intentionally or otherwise, a consultant is likely to meet that expectation. This is probably recognised by all parties concerned; after all, none of us are free from bias. It does, however remain disconcerting when two parties, one presenting a proponents view and the other a Council view, present different conclusions about the same topic. A case in point is on the matter of projection of land supply. Apparently, Government policy is that a ten year land supply should be clearly available. In the experience of the recent panel hearings in Apollo Bay, one party can demonstrate that there is only a nine year supply, while another can show that there is a 15 year supply.

Awaiting the C55 Panel Report

The Panel had patiently listened to our arguments and been tolerant of us as we again raised the issues of the *Great Ocean Green* project.

However our efforts appeared to have had little influence and the C55 Panel Report seemed to be a very predictable result as far as *Great Ocean Green* was concerned. Wanting to take some sort of initiative, I decided to write to Kim McGough, Manager, Planning and Development, South West Region, DPCD. Basically, I outlined my argument that the Apollo Bay settlement boundaries should recognise the initial position of the Colac Otway Shire Council with the, 'no development south and east of the Barham Valley Road.' In part I said:

> In relation to *Amendment C29 (Great Ocean Green)* a compromise position could be entertained by the Minister. That is to go back to a position adopted by Council, before the C29 Panel Report was released. Put simply, that position was 'no development south and east of the Barham River.' (Details attached) Most of this land is at or below 2.5metre AHD and it would seem to be more consistent with strategic policy in respect of climate change, not to develop this land. This is particularly so in the light of the new Coastal Strategy, expected to be released shortly. The current *Great Ocean Green* proposal puts over 100 houses on this section where they would also bear the full effects of rushing flood waters (as distinct from flood water backing up) in the event of a major flood.
>
> I note that although *Planning Amendments C17* and *C29* have been approved by Colac Otway Shire they have not yet been signed by Minister Madden. It would seem reasonable to suppose that the Minister is awaiting the C55 Panel Report, as you probably are before advising the Minister further.

Somewhat unexpectedly I received a reply dated 16 July 2008, from Mr McGough where he noted that:

> Council has prepared and adopted a new Structure Plan for Apollo Bay which provides a strategic basis for *Amendment C17* and *C29*. The new *Apollo Bay Structure Plan* is included within the current *Municipal Strategic Statement* review amend-

> ment *(Amendment C55)* which is currently subject to an independent Panel review.
>
> Furthermore, Barwon Water's investigations regarding a site for a 250 megalitre water storage facility at Apollo Bay are continuing. The adopted Structure Plan articulates three growth scenarios and corresponding coastal settlement boundaries to accommodate forecasted growth. These scenarios are an interim management approach for Council, pending the resolution of the augmentation of the town water supply by Barwon Water.
>
> It is important that a coordinated approach be taken in the consideration of these matters. Consequently, the Minister has decided to defer making a decision on *Amendment C17* & *C29* until the Amendment C55 Panel has submitted its recommendations and the Colac Otway Shire Council has subsequently made a determination on *Amendment C55*.

A few comments need to be made with respect to the response I received from Mr McGough. Firstly it is clear that the Department and presumably the Minister had a good understanding of what had been and was, going on in respect of developments in Apollo Bay. I also gained this view when I had a meeting with Mr McGough in March of 2008, following my unsuccessful attempt to assert that the process the Council was pursuing was flawed and misleading to the public. (I still hold that view and had a minor victory at the C55 Panel Hearing when the Chairman recognised the discrepancies in documentation presented as part of *Amendments C29 and C55*.) Secondly, I find it gratifying and rather ironic, that no decision would be made on those amendments at least until after *Amendment C55* had been considered by Council. Throughout the long saga of progressing *Amendment C29*, I and others in the community continued to call for *Amendment C55* to be considered ahead of the site specific amendments. We were continually rebuffed by Council Officers on this matter, who insisted that *Amendment C29* must precede *Amendment C55*.

Finally there was recognition that the 'elephant was still in the room', that is Barwon Water had not resolved the issue of the site for a water storage basin in Apollo Bay. In a private 'phone conversation with Barwon Water, Phil Lawson was advised that Barwon Water would be taking a recommendation to the October Board meeting that two possible sites for the storage be investigated further. They were the site on *Great Ocean Green* land and a site just west of that, on private land owned by a local farmer, Neville Day. It was indicated that a public meeting to discuss the use of these sites would be held in late November or early December.

The C55 Panel Report

On Friday 19 September advice came through that the C55 Panel Report was available to Council and the matter of its release to the public would be discussed at the September Council Meeting. It was made available to the public in the following week. Of course it dealt with a wide range of issues, but reference will only be made to the section on Apollo Bay and the *Apollo Bay Structure Plan*. There were no surprises. As expected the report continued to support *Amendment C29* and *Great Ocean Green* although it did recognise the fact the Minister had yet to sign off on the amendment. The relevant issues identified in the Panel Report were:

- Overall approach of the *Apollo Bay Structure Plan*
- Water supply and storage
- Development between Apollo Bay and Marengo
- Relationship to Amendment C29 and Amendment C17
- Staging

The report concluded that: 'The *ABSP* is acceptable in the scope of issues it deals with and will provide a clear basis for ongoing planning for infrastructure to service proposed development. The *ABSP* presents a strategic direction consistent with broader policies and current planning practice.'

The report then gave a detailed account of the water supply and storage issue and dealt with the question of whether or not a

possible site for the storage should be shown on the *Great Ocean Green* site as Council proposed. The report rejected Council's position and recommended that the possible storage site should be deleted from what was now to be known as *the Apollo Bay Framework Plan*. The C55 Panel noted the confusion that was created by the *Apollo Bay Structure Plan* being both a document and a map (plan). It was not surprising that the issue of development between Apollo Bay and Marengo should have been raised in submissions to the C55 Panel, even though the issue had effectively been put to bed in the C29 Panel Report.

It arose largely because Council had prepared an *Apollo Bay Structure Plan* in the C55 documentation with a legend that belied the existence of *Great Ocean Green* and gave some people false hope. As mentioned, that legend stated: 'Re-vegetate the Barham River Valley, enhance the ecological value of the flood plain and estuary and improve public access.' And the legend referred to the *Great Ocean Green* site, south and west of the Barham River. When challenged about this Council Officers simply said, 'Well, *Amendment C29* has not been accepted yet.' The Panel Report noted that a large number of submissions were received, with respect to development on the flood plain, concerning a range of issues that included:

- effects of flood flows and levels,
- effects of the green break between Apollo bay and Marengo,
- effects of bringing in large amounts of fill, and
- effects on the local environment.

Not surprisingly the Panel dismissed all these concerns and concluded: 'Issues on the development of land between Apollo Bay and Marengo were determined by the *Amendment C29* process.' The Report also noted that:

> *Amendment C29 (Great Ocean Green)* and *C17 (Marriners Vue)* have been adopted by Council, but have not yet been approved by the Minister. It is important to be clear about the

> interrelationship of these Amendments. ….. During the hearing we expressed the preliminary view that as *Amendment C29* and *C17* were yet to be approved by the Minister, *Amendment C55* should neither undermine nor subsume the Amendments.

The Panel Report then recommended that the *Apollo Bay Framework Plan* be modified to:

> Identify land to the west of the town as an 'Urban Development Investigation Area'.
> Identify the C17 site by way of an outline as being a 'potential residential development site'.
> Identify the C29 site by way of an outline as being a 'potential residential development site' generally in accordance with the adopted C29 Framework Plan.
> Delete the water storage facility on the Great Ocean Green site.

Lastly, although Council had recommended that development in Apollo Bay should be staged in an orderly fashion, with infill development, then *Marriners Vue* and finally *Great Ocean Green*, the recommendation was rejected by the Panel.

Local council elections were held in Victoria at the end of November 2008. This was the first election to follow the abolition of the ward system of council representation in the shire and Apollo Bay was keen to see candidates who understood the local issues. The community actively encouraged candidates to come forward and 21 candidates presented for the seven positions available. This included the three Councillors who had been sacked by the Minister for Local Government over failing to vote on the *Great Ocean Green*, proposal. Five of the retiring Councillors stood again; Cr Joe Di Cecco had taken sick leave a few months earlier and sadly passed away in November, after a difficult illness.

The result of the election was released in early December and the balance of power had swung decidedly in favour of opposition to development on the Barham River flood plain. All three of the

'renegade' Councillors (Brian Crook, Stuart Hart and Geoff Higgins) were re-elected with Cr Brian Crook returning the highest number of first preference votes and being the first to meet the quota in the system used. (Cr Crook was subsequently elected Mayor.) Cr Chris Smith was the only retiring Councillor to be returned and of the three other Councillors to be elected, two had indicated opposition to *Great Ocean Green*. On the face of it, Council was now in a position to achieve a 5-2 vote against *Great Ocean Green*. Of course by this time the matter was in the hands of the Planning Minister awaiting his decision and ostensibly beyond Council control. Many in the community saw the election as a referendum on two highly contentious decisions that the previous Council had taken. One was an unpopular decision to establish a 'Joint Use Library' facility in a new secondary school building being built in Colac, and to close the existing library. The other was of course the decision to adopt the planning panel recommendations on *Planning Amendment C29*. It then remained to be seen, just what the new Council could do. Before going on to this, it is worth noting that the *Great Ocean Green* proposal had now effectively had to survive three Council elections and the prospect of changing opinion. (This assumes some preliminary discussions with Council prior to the 2000 elections and then the 2004 and 2008 elections.) I retain some sympathy with the developers over this but only over the length of time being taken over a decision. The project has seen three different Ministers for Planning, plus four different Council memberships not to mention the changes of key personnel in Council Staff, including three CEO's.

Chapter 7 - References

1 *Australian Rainfall and Runoff – A guide to flood estimation, Ed. in chief D H Pilgrim, Volume One, Reprinted edition 1998, Institution of Engineers, Australia.*

Chapter 8 – The Panel Report Conclusions – Analysis

The conclusion to the *Colac Otway Planning Scheme Amendment C29 Panel Report – July 2007* (Section 11) runs to four pages and includes 56 specific conclusions and four recommendations. Leading into the recommendations is the statement: '*Amendment C29* to the Colac Otway Planning Scheme should be adopted generally as revised in February 2007, subject to the following recommendations …..' A conclusion also states: 'The Amendment has followed the requirements of the *Planning and Environment Act, 1987*.'

The Panel rejected all the arguments the many opponents to the development had put forward, either by refuting them outright or by asserting that the risk was acceptable and could be managed in the further development and construction phase. Not only did the Panel reject any opponent's view, there was throughout the whole process, a succession of cases where Council changed its position in favour of the proponent and the Panel's views. They can be listed as follows:

- Council's initial reluctance to refer submissions to a planning panel until the *Apollo Bay Structure Plan* was substantially complete – overturned by rescinding earlier motion.
- Council's figures on land supply – rejected in favour of the Town Planning consultant for the proponent.
- Council's view as a result of the *Apollo Bay Structure Plan Recommended Changes Report*, that there should be no development south and east of the Barham Valley Road –

overturned at the last stages of presenting the final *Structure Plan*.

- Council's view that there should be staged release of land in the order of: Infill development, then *Marriners Vue* (*C17*) then *Great Ocean Green* (*C29*) – overturned by accepting the *C55 Panel Report* with respect to the *Apollo Bay Structure Plan*.

On the subject of infill development, the Panel Chairman simply commented that no data on the extent to which such land was available, had been provided by Council. While the proponent successfully argued that *Great Ocean Green* was offering a 'different product' and it should not be required to wait until there was take up of other residential land. As I mentioned previously, development at Apollo Bay has by no means been suspended over the last eight or so years while *Amendments C17* and *C29* have been before Council. Several smaller subdivisions have been progressing at varying rates and infill development has continued. The historical nature of Apollo Bay is such that the central town area was set out in a rectangular manner with north-south and east-west streets. For the most part the properties fronting the east-west streets had rear laneways for additional access giving rise to very large allotments by today's standards. Typically they would be between 1200 and 1500 sq m. with a single dwelling. Understandably, on many of these properties a three or four lot subdivision has been developed with apartments or villas, but the single dwelling or even vacant land is still to be found. It would not be difficult to carry out a simple survey to assess the extent of land available for infill development, but the Panel did not seek such information.

The report recognised that there was still a lot of work to be done in terms of detailed design and in meeting the many requirements as specified in the *Comprehensive Development Plan* and the associated *Schedule*. As I recall it was often expressed as 'being able to proceed to the next stage of the design process.' Rather than examine each of the conclusions in turn, I have broadly grouped them under the following headings:

- Strategic Justification
- Flood Modelling
- Geotechnical and Construction Issues
- Precinct 3 – Hotel, other accommodation, facilities, clubhouse
- Coastal Recession

Strategic Justification

The Panel had certainly clearly expressed the view that the development was in accord with the strategic planning documents that were largely discussed in Chapter 2. My rebuttal of this is based on the view that strategic planning documents are, for the most part, subjective. More precisely, the position taken is so often a matter of opinion.

Returning briefly to the *Great Ocean Road Region Strategy (GORRS, 2004)* the goals of that document are to:

- Protect the landscape and care for the environment
- Manage the growth of towns
- Improve the management of access and transport
- Encourage sustainable tourism and resource use

While its introduction takes up the negative by stating that: A failure to manage growth sustainably would result in:

- environmental damage
- reduced visitor satisfaction
- potential loss of natural assets
- unsustainable growth in some towns and communities
- loss of township character, with inappropriate development
- growing congestion on the Great Ocean Road and a further reduction in road safety
- reduced quality of life in many towns and communities

- increased fire risk and the need for emergency management

Of course it is a simple thing to do to change the negatives into positives and see a set of objectives. The problem is to find ways to measure outcomes when so many of the objectives are subjective. For example, just what is township character? The second conclusion in the Panel Report states:

> Development may well change the character of Apollo Bay but this change in character is supported by the planning policies that identify Apollo Bay for growth.

Well that is the Panel's opinion. My question is how much growth? The *Victorian Coastal Strategy 2008* includes a Coastal Settlement Framework Spatial Growth Management map where the legend indicated that Apollo Bay had:

> Moderate Growth Capacity: Some growth potential beyond existing urban zoned land or through infill but within defined settlement boundaries.

Of course this is a view that I endorse while planners, in my opinion, did not! The *Great Ocean Green* project involved 537 houses and a hotel and other accommodation. Various estimates put the number of houses in Apollo Bay at 600-1000. To say planners were intent on doubling the size of the town was scarcely an exaggeration. I do not call this 'moderate' growth. (I am reminded at this stage that not all planners were of this view. As mentioned in Chapter 4, the *Apollo Bay Draft Structure Plan: Recommended Changes Report*, prepared by the planning consultants, Planisphere, had expressed significant reservations about *Great Ocean Green* including the scale of the development. These reservations were subsequently dismissed, presumably by Council Officers.)

Residential land supply

The Panel had concluded that:

> The rezoning of the land is appropriate to ensure that an adequate supply of residential land is maintained.

The issue of land supply was briefly mentioned in Chapter 3, but I want to consider a different aspect to it here. I am confident that the Panel used an argument that there was a general planning policy of ensuring that there was always a supply of residential land for at least ten years. I challenge this as a 'standing' policy, on the grounds that it assumes that growth is always possible and indeed necessary. That is to say limits to growth are not recognised. At the same time, structure plans are developed to specify growth boundaries and it was noted, either by the proponent or the Panel, that this project would be the 'last major development in Apollo Bay'. We get back to a circular argument that won't get us very far. I continue to argue that at least half of the selected land is unsuitable for development and there are limits to growth for Apollo Bay that this project exceeds. I want to digress slightly here to discuss what I would call a reality check.

Limits to growth

The impetus for the *Great Ocean Road Region Strategy* would also have come from the predicted population growth; in fact that now being experienced by Melbourne in particular and Victoria in general. Melbourne has its 2030 vision prepared in 2002 and envisages a growth in population of about 1 million by 2030 taking the population to well over 4 million and perhaps closer to 5 million. Such a large number will mean continued growth in visitor numbers along the Great Ocean Road along with growth in permanent and non-permanent residents seeking a coastal location.

As has been noted, Strategy 2.2 of *GORRS, 2004* is to: 'Direct urban growth to townships where it can best be accommodated and limit growth elsewhere.' In a sub-clause to that strategy it is noted that 'substantial new development' is to be directed to Torquay and

Warrnambool as well as Apollo Bay albeit in a more limited way. A brief examination of these three locations will quickly show that Apollo Bay is the odd one out. It is understood that the growth expected for Apollo Bay would not be anywhere near the figures that might be expected at the other two locations, but I am exploring limits to growth and I believe a comparison of the centres yields something of interest.

Warrnambool is a provincial city with a population of 30,000, while Torquay is within 20 kms of Geelong and is fast approaching the status of a suburb of that large city. Both afford opportunities for employment far beyond the scope of that available in Apollo Bay and have a wider range of facilities such as educational opportunities and health services and so will attract a wider range of individuals to settle there. People with young families take these sorts of things into consideration and it is not uncommon to hear of people leaving Apollo Bay in order to educate their children or to be nearer more extensive health services.

This is not to say that Apollo Bay should not be designated as a 'coastal settlement with the capacity for growth beyond its current boundaries', as *GORRS, 2004* puts it. I agree with the proposition but would argue that there are limits to growth and it is these limits that need to be explored. Indeed, I would argue that they should have been explored in a more meaningful way before *GORRS, 2004* was unleashed.

In an attempt to assess the growth potential of Apollo Bay, (as opposed to the growth potential of any other coastal location including those not on the Great Ocean Road) the following factors need to be considered:

- accessibility
- climate, and
- employment

Accessibility

Apollo Bay is located 200kms from Melbourne, which translates into a three hour drive from the city. Some promoters of devel-

opment would suggest that the trip could be done in 2½ hours and they extol the virtues of the improved Melbourne – Geelong road and the recently opened Geelong by-pass. Alternatively, public transport is by a one hour rail trip to Geelong followed by a 2½ hour bus ride along the Great Ocean Road, via Torquay, Anglesea and Lorne.

Apollo Bay is ringed by the Otway Ranges and any road access means a trip over the ridge one way or another. While the main ridge skirts Lorne, the mountains near there run down to the sea. The result is that the Great Ocean Road, basically from Anglesea through Lorne and on to Cape Patton, is a winding road with some steep ascents and descents along with magnificent views that make the road so attractive. The alternative route, essentially from the hinterland, takes the traveller from Geelong towards Colac, then through Barwon Downs and Forrest before reaching the Great Ocean Road at Skenes Creek about 6 kms from Apollo Bay. The trip down from Forrest is about 30 minutes of winding road and a descent from the ridge of the Otways. An approach from the west results in a similar journey over a winding road with many steep sections.

To put this into some sort of perspective, my wife spent several years working at the Great Ocean Road Visitor Information Centre in Apollo Bay, one of the busiest information centres outside of Melbourne. She often related the story of how visitors would come in after having travelled over the winding road and wanting to know if there was an alternative route (no winding road and hills) back to Melbourne. Anecdotal stories have been reported from organisers of the local agricultural show to the effect that potential animal exhibitors were reluctant to attend since it would involve bringing the animals over the hills with the attendant risks and difficulties. In a similar vein, some trailer boat owners have expressed the view that there are plenty of alternative destinations that offer easier access in terms of trailing their boats to the sea.

The point is that Apollo Bay should be contrasted with other coastal communities where perhaps a divided highway offers speedy access either directly to that community or to within a short and

direct distance from it. I am not denigrating Apollo Bay and many would say, as I would, that the effort is worthwhile for the return the place offers. Nevertheless the road access has its limitations and the journey does not suit everyone. *GORRS, 2004* recognises this and notes that there are limited opportunities to improve the traffic carrying capacity of the Great Ocean Road. Each summer in the peak holiday season, newspapers delight in reporting almost grid lock as vehicles take hours to travel short distances around the very popular destinations of Lorne and Anglesea.

GORRS, 2004 addresses this issue of access by planning for the development, and encouraging the use of north-south access routes to the Great Ocean Road. The principle is an obvious one; encourage traffic flow along the Princes Highway West (which roughly parallels the Great Ocean Road, but is inland) then stream the traffic off on the north-south roads that are available. One such road is the Forrest to Skenes creek road as already discussed. More particularly the route from the Princes Highway is from near Birregurra, through Barwon Downs, Forrest and to Skenes Creek. The problem is that the funding does not match the rhetoric. Extensive road works on the Forrest to Skenes Creek Road over the summer of 2006-07 showed distress and signs of breaking up by the end of the summer of 2007-08. That this route is the primary heavy transport route for goods and construction materials into Apollo Bay should not escape attention. Indeed it is usual to encounter at least one truck and dog trailer combination carrying quarry materials on any occasion that the trip is taken.

So while the concept is valid, little seems to have been done with regard to these north-south access routes four years after the release of the strategy. While funding for the development of a four lane highway from Geelong to Colac as part of a Princes Highway upgrade is likely, that still leaves poor quality access roads off that highway to the coast.

There are some parallels between road access and access by sea to Apollo Bay in that it too has its limitations. It is not so much the question of the journey as it is the question of what happens when you arrive off Apollo Bay since a safe entry into the harbour

is not guaranteed at all times. I am not talking about commercial ships or boats offering a public transport service, although the long term possibility of that always remains. I am referring to ocean going private yachts or motor cruisers wishing to make the trip. Experienced sailors always check the weather conditions off Apollo Bay very carefully.

If you look at the short historical past it is possible to plot the growth of coastal communities in terms of accessibility from a larger population. Even places like St Kilda were initiated by offering a seaside location away from the city with a drive (in horse and cart) along St Kilda Road. Queenscliff had an early history since it was accessible by steamer across the bay from Melbourne. It still has many unique features that continue to make it a very attractive place today. Parts of the Mornington Peninsular were probably popular in early days for similar reasons. In the post World War II years, prosperity gave birth to travel and relatively nearby coastal communities began to develop as holiday destinations. I personally have a very clear recollection, probably as a ten year old in 1950, of travelling with some family friends from Ballarat and being present as they negotiated the purchase of two blocks of land in what was then bush just behind Anglesea. The street has long since been absorbed into 'middle' Anglesea.

Climate

Apollo Bay enjoys what most would describe as a cool temperate climate with average daily maximum temperatures from November to March ranging from 19.2 to 21.9 degrees C, and a relatively mild winter having daily minimum temperatures from 7.3 to 8.3 degrees C. This is typical of southern Victoria but tempered by the coastal location so that Apollo Bay does not have the extreme heat or cold experienced in other parts of Victoria. With an average annual rainfall of just over 1000mm, it could hardly be described as dry. (Data from the Bureau of Metrology and the web site www.travelvictoria.com.au.) While it has certainly been drier over the last decade as much of southern Australia has experienced drought conditions, rainfall has remained steady and only in a few

months of summer, have the hills behind the town turned from green to brown.

The coastline looks out onto Bass Strait and while Apollo Bay itself is sheltered by a headland, westerly and south westerly winds can rapidly bring cooler and rougher conditions to Apollo Bay at any time and with short notice. Historically, Bass Strait afforded many difficulties for sailing ships and the nearby coast is well known as the 'shipwreck coast'. Nothing has changed in this regard and the waters of Bass Strait can be treacherous and should always be treated with respect.

What has all this got to do with growth potential? Well let us assume that someone is making a decision on a retirement destination, a location for a holiday home or an investment property or simply relocating for a lifestyle change. The prudent individual is going to weigh up all of the factors that I have listed for more than one possible location. I am of the opinion that developers are often tempted by what they see having happened in other communities, particularly those in South East Queensland and the northern coast of NSW, and they believe it can happen to the same extent in Victoria. Climate plays a major role in attracting an otherwise not constrained person. The climate of southern Victoria is not the climate of the Gold or Sunshine Coasts of Queensland.

Some years ago, the proprietors of a successful and well established guest house in Apollo Bay, decided to introduce a dinner cruise out of Apollo Bay Harbour. They had noticed how successful such events were in other places. They found a suitable vessel but the venture was very short lived. The ocean swells coming in from Bass Strait and the coolness of the evening air soon put paid to the idea.

There is a proposal before the Colac Otway Shire to develop Apollo Bay Harbour. There is certainly scope for this and improvements can be made in many ways. However early plans have shown a vision unsuited to the realities of Apollo Bay and the constraints of the Harbour. In researching the prospects, a number of Councillors traveled to Port Stephens and Nelson Bay in NSW and saw the marina and other developments of the region. A few

years ago I also visited Nelson Bay and the general Port Stephens area. The first thing that strikes you is that Port Stephens is a large body of water with a narrow entrance to the Pacific Ocean that immediately offers protection to boating within the confines of Port Stephens. Further there is somewhere to go. For example a day trip can be made by ferry from Nelson Bay Harbour across to Tea Gardens and Hawks Nest on the other side. Tourists have the choice of having lunch in the small village of Tea Gardens or staying on board for lunch as the ferry explores one of the many small inlets running into Port Stephens. Port Stephens itself, as a water body, stretches 24 kms inland with numerous small fishing villages scattered around its edges. By way of contrast, a typical small run about boat at Apollo Bay is restricted to a few kilometres along the coast and inshore for a spot of fishing; if the weather turns suddenly this can prove to be decidedly dangerous and lives have been lost. Again, I am not suggesting that there is no scope for development at Apollo Bay; this is simply a reality check on the extent of it.

Employment

Employment opportunities in Apollo Bay are extremely limited being largely confined to services to the tourism industry (hospitality, catering, cleaning) some retail, trades, education and hospital and medical services. A lifestyle change to Apollo Bay would not be made with a view to advancing a career and the main attraction is to people who are retired or about to retire. That said, tourism operators at all levels face the difficulty of filling vacancies largely because of the casual and sometimes menial nature of the work. In common with other coastal communities that experience seasonal peaks, there is a reliance on backpackers and vacationing students. The problem of moderately priced accommodation for such workers then presents itself since in the peaks they are priced out of the market. Some limited attempts to address this issue have been made but the problem largely remains. It has already been pointed out that Apollo Bay is not the sort of place that anyone commutes to or from, although it has been heard of!

The population of Apollo Bay has remained relatively static over the past couple of decades while a steady increase in the housing stock has continued. This can be explained as a growth in holiday houses and or holiday rental properties. The best way to see this is to overlook some of the newer housing areas at night in an off peak time. A few twinkling lights will be seen in an otherwise sea of darkness.

The Panel and the developers may well assert that they recognised the ultimate limits to growth in the suggestion that *Great Ocean Green* would be the last major development in Apollo Bay. We are then neatly back to the subjective judgment of what is moderate growth.

Flood Modelling

The Panel clearly stated its acceptance of the flood modelling and determined that 'the development can provide adequate protection against flooding,' among its seven conclusions related to the topic.
Let me state at the outset that it is possible to build on a flood plain. Land reclamation projects have been carried out all over the world and land has been successfully reclaimed from the sea. It is quite common for airports, for example, to have runway extensions out into a bay and for whole cities to be built on reclaimed land. A proposal that calls for approximately 25ha to be built up above flood level to site 537 homes (out of a total of about 170ha) should be described as land reclamation. This is especially the case as the proposal also calls for the access roads to be built up above flood level to provide safe egress and ingress in times of flood. Having said that it can be done, the question is at what cost and at what risk? No engineering project is without risk. Risk assessment is part of any sound engineering planning and is at the core of engineering training. In more recent decades it has come to the fore but it has always been there. The very idea of a factor of safety against failure is inherent in every engineering code of practice.

So it is with flood modelling and design. It begins with a statistical analysis of rainfall data and extends to the amount of runoff and so to the prediction of likely floods. The 1 in 10 year event is defined; as is the 1 in 100 year event. (These definitions need a little clarification: a 1 in 10 year event means that, on average over a long enough time period, that event would occur every ten years. They could however still occur in rapid succession somewhat randomly, the important thing is to average them out over a long enough period. Rainfall records extend at best back over about 150 years so that the concept of a 1 in 100 year event is based on rather limited data. Nevertheless it has become accepted engineering practice to base flood modelling on a 1 in 100 year event.) There is a very real risk of a flood exceeding the 1 in 100 year design flood occurring on the Barham River flood plain over the next 50 to 100 years. Experts can be lined up all of whom will say that the flood modelling has been done satisfactorily, largely because it has been done to accepted engineering practice. That does not mean it is without risk or that the design flood will not be exceeded.

In fact the very document that is the basis for flood modelling, *Australian Rainfall and Runoff* [1], cautions its users in this very regard. The following extract is taken from section 1.3.4 Risk of Failure:

> Although the conventional time period considered in determining exceedance probabilities is one year (and hence 'annual exceedance probability'), the probability of exceedance over longer periods, such as the design life of a structure, is of more fundamental importance. For example, if a structure has an economic life of 50 years and is designed for a flood with an AEP of 1 in 100, there is a probability of 40% or 1 in 2.5 that it will be surcharged at least once in its life… The probability of failure over these longer periods is often termed 'risk of failure'.

It is worth emphasising what is being said here. There is a 40 per cent chance that within a life of 50 years, the 1 in 100 year flood

event will be exceeded. Certainly *Great Ocean Green* would have a design life of at least 50 years, and many would expect over 100 years, further increasing the probability that the design flood will be exceeded in the life time of the estate.

Engineers are well aware of this. The question is what will the consequences of adverse flooding be? Most often in cases like this, the subject land is devoted to developments that can tolerate a higher than expected flood. Flood plains are often used for sporting facilities, including golf courses, and even act as flood retarding basins. Towns in flood prone regions are often protected by levee banks, built and designed to meet flood risks of a specified level, usually the 1 in 100 year flood event. How many times in our modern history have we read of levee banks being topped? There is a risk associated with flooding whether or not it has been quantified in some way. A better question to ask is what are the consequences of failure in this regard? It will certainly be a question an insurance company will ask and potential buyers will ask the same thing.

My primary concern in the flood modelling issue relates to two aspects of climate change. The first of these is the prediction that we can expect more extreme weather events; for example an unprecedented rainfall event in the catchment of the Barham River could occur. Interestingly, *Australian Rainfall and Runoff (ARR)* has something to say about this as well. It reports on the *International Conference of Scientific Unions*, held in Austria in October 1985, which released the following statement:

> Many important economic and social decisions are being made today on long term projects based on the assumption that past climatic data, without modification, are a reliable guide to the future. This is no longer a good assumption since the increasing concentration of greenhouse gases are expected to cause a significant warming of the global climate in the next century. It is a matter of urgency to refine estimates of future climate conditions to improve these decisions.

ARR then goes on to state:

> As no reliable estimates of climate change are available, it has been assumed that the statistical characteristics of heavy rainfall and floods remain constant throughout the design life of projects. This is implied in the use of all the probability terms in ARR.

Secondly, the flood modelling inputs assume that the Great Ocean Road and the primary sand dune remain as both a physical barrier and a boundary in the flood model. Coastal recession due to climate change could threaten this and the Panel blithely assumes that future generations will pay for a sea wall to ensure this does not happen. (This is discussed more fully under Coastal Recession in this Chapter.) And of course there is the matter of sea level rise. As will be seen in Chapter 9 (which is devoted to the impact of climate change, since it is such a fundamental issue) the *Great Ocean Green Comprehensive Development Plan* purports to cope with this in a particular way that I believe to be flawed.

Geotechnical and Construction Issues

As has been explained, the essence of the success of the project was the building of large earth mounds to put the house lots above the expected flood level. Just a reminder! We were dealing with a proposed 1 million cubic metres of earthworks; roughly 725,000 cubic metres of cut and 275,000 cubic metres of imported fill, based on the preliminary earthworks figures provided by the developer.

We now need to briefly examine the issues associated with building up any earth embankment, let us say to three metres high. (The depth of fill required varies across the site from zero up to 5 metres over a significant portion of the housing areas.) As a Civil Engineer I believe that I can make a number of comments on the difficulties associated with the construction of the earth mounds. The issues have been canvassed in the panel hearings and are mentioned in the Panel Report but I believe either the wrong

conclusions have been drawn or the full consequences of a decision have not been realised.

Firstly the dumped material needs to be put onto a solid base. Fundamentally, where there are a number of possible sites, they are investigated to find a suitable base. Once a selection has been made the top soil is stripped away to reveal a subgrade of satisfactory material. In the case of *Great Ocean Green* there is no choice and the construction will have to deal with what is found. Two extracts from reports give an indication of what will be found. The first comes from the DPI web site introduced in Chapter 1 that comments on the Barham Lagoon, as they describe the backwater on the flood plain. It states:

> The Barham River has a short wide floodplain south of Apollo Bay with well defined terraced margins. Drilling into the sediments has shown over 60 metres of alluvial fill in the Barham indicating the depth of river incision during Pleistocene low sea level episodes.

The second comes from a report, *Acid Sulphate Soils Assessment, ERM Australia November 2005,* prepared for the developers and presented to the panel hearing, namely:

> Trial pits TP7 and TP8 identified the presence of a historical river bed at a depth of 3.2m and 3m respectively.

There are no surprises here. It would be expected that a flood plain would be built up of alluvial fill and that across the site, evidence of the river having taken a previous path would be found. This is not consolidated material and it is likely to be highly variable from one specific location to another.

The subgrade is likely to be very low grade material that will consolidate very slowly under the weight of material piled onto it. (It is not too much to suggest that we could think in terms of the Romans building their roads across bogs and marshes.) The preliminary plans suggest that fill material can be gained from a cut. This assumes that the cut or excavated material is suitable. It is not

just a matter of dumping any material to create a stable platform or pod as the Panel referred to the raised earth mounds. In fact it is highly likely that well graded and select material may have to be used. The sides of the pods will have to be battered and may well also require rock facing to cope with expected and accepted flooding coming up against the batters of the pods. All of this would need to be revealed at the detailed design phase that has not yet occurred. I have already stated that it is possible to build on a flood plain; the question is now at what cost?

Before proceeding, another legitimate question is one that the reader may wish to ask of me. If I am so sure that the project is fraught with engineering difficulties, how did it pass the expert witnesses and a planning panel? The answer comes partly from the way in which planning panels and the development process operates. We need to start with the fact that the proponent, that is the developer, does not have a sound in-house engineering team to provide advice. The developer simply calls in engineering consultants on an 'as needed' basis, giving them a brief as to what they are expected to do. The consultants react to that brief and generally provide the developer with what they want to hear. I am not suggesting that there is anything misleading here; they generally provide technical information consistent with their expertise and have no particular interest in the overall aspects of the project, eg. Is the project financially viable? They recommend strategies to deal with further eventualities such as construction management plans and may even recommend further investigation. They do not appear to use the same data and are generally no more aware of the work of each other (when there is more than one team of consultants called in) than anyone who happens to read the expert witness submissions to the planning panel. They have a vested interest in meeting the client's requirements and are ever mindful of the fact that they may be called back to do further work. In fact, having given their evidence as expert witnesses, they simply depart from the scene and are usually not present to hear any opposing submissions.

On the other hand, my experience with planning panels suggests that they are driven by bureaucratic ideas and seem to be more preoccupied with whether or not a project has met certain strategic guidelines. For *Amendments C29* and *C55*, the Panel Chairman was a full time member of Planning Panels Victoria and an experienced town planner. Whilst it is unfair to suggest that the approach is one of making sure all the right boxes are ticked, that is an impression that a lay person might start with. Conclusions seem to be along the lines of: 'the project has strategic merit and fits in with the overall objectives of state and local planning.' (I have repeatedly argued that many of these objectives are subjective and open to wide interpretation.) Interest in the financial viability of the project seemed to be difficult to arouse and not to be of any particular concern to the Panel.

I need to return to the failure to recognise the engineering risks in the project. To do so I need to spend some little time to explain the recent history of engineering and its role in local government. During the 1970s through to the 1990s, many would argue that the engineering profession lost its way in terms of its leadership. The several decades I am referring to saw rapid change in many sectors of commerce and industry and, although I am not qualified to make an informed comment, I believe it was a period of deregulation and economic reform. Privatisation of public authorities was afoot and economic management seemed to rise to new heights and have the final say. Those in the engineering profession who saw this coming went off to do MBA's and positioned themselves well for the change. As I have noted, engineers are usually conservative by nature and by training and many couldn't or didn't adapt to change. Prior to the 1970s, local government administration was inevitably headed up by the City or Shire Engineer, (with qualifications in Civil Engineering) and his right hand man was the Town Clerk watching the books! I am not being sexist here; women were only just beginning to come into the engineering profession then. The title of CEO was not used and the shire or city engineer had overall control. In smaller regional centres there was simply just the one engineer while in larger cities

and shires, an engineering department existed. However, all that rapidly changed along with the previously mentioned privatisation of public utilities such as water authorities. There was a commensurate expansion of consulting engineering firms as they took up the work of the previous public bodies. CEO's were appointed to local government, some from an engineering background, but more and more from other backgrounds such as economics and human resources management. Engineering departments still existed but were likely to be described as 'Infrastructure Services' or something similar. (I observed most of this from the relative security of academia, but there were great changes going on there, as well as the general move to mass university education.)

There is little doubt that change was necessary and I am not lamenting it, but it did shift the emphasis onto the dollar bottom line. Engineering lost some of its aura and engineers had to earn their respect amongst the other professionals.

I shall return now to the argument of the failure to note the engineering risks of the *Great Ocean Green* project. Whether or not the Colac Otway Shire Council sought the opinion of its engineering staff, I cannot say. Certainly the engineering staff were not prominent in any presentation of the project and the CEO was not an engineer. One of the elected Councillors (who was also a director of the company behind *Great Ocean Green*) was a Civil Engineer and of course a proponent of the scheme. During the panel hearing the Colac Otway Shire Council was represented by its senior strategic planner. Apart from that discussed in the following section, the idea of an independent engineering opinion on the likely success of the project was not to be found. The question might then be asked, what would the likelihood of this project getting this far have been, had it been set in a previous generation when the CEO was an engineer.

I raised the question of the financial viability of the project in making my first submission to the panel hearings. It was based simply on the observation that the amount of earthworks involved was huge, especially when compared to the number of lots the

project would produce. My expertise as a Civil Engineer was in Structural Engineering and I had no firsthand experience in estate development, however I was able to question an expert witness in relationship to a golf course housing estate development on the shores of Port Phillip Bay near Melbourne (*Sanctuary Lakes*). Based on figures he provided it was easy to show that the amount of earthworks involved per lot yield for *Great Ocean Green*, was five times that of *Sanctuary Lakes*. Further, *Sanctuary Lakes* had a source of imported fill within a few kilometres of the site. As I indicated earlier, the cost of this must simply be passed on to the cost of each house lot. I am not in a position to be able to apportion costs, but at five times the volume of earthworks for each house lot produced when compared to those of another estate development, I ventured to suggest the cost would be substantial. At the time of my raising the issue, the proponent had not acknowledged any figures for the amount of earthworks involved and when preliminary earthwork figures were finally released my calculations were vindicated. In his closing remarks to the first session of the panel hearing, Jeff Morgan, on behalf of the Council, raised the question of the financial viability of the project, but apart from my continued attacks on this aspect, it was not raised again.

Earthworks Construction

Under *Section 6.5 Site Capability and Geotechnical Issues* the C29 Panel Report gives details of the reports received and some discussion is presented. Obviously there were geotechnical reports presented by the consultants engaged by the proponents, but rather significantly, Colac Otway Shire Council (to their credit) had engaged the engineering firm, Gutheridge, Haskins and Davey, (GHD) to review the geotechnical aspects of the development, including the submitted geotechnical reports. GHD made two reports, one dated May 2004 and the other August 2004. Of relevance to my personal views, the May 2004 GHD report suggested that a number of issues should be resolved before any rezoning consideration was made. (p. 46, C29 Panel Report)

I regard this as an important observation having been made by an engineering firm retained as consultants by the Council. I assume that the Panel thought it was significant as well, since as indicated, it is to be found in their report. Page 46 of the Panel Report continues:

> The May 2004 GHD report concluded that:
> Whilst it is envisaged that engineering solutions exist to technically overcome these issues, they may have significant economic impacts on the development. …
> Although these issues are not necessarily considered to be a technical impairment to the development, it is considered prudent for the Colac Otway Shire to seek assurances from the developer prior to any consideration for rezoning that such issues will not cause the abandonment of the proposed development for economic reasons.

Unfortunately I am not aware as to whether or not the Colac Otway Shire sought the assurance suggested by the GHD report, although I find their concerns consistent with my views. In short, I would interpret their reservation as saying, 'Well it may be technically feasible to do this, but at what cost?'

Included under the heading of 'Construction Issues' in the GHD report were the following:

- Bearing capacity of the site
- Compressibility of the soil and long term settlement characteristics
- Suitability for embankment construction
- Long term stability of proposed excavations and fill embankments
- Depth to groundwater
- Nature of construction under wet conditions

My technical training, if not my experience, confirms the importance of each of the bullet points with regard to construction as

presented above. They represent the logically ordered points one would consider in construction of this type.

I could examine each of the bullet points but just one will suffice to support my argument of doubt over the viability of the project. That is the *Compressibility of the soil and long term settlement characteristics.* This does receive some attention in the Panel report. The second GHD report (August 2004) comments:

> There is little doubt long-term settlement of compressible soils will occur at the site given the nature of the soil and the loading from the imported fill and construction. This settlement needs to be fully assessed and catered for in the final design.

The Panel responded to all of this with the conclusion that: 'There are no significant geotechnical impediments that preclude the development from proceeding to the next phase of the planning process.' And the following recommendation was made:

> The requirements for the Land Management Plan include:
> - details of how the fill for the residential pods will be engineered to ensure that the maximum settlement with time does not exceed 5 cm.
> - requirements that a trial fill site be established at an early design stage to demonstrate that maximum settlement rates will not be exceeded.

To my mind we are faced with a number of practical difficulties here, mostly concerned with rigour. At this stage it is perhaps relevant to point out that while a panel report is a significant document it does not of itself have a statuary or legal status. The authorisation for a development is to be found in the *Municipal Strategic Statement (MSS)* and (in this case) in the *Great Ocean Green Comprehensive Development Plan* [2] *(CDP)* and the associated *Comprehensive Development Zone – Schedule 1 (CDZ).* This is perhaps a little confusing to the layperson and throughout the Panel sessions, the Chairman and the Barrister acting on behalf of the proponent, often

made remarks referring to the inclusion of some item or other in the *Schedule*. The precise details are not significant; suffice to say that accepted recommendations of the Panel find their way into either or both of the *CDP* and the *Schedule*. This is the case in the issue we are discussing, namely the construction of the earth pods, and so under *CDZ –Schedule 1* we find the following details:

> *1. Land Management Plan*
>
> The Land Management Plan must identify any environmental constraints and opportunities on the land, the appropriate strategies and solutions to address these based on best land management practice.
>
> The plan must be approved by the Department of Sustainability and Environment and the Responsible Authority [Colac Otway Shire] and address the following matters: [not all points listed]
>
> - Broad details of the methods of construction of any housing pod to ensure their long term stability.
> - Details of how the fill for the residential pods will be engineered to ensure that the maximum settlement with time does not exceed 5 cm.
> - Requirements that a trial fill site be established at an early stage to demonstrate that maximum settlement rates will not be exceeded.

Having established the status of these requirements I can return to discuss their shortcomings. The first of these arise, in my opinion, with the statement 'maximum settlement with time'. What precisely does this mean? Does 'with time' mean three weeks, three months or three years? Now I am being deliberately provocative here since clearly we are implying a significant period of time, closer to three years than three months. But the detail is not here and an argument could be mounted that says the requirement has been met if after three months settlement has not exceeded 5 cm. I suspect that if the issue ever came to a legal argument, the 'reasonable

person test' would be applied. That is, how would a rational reasonable person interpret the statement, 'maximum settlement with time'?

As I have explained, the construction of an earth mound or embankment is a relatively straightforward matter. Earthworks of a similar nature are regularly observed by the general public in road works all around the country. The general principle is to prepare a base or subgrade by stripping the ground of vegetation and other organic material and excavating the topsoil to a suitable depth to expose a sound base – if one exists. There are techniques to measure the bearing capacity of the base material and the design is taken from there. The problem inherent in this site is that a sound base is unlikely to be found and whatever base is exposed is likely to consolidate (settle) under the load of the fill material brought in. In any trial site to demonstrate the settlement characteristics there will be two components to settlement. The first will be the consolidation of the base material under load (and with time) and the second will be the settlement of the imported fill as it is compacted during construction and with time. The consolidation of the base material (mostly alluvial silts) is the major unknown, although some assessment of this could be gauged by pressure loading a specific (small) area. In any event it is the overall settlement with time that is the question.

Setting up a trial site would not of itself present any particular difficulties, although extrapolating the results to the entire site, where there are probably marked variations in the subgrade, may be limited. The actual depth of fill over the site will vary as well; should the trial site be two or four or even five metres of fill? Who will specify it? It would be expected that settlement with time would not be linear with the rate of settlement decreasing with time. This probably represents the best chance of meeting the requirement of 'the maximum settlement with time not to exceed 5 cm' (an engineer would not express this in cms; 50mm please!) To demonstrate that settlement is slowing down and approaching a limiting figure is probably the most desirable outcome from a trial site of unspecified time. For instance, if after three months,

settlement has slowed but exceeded 50mm, then that trial will have failed. On the other hand success could be argued if a projection of observed settlements after three months indicated that the site was stabilising and likely to approach less than 50mm in perhaps two years. All this is pure speculation on my part, introduced to show the vagaries of what has been proposed in the *Construction Management Plan*. There are other issues as well, such as the behaviour of the earthworks as the base material goes through wet and dry cycles.

The question that I have upper most in my mind when all of these recommendations and requirements are imposed on the developer is, 'What happens if the requirements are not met?' I know that the answer from the responsible authority is that the project will then not go ahead. But by then the land has been rezoned in a particular way, presumably some legally binding contracts will have been signed and the untangling of it all will present problems for the community. Even if the requirements as set out are met, risk will remain. Earthworks are prone to failure even when construction is carried out in the best of circumstances. How many of us have noticed a slump (settlement) in an approach embankment to a road bridge, or seen evidence of a land slip on the side of an embankment perhaps years after construction? The consequences in these circumstances may be inconvenient but they are not dire and roads are usually flexible pavements to cope with some change. The consequences of failure in this project are far more severe.

Engineering projects are not without risk. For the most part risks can be identified and minimised, however the consequences of failure should always be recognised. In my opinion, there are significant inherent risks in building on a flood plain and there is a real possibility that failures may not manifest themselves for years after construction. I would particularly emphasise the comment from GHD, 'that a number of issues should be resolved before any rezoning consideration was made.' Cautionary notes have been sounded by others and decision makers must be prepared to take the risk and wear the consequences if they were to proceed.

Precinct 3 – Hotel, other accommodation, facilities, clubhouse

I have singled out conclusion 34 in order to highlight what I consider to be conflicting statements from the Panel with regard to Precinct 3. The conclusion states:

> Precinct 3 is broadly suitable for the proposed activities, but the form and extent of activities will need to be subject to a planning permit.

On the other hand the Panel had previously stated:

> We feel obliged to record our view that Precinct 3 may not be the most suitable location for the proposed activities. ….. In our view, the creation of a relatively isolated commercial area is not an ideal planning outcome. – (p. 51 September 2006 Directions Report)

I find it rather extraordinary that the Panel was so willing to compromise its principles in this way.

Coastal Recession

The Panel Report discusses the issue of coastal recession under section 6.7 and I would draw attention to two rather curious statements. The first is to be found on page 51 of the report where it states: 'If coastal recession is an issue it is because of the potential impact of the coast on this development, not the impact of this development on the coast.' The second is in the Panel's rejection of an assumption that implies future action by future generations. It has been expressed in a rather convoluted way, but the Panel is

rejecting the assumption that: 'there will be no public response to preserve the dune system and the Great Ocean Road by protection works or beach renourishment' [along Mounts Bay].

As I have pointed out in discussing the sustainability of the development in Chapter 4, this is hardly the essence of sustainable development. The Panel is quite prepared to commit future generations to protection works to maintain the dune system and the Great Ocean Road in its current alignment along Mounts Bay. Finally, conclusion 23 states: 'The proposal will not increase coastal recession and is not directly exposed to immediate threats from coastal recession.' I could hardly agree more, but what about future threats? This aspect will be presented in more detail in the following chapter.

In the same section, the Panel Report makes reference to the effect of sea level rise on coastal recession and states:

> Our attention was drawn [by the Western Coastal Board] to the Bruun Rule. The Bruun rule does not nominate a ratio for coastal recession to sea level rise, but rather hypothesises that the rate of shoreline retreat is directly proportional to the rate of sea level rise. It follows that the ratio of future shoreline retreat rate to present day shoreline retreat rate (the shoreline retreat rate multiplier) will be the same as the ratio of future sea level rise rate to present day sea level rise rate.

The report goes on to say:

> It is one thing to be cautious, but to suggest, as the Western Coastal Board does in a copy of a letter sent to us, that a 1m rise in sea level could result in a 100-150m retreat in coast in this location is without any basis. The Board's letter seems to confuse the Bruun Rule with a sometimes quoted 'rule of thumb' that is, as far as we can tell, without foundation and undermines the credibility of the Board.

In researching aspects of sea level rise and coastal recession, I came across several papers that made reference to the Bruun Rule and my

study of it in the paper by Carley, J.,[3] et al has resulted in a completely contrary view to that of the Panel. Put simply, the Bruun Rule does result in a simple ratio for coastal recession to sea level rise. A closer examination is warranted since it is highly likely that the vulnerability of the coastline to the effects of climate change would have been critical to the outcome of the *Great Ocean Green* development.

The Panel is wrong with regard to two statements and clearly it is the Panel who did not understand the Bruun Rule. The very essence of the Bruun rule is that it is a direct ratio of coastal recession to sea level rise and the rule itself has resulted in a 'rule of thumb' that is often applied. Rather than undermine the credibility of the Western Coastal Board as they assert, the Panel's statements undermine their credibility. I shall explain. The Bruun rule assumes that a beach has established an equilibrium condition with a particular sea level. If the sea level rises it assumes that the equilibrium condition will re-establish itself, primarily extending the beach profile upward and inwards away from the sea. It is basically looking at the slope of the beach and is expressed as:

$$R = r X / (h+d_c)$$

where R = horizontal recession distance
r = sea level rise
X = horizontal distance between h and dc
h = active dune/berm height
d_c = profile depth closure

While a diagram would help it is not necessary to illustrate the point and further details can be found in the reference. Suffice to say that $(h+ d_c)$ is a vertical distance and X is a horizontal distance. Put simply $(h+ d_c)$ to X is a gradient reflecting the slope of the beach, for example 1 to 50, so that R would be 50 times the sea level rise.

For a given beach, data has to be collected and results have shown that there is a wide scatter in the results for the Bruun Rule factor. The rule has been widely criticised and is often regarded as a best estimate, where for most exposed beaches the factor is

between 50 and 100. However, in the absence of any other analysis and data (and surely for planning purposes looking perhaps 50 years ahead) it is better than ignoring it altogether. The worst that can be said about the Western Coastal Board in this instance is that perhaps they were a little over zealous in suggesting an upper limit of 150m recession for a one metre rise in sea level. It is also worth noting that the Western Coastal Board has one full time executive officer and voluntary board members and is doubtless under-funded for the task it is expected to undertake. As I explore in more detail in Chapter 11, this is one of the problems with strategic planning in Victoria.

Council's Response to the Panel Report

Before leaving this chapter a comment needs to be made on Council's response on receiving the Panel's report on *Amendment C29*. Clearly what follows is part of the planning process and the comments are drawn from the Council document, *Great Ocean Green, Apollo Bay Consideration of Panel Report & Officer Assessment, October 2007* [4]. I believe it is useful to quote from the Introduction that states:

> The purpose of this report is to:
> - Form the basis of Council's consideration of the Panel report as required by section 27(1) of the *Planning and Environment Act 1987*.
> - Provide a critical review of each section of the Panel report.
> - Provide a critical review of each conclusion and recommendation contained in the Panel report.
> - Identify concerns raised by Council in submission to the Panel hearing and review whether these concerns have been addressed by the Panel and if not, any implications.

- Conclude by providing advice to Council as to any additional information and/or modifications to the proposed planning provisions required before making a decision about the amendment; or if no additional information is required, provide a recommendation to adopt, adopt with changes or abandon the amendment.

The report then takes the form of mirroring the Panel Report by going through each of the chapters and most of the chapter sections, with repetition of the major points, a statement of the Panel conclusion to that section and then the Officer's comment. Of approximately 52 comments, by far the most common was a bland 'agreed', followed by an 'agreed' with a limited further statement. There were only two 'disagreed' then an explanation. I do not want to suggest that this, in itself, is improper. However, my experience with the whole exercise, as I pointed out earlier in this chapter, is that the Council and its Officers were completely accommodating with both the Panel and the developer. At any time when the Council had expressed a contrary view, that view was later overturned. The most striking of these was of course the 'no development south and east of the Barham Valley Road.' The review was of the conclusions and recommendations contained within the Panel report rather than the point listed conclusions and recommendations of section 11 of the report. Not that this makes any significant difference, since section 11 can be seen as a summary.

One of the 'agreed' comments was in relation to the supply of residential land. The Officer's added a rider to which said in part:

> Specifically insert an additional decision guideline into clause 3 of the *Schedule* to the *CDZ [comprehensive development zone]* that 'Whether the staging of the proposed subdivision is consistent with residential growth scenarios envisaged by the *Apollo Bay Structure Plan*.'

I mention this, since while staging of the various development proposals for Apollo Bay was always a position of Council, it was

neatly overturned by legal counsel for the developer of *Great Ocean Green* at the time of the C55 Panel Hearing. That planning panel simply accepted the argument against staging.

The two 'disagree' comments are worthy of some examination. The first of these came up under section 6.8.1 on the subject of storm tides where the Panel had concluded:

> The risks associated with severe changes to land form from storm tides are not sufficient reason to reject the development.

The Officer's replied with: 'Disagree – in part – but the issue has been resolved…,' and went on to acknowledge that ultimately 'hard engineering' solutions would be introduced to protect the beach, the dunes and the Great Ocean Road in its current alignment. As I have pointed out, this is not sustainable development and violates the intergenerational principle of sustainability. Council is fully complicit with the Panel in this regard and I find this particularly galling when the responsible department calls itself the Department of Sustainable Planning and Development.

The second disagreement came up with the Panel statement that a height limit of 8.5 metres is appropriate for all residential areas. The Officers suggested that one storey and 60 per cent building site coverage apply to residential development on the land between the Barham River and the Great Ocean Road. This is on the lowest land on the subject site and also is in the region of the supposed 'green break' between Apollo Bay and Marengo. In the event it was agreed that here the height limit would be 4.5 metres and, in an attempt to meet the 'green break', trees would be planted to screen the housing from the Great Ocean Road. Slightly tongue in cheek, I subsequently suggested that the limitations would make it hard for the salesperson. 'You are asking someone to buy on a flood plain within 400 metres of the sea, restricting the options to one storey and telling them the houses will be screened so they can't be seen. If they can't be seen, they can't see out either!'

On a more serious note I would be highly critical of the failure by any party to pursue the question of financial viability. Although at the time of writing the world is well aware of the economic crisis, my arguments have nothing to do with that. To set the scene I need to draw particular attention to *Section 6.5: Site Capability and Geotechnical Issues* of the Officer's report. The report makes a clear reference to Council's reliance on the reports prepared for Council by GHD dated May 2004 and August 2004. It goes on to state that 'it is necessary for Council to consider the advice of GHD regarding matters that must be resolved prior to determining the rezoning…' However there is no reference at all to the GHD recommendation that I have raised earlier in this Chapter; that was:

> ..it is considered prudent for the Colac Otway Shire to seek assurances from the developer prior to any consideration for rezoning that such issues [geotechnical difficulties] will not cause the abandonment of the proposed development for economic reasons.

Of course all this ties in with my strong assertion that the financial viability of the project must be questioned and takes us back to Colac Otway Shire Council's closing submission to the June 2006 panel hearing where the presenting Officer raised this very question. I am of the opinion that at least two points of submission by Council have been conveniently overlooked with regard to the fourth bullet point above in the purpose of the report. That was to identify concerns that were not addressed. During the long saga of this amendment there have been several staff changes. (The Officer who made that closing submission and questioned the financial viability in June 2006, resigned as did the then General Manager of the Planning Department, prior to the release of the C29 Panel report.)

Cheerfully ignoring financial viability, the report on this section simply agrees with the Panel conclusion noting that outstanding issues have been resolved either through the Panel process or in the required management plans. In commenting on

the requirement that the Land Management Plan must include details of how the fill for the housing pods will be engineered to ensure 'maximum settlement with time does not exceed 5cm,' the Officers made the observation that the fill is expected to settle up to 100-300mm in the construction phase and that the maximum settlement with time 'refers to settlement after the initial 100-300mm, after construction of dwellings.' It then goes on to suggest that armed with this assurance the foundations for the houses could have been designed to accommodate this 5cm. I certainly would not have wanted to underwrite such a figure.

The final chapter of the Officers Assessment of the Panel Report is *Chapter 12: Council Officer Recommendations,* in which modifications to planning provisions are recommended. For the most part these are some detailed points for alterations to various documents in a relatively minor, but nonetheless important way, that do not raise any particular concern. Two however caught my eye. The first is a repeat of what had already been asserted regarding the 'maximum settlement with time' thing of 5cm. However I shall quote the paragraph to illustrate a point:

> While initial assessment of this issue was that a reference should be made to 'appropriate settlement' or 'Australian Standards', legal advice from Harwood Andrews [presumably a legal firm retained by Council] recommended the clause relating to this matter be unchanged as specifying a 5cm maximum settlement with time enables anyone preparing the engineering specifications to make provision for maximum settlement not exceeding 5cm. With knowledge that maximum settlement will not exceed 5cm, this standard can be provided to those preparing designs for dwellings which will then enable them to accommodate a maximum settlement not exceeding 5cm.

Of course I have already expressed how dubious I am of anyone being able to guarantee this 5cm figure, which is being stated in such a prescriptive manner. Further, I would have preferred an

engineering firm, rather than a legal firm being consulted over this matter. To my mind, planners are more hung up about legal aspects than they are about engineering matters, my own bias notwithstanding. The second clause states:

> In section 4.11 – Residential Design Principles (Precinct 2) – of the *Comprehensive Development Plan*, insert a new General Design requirement that states 'each dwelling requires engineer designed footings or slab that responds to engineering specifications of the residential pod it is on.'

This is not at all surprising but it is highly likely that this necessary requirement would have added at least $20,000 to the cost of a residence. In a competitive market where other golf course/ housing estates are available, surely this was an important factor.

A Reflection on Sustainability

If I were to be asked, 'What was the central point to your opposition to this project?' I would have to say that it is an example of unsustainable development. Having explored the entire planning process and examined the conclusions of this project, it is timely to go back to the question of sustainability using the guidelines as presented in Chapter 4. There, largely based on the book by Tor Hundloe[5], the three 'e's' of sustainability; ethics, ecology and economics were presented along with the five principles of sustainability. Ethics is a difficult topic and is perhaps largely subjective. I could argue that it is unethical to go against the majority in the community using the results of the November 2008 Council Elections as the basis. I could suggest it is unethical to destroy the potential for the flood plain to be restored to a natural state in some other way. But the one issue that comes to mind is the apparent disregard for the Garretts and their right to enjoy their retirement on their own land. I say this based on the *Preliminary*

Earthworks Cut and Fill Scheme which showed an intention to ignore the fact that their private property was not part of the re-zoning. I am not sure whether or not this is an ethical issue, but I have always found it incongruous that, in the spacious environment we find ourselves in, land has to be reclaimed from a river flat.

To my mind there is an overlap between ethics and ecology. I guess I would always be arguing, 'Let's get those important parts of the environment back to where they were to undo the mistakes of the past.' If we were to be faced with the possibility of releasing the river flats for farming purposes (and assuming they had remained untouched all these years) in this 21st century, I would suggest it would never happen. Having said that, of all the requirements of sustainability, perhaps ecological would have been best met.

It is in the field of economics that the *Great Ocean Green* project just doesn't stack up. Compared to alternatives and its market competitors I could never see the project as a viable one. It is clear to me that the developer had recognised this to a limited extent in the massive amount of excavations proposed on the site; primarily I would suggest, in order to minimise the costly importation of fill from an unknown source. In the increasingly carbon conscious world, the carbon cost of the project cannot be ignored either.

Having very briefly looked at the three 'e's', it is the violation of the ethical principle of second intergenerational equity – fairness between generations, that strikes me as the most alarming. Here we have a blatant statement that future generations will pick up the pieces to ensure that the site is protected from the ravages of the sea. This is not risk aversion; it is risk acknowledgement and also violates the fifth principal of sustainability, namely: The principle of deliberate risk aversion in decision making, otherwise known as the precautionary principle.

An alternative approach to strategic planning

Having explained at length a long and difficult planning process that has caused much angst to many people and consumed many hours of effort by a large number of people at no small cost, the question that should be asked is: 'Is there an alternative approach that planners could consider?' I would assert that there is and take up the challenge to answer the question in Chapter 11. In the meantime, Chapter 9 takes an in-depth look at climate change, while Chapter 10 explores the balance of the project up to the time of the Planning Minister's decision.

Chapter 8 - References

1 *Australian Rainfall and Runoff – A guide to flood estimation, Ed. in chief D H Pilgrim, Volume One, Reprinted edition 1998, Institution of Engineers, Australia.*

2 Glossop Town Planning Pty Ltd *Great Ocean Comprehensive development plan Barham River flats, Apollo Bay*, February 2008
(Attachment 10 to Agenda, Colac Otway Shire Council Meeting 22 April 2008)

3 Carley, J., Blacka, M., Cox, R., Attwater, C., & Watson, P., *Modelling Coastal Processes and Hazards to Assess Sea Level Rise Impacts for Integration into a Planning Scheme* Inst. Public Works Eng., Aust., Nat., Conf., on Climate Change Coffs Harbour, Aug, 2008: available at:
www.ipwea.org.au/content/navigationmenu/sigs/climatechange

4 Colac Otway (Vic.). *Council. Colac Otway Planning Scheme Proposed Amendment C29 Great Ocean Green, Apollo Bay Consideration of Panel Report & Officer Assessment October 2007 (updated April 2008). Attachment 2 to Agenda Ordinary Council Meeting 22 April, 2008*

5 Hundloe Tor, *From Buddha to Bono – Seeking Sustainability,* JoJo Publishing, 2008?

Chapter 9 – Coastal Recession and Climate Change

This chapter represents something of a departure from the previous ones in so far as I have left the particular for the general, before briefly returning to the main subject of the *Great Ocean Green* development. I have done so because of the importance that I personally place on the topic and in the belief that the generalisation may be of some value. The meticulous reader will find some repetition here but I think it is tolerable in the interests of generality. I do not intend to discuss the science of climate change. For my own part I have found *The Weather Makers* by Tim Flannery[1] and the documentary film, *An inconvenient Truth*, by Al Gore[2] to be most informative. I am simply prepared to accept that there is sufficient evidence that human-induced global warming is real and is changing our climate. What I think is important now is how we prepare to face the reality. To some extent I am also interested to track the changing attitudes and the changing facts around climate change over the last ten years. It may be of value to some future historian.

Australian coasts are under threat of invasion. This time it is not invasion by sea; rather it is invasion from the sea itself. It comes in the form of sea level rise, courtesy of global warming. Coastal communities, individuals and corporations alike have to face up to this challenge. As with any invasion, strategies and tactics are necessary. Attack is not an option and it never was. So what are the options? As any General will tell you:

- withdraw,
- abandon or
- defend.

At first glance it might seem that the first two options are the same thing, but there is a subtle difference. Withdraw to higher ground and take your capital improvements with you or simply abandon the site and leave all behind. To stay and defend might seem to be the obvious thing to do, but it could turn out to be the most costly option and one that is ultimately doomed to failure. Of course circumstances are going to vary from location to location, along with the question of whether it is public, private or corporate coastal sites that are under threat.

Strategic planning guidelines have long recognised the importance of careful planning for coastal communities and their development. The last several decades have seen an explosion of growth in coastal areas particularly in South East Queensland and along the northern coast of NSW. In fact Brisbane has been described as a continuous metropolis extending for 200km from the NSW border to Noosa on the Sunshine Coast. The buoyant economy of these last few decades has supported the development and growth has certainly been seen along Victorian coastlines as well. While some in Victoria may have looked on the northern growth with envy, it is reasonable to suggest that almost continuous strip development along a coastline is not what would be preferred for Victoria. In typical fashion, governments react to these pressures with appropriate bodies set up to inquire into them and advise accordingly. From a planning perspective, Victoria has reacted with the *Victorian Coastal Strategy* and the *Coastal Spaces Report* as well as more specific documents such as *GORRS, 2004* as has been widely discussed in earlier chapters.

We also have the various coastal boards, catchment management authorities, local councils, marine parks and foreshore reserve and management bodies. Quite a collection; all of whom have varying degrees of control, interaction and power in the decision making process related to planning. Alongside these bodies a community can expect to find environmental groups open to public subscription and perhaps with or without some government funding. Among the latter are bodies such as the Marine Coastal Community Network (MCCN) which is Australia

wide and was funded to the level of $550,000 p.a. by the Federal Government. MCCN has been running for 15 years but issue Volume 14, Number 2, 2008 of its magazine, *Waves,* indicated it may be the end of the road since its continued funding was in doubt. The Australia Conservation Foundation (ACF) is another high profile group that is a strong voice for the environment and is prepared to work with the community, business and government to protect, restore and sustain the environment.

What is now emerging, as the impact of climate change is recognised more and more, are adaption strategies. An example is the draft discussion paper *Towards a City of Melbourne Climate Change Adaption Strategy*[3] released by the City of Melbourne in July 2008. Planning authorities have a duty to look ahead and consider impacts on both existing developments and proposed developments.

Coastal Recession

It is important to note that coastal recession is not a new phenomenon. By their very nature coastlines are a dynamic entity, subject to the natural effects of erosion and change that has been going on for millennia. Communities have often had to contend with the instability and impermanence of sand dunes for example, particularly as the pressures of increased population takes its toll. Planning authorities have long had policies on building on sand dunes, although doubtless there have been variations in policy and, correspondingly, varying degrees of success. Storms, cyclonic or otherwise, have always affected beach areas and associated infrastructure even if it has only been on facilities such as surf life saving clubs, not that I am suggesting that these are unimportant.

An interesting study of an experience with private development comes from the NSW coastal town of Byron Bay. Byron Bay is a well known town that is a popular tourist destination and the most easterly point on the Australian mainland. It has experienced rapid growth in recent decades and has, at times, attracted National attention with some forthright planning decisions

to control the growth. Perhaps it is not surprising then that Byron Shire Council is well to the fore on the issue of coastal recession and sea level rise.

Immediately to the north of the town is Belongil Beach on a spit of land with a creek behind and a number of private properties with absolute beach frontage and a degree of seclusion. This has made the area very popular for both residential and holiday accommodation. Presumably a subdivision of the area was approved many years ago and no doubt the initial development was slow. I recall visiting Byron Bay perhaps eight years ago and taking holiday accommodation at Belongil Beach. The access to the property was from the rear while the front of the property had a small semi-tropical garden that ended with an abrupt drop of perhaps 1.5 metres to the beach. The beach was more readily accessed by walking through an adjoining property and scrambling over some large rocks that had been dumped there as a defence against the sea. A walk along the beach showed that a mishmash of defences had been set up on individual properties with a corresponding variation in success at preventing erosion.

Cyclones are not unknown in the area and a particularly severe storm in the 1970's prompted the Byron Shire Council to give serious consideration to the long term future of Belongil Beach even before the threat of global warming and rising sea levels had grabbed National attention. Council policy since 1988 has been for a planned retreat from areas such as Belongil Beach. However apparently vacant land still exists in the original subdivision and Council now has a policy that requires any new homes to be of modular construction with de-mountable units capable of being ready to be transported away within 24 hours. Here we have a classic case of a withdrawal or retreat strategy so that the capital improvement can be taken away. Such an approach is not entirely without precedent; it has been common practice in caravan parks for many years where both caravans and cabins may have to be moved away from flood waters. No doubt a combination of wealth and modern technology will still make it an attractive proposition for development to occur at Belongil Beach in spite of the restrict-

ions and risks.

Not surprising of course is the blame game that starts in a situation like the one at Belongil Beach. In April 2007, residents took legal action against the Council, the essence of which was that Council had failed in its duty of care, to protect their properties from coastal erosion. Matters are proceeding! The debate about protection or defence precedes this legal action largely since the problem has been well known for some time and, as indicated earlier, there has been some attempt to set up defences. However defence in the form of a sea wall needs a coordinated approach essentially with the same barrier extending right along the problematic coastline.

In the case of Belongil Beach, the matter was raised in the NSW Parliament in October 1996 and the following story has been gathered from a parliamentary report. Following further storm damage in May 1996 a development application was presented to Bryon Shire Council for the construction of a sea wall, 260 metres long and 25 metres wide to protect residential properties. While there was considerable community opposition to the proposed sea wall, the Council did not consider it in a timely manner and the application ended up in the Land and Environment Court. The Council then argued that approval of this development would be contrary to the local environment plan, the development control plan and the State Government's coastal policy. Speaking to the matter, The Hon I. Cohen said that he agreed with the Government's stated coastal policy but expressed concern that the policy was not being carried out. Mr Cohen[4] went on to say:

> Currently the Coastal Floodplain and Riverine Resources Directorate of the Department of Land and Water Conservation does not support the Premier's statements [supporting ecologically sustainable development that considers the impacts on the coast.] Though the land to be developed is Crown land, it is expected that its assessment would be treated with the utmost respect and thoroughness. It appears that this is not so. I am concerned about the

> directorate and its power. I am concerned about the financial support that the directorate makes available for projects that may be contrary to government policy. The Belongil seawall is such an issue: the directorate has given support for the project and has the ability to offer a 50 per cent subsidy. What environmental assessments are carried out by the directorate? My concern is that the directorate is nothing more than a bunch of engineers with little regard for environmental consequences.

In his concluding remarks, Mr Cohen referred to a recent court case where the engineer presenting evidence for the developers agreed that the beach, or all the sand on the seaward side of the wall, would disappear possibly in ten years. This agrees with anecdotal evidence that suggests the ultimate outcome of constructing sea walls as a defensive measure, is a resultant loss of the beach. The matter came to the Land and Environment Court in November of 1996 and the court found in favour of the Council and the wall was not built. Following further erosion in 1999, some residents took action and constructed a temporary sea wall, contrary to Council's position of a planned retreat. In 2001, Council undertook interim work to maintain public access to the beach and to reduce the impact of the end effects caused by various rocks walls built by residents. (This advice was provided by the Byron Shire Council in 2008, following an enquiry I made. I am most grateful for the information that confirms my own observations made while holidaying there as mentioned earlier.)

Before leaving the Bryon Bay, Belongil Spit story, it is important to note that climate change and sea level rise was not the primary factor in Council's decision to take the planning strategy that it is pursuing. Belongil Beach is indeed on a spit formed by a creek running behind and parallel to the beach for the most part before the creek enters the sea. However climate change will no doubt exacerbate the situation and the story serves to illustrate some planning options.

Background to Climate Change

The suggestion that the steady accumulation of green house gases in the atmosphere, as a result of human activity, would ultimately affect the climate of the planet has been around for over 100 years. Kunzig and Broecker[5], in their book *Fixing Climate* relate the story of the Swedish physicist and future Nobel Prize winner Svante Arrhenius who in 1895, calculated just how much the earth is warmed by carbon dioxide in the atmosphere. In a public lecture in 1896, Arrhenius explained that a colleague had estimated that at that time the 500 million tons of coal then being burned annually in factories and homes, was raising the CO_2 levels by about one tenth of a per cent per year. Arrhenius was not at all alarmed about this and felt that future generations would be grateful of a more 'genial' climate. It is of interest to note current media reports explain that there will be 'winners and losers' out of climate change and there has been some suggestion that Russia, for example, can see some decided advantages for itself in a warmer world.

The scientific community probably started wider studies in the 1950s and 60s and some current proponents of climate change (notably the former US vice president Al Gore) were certainly studying the problem then. Dr Barry Jones, as Science Minister in the Federal Government, was advising his parliamentary colleagues of the potential risk of climate change back in the 1980s. Books such as Tim Flannery's *The Weather Makers* were published in the 1990s so that there was a gradual growth of public awareness of the issue. The book *Preparing for the Twenty-first Century* by Paul Kennedy[6] has a chapter entitled: 'The dangers to our natural environment.' Written in 1993, the figures on atmospheric CO_2 concentrations are interesting and given as 350ppm (parts per million) then, having risen by about 70ppm during the previous century. Kennedy reports that some scientists were predicting that the carbon dioxide levels would reach 550ppm or even 600ppm by the middle of the 21st century and lead to significant rises in the earth's temperature.

However the wider community remained largely ignorant of the concept until the early years of the 21st century. In Australia, the

hallmark event was the beginning of a prolonged drought, the like of which had not been seen since the turn of the 19th century. While it is true that not everyone has linked the drought to climate change, the connection is certainly debated. In any event, some evidence was in the public eye and water restrictions, usually limited to small communities, hit metropolitan and large regional centres alike. On the world scene, the devastating effects of hurricane *Katrina* on the US City of New Orleans on 26 August 2005 brought more prominence to the climate change debate, since climate change suggested that storms, such as *Katrina*, would increase in both frequency and intensity.

Intergovernmental Panel on Climate Change

Even so, prior to about 2005, few in the general community would have heard of the Intergovernmental Panel on Climate Change (IPCC) and any reports from that panel were buried in the back pages of newspapers. The IPCC was set up in 1988 by the World Meteorological Organisation (WMO) and the United Nations Environment Programme (UNEP). It is largely a coordinating body organising conferences where scientists can discuss the validity of worldwide research into climate change. The results have been a series of reports presented in the years 1990, 1995, 2001 and 2007. Each successive report has received more and more prominence in the daily press, with the most recent one receiving almost daily coverage as interim statements were issued leading up to the final communiqué for the 2007 report.

A brief comment on associated world bodies is appropriate before moving on. The United Nations Framework Convention on Climate Change[7] was an initiative set up to provide for an intergovernmental response to the challenges of climate change. It was adopted in May 1992 and the convention entered into force in 1994 after the requisite number of 50 countries had ratified it. The best known action of the UNFCCC is the Kyoto Protocol[8], adopted in 1997. (Australia became a signatory to the Kyoto Protocol following the election of the Rudd Labour Government in

November 2007.) The central feature of the Kyoto agreement was that it set binding targets for the reduction of greenhouse gas emissions. They amounted to an average of five per cent against 1990 levels over the five year period 2008-2012. There is a general expectation that by 2012, a new international framework will be in place to deliver the stringent reductions in greenhouse gas emissions that the IPCC has strongly urged are so necessary to avoid dangerous climate change. In order to advance this cause an important international convention is scheduled for Copenhagen in late 2009.

While there have been climate skeptics, as each year has passed measured indictors of climate change have either matched or exceeded the levels predicted in earlier reports. This has had the effect of 'raising the bar' of any recommended figures for future planning. For example, around 2006 a recommended planning figure to take account of sea level rise was 500mm; currently a figure of 800mm is widely suggested with the effect of a storm surge to be added to that.

An Australian member of the IPCC's Fourth Assessment Report was Dr Geoff Love, who in 2008 left his position as Director of the Australian Bureau of Meteorology to take up a post as a director of the World Meteorological Organisation. In an interview published in *The Age* (13/9/2008) Dr Love had some telling comments to make concerning the IPCC:

> 'Because it is governments that control the final shape of the documents,' he says, 'and not the scientists, the result is "very conservative". The world is divided into political blocs, and there are a number of governments that are sensitive to all sorts of things in the greenhouse issue, and at the end of the day the IPCC reports are really compromised documents, the lowest common denominator.'

From a planning perspective the most pressing issues of climate change are associated with potential sea level rise and the increased height of storm surges, both affecting the coastline. In many places

coastal recession could also be a problem with the prospect of storms of higher intensity and changing ocean currents. Inundation of both dry and tidal land will obviously be more extensive under sea level rise. Since more extreme weather events are also predicted, flooding in some areas, notable along coastlines, may be expected at unprecedented levels.

While it may be suggested that planning authorities have been slow to react, strategic planning documents reflecting climate change concerns are certainly to be found. Important among these is the *Victorian Coastal Strategy* as discussed in earlier chapters.

The Victorian Coastal Strategy 2008

The Victorian Coastal Strategy was initially released in 1997 and revised in 2002 and 2007. No doubt the impetus came from the rapid growth that many Victorian coastal areas were experiencing and the need to put in place some guidelines to control and offer direction for that growth. Some coastal communities were experiencing unprecedented growth with both increases in residential numbers and pressures from tourism. For example on the question of growth, the *Bass Coast Shire Council Annual Report 2007/08* states:

> The sea change phenomenon continues to have a considerable impact on population growth. Bass Coast is the third fastest growing Local Government Authority in regional Victoria and the eleventh fastest growing in the whole of Victoria. …with an annual growth rate of 1.40% from 2002 to 2007 and 2.35% for the past decade.

The introduction to the *Victorian Coastal Strategy 2008* (p. 6), states:

> This strategy gives direction for planning and managing the impacts of activities on and in the:

- marine environment – includes the near shore marine environment, the seabed and waters out to the state limit or 5.5 kilometres.
- foreshore – or coastal Crown land 200 metres from the high water mark.
- coastal hinterland – on private and Crown land directly influenced by the sea or directly influencing the coastline and land within critical views of the foreshore and nearshore environment.
- Catchments – feeding rivers and drainage systems and including estuaries.

It also suggests that (p.13):

> During this century, it is likely the Victorian Coastline will be impacted by sea level rise and increased frequency and severity of storm events leading to inundation and erosion.

The *VCS*, *2008* identifies three significant issues facing our coast. Namely:

- Climate Change
- Population and growth, and
- Marine ecological integrity

Understandably the main topic under climate change is the question of projected sea level rise. After some discussion and background the report states:

> On the basis of the IPCC report and until national bench marks for coastal vulnerability are established, a policy of planning for sea level rise of not less than 0.8 metres by 2100 should be implemented. This policy should be generally applied for planning and risk management purposes. As new scientific data becomes available, the policy will be refined. - (p.13 *VCS, 2008*)

I have presented the relevant paragraph in full, since I feel that many planners (or developers) simply see a 'sea level rise of 0.8 metres by 2100.' This is not what the strategy is saying. It is interesting to note the change from the *Draft VCS 2007* that used the very weak statement of: '… for planning purposes we will assume a sea level rise of approximately 0.4 to 0.8m by the end of the century.'

Scientific Opinion

Previously accepted figures, also presented in the *VCS, 2008* referred to a sea level rise of 0.59 metres. Unfortunately, the figures keep on increasing, as more and more scientific data becomes available. What I would now suggest was some advanced thinking, was that of Dr James Hansen[9] of NASA's Goddard Institute for Space Studies. In an article entitled *Climate catastrophe* and published in the New Scientist, 28 July 2007, James Hansen explains why he believes a sea level rise of several metres will be a near certainty if greenhouse gas emissions keep increasing unchecked. He also explains why other scientists are reluctant to speak out. Hansen suggests that those scientists who take a more conservative line do better when it comes to attracting the research funds necessary for them to continue their work. In fact Hansen had experienced this very thing himself. His paper makes for very interesting reading and is very much in line with the comments made by Dr Geoff Love with regard to the very conservative nature of IPCC data as I mentioned earlier. The concept of tipping points being reached and positive feedback loops are explained in Tim Flannery's book that I have mentioned. In brief, a tipping point can be reached beyond which very rapid changes take place and effects are amplified by positive feedback accelerating the process. James Hansen asserts that sea level rise should be assessed in metres. In fact he suggests a scenario where the sea level could rise by more than five metres by 2095. Hansen uses the required limits of atmospheric carbon as a

measure of our success or failure to do anything about climate change. To be precise he states:

> The threat of large sea level change is a principle element in my argument that the global community must aim to restrict any further global warming to less than 1°C above the temperature in 2000. This implies a CO_2 limit of about 450ppm or less. Such scenarios require almost immediate changes to get energy and green house gas emissions onto a fundamentally different path.

I shall return to the question of atmospheric CO_2 concentrations shortly but it is worth noting before leaving James Hansen, that in December 2008 he essentially revised the limit downward to 350ppm. This is a figure that has already been exceeded by the accepted value of around 380ppm for late 2009. This information was presented in a Science Brief released by NASA GISS[10] entitled *Target Atmosphere CO_2: Where Should Humanity Aim?* The report opens with the sobering statement: 'Humanity must find a path to reduced atmospheric carbon dioxide to less than the amount in the air today, if climate disasters are to be averted.' It goes on to say: 'The only realistic way to sharply curtail CO_2 emissions is to phase out coal use except where CO_2 is captured and sequestered.'

The question of carbon capture and storage, (CCS) has received considerable attention in Australia as well as overseas. Initially the 'storage' was referred to as geological sequestration, as indeed it is, since the CO_2 is compressed and pumped into a geological formation deemed suitable to receive and retain it. Australia is heavily dependent on coal-fired power generation and is a major exporter of coal. The public perception, in my view, is that there is a very strong coal lobby influencing the Government decisions on climate change action. At least Australia seems to have taken the initiative with CCS and in April 2008 there were wide spread media reports of the opening of a demonstration plant, to carryout geo-sequestration in the Otway Basin of Victoria. Known as, the Cooperative Research Centre for Greenhouse Gas

Technologies[11] (CO2CRC), the project has both widespread industry and government support. The CO_2 in this case is being taken from the production wells of an off shore gas field near Port Campbell; a relatively easy capture compared to that which would be required at an existing coal-fired power station.

In May of 2009 my attention was drawn to a media report of seven Australian scientists who were pursuing Hansen's line on coal use, but putting the case even more forcefully. (Two of the seven were lead authors in the IPCC Fourth Assessment Report.) They had written to all the coal-fired power stations in Australia urging that 'genuine action on climate change will require that existing coal-fired power stations cease to operate in the near future.' I have included the full text of the letter in a box at the end of the chapter, since I consider it to be a snapshot of scientific opinion of the time. I might suggest that it will achieve little in the way of action, at least in the immediate future, mores the pity.

Hansen's position of sea level in metres seems to have received support in a press release from an *International Scientific Congress on Climate Change*[12] held in Copenhagen 10-12 March, 2009. Headed, '*Rising sea levels set to have major impacts around the world',* the report quotes Dr John Church, of the Centre for Australian Weather and Climate Research, Hobart, as saying: 'Unless we undertake urgent and significant mitigation actions, the climate could cross a threshold during the 21st century committing the world to a sea level rise of metres.'

The report goes on to explain that in the IPCC Fourth Assessment Report the projected sea level rise was of 180mm – 590mm, but with a rider that clearly stated that not all factors contributing to sea level rise could be calculated at that time. The more recent modelling has included the loss of ice from the Antarctic and Greenland Ice Sheets which has accelerated over the last decade. It is little wonder then that the *VCS, 2008*, in providing guidance to planners on sea level rise, included the statement, 'As new scientific data becomes available, the policy will be refined.'

The question is where does this leave the planners? Expressed rather roughly, in the space of perhaps three years, figures for sea level rise have gone from 0.4m to 0.8m to over one metre. Where might that figure be in just ten years time? Clearly, for coastal areas the most pressing issue with regard to climate change is a predicted sea level rise. Coastal planners and managers could well do with a positive and clear direction as what should be built into their planning. The consequences of making the wrong call now could be very dramatic in 50 to 100 years time. The consequences of a very conservative approach now, proved to be too conservative, would not be particularly significant and would only result in an increased coastal 'foreshore' being left undisturbed. What would be so difficult in recommending a figure of say 5 metres sea level rise for any new development projects in coastal areas? Alternatively this could be expressed as 'no new development on land below 5m AHD.'

The other aspect of climate change that goes hand in hand with sea level rise is the effect of a storm surge. Climate scientists also predict an increase in the frequency and the severity of storms. The *Draft VCS 2007* reported that: 'After assessing the Gippsland coastline the CSIRO predicted that a 1 in 100 year extreme sea level or storm event could occur around every five years by 2070.' Clearly a revised 1 in 100 year event would then be more substantial than that and affect design criteria for coastal infrastructure.

The *VCS, 2008* promotes a hierarchy of principles (p. 21) that underpins the strategy, moving from one to four as follows:

1. Provide for the protection of significant environmental and cultural features
2. Undertake integrated planning and provide clear direction for the future
3. Ensure the sustainable use of natural coastal resources, [and] when the above principles have been considered and addressed:
4. Ensure development on the coast is located within existing modified and resilient environments where the

demand for development is evident and the impact can be managed.

Of course the document expands on each of these principles and they are presented here simply to give an indication of the approach taken in the strategy. One of the immediate problems that arise is that while the principles are fairly clear it is the interpretation of them that is important. Unfortunately, as I have repeatedly stated, judgment as to whether or not a principle has been met is largely subjective. As an example of this I would cite principle 4 which ultimately led to a statement about growth in Apollo Bay, namely: 'Moderate Growth Capacity: Some growth potential beyond existing urban zoned land or through infill but within defined settlement boundaries.'

What is meant by 'moderate growth'? Obviously planners and managers have to make a decision and in the case of Apollo Bay and *Great Ocean Green* this was done with an outcome that would have almost doubled the size of the town. I do not call this 'moderate growth.'

Gippsland Coastal Board v South Gippsland Shire Council

In May 2008 an action was brought before the Victorian Civil and Administrative Tribunal, (VCAT) by the Gippsland Coastal Board against a decision of the South Gippsland Shire to issue planning permits for dwellings in a farming zone close to the coast. The land is subject to flooding and likely inundation due to sea level rise as a result of climate change. VCAT found in favour of the Gippsland Coastal Board and concluded that the decisions of the responsible authority should be set aside and no permits should be granted. In a summary of the decision some remarks were made that could be taken as some general guidelines for future planning. However, it should be noted that VCAT is not a planning panel.

- The Panel concluded that sea level rise and risk of coastal inundation are relevant matters to consider in appropriate circumstances.
- The Panel accepted the general consensus that some level of climate change will result in extreme weather conditions beyond the historical record that planners and others rely on in assessing future potential impact.
- The Panel applied the precautionary principle to find that increases in the severity of storm events coupled with rising sea levels create a reasonably foreseeable risk of inundation of the subject land and the proposed dwellings, which is unacceptable.

In the light of this decision, a few comments can be made with respect to the *Great Ocean Green* development in Apollo Bay, assuming that it had been approved by the Minister. Firstly there would have been no question of an inappropriate zone and the subject site would have been within coastal settlement boundaries also assuming that that was confirmed in *Planning Amendment C55*. Secondly, while much of the subject site was land subject to inundation, the proposal called for the housing sites to be built up with earth fill and to subsequently have floor levels 600mm above design flood level. Of course this begs the question as to what the design flood level is! (Or even what it might have been at the time of construction.)

Of some further relevance is the manner in which the C29 (*Great Ocean Green*) Panel used the precautionary principle. In essence the argument the Panel used was that if the risks were identified and steps taken to manage those risks then the project should go ahead. I would argue that they were shooting at a moving target or that the goal posts are being constantly shifted. As mentioned earlier, even in the time of the Panel Hearings the allowance for sea level rise had gone from 500mm to 800mm.

The Communities Response to Climate Change

I have already commented on the rapid increase in the level of awareness in the community's consciousness on the threat of climate change, probably since some time in 2006. While sceptics remain, I think it is reasonable to assume that the community accepts the reality. What remains as the major difficulty however, is what anyone is really prepared to do about it. I am not talking about the many individuals and groups who are actively involved and passionate about changing the way we live. Rather I am talking about the majority, as far as it can be assessed, whose views are reflected in the actions of our political leaders. In writing this I am reminded that the world has experienced what many have described as the greatest global economic collapse since the Great Depression in the first half of last century. However I want to put that to one side to go back to the years immediately beforehand when prosperity seemed assured.

Economists prepared reports which to my mind said, 'You can have your cake and eat it too!' In other words we could continue with economic growth while moving from a carbon based economy to one that was less threatening to the environment. Probably the most notable of these was what has become known as *The Stern Review.* More correctly it is *The Stern Review on the Economics of Climate Change*, by economist Lord Stern[13] of Brentford prepared for the British Government and released in October 2006. The purpose of the review was to assess the nature of the economic challenges of climate change and how they could be met, both in the UK and globally.

In essence the review argued that an expenditure of one per cent of global gross domestic product (GDP) per annum should be invested to avoid the worst effects of climate change. Failure to do so, the review asserted, could risk up to a twenty per cent reduction in global GDP and lead to the greatest market failure ever seen. In June 2008, Stern increased the estimate to 2 per cent of GDP to

allow for the accelerating effects of climate change. The Stern Review received widespread media coverage and while it was broadly accepted it was not without its critics. In Australia, the Federal Government commissioned its own economic review of the likely impact of climate change. The study was carried out by an economist, Professor Ross Garnaut[14], with a series of reports, known collectively as the *Garnaut Climate Change Review Reports* and released throughout 2008 culminating in the final report of 30 September 2008. My consideration of his report has come from a presentation –*Summary of the Garnaut Climate Change Review Final Report.*

Garnaut acknowledges human induced climate change pointing out that, since the start of the Industrial Revolution, green house gas emissions have been above the natural rate of removal through chemical destruction and the carbon cycle resulting in an accumulation in the atmosphere. He states that there is a risk of damaging climate change and the mitigation of the effects will involve major early change to established economic structure. While the costs of change are considerable they are manageable and would be based on an emissions trading scheme – a carbon cost. The report asserts that Australia could be a low emissions economy by 2050 consistent with continued strong growth in material living standards. Garnaut points out that the long time frames involved in addressing climate change, 'create a special challenge requiring us to measure how we value the welfare of future generations relative to our own.' I find this to be a particularly relevant comment since it reflects one of the five principles of sustainability as discussed in Chapter 4.

The threat level of global warming seems to be measured in terms of global mean temperature rise with most scientists suggesting this must be limited to not more than 2 degrees Celsius in order to avoid dangerous climate change. The fact that there is a level of uncertainty in the relationship between temperature rise and increasing green house gas concentrations notwithstanding, many reports suggest that an objective in mitigation, should be a target level of GHG in the atmosphere to be reached at some stage (say by

2050). Broadly speaking, the *Garnaut Report* looks at the likely outcome from three scenarios, namely: no mitigation and then two possible figures for the reduction of emissions. The first figure is to the level of 550ppm, and the second to 450ppm of carbon dioxide equivalent of GHG in the atmosphere. These quantities need a little explanation since they recognise that there are GHG's other than carbon dioxide. As a result Garnaut has decided to express all GHG emissions in terms of the equivalent amount of CO_2. Obviously these figures are higher than they would be if expressed simply in terms of the CO_2 component alone. Unfortunately many press reports have failed to see the subtle point here and simply report Garnaut's figure as 450 and 550ppm of CO_2. Scientists have tended to report target figures for CO_2 alone so it would be useful to be able to express a relationship between CO_2 and CO_2 equivalent figures. The graph of Figure 9.1 shows the predicted temperature rise with time under the three Garnaut scenarios with the dotted lines indicating a range for error. Even under the best scenario it is clearly likely that a two degree rise in temperature will be reached around 2050.

Both the Stern and Garnaut reviews received widespread media coverage and, while broadly accepted, neither was without criticism. In the broad sense what was at issue was the extent to which governments should be prepared to reduce green house gas emissions and how this could be achieved within the framework of a stable economy. I have included a brief reference to these economic reviews since I regard them as significant documents, amongst those that have promoted public awareness to climate change. I am not an economist and I am in no position to comment on their economic validity. However, what I have observed from a brief look firstly at texts, then scientific papers, then government sponsored studies is that while they are collectively urging action on climate change little is actually being done. With some notable exceptions, governments seem to be jockeying for positions to maintain the status quo and minimise their commitment to a reduction to greenhouse gas emissions, against the wishes of the scientific community.

In discussing emissions reduction proposed by governments, two timelines come up in all the reports and studies; these are reductions to be achieved by 2020 and those to be achieved by 2050. Broadly,

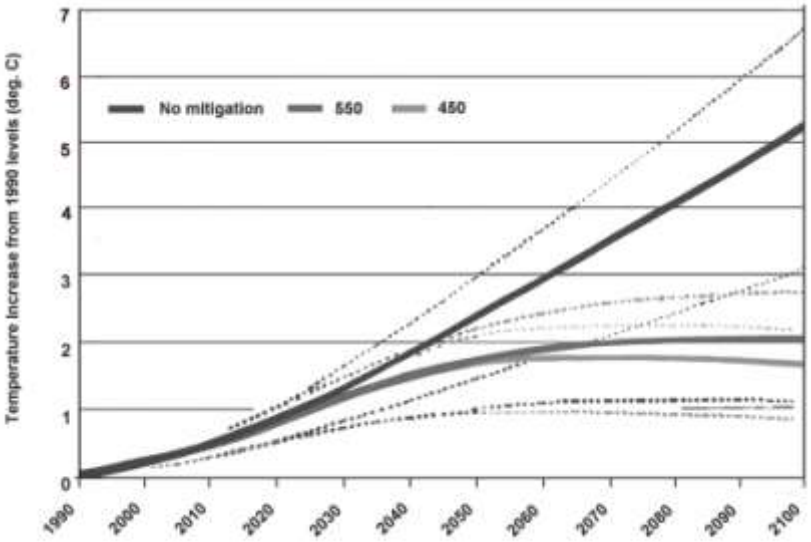

Figure 9.1: Temperature Increases above 1990 levels for the three emissions cases -
(Fig. 4.5 Summary presentation: The Garnaut Climate Change Review Final Report, 2008)

figures for 2020 have a range from 5 to 40 per cent, while those for 2050 are in the range of 60 to 80 per cent. A second question arises here however; a percentage reduction from what? If we were to take a country's carbon emissions for the year of 1990 (assume it is 1000 units) and say we wanted a 10 per cent reduction on that by 2020 then the carbon emissions target for the year 2020 would be 1000 – 0.1x1000 = 900 units. However if we were to take the carbon emissions for the year 2000, in the absence of mitigation they will have increased by say 2% to 1020 units, now our 10 per

cent reduction by 2020 would leave a target of 1020 – 0.1x1020 = 918 units. This means that our 10 per cent reduction target based on 2000 levels is really only 8.2 per cent. The United Nations has accepted the emissions for the year 1990 as the baseline, while Australia seems determined to hold to a year 2000 baseline.
(April 2009 figures from the US suggest 19% by 2020 below 1990 figures which translates to 30% below 2005 figures)

A brief look past and future

The publication in 1972 of the book, *The Limits to Growth,* [15] created a lot of interest. The book was based on a report for the 'Club of Rome's' project on the predicament of mankind. Broadly speaking the book explored issues of population growth, resources and pollution. It is interesting to read what was written in 1972 on pollution and increasing atmospheric carbon dioxide. The following extract is taken from the book:

> At present about 97 per cent of mankind's industrial energy production comes from fossil fuels. …. When these fuels are burned, they release, among other substances, carbon dioxide (CO_2) into the atmosphere. Currently about 20 billion tons of CO_2 are being released from fossil fuel combustion each year. ….the measured amount of CO_2 in the atmosphere is increasing exponentially, apparently at a rate of about 0.2 per cent per year. Only about one half of the CO_2 released from burning fossil fuels has actually appeared in the atmosphere - the other half has apparently been absorbed, mainly by the surface water of the oceans.

The text is accompanied by a graph showing a model prediction of atmospheric CO_2 starting at approximately 293ppm in 1860 and concluding with 380ppm in 2000. An insert on the graph shows the model verification with values observed from 1958 to 1970 at Mauna Loa, Hawaii. These observations continue today and the figure was 386.6ppm in February 2009 as can be seen in Figure 9.2.

This shows that the model of 1972 was quite accurate in virtually a thirty year prediction. Unabated, in another thirty years from the year 2000, a simple projection of the graph would give a figure somewhere in the range of 600 to 750ppm. These figures are consistent with those suggested by Kennedy[6] and Flannery[1]. The issue of the absorption of CO_2 by the ocean has received recent attention with reports of the oceans becoming more acidic and warmer, with both factors reducing the amount of CO_2 that they can absorb. Kennedy reports that at 700ppm, it is estimated that the average temperature increase would between 1.5° C and 4.5° C. Flannery takes a stronger line and suggests that under those circumstances the temperature rise could be between 3° C and 6° C.

Some brief comments about Figure 9.2 and the CO_2 observations at Mauna Loa should be of interest. The observations were started by Charles Keeling in the 1950's and are maintained by the National Oceanic and Atmospheric Administration[17]. The data can be accessed through the web site:

www.esrl.noaa.gov/gmd/cogg/trends/

Figure 9.2 has been reproduced from that data. The graph shows two curves; one being a seasonal variation of atmospheric CO_2 over each year and the other the seasonally corrected data. To my mind the seasonal variation is quite fascinating; it effectively shows our planet earth 'breathing'. In the northern spring the greening forests take up more CO_2 as a great 'inhalation' causing a fall in the graph, while in the autumn with an absence of greenery a great 'exhalation' occurs causing a rise in the graph. (A more in depth discussion of the Keeling curve is given in the book, *Fixing Climate* [5].) A further and very important point to note about Figure 9.2 is that at first glance it appears to show a steady increase in CO_2 with time. This is deceptive since the exponential nature of the curve cannot be seen over the short five year period. We need to return to the trend over many decades as for example, is seen in a similar graph in *The Limits to Growth*, to see the ever increasing rate. The exponential curve is now so steep that small sections appear linear.

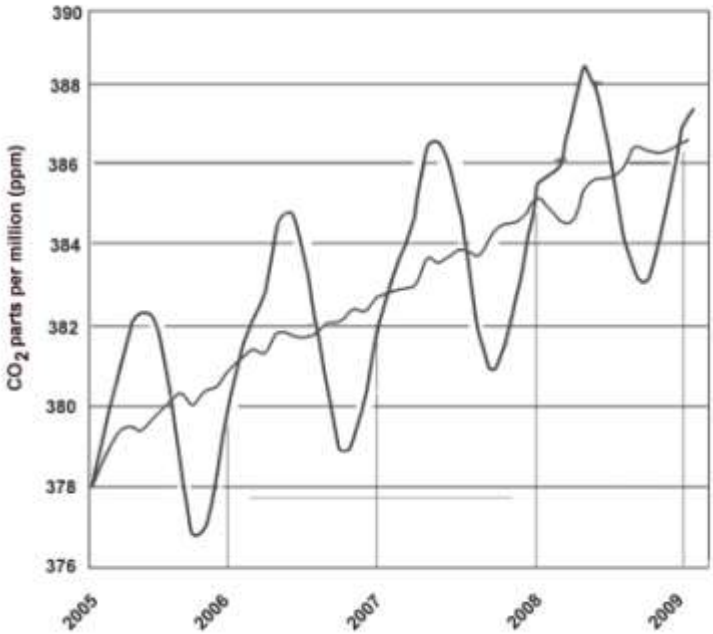

Figure 9.2: Recent Monthly Mean CO_2 at Mauna Loa, Hawaii
(Source: Trends in Atmospheric Carbon Dioxide – Mauna Loa)

Some quotes from the Garnaut Report[14] will serve well to conclude this section:

- Much coastal infrastructure along the early 21st century lines of settlement is likely to be at high risk of damage from storms and flooding associated with sea level rise.
- There are times in the history of humanity when fateful decisions are made. The decision this year [2008] and next on whether to enter a comprehensive global agreement for strong action is one of them. The case for strong mitigation is a conservative one.

- On a balance of probabilities, the failure of our generation on climate change mitigation would lead to consequences that would haunt humanity until the end of time.

My own view is that in spite of all the strident warnings, the political will for decisive action is not present.

Coping with Sea level Rise – The Response from Great Ocean Green

Aware of the likelihood that the recommended allowance for sea level rise will be reviewed during the lifetime of the construction of the project, the planners came up with a scheme to be able to react to this. In my opinion, the scheme was flawed. It is presented here for others to make a judgment. The scheme was incorporated into the *Great Ocean Green Comprehensive Development Plan – Feb 2008* [17]

Building on a flood plain within 500 to 1000 metres of the ocean would seem to be a prospect fraught with danger and difficulty in the face of climate change and sea level rise. Add to this mix the fact that approximately 50 per cent of the site is at or below 2.5 metres AHD, then the whole thing might appear to be downright foolish. Nevertheless, what could be described as a rational and reasoned proposal was put forward and it is interesting to reflect on the approach that was taken by the planners and the planning authorities.

The project was for an integrated 18-hole golf course and housing estate with up to 537 homes. The flood risk was to be mitigated by clumping the houses in four or five precincts. Each precinct would be built up and provide flood protection by having a minimum of 600mm free board above the design flood level to floor level. To give some perspective to the proposal, the area involved in the housing precincts would be about 10 – 15 football fields built up with an average of 3.5 metres of earth fill. A preliminary earth-works plan had put the amount of earthworks at

one million cubic metres, achieved by a cut in the higher ground of about 750,000 cubic metres and then requiring about 250,000 cubic metres of imported fill – all for a yield of 537 house lots.

The most vexing question in all of this is what is the design flood level? Is it the figure demonstrated to work with the flood modelling at the time of the planning panel hearing? Is it the figure at the time of the final design perhaps some years later? What figure should be used to allow for climate change within the 50 to 100 year life of the development? Of course climate change had been considered in the planning to date, but is the accepted figure for sea level rise in 2008 still going to be the same in ten or twenty years time? Already, even over the Panel sessions from June 2006 to April 2007 the allowance for sea level rise went from 500mm to 800mm in the flood modelling that was presented at the hearings. A project of this size ($200m) would have taken years in the detailed design phase and it probably would have been built in a series of stages. It would not have been hard to see ten or fifteen years going by before the last stage was built.

The prospect of this time effect was built into the *Comprehensive Development Plan*[17] and an associated schedule. This latter document was to be part of the *Colac Otway Planning Scheme* and is referred to as *Schedule1*[18] *to the Comprehensive Development Zone* with a subheading *Great Ocean Green Development Plan.* The first point to note is that there was a requirement for the development to commence within 10 years of the date of approval of the *Comprehensive Development Zone (CDZ1).* Secondly, under the heading *Subdivision* (which would have required a permit) is the following statement:

> Any permit for subdivision which creates residential lots shall contain a condition that where any works for any subdivision stage will commence greater than 2 years after the date of certification of the plan of subdivision for the corresponding stage, then prior to the commencement of such works the permit holder must demonstrate to the satisfaction of the Corangamite Catchment Management Authority and the

> Responsible Authority that the proposed subdivision can appropriately proceed having regard to the forecast impacts of climate change.

The phrase 'to the forecast impacts of climate change' is repeated four times in other paragraphs of the *Schedule*. In a private discussion, the General Manager of Planning at the Colac Otway Shire advised me that the *Schedule* was written in a manner that would require the development to respond to changing conditions such as a variation in the recommended figure as an allowance for sea level rise. Personally, although I am not a lawyer, I could see disputes arising over the conditions of the schedule in this regard. For example, what 'forecast impacts of climate change' are we talking about? Is it the forecast as of the date of application for a permit? And whose forecast are we to depend on? I have little doubt that as the years go by, each successive *Victorian Coastal Strategy* that is released will have a revised figure for sea level rise, but that document was not written into the *Schedule*.

In the *Great Ocean Green Comprehensive Development Plan* itself, under *4.5 Flood Plain and Inundation Management – Objectives* (p. 24) it states:
'To ensure that the development responds to the forecast impacts of climate change.' So that now the *Plan* and the *Schedule* are linked in this rather tenuous way to the 'forecast impacts of climate change.'

I would now like to consider the following scenario that I could see as having been quite feasible, had the project gone ahead. Day one; the developer applies for a subdivision permit for stages, say 1, 2, 3 and 4. Everything is in order and work commences. Two years go by and work has not started on stages 3 and 4, but stage 1 and 2 are complete. According to the *Schedule* the developer must now again demonstrate that the work will cope with the impact of climate change. However the forecast figure for sea level rise is now 1.5 metres, not 800 mm as it was two years earlier. So the earth works for stages 3 and 4 are built up even higher than they were for stages 1 and 2. What about the fate of stages 1 and 2?

Now completed and based on a lower predicted sea level rise, how can they cope? Surely we have an irrational program of development here.

Sound logic would have done one of two things; not allow the project in the first place or pick a figure with a margin for error on sea level rise to be used from the start; say 2.5 metres. Of course my latter figure would have made the whole project uneconomic right at the outset.

Coastal Recession at the Beaches of Apollo Bay

Sand movements in the Apollo Bay area have received attention since the development of the harbour with its associated breakwater in the 1950s. For most of the time since then it has been necessary to dredge the entrance to the harbour in order to keep it open. Sand movement and coastal recession has also been observed particularly along the beach at Mounts Bay. Between Apollo Bay and Marengo the Great Ocean Road runs along a primary sand dune immediately behind the beach of Mounts Bay. There has been a history of movement of the vegetation line, basically at the toe of the sand dune on the beach side, as recorded by aerial photography, since 1942. This movement is variable along the approximate 1.5km of the beach so that it is difficult to generalise. However there is one location where significant erosion occurred in the winter of 2004 and this has left the edge of the pavement of the Great Ocean Road as little as 13 metres from the top of the dune. It should be noted that the primary cause of this erosion was the storm water runoff from the carpark and the Great Ocean Road.

At the Marengo end of the beach, between 1942 and 1952 the vegetation line receded 20m, but recovered by 10m in the period to 1986. It remained static from 1986 to 1997 and from then to 2004 it eroded 1.5m. A more general picture of the movement (and perhaps the significance of the current loss to the dune) is given by

the fact that in the 1960s there was sufficient width between the edge of the road pavement and the top of the dune for camping to take place there. Indeed there was a toilet block sited seaward of the existing block about half way along the beach. It takes some imagination now to appreciate where the toilet block might have been, although a recent photograph shows one of the bluestone foundation blocks embedded in the eroded face of the dune.

In August 2005 the *Apollo Bay Sand Study* [19]*, Final Report, (Sand Study)* was released. It was prepared by Coastal Engineering Solutions on behalf of the Colac Otway Shire and the Department of Sustainability and Environment. The study covers the harbour and the beaches both to the north (Apollo Bay) and south of the harbour (Mounts Bay). Broadly speaking the study found that sand movements were from the south to the north, particularly with respect to Mounts Bay Beach. In fact some years ago, a groyne was established at Point Bunbury to trap the sand in an attempt to reduce the sand build up at the harbour entrance. Some infrastructure associated with that is now buried under sand and the harbour entrance still requires dredging. The Point Bunbury 'sand trap' does however provide a source of sand for beach nourishment as required along stretches of beach elsewhere.

The *Sand Study* had the primary interest of identifying and assessing the most effective and sustainable solution to the problem of sand build up at the entrance to the Apollo Bay Harbour and to maintaining the beach and primary dune at Mounts Bay. The study area included the Apollo Bay beaches as well.

With regard to the beach and dune problem, fundamentally there are three options available namely:

- Beach nourishment; achieved by returning sand to where it was taken by natural movement. At its simplest level this is by loading trucks (eg. from a sand trap) and carting it back to the beach. This is referred to as 'back passing' of sand.

- Building groynes or breakwaters. The objective here is to interrupt the natural sand movements and retain the sand basically in place.
- The construction of a sea wall.

As a solution to the problem at Mounts Bay, the *Sand Study* has suggested that the initial carting of 80,000 cubic metres of sand could re-establish the beach to the condition it was round 1942. Thereafter about 1500 cubic metres of sand would have to be back passed each year. Taking a long term view (> 50 years) the possibility of having to build a sea wall is not ruled out. However the *Sand Study* points out that experience has shown that while building sea walls is a defensive option for what is behind it, it is usually accompanied by a loss of the beach in front of it. At Mounts Bay the sea wall would have to extend from Marengo to the Barham River.

The next chapter returns directly to the matter of *Great Ocean Green* and *Planning Amendment C29* as its possible future unfolded. In the final chapter, the question of an alternative approach to strategic planning is canvassed.

Letter to Coal-Fired Power Stations, 29 April, 2009

We are writing to you regarding the urgent issue of climate change. We are all closely involved in producing and reviewing climate change science and are extremely concerned about the state of the global climate system.

The warming of the atmosphere, driven by human-induced emissions of greenhouse gases, is already causing unacceptable damage and suffering around the world. Evidence is mounting that climate change is occurring faster than previously predicted and we are perilously close to a number of tipping points which, if passed, would amplify the effects of climate change and make it much more difficult to bring further warming under control. We cannot emphasise enough just how serious the situation has become.

As you will be aware, the burning of coal is the largest contributor to greenhouse gas emissions in Australia, with more than 80% of Australia's electricity coming from coal-fired power stations. Emissions from Australian coal-fired power stations are a small but significant contribution to total global emissions, which are directly causing sea level rise and resulting in impacts such as the flooding of coastal communities. Given the urgent need to reduce greenhouse gas emissions, immediate attention needs to be given to changing the way that we use and produce energy. The British government, recognising the need for these changes, has just announced that no new coal-fired power stations will be built in Britain unless they capture and bury at least 25 per cent of emitted greenhouse gases immediately and 100 per cent by 2025.

Unfortunately, the development of carbon capture and storage technology is not sufficiently advanced and is unlikely to be deployable within the timeframe necessary to cut emissions in order to avoid unacceptable levels of greenhouse gas concentrations and associated warming.

It is our considered view that no new coal-fired power stations, except ones that have ZERO emissions, should be allowed to be commissioned in Australia. Furthermore, we need an urgent program to replace existing coal plants with zero-carbon energy sources and energy efficiency programs as soon as possible.

We understand that this will require a significant social and economic transition that will need to be managed carefully to care for coal sector workers and coal-dependent communities and to meet Australia's energy needs both through the transition and in the longer term. However, given the climate change imperative, this transition needs to proceed with the utmost urgency.

(Box continues next page)

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The unfortunate reality is that genuine action on climate change will require that existing coal-fired power stations cease to operate in the near future. We feel it is vital that you understand this and we are happy to work with you and with governments to begin planning for this transition immediately.

Yours sincerely,

David Karoly Prof., Univ. of Melbourne and Lead Author, IPCC Fourth Assessment Report; Barry Brook Sir Hubert Wilkins Chair of Climate Change, Univ. of Adelaide; Karl Braganza Climate scientist, Melbourne; Matthew England Prof. and Co-Director, Climate Change Research Centre, Univ. of New South Wales; Ann Henderson-Sellers Prof., Macquarie Univ. and immediate past Director of the World Climate Research Programme; Lesley Hughes Prof., Macquarie Univ. and Lead Author, IPCC Fourth Assessment Report; Barrie Pittock Lead Author, IPCC Fourth Assessment Report

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Chapter 10 - The End Game

It really was a waiting game rather than an end game and the play did continue. No one was to know how the Minister and his department would react until it happened. Life had to continue and perhaps there were some moves left to be made. We need to now see how it did play out.

Following the elections of November 2008 and with the end of 2008 in sight, the new Council of the Colac Otway Shire met for the first time. Cr Brian Crook, one of the three Councillors dismissed in December 2007, was elected Mayor and Council considered the two most controversial issues that had beset the previous Council. They were the development of a Joint Use Library (JUL) with the building of a new secondary college in Colac and the *Great Ocean Green* project in Apollo Bay. At its last meeting in November 2008, the previous Council had successfully moved to proceed with the JUL and to submit *Planning Amendment C55*, the *Municipal Strategic Statement* that included the *Apollo Bay Structure Plan*, to the Minister for Planning for final consideration. The latter had implications for *Great Ocean Green* since the *Apollo Bay Structure Plan* supported the project. In any event, as I have mentioned, the Minister had indicated that no decision would be made on *Amendment C29* (*Great Ocean Green*) prior to the submission of *Amendment C55*. This would now be the case as both amendments were before the Minister.

I had written to the Colac Otway Shire Councillors in October 2008, wistfully suggesting that they should not vote on either matter (the JUL and *Amendment C55*) at the November meeting since the Council Elections were upon them. If, as a group of them had suggested, they were so confident that they were right, then they should wait until they were re-elected. Of course my

suggestion was rejected and the important votes were taken. (Only one member of that power group was subsequently re-elected.) Now we had a new Council, with what could be described as a mandate against both previous issues, struggling to know what could be done. Briefly, it can be said that they sought legal advice on what options were open to them. An agreement on the JUL had been signed and *Planning Amendment C55* (as indeed had *Amendments C17* and *C29* much earlier) been submitted to the Minister for Planning. There was some discussion in the local newspapers of the dilemma and it was reported that Council had written to the Planning Minister, Justin Madden, asking that he not sign off on *Amendment C29* pending further investigation by Council, particularly with regard to the *Victorian Coastal Strategy 2008*. Legal advice eventually came through and Council had to acknowledge that the matter was now entirely up to the Minister. My own thoughts, as 2009 rolled by, were perhaps the Minister and his department were awaiting the outcome of what was known as the *Future Coasts Project* of which more will be said shortly.

As an aside, the Planning Department maintains a web site and in particular a section called *Planning Scheme Amendments ONLINE*. Anyone can access this web site and review the progress of all the amendments across the State of Victoria. Of course I was a frequent visitor to the site sometimes waiting nervously to see if 'Finished' had been entered alongside the three amendments I was interested in: *C17*, *C29* and *C55*. For the record, *C17* was 'submitted to the department for approval' in January 2008, *C29* in April 2008 and *C55* in November 2008. How long can the Minister 'sit' on a submission without making a decision? I maintained my vigilance on the issue of 'Ministerial Approval' and kept my limited contacts up to date with what I at least thought was going on. Among these contacts was the Shadow Minister for Planning, Matthew Guy, who maintained his interest and support throughout and always responded to my emails. He was interested enough to have visited Apollo Bay at our invitation and a colleague and I were able to show him the site and discuss the ramifications of the project. I also had contact with the Federal Member for

Corangamite, Darren Cheeseman. I had first met with him in late 2007 just after he had become the new member for Corangamite in the 2007 election. He did act with me in an attempt to seek a meeting with Justin Madden although the meeting did not eventuate. In late March 2009 when I sent an update to Darren Cheeseman, he responded with the advice that he had forwarded my email to Gayle Tierney, the Upper House Member for Western Province in the Victorian Parliament. I contacted Gayle Tierney (who had certainly expressed her reserve-ations about *Great Ocean Green*) and her advice was that the matter of all three *Amendments C17, C29 and C55* was still in the hands of the Department of Planning and Community Development and not actually before the Minister. She agreed to keep me informed. In the meantime other somewhat related events continued to unfold.

Victorian Coastal Strategy 2008 – A Community Information Session

In early April 2009, the Western Coastal Board held a community information session in Apollo Bay in order to present some features of the strategy. (This strategy has been discussed in some detail in earlier chapters.) The presentation was by Lynn Murrell, Chairman of the WCB and Steve Blackley, Executive Officer. Although I was familiar with the strategy, I still found the meeting informative. For instance, it was reported that the Victorian Coastal Council had conducted a market survey and found that 87 per cent of the respondents agreed that there was a need for more research into climate change, while 50 per cent were concerned to preserve the town character of coastal communities. In contrast with the previous strategies, it was asserted that the *VCS, 2008* has a strong implementation section with definitive action plans.

It was also explained that complimentary to this and since the release of the strategy, the Planning Minister had also released *Ministerial Direction 13 Managing Coastal Hazards and the Coastal Impacts of Climate Change.* A Ministerial Direction restructures clauses of the *State Planning Policy*. In this case the direction applies to the re-zoning of non-urban land for urban use or development and applies

to land under 5 metres AHD and within one kilometre of the coastline. It addresses the current and future risks and impacts associated with sea level rise, coastal erosion and waterway flooding. The expected outcome of the directive is that its application would avoid or minimise exposing future developments to coastal hazards. A general practice note was also issued that addressed the following points:

- Locational variability and characteristics need to be understood
- Existing information to inform decision making
- Scale of investigation relative to the value, scale and intensity of the proposal
- Consideration of the design lifespan

Of course listing those points in such a bland way probably simply raises more questions than it answers. However I have included them as an illustration of how the planning process develops over time and I note that briefing sessions, and presumably the practice note itself, have expanded on the points. The meeting also drew my attention to an important note on *Figure 12b: Coastal Settlement Framework*, *(VCS, 2008)* that states:

> The future impacts of climate change (eg sea level rise, storm surges, coastal erosion, flooding and bushfires) will fundamentally determine the shape, size, capacity and viability of existing settlements. Planning Authorities will be required to assess and avoid the future spatial impacts of these risks using the best available information to inform the spatial growth management parameters through the Settlement Planning process. This Growth Management Framework will be reviewed from time to time at the discretion of the Victorian Coastal Council and with future revisions of this Strategy.

Of course all this had occurred, post the consideration of *Planning Amendment C29* and the *Great Ocean Green* development and its

submission to the Minister's Department. Notably however, the directive had been issued at a time when the amendment had not yet been signed off by the Minister. It is interesting to speculate on what the outcome for *Great Ocean Green* might have been, had the amendment been before a planning panel in 2009 rather than 2006. This is not to suggest that the Panel did not consider each of the aspects of the more recent directive. However, under such a directive and in the light of the current *Victorian Coastal Strategy*, these aspects could have weighed more heavily and produced a different outcome from the Panel.

Barwon Water plans for Apollo Bay Water Storage Basin

In the meantime in early 2009 there was a response out of Barwon Water on the issue of the new Apollo Bay Water Storage Basin. They announced that they had decided on a site and that a public information session would be held in Apollo Bay on 18 February 2009. On that occasion, a series of information display panels summarised the need, gave an indication of the extent of the investigations and finally presented the site that was on a farming property immediately adjacent to, and west of the proposed *Great Ocean Green* site. So there we had it, no water storage was to be located on *Great Ocean Green* land; however it would be located on the last working dairy farm in Apollo Bay. There were a number of interesting revelations in the Barwon Water proposal that would have had implications for *Great Ocean Green* had the project gone ahead. A few quotes from a Barwon Water leaflet entitled, *Community Info Bulletin – January 2009* help to introduce those implications:

> Since 2001, Barwon Water has investigated a range of augmentation options [for the Apollo Bay Town Water Supply], including off-stream storage sites, on-stream storage, …. groundwater, recycled water and seawater desalination. In total, 26 options were evaluated.
>
> …The topography and instability of land near Apollo Bay has made locating a suitable site extremely challenging.

> The 250ML storage will complement the existing 125ML basin at Marengo. …. Combined with conservation measures, this will be sufficient to meet demand until 2055. The latest forecasts indicate the permanent residents of Apollo Bay, Marengo and Skenes Creek will increase from 2350 to 3150 by 2055 [this is only 800 in 45 years!]. … the capital cost of the project … is about $14 million.

Also of relevance were some observations from the display panels and comments made by Barwon Water staff at the public information session. Attention was focussed on two sites since the final decision was between them. These were site 8, on the *Great Ocean Green* land at the western boundary and site 3, immediately adjacent to site 8, but further west on Day's Farm. Over both sites from east to west the land rises from around the 4 to 6 metre contour up to the 28-30 metre contour at the extreme western edge of site 3. Beyond that again the land rises up further into the foothills of the Otways. Site 3 has the steeper gradient. Two simple statements by Barwon Water describe the sites as:

> Site 8 Groundwater presence, soft ground, floodplain
> Site 3 Groundwater presence, sloping topography

(I would question the tag of 'floodplain' for site 8 since it is on relatively high ground.) Site 3 was clearly the preferred site even though the project remained 'geotechnically complex, but feasible.' In addition even on this higher ground, Barwon Water acknowledged that potential acid sulphate soils (ASS) were present. That is to say while they remained in anaerobic conditions they were stable but on exposure to oxygen would become acid sulphate soils that Barwon Water would have to manage accordingly. However the design of the basin was modified with respect to the depth of the excavation in order to minimise the risk from ASS. The earthworks would be balanced by excavating on the higher slope and building an embankment up to 10 meters high above the natural surface on the eastern boundary of the site. It was expected that planning and design would be completed by 2011 with

construction to take approximately two years so that the facility would be operational at the end of 2012. It came as no surprise to me, that of course, the planning would involve an amendment to the *Colac Otway Planning Scheme* and another planning panel process.

As I have said, the plans announced by Barwon Water had a number of implications for the *Great Ocean Green* project had it been approved. The first of these related to the abandoned site 8 being in the immediate vicinity of site 3, both sharing a common boundary. The *Preliminary Cut and Fill Schematic Plan* for *Great Ocean Green* showed a cut in the range of 3 to 5 metres below the natural surface over the general area of site 8. We would now have had the extreme case of an embankment being built up on the one hand and, in close proximity to the toe of that embankment, a proposed cut, albeit on an adjoining property. This would have been unsatisfactory from an engineering point of view and would have brought into question the cut on site 8. In a related aspect, *Great Ocean Green* had acknowledged the presence of acid sulphate soils (ASS) and abandoned an early scheme to introduce ornamental lakes in order to avoid excavations that would produce ASS. However it now seemed likely from the comments of Barwon Water that the cuts proposed in the earthworks scheme would have encountered acid sulphate soils.

Whenever the question of the importation of fill onto the site had been raised in the past, the response from *Great Ocean Green* was that fill would be available from the construction of the water storage basin, assuming it was not on their land! With balanced earthworks being proposed in the construction by Barwon Water, no excess fill would be available. Further, if the proposed cuts by *Great Ocean Green* had to be reduced to minimise the impact of ASS, then the imported fill requirements would simply have to be increased. All of this was further compromising the economic viability and the engineering soundness of the *Great Ocean Green* project and adds further weight to the arguments against the project as presented in Chapter 8. It also underscores what I have always regarded as a serious error on the part of the C29 Panel in that there

was no public discussion on the merits or otherwise of the *Preliminary Cut and Fill Schematic Plan.*

The Future Coasts Project

In a response to climate change, the Victorian Government has taken an initiative to demonstrate what the coastline could be like by the year 2100. The *Future Coasts Project*, being managed by the Department of Sustainability and Environment and the Department of Planning and Community Development, is committed to developing a comprehensive climate change vulnerability assessment of the Victorian Coast by the end of 2009.

It is expected that the study will provide appropriate guidance for coastal mangers, local government and other decision makers to meet the challenges presented by climate change to planning in coastal areas. The project has three components. The first involves the science of capturing detailed data of the existing coastline. This involves producing a three dimensional model that is actually in two parts – one land based (topographic) and the other sea based (bathymetric). The 'width' of the model is such that it captures the coast from 10 metres above AHD (Australian Height Datum) to 20 metres below AHD with very high resolution.

The second component involves developing models that simulate storm surges, coastal inundation, wave action and erosion effects (coastal recession). Clearly, armed with such data and the appropriate simulation tools, an assessment can be made of the physical vulnerability of the coastline which is the third component of the study. The DSE is also working with the Department of Planning and Community Development to provide policy principles and adaptation tools. A presentation by Neville Penrose[1] at the Coast to Coast Conference, Darwin, 2008 explained the project in some detail. It was entitled, '*A statewide climate change vulnerability assessment – Victoria's Future Coasts project drawing a line in the sand.'* I was particularly taken by the tag line in this title. While I well recognise it is not to be taken literally, my experience tells me that strategic planning guidelines need to be far more prescriptive than they have been. I would encourage the 'drawing a line in the sand'

particularly in the case of further developments in a low lying coastal area. As I may have stated elsewhere, what real harm is done if the line says 'no new developments on coastal land below 5 metres AHD'.

While the major project continues, some local and regional projects on a smaller scale have been completed with the assistance of the Federal Government and the Department of Climate Change. For example the Gippsland Coastal Board commissioned the CSIRO to model potential storm surge and sea level rise for the Gippsland coast. The results of this and other studies will inform the *Future Coasts Project* as will a *National Coastal Vulnerability Assessment* being undertaken by the Federal Government.

The Public Reserve on the Heathfield Estate

In introducing *Great Ocean Green* in Chapter 2, reference was made to the assortment of land that made up the subject site. One parcel of land in particular was a public reserve held by the Colac Otway Shire on the Heathfield Estate. This 11ha site alongside the Barham River was allocated to the Council as public open space at the time of the development of the low density housing estate. The land is on the flood plain of the river, which forms one boundary, while the opposite boundary is the edge of the house lots backing onto it. Two private properties close off the reserve at either end. The Heathfield Estate was developed in the 1990's and had somewhat of a difficult beginning although it is now considered to be quite successful. Land is still available on the estate. As the *Great Ocean Green* proposal was being put together, it is now clear that the Council was prepared to negotiate over the use of this reserve. There would have been a trade off for other public open space that would become available, particularly along the river, as part of the *Great Ocean Green* development. The plans for *Great Ocean Green* showed that four holes of the 18-hole course would be set out on this 11ha site, one boundary of which conveniently came up against the proposed Precinct 3; the Clubhouse and other facilities site.

A couple of background comments need to be made here. Firstly, the land in question has not been available for public use in

the twenty years or so that it has been in Council's control. It has been intermittently leased for grazing purposes. Secondly, the Apollo Bay Pony Club believed it had an undertaking from the Council that the land would be made available to them. (The club currently uses a small section of foreshore reserve, at the mouth of the Barham River and it has been asked to vacate that site.) Following the 2008 elections one of the actions of the new Council was to call for submissions on the interim use of the public reserve on the Heathfield Estate. This recognised the agreement that Council apparently had with *Great Ocean Green*, but perhaps also underlined the uncertainty of the project. The Council held a public meeting in Apollo Bay to explain the precise nature of the site and discuss its potential use. What emerged from that meeting, in my view, were some facts that I would like to call 'accidental' planning and illustrate the importance of foresight in planning that I would suggest was clearly lacking in this case.

It immediately became obvious that there was no considered access to the reserve. That is, apart from two 3 metre wide 'bridle' paths between the house lots, and one drainage easement. The only feasible solution for vehicle access would be to build a bridge across the river. My question was, 'Why didn't the planners foresee this problem and negotiate appropriate road access?' There was also a related problem. The principle road through the estate is called Ocean Park Drive and runs off the Great Ocean Road at Mounts Bay. This road terminates at a dead end, although any casual observer of its alignment would expect it to continue. It transpired that this might well have been the original plan, but as the developer got into difficulties, the undeveloped western end of the estate was sold off as a single parcel of land in a private sale. Why didn't Council and its planners negotiate in this deal to keep a road reserve? There are two repercussions from this. The first is that access to the estate from the western end is now not possible, leaving entry and exit from the Great Ocean Road as the only option. The second is that any access to the reserve from the western end is also prevented, since a short western boundary now abuts private land. I have raised some questions with the Council

that might lead to one solution although at the time of writing I have had no response. It is my understanding that the original titles to the land on the Barham River Flats, dating back to the 1850's, extended to the midpoint of the river. This is confirmed by no public access to the river bank at the present time, (apart from a small section where crown land applies). It is also my unconfirmed understanding that when a sale of the land takes place, the title is altered so that an appropriate section of the river bank comes into public ownership. If this is correct, could access be provided along the river bank from a point further upstream where a second bridge crosses the Barham River?

The reader might be wondering why I have raised what could be regarded as a relatively minor issue in the overall scheme of things. I believe this example illustrates the importance of town plans and illustrates the difficulties that can arise when such a plan is either not in place or is not kept up to date. I have previously discussed at length the *Apollo Bay Structure Plan 2001*, which was never put into the *Municipal Strategic Statement*, and the *Apollo Bay Structure Plan 2006,* which had now been under consideration since at least 2004. It has now been finalised, essentially by the Planning Minister and presumably his Department, following his decision with respect to *Great Ocean Green.* It is hardly stretching the point to say that that it has taken nearly ten years to get a structure plan for Apollo Bay. I find this quite ironic since I also understand that such plans should be reviewed every five years, or is it three?

April 2009 saw the first anniversary of the Council motion that passed the *C29 Planning Amendment* and forwarded it on so that it had the status of, 'submitted to the department for approval', as reflected in the web site *Planning Scheme Amendments ONLINE.* The local press, *The Colac Herald*, ran a front page story under the headline, 'It's been a year $200-million project waiting on Minister'. The article quoted a spokesperson for *Great Ocean Green* as saying the developers hoped for a decision from the Minister 'shortly'. At a Council meeting on that same day, it was noted: 'that the *C55 Planning Amendment* includes the *Apollo Bay Structure Plan* with the flood prone land in the *Great Ocean Green* proposal identified as a

possible area for residential housing. Council was concerned about the appropriateness of this development in the light of the latest information on climate change…..' A motion was then passed that the Council write to the Planning Minister requesting a meeting between Councillors, the Minister and advisers, seeking resolution of the matter and options to update the amendment.

It should not be forgotten that *Planning Amendment C55*, the *Municipal Strategic Statement*, dealt with a whole range of other matters, not the least bit connected to the vexed issue of *Great Ocean Green*. These other matters, it can be argued, were experiencing unnecessary delays. It was of some interest to me to note that the Urban Property Corporation, *Great Ocean Green* web site, as at May 2009 at least, was last dated March 2008 forecasting the imminent decision of Council to pass the amendment as indeed it did in April 2008. (The web site is now not available.)

In November 2008, the Colac Otway Shire CEO, Ms Tracy Slatter announced her resignation to take up another appointment and in May 2009, the Council appointed Mr Rob Small to the position of CEO. Meanwhile Councillors Stuart Hart and Stephen Hart had asked Phil Lawson and me to review the situation with regard to the C29 Panel's conclusions. We had both indicated our concerns to the Councillors on previous occasions and the matter was highlighted by the Council's most recent decision to contact the Planning Minister. By this time I had written Chapter 8 which I regard as a critical analysis of the Panel's conclusions. Phil, showing his usual tenacity, had continued to work on 'flaws in the flood modelling' as he put it. Along with his records of the Barham River levels and tidal levels at the harbour, he had collected a lot of local data on rainfall records (notably at Tanybryn at the top of the catchment area for the Barham River) flood events and weather maps coinciding with historical floods. We put together a presentation which we gave to the Councillors Hart on 8 May 2009. They were both keen to see that the same presentation should be given to Rob Small as the newly appointed CEO of the Colac Otway Shire. This was done on the evening of 20 May when Rob

Small expressed interest in our arguments that opposed the Panel's conclusions.

On Thursday 14 May it was reported to me that the Planning Minister, Justin Madden, together with others, was on the Barham Valley Road at the site of the *Great Ocean Green* project. A local stopped and talked to him asking if he had time to meet with other locals. The invitation was politely declined. Somewhat fortuitously, Justin Madden stopped for a coffee at the one place that held strong views against the flood plain development. An alert went out to Phil Lawson who was soon able to present himself, armed with some recent sea flood photographs, and speak with the Minister. All good 'grist to the mill', I should have thought.

The Harbour Plans Continue

I have previously made reference to the potential development of the Apollo Bay Harbour and its relative importance to Apollo Bay. Perhaps not surprisingly, there have been numerous plans for development stretching back over nearly twenty years. This is not to say that nothing has been done. In fact there has been considerable expenditure in the last decade which has included a strengthening of the breakwater and reconstruction of the main harbour side berths, the boat ramp and the installation of mooring pontoons. However, what remains as undeveloped is what can be described as the immediate harbour shoreline precinct, and clearly this is a potential development site.

The community has always speculated on what might happen on Point Bunbury if and when the golf course was to be relocated. The more cynical view was that such a magnificent site would be given over to developers for it to be fully exploited. In January 2007 a Harbour Precinct Plan was released for public comment and it caused considerable consternation within the community, as I have mentioned. The major issue seemed to be a new road alignment cutting a swathe through the foreshore (and the golf course) ostensibly to provide a better linkage between the town and the harbour. A second sticking point in the community's eyes was

the introduction of an 80 bedroom five star hotel, right on the harbour.

It is worth digressing slightly here to look at the generality. Governments, in providing community benefits and development, expect to get a return on the investment. A popular approach (from government) is to seek some sort of private investment, in this case perhaps for a lease arrangement on public land to build a private hotel. Of course there are two sides to this argument. Many in the community want to say that it is public land and should remain so with Government having a responsibility to develop it regardless of private equity. Personally, I am usually one to seek a compromise and I think a 'balanced' position should be reached.

The Harbour Plan of 2007 persisted until a review was announced for September 2008, with what was essentially a weekend seminar run by consultants and referred to as *Enquiry by Design.* In the event it was well received by the community, largely since the new road alignment was scrapped and the size of the hotel reduced to 40 rooms. Of course the project is well short of any funding for the estimated $60m cost and the $19m private investment for the hotel. Of relevance to the principle topic of this chapter however, was the fact that various sketch plans were professionally produced over the weekend that showed the retention of the golf course on Point Bunbury. Perhaps the beginnings of some compromise were being reflected here along with a general acknowledgement that it was by no means certain that approval would be given for the *Great Ocean Green* project.

With regard to the *Apollo Bay Structure Plan 2006,* the Harbour Precinct was always an area set aside that would be subject to further consideration and it was also always made clear that this would be the subject of a further amendment to the *Colac Otway Planning Scheme*.

The Decision is Made

I would be less than honest if I didn't say that I had often thought about the circumstances that would surround the release of the final decision on the part of the Planning Minister over the matter of

Great Ocean Green. How would I react? Where would I be and who would inform me? My second guessing would be over. I was out of town for the day and arrived home around 5.00pm and my wife said, 'Have you heard the news?' Taking me completely by surprise, a lot of other possibilities flashed through my mind as I said, 'No'. The next words I heard were: 'The Minister has rejected *Great Ocean Green*.' We had received an email copy of the media release, courtesy of Gayle Tierney's Office, for which I was most grateful. An extract of that release made on 11 June 2009 is as follows:

> Planning Minister Justin Madden today approved an amendment to the [*Colac Otway Planning*] *Scheme* to help manage future growth throughout the municipality, and refused permission for the *Great Ocean Green* development.
>
> 'The Brumby Labor Government is taking action to protect Victoria's environment and tourist attractions while at the same time ensuring we have the balance right so we can continue to create jobs and build even better communities,' Mr Madden said. 'That's why I have rejected the proposal for the *Great Ocean Green* residential and golf course resort development in the Barham River floodplain between Marengo and Apollo Bay. I consider the substantial risk of flooding and the excessive scale of engineering works required for a residential development in this sensitive location, outweighs the potential benefits of the proposal.'
>
> 'The new strategic planning for Apollo Bay allows for residential growth and direction on how to accommodate the anticipated growth in a responsible and environmentally sensitive manner,' Mr Madden said. 'Victoria is experiencing a population boom and it's clear that Apollo Bay is a strategically located coastal settlement with the capacity for growth beyond its current boundaries. That's why I have also approved a further amendment to facilitate the development of an 85 lot residential subdivision known as *Marriners Vue* on the northern perimeter of the Apollo Bay Township. This 21-hectare site is now located within the designated

> settlement boundary for Apollo Bay and the site has been the subject of a series of environmental and geotechnical investigations as well as re-vegetation by the landowners.'

The reaction to the media release was swift with local and regional press reporting the decision and a brief comment in *The Age,* although not in proportion to the spread when the planning panel report, recommending the project should go ahead, was leaked to that paper several years ago. Predictably, the developers cried 'foul' and requested 'Urgent and immediate talks with the Minister,' while the Golf Club committee expressed surprise and dismay.

On the other hand, those of us who had fought this development for so long felt vindicated and to say we were pleased is an understatement. Phil Lawson and I were particularly pleased to see the Minister's statement used the phrase, 'the substantial risk of flooding and the excessive scale of engineering works', in his explanation, since these two aspects were the major points of our opposition.

I cannot claim to know the Minister's thoughts in reaching his conclusion. However I do think that there are a couple of points that can be made in hindsight. Firstly his reasons for rejecting the proposal were based on the information available to the Panel at the time and, most appropriately, not on some information (such as could be expected to come from the *Future Coasts* project or even out of the *Victorian Coastal Strategy 2008*) that has since become available. I would say that to have done otherwise would have been an injustice to the planning process. The fact that more recent information might only lead to an exacerbation of the problems had to be ignored. This does not excuse either the C29 Planning Panel or the Council and particularly the Council Officers for failing to see that they were indeed taking a very significant risk with regard to flooding and that the scale of the engineering work and the difficulty of carrying it out had not been fully explored. Of course they may beg to differ with me, but I believe that I have adequately made my case.

There remains a very important question that needs to be asked in explicit terms and I would put it as bluntly as: 'How is it that such an obviously flawed project received all the approvals, all along the way, right up to the last one on the Minister's desk?' I believe I have answered that in the course of this book. In short, engineering was always going to be the key to this project's success or failure, both in terms of the scale of the works and their technical feasibility. However, the emphasis in the planning process was always on planning and procedure, with scant attention to engineering. At no stage did a Council Engineer express an opinion; my own views were probably downgraded since I was not an expert witness and besides I was a member of the community and likely to express 'passionate and emotional views'. The closest the Panel got to the truth was in citing the Council's own commissioned report from Gutheridge Haskins and Davey that expressed caution with regard to financial viability, given the technical difficulties that the developer might have faced. As I have repeatedly stated that was never pursued. I would say that even if the process didn't actually go through red lights, it certainly went through a number of amber ones. No one has got off lightly in this saga. The developers assert they have lost $2million and the cost to the community and the taxpayer would have to run into the hundreds of thousands of dollars (even though some expenditure would have been recouped in fees and charges) to say nothing of the time and effort expended. Just think of the time Councillors and Council Officers have spent on the project over nearly ten years. Strategic planning, planning panels and Council attitudes all need to be examined in the light of this result. I see some evidence of a stronger line being taken in the more recent strategic planning documents such as the *Victoria Coastal Strategy 2008*, as I have explained earlier. I would urge that the trend continues.

Although I return to this point in Chapter 11, it is clear to me that the three major players were intent on seeing this project go through. They were the controlling group of Councillors, Council Officers and the C29 Planning Panel. This is the underlying weakness in a planning system that allows for site specific amendments.

In my opinion, the closed door, prior negotiations with a developer, and the assurances that must surely be given about the chances of success, line up the outcome as 90-10 in favour of the developer. Thank God the Planning Minister has a final say!

Beyond Great Ocean Green

Of course developments affecting Apollo Bay don't simply stop with a Ministerial decision to end one project. A revised *Apollo Bay Structure Plan* has now emerged with a map that is designated *Apollo Bay, Marengo and Skenes Creek Framework Plan* [2]. It has defined the settlement boundaries and these exclude the Barham River Flats. Immediately adjacent to the settlement boundaries of Apollo Bay and Marengo the region is shaded with a legend that states:

> Protect prominent slopes of the foothills and waterway corridors from intensive development and further subdivision and encourage revegetation.

Of course this includes the entire former *Great Ocean Green* site. More specifically and with direct reference to the lower portion of the Barham River Flats is a box with the phrasing:

> Land with environmental constraints. Potential for recreational tourism use subject to investigation. Maintain the sense of a landscape dominated 'green break' between the road and the river.

The discerning reader will note the irony in all this. We are essentially back to the position that Council had proposed in the *Apollo Bay Structure Plan, 2001* that was never ratified. I can't resist commenting on how the position we have now reached has underlined the arguments of our group submission to the C29 Planning Panel in 2006.

A brief comment on the settlement boundaries shown in the Framework Plan: The southern boundary to the Apollo Bay Township area now follows the natural contour of the limit to an elevated land form before the land drops into the river valley. The

northern boundary to the Marengo settlement area follows in a similar vein and, since it is an elevated portion, now takes in the previously discussed 'Precinct 3' of the 'K Farm'. In other words, what we now have is what one would have expected without the intervention of *Great Ocean Green*. I mention this since I recall reading a guideline on settlement boundaries in one of the planning strategies that suggested that where possible, settlement boundaries should follow 'natural boundaries'. (Unfortunately the exact strategy escapes me!)

Of particular interest to me and many of my colleagues, is the future of the lower reaches of the flood plain. The lawyers may take some time to sort out the ownership of the several parcels of land in question which, apart from the public reserve associated with the Heathfield Estate, will remain in private hands. Hopefully, some opportunity for the land, or at least part of it, to become public land may express itself. Already there are some very good signs of at least obtaining public access to a reasonable width of river bank that should prove invaluable to the community. With a little imagination and effort, it could become an eco-tourism feature and that was one of the alternative ideas that were raised during all the deliberations. The Council and the Southern Otways Landcare Network (SOLN) have taken up the challenge. It would seem that I now have a chance to realise a personal goal: that of being able to walk on public land along the southern bank of the Barham River from the bridge on the Great Ocean Road to the next upstream bridge as the Barham Valley Road leaves the flood plain.

There are other questions that remain. What affect will the decision have on Barwon Water's plan for a new water storage basin? What about the long term future perhaps in the face of the *Future Coasts Project* yet to report? Some have suggested that the main street of Apollo Bay could be under threat from sea level rise. Not such an outlandish idea as might be first thought. After all, historically the ocean has reached the kerb side at the shop fronts before. As I have discussed, in my opinion the authorities have taken a 'head in the sand' approach to the future alignment of the

Great Ocean Road as it passes through Apollo Bay and Marengo. Should this now be more vigorously pursued?

Finally (and perhaps most importantly) what about the future for the Apollo Bay Golf Club? Perhaps some unfortunate decisions were made that led to a gulf in the community between supporters and opponents of a development on a flood plain, but now that gulf should be bridged and the community should support the Golf Club as it endeavours to go forward. It was never about the Golf Club per se; rather it was about a massive development that was risky and had no sound basis.

Chapter 10 - References

1 Penrose, Neville & Ronalds, Cathy *A statewide climate change vulnerability assessment – Victoria's Future Coasts project drawing a line in the sand,* Coast to Coast, Darwin, 2008. *(available at www.coast2coast.org.au/presentation-files/Penrose.html*

2 Colac Otway Planning Scheme *Municipal Strategic Statement – Clause 21.03 Apollo Bay, Marengo and Skenes Creek Framework Plan*

Chapter 11 - An Alternative Approach

The essence of my argument here is that site specific amendments have no place in the strategic planning process. Site specific amendments have been discussed earlier where they were seen to be an amendment that seeks to re-zone an area or site for a specific purpose as opposed to the introduction of a general zone. Most of us would be familiar with the range of planning zones such as residential, industrial and commercial. However the possibilities are more extensive than that. For our purposes, planning amendments are only necessary when a zone use is to be changed as for example when rural land is re-zoned residential. This would not be a site specific amendment since the land, even with covenants, would be generally available as residential land. *Great Ocean Green* was an example of a site specific amendment since the application was for a rural zone to be amended to provide for a specific and comprehensive purpose.

I will be arguing for a more orderly and transparent process than that revealed by my experiences with the planning processes in the Colac Otway Shire over the last ten years. I also need to recap on some of the issues already raised as well as introduce a few new points by way of background. Some of this is necessarily supposition on my part and a judgment of the veracity of those suppositions will be left to the reader.

My starting point is to return to the year 1999 or thereabouts, when the Apollo Bay Golf Club quite independently started negotiations to buy the Garrett's Farm as a suitable site for the development of an 18-hole golf course. We can assume that all the negotiations went smoothly and an agreement between the Garretts and the Golf Club was entered into to purchase the land over ten years. Naturally the Club would have been concerned about other

development costs and perhaps had no clear idea on where that money would be coming from. I understand that the Club was in a good financial position, due largely to the green fees it was able to collect during the holiday seasons when it has always proved a very popular course. At about the same time the interests of a developer were aroused through the agency of the then Mr Joe Di Cecco, later to become Cr Di Cecco. If the situation is analysed at this time, the golf course had probably already signed the agreement with the Garretts, so that the question of extending the site by buying, or obtaining options on adjoining land would have presented itself. The lower regions of the flood plain beckoned. It would not have been difficult to discover that, although the Colac Otway Shire had an *Apollo Bay Structure Plan* with a particular recommendation for the flood plain, that structure plan had not been incorporated into the *Municipal Strategic Statement* and therefore had no binding status. The flood plains were privately owned and options to purchase were available or at least could be negotiated.

What followed were presumably a series of negotiations between at least three parties; the Golf Club, the developers and the Colac Otway Shire Council. I say at least three, since rumour and innuendo would include the State Government at some level. There is little doubt in my mind that the then Council encouraged the emerging project, later to become known as *Great Ocean Green*. The popular view was that the Council was intent on development in Apollo Bay and that it saw the project as a way to increase the rate base and raise rates in Apollo Bay as a solution to income constraints. Under the planning arrangements that allow a site specific amendment to be considered, I can well understand the desire of a developer to get some assurances from the appropriate authorities that the project had a reasonable chance of success.

Take the issue of the costs involved. Ultimately it emerged that the project was likely to cost $200 million. At one per cent of the total cost, the risk capital is still $2 million. It is not difficult to arrive at a figure like that even on the basis of some crude estimates of an uninformed person; namely myself! In the first place there would have been the preparation of all the preliminary design

documentation that went into the initial submission to Council and on to the exhibition stage of the planning process. Apart from schematic plans, various engineering studies and reports would have been required and all the while a legal eye would have to be kept over everything. Let's suppose the cost of this preliminary work was of the order of $200,000. It was well reported that the C29 Planning Panel cost the developer $80,000. Probably at least ten expert witness reports, some requiring site or other investigation would have been prepared. At say an average of $50,000 each, there is another $500,000.

For the eventual twenty days or so of the panel hearings plus the further directions sessions and including representation at the C55 Planning Panel, the legal costs of a barrister and an attending solicitor must be added, (including accommodation). How about no change out of $100,000? Added to this must be some costs from Urban Property Corporation to have handled the early negotiations and to have maintained its business over the years involved. Now I will cheerfully admit that I am out of my depth here. However my rough figures would get us close to $1million and 'coffee shop' chat would agree that the likely costs incurred to date would be between one and two million dollars.

There is a point to this estimate of the preliminary costs involved, and it gets back to the assurances that a developer might seek. Now I would emphasise that I am not suggesting any impropriety here at any stage. However the fact that a developer has spent a lot of money must be well known to all the decision makers in what was a long process in this case. A decision maker may well try to push that idea out of his or her mind, but it remains there as a fact, and in my view, a weakness in the very concept of allowing site specific amendments. Public perception is important and public perception, even at a very early stage, was that the State Government had a hand in this beyond the normal and had in some way given a nod to the project. On numerous occasions as I expressed my views on *Great Ocean Green*, people would say to me, 'Well, you can't defeat it: the Government has made up its mind on this one!', or words to that effect.

Of course I had followed the Councillor's arguments in the various debates at Council meetings as the matter progressed over the years. On one occasion I was astonished to hear one Councillor in particular, speak strongly and passionately about the environmental responsibilities of Council in a debate not directly related to *Great Ocean Green*. My reaction was so strong that I wrote to the Councillor concerned, knowing that he had voted for *Great Ocean Green*, and asked how he could reconcile his view as expressed and yet vote for *Great Ocean Green*. I received a written answer, which I consider to be private correspondence, in which he said that he believed the State Government wanted this project and he went along with it for that reason. I have no way of knowing the truth here, but it would not be difficult to promote the idea so that the perception was there in the community.

In the preceding chapters, I have numerated all of the occasions when Council had backed down on a particular position in favour of the project. The most striking of these was in regard to my oft referred to, 'No development south and east of the Barham Valley Road.' I would like to speculate on a different outcome had Council proceeded with the adoption of the *Apollo Bay Structure Plan 2001,* where I remind the reader Council had this view:

> The Barham River flats, situated between Apollo Bay and Marengo, are another feature of the area. They are sparsely covered with vegetation and the Barham River meanders down from the foothills to the ocean. The river flats play an important role as a green wedge and visual separation between Apollo Bay and Marengo. Any development of this land is constrained, as it is low-lying and subject to flooding. Accordingly, Council has placed the area in the appropriate Land Subject to Inundation Overlay.

Suppose the development of *Apollo Bay Structure Plan* had been allowed to proceed without the pressures of the site specific *Amendment C29*. I would confidently suggest that there would

indeed have been a result that said, 'No development south and east of the Barham Valley Road.'

This is the nub of my argument: that site specific planning amendments have no place in planning in the 21st Century. Town plans should proceed with no 'baggage' and preconceived ideas. If the town needs a new golf course and even wants to combine it with a housing estate, then that idea could be carried forward to the structure plan and, within the constraints of the structure plan, suitable land could be considered without prejudice. Once suitable land was identified, the next step would be for Council to call for expressions of interest from developers to proceed with the project. I am quite prepared to be called an idealist, but the present arrangements are fraught with danger and the risk of corruption. If I am an idealist, then so too are those responsible for the prose in *GORRS, 2004* with its noble sentiments such as:

> Urban growth will be managed by directing substantial new development to Torquay, Warrnambool and Apollo Bay (once structure planning for this area has been undertaken). Apollo Bay has been identified as a strategically located coastal settlement with the capacity for growth beyond its current boundaries. To manage this growth, a blueprint for the future growth and development of the Apollo Bay region over the next 20 years will be jointly developed by Colac Otway Shire Council and the Department of Sustainability and Environment, taking into consideration issues of accessibility, efficiency, amenity, safety, sustainability and infrastructure provision. This presents an opportunity to create best practice future urban form that responds to the landscape around it. - (p. 21 Strategy 2.2 *GORRS, 2004*)

In my opinion few of those sentiments were carried out in allowing the site specific *Amendment C29* to proceed concurrently with the *Apollo Bay Structure Plan*. Note the phrase in brackets in the above extract: 'once structure planning for this area has been undertaken.' It may be argued that the application for *Amendment C29* had

preceded *GORRS, 2004* as indeed it did, but it was issued in a draft form prior to 2004 and the DSE would have been well aware of its objectives prior to that.

Strategic planning before detailed planning

One would expect the notion of strategic planning before detailed planning would be self evident, but apparently planners have another view. In support of the former I put forward two items. In a news item under the general theme of *Coastal Towns under threat from Developers* (ABC TV News, 17 April 2006) the following was to be heard:

> Mr Hulls, Minister of Planning- 'You can't simply have ad hoc development proposals dictating where town boundaries go, it has got to be the other way round'
> Mr Thwaites, Minister for the Environment – 'We have vast areas still available for residential development within our coastal towns, we want to develop them. We don't want to fill in all the natural environment between towns with urban development.'

The second item was written by Christine Pruneau, Secretary of the Macedon Ranges Residents Association. In a similar situation to mine, Christine has come to her position from the experience of community involvement in planning matters. I consider it to be an excellent piece of logical thinking. Christine was indirectly given a brief outline of the problems of the developments in Apollo Bay and had this to say:

> Without knowing precisely what Amendments C17 and C29 are, from this they sound a little as if they are site specific amendments to facilitate development proposals. That is, to enable development proposals to go ahead, the planning scheme has to be changed, probably to rezone the land in question, and these are amendments to do that. It also sounds as if the *Apollo Bay Structure Plan* doesn't support the

re-zoning. These are the assumptions I will rely on in the following comments.

Traditionally, site specific amendments have no basis in sound strategic planning – they are just used to smooth the path for particular developments and most – if not all – should never see the light of day. They usually have no regard to how what's being asked for integrates into the town as a whole, and are often pre-emptive because if approved they restrict available options if and when land use is assessed strategically. For example, rezoning industrial land to residential just because someone wants to build some units might help the person get what they want, but what impact does it have on the big picture issues of the town's ability to increase industrial land use, and on maintaining existing industrial use and development?

If there is now a major strategic study, i.e. the structure plan, it should (strategically speaking) take precedence over everything else, including an ad hoc site specific amendment. In fact it sounds as if, if the site specific goes ahead, it will compromise the integrity and strategic basis of the Structure Plan, and delivery of strategic planning and outcomes.

The government's first responsibility is to promote and support strategic planning – that's what the VPP's [Victorian Planning Principles] are supposed to be based on. There's no point doing strategic work if it can be tossed out the window because an individual wants something else. That's called planning anarchy, not strategic planning.

The structure plan should be given top priority (although there is no legal requirement for this to occur). The Minister should be asked as soon as possible to not approve the two amendments (pending the outcome of a panel hearing for the Structure Plan) and to assist and support the Colac Otway Shire Council and community to move through the formal processes for the Structure Plan as quickly as possible.

To have the amendments approved at this time would undermine the integrity of – and pre-empt – the Structure

> Plan, and send a message across Victoria that strategic planning isn't important and neither is the investment in time, money and consultation Councils and community put into strategic planning. Strategically based structure plans (which address more than a single site and consider how everything works together) should take precedence over site specific, ad hoc development-driven amendments. There is also a need to consider the *Great Ocean Road Region Strategy (GORRS, 2004)*. My guess is that the Structure Plan is compatible with the objectives of *GORRS, 2004*, but the amendments probably are not. The approval of the amendments by the Minister would then also have potential to undermine the State government's own policies and objectives as contained in *GORRS, 2004*.

Of course the two site specific amendments were progressing at the same time as the *Apollo Bay Structure Plan* was being developed and serious attempts were being made to have those amendments resolved prior to the resolution of the *ABSP*. That this didn't happen may just have been a quirk of fate. There is a case for a mandatory statement that basically says: strategic planning (as in structure plans) must precede any site specific amendments, if indeed site specific amendments are to be considered at all.

Interpretation of planning strategies

There are two other immediate arguments showing the weakness in strategic planning as currently practiced in Victoria. The first of these will be again shown by example. *The Victorian Coastal Strategy 2008* has continued with the recommendation, that it first made in the earlier draft document of 2007, to designate Apollo Bay as having: 'Moderate Growth Capacity: Some growth potential beyond existing urban zoned land or through infill but within defined settlement boundaries.' - (p. 88 *VCS, 2008*)

I would draw attention to the different language used in two strategic documents (namely *GORRS 2004* and *VCS, 2008*) purporting to direct the same outcome with the latter being far

more prescriptive. I have previously raised the question of what is 'moderate growth?' This is clearly subjective so that what one person considers moderate, another may not. My limited understanding of such things is that if this were to be argued in a court of law, then it would be judged to be 'what any reasonable rational person would agree was moderate.' While I endorse this view apparently planners do not! As already indicated, *Amendments C17 and C29* involved the development of more than 600 house lots between them. Various estimates put the number of houses in Apollo Bay at 600 -1000. To say planners are intent on doubling the size of the town is hardly an exaggeration, given that there is plenty of scope for infill development and already approved smaller developments to consider as well. I do not call this 'moderate' growth.

The second argument takes us back to *GORRS, 2004*. As shown previously, with reference to growth in Apollo Bay the document says: '…taking into consideration issues of accessibility, efficiency, amenity, safety, sustainability and infrastructure provision.'

On the question of infrastructure a particular problem facing Apollo Bay is the provision of an adequate water supply. The issue has been well canvassed in the preceding chapters, but it can now be examined against the question of the adequacy of strategic planning. In the absence of any site specific amendments, the provision of an adequate water supply might have been a more rational and certainly less expensive study. As it happened it is reasonable to assume that the emergence of the *Great Ocean Green* project and the uncertainty of the settlement boundaries put the demand projection up to a much higher figure than what might now be the case. As has been explained Barwon Water have been searching for a number of years for a suitable site within the constraints presented by this coastal settlement and the surrounding hills. Barwon Water have also commented that, due to the nature of the geotechnical conditions of all the sites, the cost to build a storage basin in Apollo Bay would be approximately twice the cost of building one say in the Colac area. I find this to be hardly a

matter of efficiency. (Barwon Water should know; they had cost overruns in building the sewage treatment plant in Apollo Bay in recent years, largely due to poor ground conditions that prevail in the area.) It remains to be seen now just what Barwon Water will do with regard to both the size of a storage basin and where it will be located. In any event I wouldn't think that anyone could suggest that the matter of infrastructure provision with regard to water has been 'efficient'.

Local planning versus strategic planning

My concerns now come to how local planners approach strategic planning documents. Admittedly I have only the one narrow experience, but I think it makes an interesting observation. At the Colac Otway Shire Council Meeting of 30 January 2008 a motion to accept the Shire's submission to the then *Draft Victorian Coastal Strategy* was debated. The submission was attached to the agenda papers and I now quote from point 3, page 2 of that document:

> 3. The role of the Coastal Board
> It would be helpful to Council if a section was provided early in the document to explain the purpose of the document, particularly how it should be used, what it is and what it is not, how it relates to local planning schemes, the role of regional coastal boards in terms of land use planning decision making (i.e. whether they should be referral authorities or not and in what circumstances) and a statement that the document provides guiding principles and is not intended to be prescriptive as local circumstances will vary.
>
> A criticism of the current and draft VCS is that while it is referenced in the Planning Scheme, it is written in quite an esoteric manner which results in limited useful guidance for statutory planners when assessing coastal planning permit applications.

I find the last part of the first paragraph above rather intriguing, that is, in the request for 'a statement that the document provides guiding principles and is not intended to be prescriptive as local circumstances will vary.' Again noting that I am not a planner, I would have thought that the whole idea of strategic planning is to be prescriptive. I also find this statement at odds with the comment in the next paragraph that refers to the *VCS, 2007* as 'written in quite an esoteric manner.' I questioned this at the Council meeting and was told by the Mayor that he and the CEO had had a briefing session with Officers of the Victorian Coastal Board and they were advised that it was not intended to be prescriptive.

The Western Coastal Board (one of the regional boards referred to in Council's submission to the *VCS*) had of course consistently opposed *Great Ocean Green*. The panel hearing largely rejected the Western Coastal Board submissions on the grounds that it had not presented credible evidence. In late 2007 The Age published a letter under the heading of *Saving the Coast*. The correspondent described himself as a former planner in a coastal shire council.

In the letter he acknowledged that he had experienced the tensions that allowed inappropriate developments to occur contrary to planning advice. He cited three main factors for a continuation of such developments, namely:

- revenue returns
- the absence of accredited evidence to inform planning policies against coastal development subject to flood risk
- the likelyhood of a council planning authority that had rejected an application on the grounds of ocean flooding, having the decision overturned on appeal at a tribunal because of that lack of evidence.

The writer went on to assert that the only way to prevent inappropriate development is for the Federal and State Governments to provide that accredited evidence through the appropriate coastal impact studies.

A few comments about the letter: I should think the writer was referring to low lying coastal land already zoned for some type of development, rather than issues of re-zoning. I say this since my understanding is that the tribunal he referred to is probably VCAT and that VCAT has no role in planning amendments. The other obvious comment is that the writer is talking about the absence of accredited evidence to inform planning policies. Precisely the issue I have raised with the rejection of the Western Coastal Board's submissions to the panel hearings in the case of *Great Ocean Green*.

Devolution of responsibility is all very well, but it becomes a problem when the issues are so complex that basically only a trained mind can grasp the full import of what is going on. My experience in local planning matters and in discussions with the Colac Otway Shire Councillors, tells me that they do not fully understand and must rely on the information passed on to them by Council Officers and the planning consultants who are so often engaged to do the work.

There is no doubt that strategic planning is a very necessary and important tool for sound planning and development in Victoria. There are of course a large number of strategic documents from a range of government authorities. This book has concentrated on two, the *Great Ocean Road Region Strategy, 2004* and *the Victorian Coastal Strategy 2008*. Unfortunately, my experience shows me that strategic documents tend to make very subjective statements that are often open to wide interpretation. As a final example consider the statements made in elaborating on the fourth principle of the *Hierarchy of principles for coastal, estuarine and marine planning and management in VCS, 2008*. That principle relates to development and says in part:

> Appropriate development is development that:
> - is consistent with relevant coastal policies and plans:
> - responds to existing or preferred coastal character
> - is functionally dependent upon a coastal location

- reverses or addresses coastal degradation and demonstrates net community benefit, taking into consideration long term environmental, social and economic impacts

What is the alternative approach? Suppose for example, that neither of the site specific *Planning Amendments, C17 and C29*, been proposed prior to November 2004 and that none were to be put forward before the *Apollo Bay Structure Plan* was finalised. Further suppose that a level of growth for Apollo Bay was accepted as called for in *GORRS, 2004*. Now all the issues could be examined without fear or favour. Potential lands for re-zoning could be considered and, although the land holders may have an interest, it would not be the same as a developer having spent hundreds of thousands (if not millions) of dollars in getting a site specific proposal together. Planners and Council may assert that they are not influenced by developer pressure, but I personally find it hard to believe that the knowledge of the investment that has preceded a submission, and continues with it, does not influence outcomes.

A rational examination of matters such as water supply, road infrastructure and indeed all of the items mentioned earlier, (adverse environmental processes and effects including storm surges, river and coastal flooding, erosion, landslip, salinity, sea level rise, disturbance of acid sulphate soils, wildfire or geotechnical risk) could also be carried out. The result could be the identification of land suitable for development for a specific purpose and tenders could be called for that development. By this means the complex, interactive play that Apollo Bay found itself in over the past ten years could have been avoided.

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