



Submission to the RPDC

**Lauderdale Quay
Draft Integrated Impact Statement**

Part B
(Two parts in total)

Community Response

**Save Ralphs Bay Inc.
PO Box 161
Rokeby 7019**

April 6 2009

Introduction

Thank you for the opportunity to comment on the Walker Corporation's Draft Integrated Impact Statement (DIIS) for its proposed "Lauderdale Quay" canal estate development.

Save Ralphs Bay Inc. (SRB) is a community group, formed in 2004 to oppose the destruction of the Ralphs Bay Conservation Area and the building of a canal housing estate on its then footprint. We have no office, no staff and our financial resources are limited to what we can raise by way of donations, memberships and sales of merchandise.

We have, however, received generous support from experts in many fields and from Jess Feehely, Principal Lawyer of the Environmental Defenders' Office, who has provided wonderful and highly professional assistance as we have worked to coordinate expert input into this submission.

We are passionately committed to our aim of preventing the destruction of the sandflats of the Ralphs Bay Conservation Area at Lauderdale, and we have been active in pursuit of our aim for over 5 years. The SRB working group meets regularly, with a dozen or so members at every meeting. We have never wavered in our commitment to our cause and have no intention of doing so.

SRB has 478 members and just over 500 supporters in our email group. We receive constant messages of gratitude and encouragement from members of the community.

Our constitutional objectives are to oppose this and any other inappropriate developments at Ralphs Bay, to work towards enhanced protection of the natural, aesthetic and community values of Ralphs Bay and to promote an approach to coastal planning in Tasmania that will prevent future inappropriate developments in coastal areas.

Since 2004, we have lobbied politicians at every level of government, in Hobart and in Canberra, produced and distributed newsletters, developed a website containing a large archive of information, campaigned in support of our aims in the media, written submissions on a range of topics, held rallies, public information evenings, community forums, candidate forums for various elections, a Ralphs Bay Expo and a Ralphs Bay Fair. We have held information displays at the 2004 Coast to Coast Conference, in shopping centres, at community events and at markets. We have developed and produced merchandise including calendars, cards, tea towels, t-shirts and other clothing items, mugs, stickers and more.

We do all this because we have an unshakeable conviction that the Walker Corporation's proposed canal housing estate is inappropriate and should never be built; that the Ralphs Bay Conservation Area should be confirmed as extending right across the enlarged area shown in Schedule 1 of the Ralphs Bay Conservation Area (Clarification) Act 2006; that the Crown land of the sandflats should not ever be sold and that canal estates should be banned in Tasmania, as they are in the Municipality of Kingborough, the state of NSW and the state of Victoria.

We would like to see the Ralphs Bay Conservation Area given further protection in due course. The Ralphs Bay Conservation Area was recommended for Marine Protected Area (MPA) status by the RPDC's Inquiry into the establishment of Marine Protected Areas within the Bruny Bioregion. However, it was then excluded from the Inquiry in Minister Steve Kons' amendment to the terms of reference, on 8 August 2007.

However, at the time, the Minister made clear that the Ralphs Bay Conservation Area could be considered for MPA status, following the conclusion of the RPDC's assessment of the Lauderdale Quay proposal.

Save Ralphs Bay Inc. has not forgotten this unfinished business. We look forward to the assessment and declaration of the Ralphs Bay, Lauderdale MPA, following the rejection of the proposal to build 542 homes on this wetland which provides critical habitat for resident and migratory shorebirds, the invertebrate communities on which they feed, fringing saltmarsh species and juvenile fish to name just a few of the values for which we cherish our Conservation Area.

Our job as a community group is hard in some respects and very time consuming. However, we are always heartened by the huge amount of community support for Ralphs Bay. During our roadside protests on chilly mornings at Lauderdale, we always encounter well over 60% overt approval from passing motorists, well under 1% disapproval, and the P-platers fortunately keep their eyes on the road and refrain from tooting and waving. We do not pretend to have 100% support in the community, but support for the proposed "development" has always been at a very low level, as most Hobartians know well.

Formal constituent surveys were carried out by a number of politicians in 2004, and each produced the same result – very strong opposition to the development and very little support. The largest survey was carried out by Senator Paul Calvert and his office staff were nearly swamped by the avalanche of responses. Opposition to the development was expressed by 73% of respondents, with very few indicating strong support.

The Save Ralphs Bay Inc. response to the first Walker Corporation proposal was delivered to Minister Judy Jackson on 24 September 2004. It contained 2500 letters and personal messages opposing the proposal, and a detailed SRB submission examining the issues, which can be accessed at www.saveralphsbay.org. In August 2005 we delivered a further 500 letters in the lead-up to the first anticipated cabinet decision on Project of State Significance status for the proposal.

Thousands more letters were sent directly to members of the government by the public. Minister Jackson's office began tallying the responses but was soon overwhelmed. Save Ralphs Bay Inc. received the first 9 summary sheets of the tally following a Freedom of Information request: Out of the first 227 items of correspondence summarised in the Minister's office, 224 communications were opposed to the development; 2 supported it and 1 was neutral. This is 99% opposition, in unsolicited letters from concerned members of the public.

Why, then, does the Walker Corporation persist with its highly unpopular proposal? This is the only mystery that remains opaque to us after 5 years of campaigning. Meanwhile, we have learnt a great deal about resident and migratory shorebirds, the spotted handfish, saltmarsh vegetation, the industrial history of the Derwent estuary, heavy metals, acid sulfate

soils, canal estates and even metes, bounds and ambulatory boundaries. We have immeasurably deepened our appreciation of the wonderful South Arm Peninsula, its landscapes, vistas and wildlife. Our resolve to defend this place we love only grows stronger.

We conclude this introduction with the words of Allison Ritchie and Norma Jamieson, spoken in the Legislative Council during the debate on the Ralphs Bay Conservation Area (Clarification) Act 2006:

Allison Ritchie, Hansard, Thursday 7 September 2006

“I frequently do not understand when we have debates of this nature why there are attempts, not necessarily in this House but perhaps in other forums, for people to relegate the validity of passionate public input and opinion below that of specialist or expert or independent knowledge or opinion. The view that somehow, because there is an emotional attachment, there is less sense or objectivity, is nonsense. More and more people want to have an active, participatory role in the decisions about developments that are going on to affect their lives and the lives of their children. I believe that it is our job to support that interest. It is my view that they are equally important and we can ill afford to dismiss local passion as being out of focus, not logical or somehow less acceptable than that of someone that is removed and therefore apparently more able to accurately and fairly judge the facts.

I honestly believe that you are never more clear about what is right and what is wrong and the reasons behind your decision-making processes than when you are dedicated and passionate about what you believe in.”

Hansard, Mrs. Jamieson Thursday 7 September 2006

“Tasmania has been behind the times, going headlong into where other States have been with regard to coastal development. We should look, learn and listen also from others without having to experience the same mistakes which have caused degradation of coastlines and the habitats of fauna and flora.”

1. Comments on the Frontispiece / Project Information Bulletin

1.1. The Final Scope Guidelines state that the Frontispiece / Project Information Bulletin should, *“briefly outline the assessment and approval process, and explain the function of the draft Integrated Impact Statement (IIS) in this process.”* The Frontispiece was to provide information on:

- *“how and where to access the draft IIS;*
- *how to lodge a submission on the draft IIS;*
- *the date by which submissions must be received; “*

The Guidelines further state, *“This section should be designed in an easily read manner and be useable as a public information bulletin to explain all opportunities for public participation.”*

Why, then, did the Walker Corporation (Walker Corp.) choose NOT to include the frontispiece, containing this useful information, at the front of the Executive Summary, where it would have been read by the wider public?

In relation to the Executive Summary, the Guidelines state, *“This should be designed to be easily read in conjunction with the frontispiece...”* which certainly implies the two documents should have been presented together.

The Executive Summary is a document containing just 28 pages of text. It is the most accessible and readable section of the draft IIS (DIIS) for the general public. It is obtainable as a single download from the Walker Corp. website, at the top of a long list of download options.

Therefore the important Resource Planning and Development Commission (RPDC) contact information in the Frontispiece should have been placed with the Executive Summary if the Walker Corp. had any serious interest in complying with the Commission’s request that it should effectively communicate, *“all opportunities for public participation.”*

Instead, Walker Corp. chose to place the Frontispiece in the DIIS itself, a document of 415 pages of text + references + figures. The Walker Corp. would no doubt have been confident that the length of the DIIS would discourage general readers from accessing it and thus discourage them from reading the Frontispiece.

SRB submits that it was the Walker Corp.’s intent to discourage public participation, contrary to the intent of the Guidelines.

1.2. Media coverage of the DIIS made much of its length: close to 7000 pages. Television footage showed numbers of huge folders. The “almost 7000 page DIIS” was launched at the commencement of the six week submission period. Did the Walker Corp. make any serious effort to communicate the fact that the Frontispiece (less than two pages) and Executive Summary (28 pages of text) were easily accessible, easy for the general public to read and provided an adequate outline of the proposal on which to base a submission in response to the proposal?

SRB submits that the Walker Corp. did not, because it was not their intent to encourage public participation.

1.3. Why was the DIIS not placed on the RPDC website?

Why was it necessary for the general public to go to the proponent’s promotional website in order to access the DIIS, which is being assessed by the RPDC?

Walker Corp. continued a debate on this website during the submission period, with sections such as, “Addressing community concerns”.

Media releases were also placed on this site, including the following offering:

“February 17, 2009 - Campaign of Misinformation

Lauderdale Quay will Not Be Built in a Conservation Zone”

There was no place for community members to access the DIIS without this accompanying “spin” from the proponent.

SRB submits that this was not appropriate and not conducive to a fair assessment process. The DIIS should have been accessible on the RPDC website.

2. Comments on the Executive Summary

2.1. The Proposal, Executive Summary, Page I

SRB submits that the proposed 477 allotments and development size of 146.5 hectares are excessive in their size and out of scale with the township of Lauderdale. The destruction of 146.5 hectares of wetland habitat in the Derwent estuary is not and cannot be justified in a state known worldwide for its natural values and “unspoilt” characteristics.

Furthermore, the proponent has been evasive with respect to the number of dwellings actually involved, which is surely the most basic of information to present to the public? It is necessary to go to page 332 of the DIIS to discover that the total number of dwellings intended is 542, a figure which only appears once in the DIIS document.

With regard to the proponent’s claim at the top of page II that it has, “undertaken extensive and thorough public consultation and stakeholder engagement”, SRB submits this is not the case. The Walker Corp. has never held an open-invitation focus group, public meeting or community forum, to our knowledge. Instead, it has presumably conducted a number of controlled, “by invitation only” briefings for selected and targeted groups. As a stakeholder group, SRB was invited to only a single Walker Corp. briefing. As a stakeholder, SRB was never “engaged” in any way.

2.2. The Objectives, Executive Summary, Page II

- 2.2.1. SRB objects strongly to the phrase, *“new and improved residential, lifestyle, commercial and recreational opportunities in Lauderdale”*. The key question here is, *“for whom?”* Residents of the South Arm Peninsula have made an active choice to live in quiet, peaceful communities, in close proximity to unspoilt beaches. If a Gold Coast style canal housing estate was an *“improvement”*, these residents would have relocated or never moved to the area in the first place. The Walker Corporation appears to be unaware that, far from being an *“improvement”*, its development is widely regarded as crass, insensitive to its location, repellent in its underlying values and as aesthetically pleasing as a drive-through McDonald’s outlet.

As far as *“lifestyle”* and *“recreational”* opportunities are concerned, the Walker Corp. openly admits that it intends to destroy much of one of the state’s best windsurfing locations, where high windspeeds combine with shallow water and the protection of the embracing landforms enclosing the bay to offer wild, exhilarating and far-reaching rides combined with the safety factors of generally small waves and a sandy bottom to stand up on after falling off the sailboard. Thus Ralphs Bay is an ideal windsurfing location for beginners as well as experienced practitioners.

The Walker Corporation’s proposal would leave a reduced fraction of the area currently enjoyed by windsurfers. Inexperienced riders would face the danger of collision with rock armoured seawalls. SRB contends this is an unacceptable loss of amenity and increase in hazard.

“The Lauderdale Quay development (construction and operation) will impact on the area currently utilised by windsurfers, and will likely result in a reduction in this activity at the site. There are few similar alternative sites for this activity in the local area, and this will be experienced as an impact for people who windsurf, and as a diminution of the character and usual interest this activity lends to the surrounding community” (Socio-Economic Impact Assessment, Appendix F, DIIS, page xvii).

In addition, large numbers of birdwatchers visit Ralphs Bay for *“lifestyle”* and *“recreational”* purposes. Their *“lifestyle and recreational opportunities”* are disregarded in this rapacious proposal, as are the *“lifestyle and recreational opportunities”* for photographers, artists, and all residents who pass daily along the shores of the bay, appreciating its natural beauty.

As far as the *“commercial”* opportunities are concerned, SRB is reliably informed of considerable disquiet among the existing Lauderdale business community, which has been likened to an ecosystem. Only so many business niches exist; only so many operators can make a living in this small community. Existing businesses may not survive the competition from new businesses established in Walker Corp.’s proposed canal estate development, especially when combined with the impact of competition from the new businesses planned for the vicinity of the Harmony Garden Centre, which have close connections to the Walker Corporation through the personnel involved.

The RPDC is asked to consider how much loss, disruption and dislocation can be justified in the existing Lauderdale community, in order to give *“new opportunities”* in the proposed canal estate?

2.2.2. SRB objects strongly to the suggestion that the proposed canal estate would, *“create a new community with distinct identity and character that integrates with the existing local community and provides a centre for Lauderdale, and a gateway to the South Arm Peninsula”*. The best that can be said about this statement is that it is one place where the Walker Corp. acknowledges the location to be the “South Arm Peninsula”, rather than its own invention, the “Southern Peninsula” (DIIS p. 77, 78, 83, 322, and each of pages 343-351).

Communities in the South Arm Peninsula are characterised by stability, limited disparities in income levels and affluence, strong community spirit and a high level of volunteering. It stretches the limits of credibility to suggest that the affluent purchasers of the “Lauderdale Quay” properties will be year-round residents committed to integrating with local communities and joining the CWA, Coastcare groups, Fire Brigades and the like. The personal value set which leads an individual to purchase a canal estate home (or a canal estate property as part of an extensive property portfolio) in ignorance of or with complete disregard for the environmental and social cost of the development is unlikely to be a value set in harmony with the wider peninsula community.

SRB questions what proportion of “Lauderdale Quay” property owners are likely to remain in residence throughout the Tasmanian winter, and what kind of “community” can exist when numbers of properties are standing empty in the coldest, windiest months of the year.

As previously mentioned, communities of the South Arm Peninsula are strong, with a deep attachment to this area. The notion that “Lauderdale Quay” could have value as a, *“gateway to the South Arm Peninsula”* is abhorrent.

As Dr. Peter Hay said at the Save Ralphs Bay Rally in City Hall on Tuesday 17th March 2009, *“The Walker Corporation has no concept of the depth of the ties to place that prevail here in Tasmania.”*

2.2.3. Re. the Walker Corp. objective, *“to implement best practice urban design principles that consider the local character, expectations, and needs of the existing Lauderdale community”*, the comments already made apply here also, and SRB will seek to provide expert evidence on this subject at the Hearings.

2.2.4. Re. the Walker Corp. objective, *“to deliver a sustainable, safe, and pleasant working, living, and recreational environment”*, many local residents regard such claims as almost hilarious. It is often very cold and windy at Ralphs Bay, and on windy days, the windsurfers often need to wait for the wind to drop in order to avoid breaking their equipment, which remains a common occurrence. The idea that “Lauderdale Quay”, the closest canal estate to the Antarctic, and located fair and square in the Roaring 40's would be a pleasant environment is a joke for much of the year.

What is the meaning of *“sustainable”* in this objective? Walker Corp. makes clear that long term realities are of little interest to it, as shown on page 130 of the DIIS, *“Outcomes of the assessments concluded that the adopted sea level rise value is appropriate given the engineering design life of the project and the potential hazards under greater sea level rise.”*

In contrast, the Clarence City Council's 2008 report, *"Climate Change Impacts on Clarence Coastal Areas"* states:

"New developments in areas identified as subject to longer term risk should clearly be notified that they will be subject to requirements to actively manage risk when unacceptable risk levels are approached, even if this is long after the end of the expected service life of the building."

..... "It is prudent, however, to consider a range of sea level rise scenarios for future planning, as most of the present day risk is due to inadequate past planning and risk assessment." ("Climate Change Impacts on Clarence Coastal Areas", page v.)

The 'Lauderdale Quay' development is designed with 0.5m sea level rise in mind, when clearly, scientific report after report emphasizes that the effects of climate change are occurring sooner and to a greater degree than predicted in the IPCC's more optimistic scenarios.

According to Professor Will Steffen, Executive Director, Australian National University Climate Change Institute and Science Adviser to the Australian Government's Department of Climate Change:

"Sea level rise is accelerating... 21st century sea level rise of at least 0.5m is a certainty. A rise of 1 to 1.5m is more likely. According to palaeo-evidence, a rise of up to 4m this century is possible." ("The Science of Climate Change: Implications for the Coastal Zone." Keynote address to the Coast-to-Coast conference, 19 August 2008).

If sea level rise greatly exceeds the 0.5m Walker Corp. is designing for, what then? If, within, or beyond, *"the engineering design life of the project"*, the development experiences much greater sea level rise impacts than predicted, what might the results be? A crumbling set of islands, releasing the "fill" that was once the sandflats into the surrounding waters? Overflowing settling ponds, returning heavy metals to the bay? A visual nightmare of crumbling derelict properties?

Abandoned properties in a failing development or left vacant for the winter may become a magnet for criminal activity.

What guarantees are there regarding the economic sustainability of the project, given the likelihood of rising costs associated with remediating damage? How sustainable are the low-lying parkland areas likely to be in the longer term? How likely is it that, in Tasmania, with slow population growth and a well networked community, "Lauderdale Quay" properties will successfully resell after the first owners discover what it is really like to live in such a development? Reports from Queensland's Gold Coast indicate that, while canal estate homes can be successfully marketed by appealing to the "swimming pool mentality", they typically resell within a year owing to their poor "liveability". Unlike Queensland, Tasmania does not experience the constant influx of naïve purchasers to be lured by the canal estate dream.

How "safe" will life in the development be, when the risk of Ross River Fever infection is considered? See pages 364-366 of the DIIS, and the SRB response to section 2.10.1 of the Executive Summary, "Health Impact Assessment".

2.2.5. Re. the objective:

“to establish a community that acknowledges a sense of ownership and responsibility to the urban, social, and natural environment”, this is language almost as Orwellian as the title of the “Ralphs Bay Conservation Area (Clarification) Act 2006”.

Walker Corp.’s own *“Net Benefit Assessment”*, flawed as it is, admits the environmental costs of the development outweigh the claimed economic benefits (Executive Summary page XXIV). How, then, can a *“sense of responsibility to the natural environment”* be engendered in property purchasers who have been complicit in the destruction of 146.5 hectares of internationally significant wetland habitat and environmental degradation on a much wider scale?

SRB urges the members of the RPDC panel to firmly resist sending Tasmania down such a future path, where large areas of publicly owned important wildlife habitat can be destroyed for non-essential uses, and the language of spin is subsequently employed to suggest *“responsibility to the natural environment”*. This is a fundamental dishonesty that is corrosive to Tasmanian society.

2.2.6. Re. the final objective, *“to create a self-managing environment that minimises ongoing costs, demands upon infrastructure, and maintenance”*, SRB wishes to point out that we already have one. It is called a sandflat ecosystem, and it is part of a connected set of Derwent ecosystems, with links to other sites such as the Pittwater-Orielton Ramsar listed wetland of international significance.

Ralphs Bay does not need the Walker Corporation to, *“create a self-managing environment”*. What is needed is for the RPDC to reject this proposal entirely, and take another look at SRB’s Draft Planning Directive to ban canal estates in Tasmania, bringing all council planning schemes into line with the Municipality of Kingborough, which banned canal estates in 2000.

“Kingborough Planning Scheme 2000

5.2.1.8 Canal Estates: Canal estates are not permitted.”

Tasmania needs to join Victoria and NSW in protecting its estuarine wetlands from destructive canal estate developments.

2.3. Precautionary Principle omitted at this point

The Precautionary Principle was moved from the end of the Draft Guidelines to the front of the Final Scope Guidelines for the IIS, where it is referred to in section 1.3.1, Statutory instruments. However, the Walker Corporation’s Executive Summary skips quickly over the Statutory and Non-Statutory framework on page V, without mention of the Precautionary Principle. The Precautionary Principle is then mentioned for the first time on page XXV, near the end of the Executive Summary.

In relation to climate change risk management, the Clarence City Council’s 2008 report, *“Climate Change Impacts on Clarence Coastal Areas”* makes the following case for the application of the Precautionary Principle:

“There is a developing practice around Australia to use the hazard associated with the estimated high range for sea level rise in 2100 to determine

acceptable development when revising planning schemes to take climate change into account. For erosion, set backs would be established that allow for expected erosion over this time frame while ensuring continued foundation stability.”

“Such a level substantially exceeds usual safety margins for most of the service life of the buildings, intending to ensure low levels of risk normally associated with development will still apply by 2100 after allowing for the ‘maximum’ expected sea level rise and other climate change effects.

“The arguments for adopting this relatively cautious approach are usually summed up as applying the “precautionary principle”. Practical arguments for adopting this level of caution include:

- *Uncertainty – while using the high scenario may seem conservative, recent evidence shows sea level rise and greenhouse gas (GHG) emissions are following the high scenario. They could go higher, sooner.*
- *.....*
- *Low marginal cost – The extra cost of allowing for additional safety factors, for example by lifting buildings further above flood levels, is relatively low at the time of construction but much higher if the building has to be lifted once built.”*

It is to be hoped the RPDC will have the Precautionary Principle very much in mind when assessing all the risks associated with the proposal.

2.4. Public consultation and participation, Executive Summary, Page V

Re. the claim that:

“Consultation activities have been directed to:

- *community interests – including community action groups, local interest groups, community liaison groups coupled with community information sessions and public displays to encourage local residents to “have their say”,*

SRB was invited to precisely one *“community information session”*, when limited results of the Walker Corporation’s environmental studies were presented. As an indication of the calibre of the presentation, we were invited to feel reassured by the statement that, *“no species would become extinct as a result of the development.”* It is to be hoped the bar is set a little higher, when the final recommendation is made by the RPDC.

Public displays were indeed provided, and, in the main, Walker Corporation staff conducted themselves with courtesy towards those who oppose the development. This was not always the case, however.

2.5. Need for the Project, Executive Summary, Page VI

2.5.1. Land availability and the “need” to destroy the Ralphs Bay Conservation Area for the proposed “development”.

- Tasmania is a state with a population of half a million and a land area of 68,102 km². In comparison, Scotland has a land area of 78 772 km² (much of it mountainous) and a population of over 5 million. With such a low Tasmanian population density, how can the RPDC possibly give its assent to Walker Corp.’s claim that there is a “need” to destroy a listed, internationally significant wetland in order to provide building blocks in southern Tasmania?
- Can there really be any serious validity in the claim that, *“There is a shortage of unconstrained land in inner suburbs of greater Hobart”*? Surely Hobart is not experiencing a population boom of any magnitude? Surely there are any number of run-down areas in central Hobart which could be redeveloped into smart, fashionable energy-efficient clusters of dwellings in easy reach of cultural and retail offerings for their residents?
- If there is indeed, *“a shortage of unconstrained land in inner suburbs of greater Hobart”*, it is absurd to suggest that this should be remedied by removing the Conservation Area status of an internationally significant area of sandflat ecosystem some distance away from Hobart, selling off the Crown land to a developer and allowing the destruction of the wetland ecosystem and subsequent construction of a housing subdivision in the sea.
- If the RPDC were to decide this was, indeed a reasonable case of, “need”, where would such an approach to planning end? Would any beachside suburb be safe from such predatory claims, and if, so, on what grounds, given the precedent that would be set by approval of the Walker Corp. proposal?
- If there is any truth in the claim that, *“In particular, demand for waterfront land in desirable suburbs is not met by the existing vacant land supply”*, what are we to make of the suggestion that any Conservation Area, any stretch of Crown land, any area of the coast and foreshore can be sold to a developer who seeks to “remedy” this “unmet demand”? Is it not the reality that waterfront land is a limited resource? Is it not the case that the price of waterfront land may rise in response to demand, but this does not necessarily mean that new waterfront blocks must or should be created at the expense of natural ecosystems and communities which oppose such moves? Is it not the case that schemes of this nature represent such extremes of hubris, arrogance and naked greed that they should be resisted by a responsible planning authority such as the RPDC?
- The Walker Corp. claims on page VI of the Executive Summary:
“In waterfront suburbs near Lauderdale, there is no more un-subdivided urban zoned land or reserved residential land available for release onto the market. This includes Bellerive, Cremorne, Clifton Beach, Seven Mile Beach, South Arm and Lauderdale.”

Why then did a local resident inform SRB that, when she and her partner recently applied to subdivide land at Cremorne, the response from Clarence City Council was a refusal on the basis that there was insufficient demand for such blocks?

- If, eventually, all subdividable land within the Village Zones of communities in the South Arm Peninsula were to have been taken up, should a responsible planning authority allow expansion into adjacent Conservation Areas and coastal Crown land, or should housing be restricted to certain centres, with an increase in density if warranted by increases in population and demand? SRB contends the latter, not the former, is the responsible course of action.

2.5.2. The interstate experience with canal estate developments

Re. the statements, also on page VI, that:

“Lauderdale Quay will be unique to Tasmania. As there are no similar waterfront housing and marina developments either currently existing or proposed, it is therefore appropriate to compare Lauderdale Quay with comparable waterfront housing and marina developments elsewhere in Australia. The interstate experience with waterway developments indicates strong market support given the lifestyle advantages in comparison to conventional residential subdivisions.”

The interstate experience of canal estate developments is such that these developments have been banned in two Australian states, as the following extracts show:

“NSW State Environmental Planning Policy No 50—Canal Estate Development.

5 Canal estate development prohibited

A person must not carry out canal estate development.

The Victorian Coastal Strategy 2008 prohibits the development of housing estates around man-made canals in a bid to protect estuarine environments.

8 Prohibit the development of new residential canal estates to ensure the protection of coastal and estuarine environments.”

As the submission from Dr. Steve Appleyard in Western Australia indicates, the interstate experience of canal estate developments has often been disastrous. Dr Appleyard has indicated in a telephone conversation:

“What we are dealing with over here is the extensions to the extensions to the extensions of canal estates. Whilst it may be claimed the particular example being considered will flush adequately, this is not necessarily the case after a number of extensions have been sought and added to the development.”

In SRB’s experience, interstate scientists, especially experts in water quality, are only too aware that Tasmania is the only state in Australia without canal estate developments, and they have responded with disappointment and sorrow when informed that we are now facing the prospect of the first such Tasmanian development at Ralphs Bay.

According to a retired real estate agent from Queensland’s Gold Coast who relocated to Tasmania and spoke at one of the SRB Public Information Evenings in 2004, canal estate homes on the Gold Coast are fairly easy to sell to the uninformed, by appealing to the “swimming pool mentality” and using brochures depicting endless blue seas

and skies. However, the poor “liveability” of canal estate homes, and the sharp contrast between the dream and the reality, result in these homes typically reselling in around a year. This model can be successful on the Gold Coast, with its constant influx of newcomers, poorly connected to the existing community and seeking a dream to buy into. Tasmania, in contrast, has a relatively stable and well connected population, which was falling for many years and has shown a very small increase in recent times. It seems highly unlikely that the Gold Coast experience of new buyers lining up to purchase canal estate homes as disillusioned previous owners move out can be replicated here.

2.5.3. How comparable, in reality, would “Lauderdale Quay” be to interstate examples?

As the proposed canal estate closest to the Antarctic, “Lauderdale Quay” can be expected to have even poorer “liveability” than its counterparts in warmer parts of Australia.

Even if the Walker Corp. can achieve initial sales of its canal estate blocks, there is every likelihood that in Tasmania, the word would soon spread as to the reality of life in the proposed canal estate, which would be,

- Often very windy;
- With consequent unpleasant wind chill;
- With nuisance and health risks from biting mosquitoes on windless evenings in summer;
- With salt spray causing corrosion of metal structures and fittings including window fittings and residents’ cars;
- Exposed to the scrutiny of passing vessels on the waterways;
- Exposed to the scrutiny of passers-by on the roads and walkways;
- Almost entirely lacking more than the most minimal of “back yards”;
- And consequently lacking privacy and seclusion from the public gaze;
- With the likelihood of being forever marked by the stigma of being “Tasmania’s first canal estate”, whose origins were in a period of Tasmanian political history not known for transparency or due process.

Consequently, there is a real risk that, even if Walker Corp. can succeed in selling the blocks and making its exit early in the life of the “development”, resales into the future may not be achievable. This will be especially likely as sea levels rise, low level parkland areas are more frequently inundated with seawater, grass fails to grow on them and weather events currently regarded as “extreme” become more commonplace.

Whether or not the properties are initially insurable, problems with uninsurability of canal estate homes can be expected to increase into the future, which will further diminish the resale potential of the properties.

Whilst the proponent suggests there is, “*strong market support*” for such developments in mainland states, it must further be questioned whether this will continue as government policies place increasingly high costs on carbon pollution, thus reducing the ease with which “fly in, fly out” property owners can occasionally access their “Lauderdale Quay” homes.

2.6. The Construction and Operation, Executive Summary page VII

2.6.1. Sea level rise allowance inadequate

The Walker Corp.'s adopted design level is too low, and the sea level rise allowance of 0.5m is inadequate. The clear consensus of scientific reporting in relation to climate change and sea level rise is that,

- Measurable climate change effects including sea level rise are occurring faster than earlier models predicted, and
- Climate change and sea level rise are occurring at or beyond the high end of the Intergovernmental Panel on Climate Change (IPCC) range of predictions.

Therefore, Walker Corp. should be designing for, at least, the IPCC's adopted "high" scenario of 0.3m sea level rise by 2050 and 0.9m by 2100.

Appendix L1 makes clear the planned height of the western revetment is inadequate, even with the inappropriately low risk sea level rise scenario Walker Corp. is prepared to acknowledge and plan for:

"Applying these design wave parameters to the wave run-up formulae, and taking into account the rough nature of the slope (1V:2H), the run-up height was found to be 0.6m at the 100-years ARI. The crest level of the western shoreline revetment is then set as:-

100-years ARI level at Lauderdale 2.1mAHD

Wave Run-up Height 0.6m

100-years ARI Run-up Level at Lauderdale 2.7mAHD

Therefore a crest level of 2.7mAHD would need to be established to generally avoid wave overtopping. Such a level is unable to be achieved due to earthworks and aesthetic requirements and hence a crest level of 2.5mAHD is recommended. By adopting this crest level, a small volume of water could be expected to overtop the western revetment under the 100-years design storm, affecting a narrow area (<30m) of the shoreline behind the wall." Section 8.3.2 Wave Run-up and Crest Level, Appendix L1, page 28.

SRB requests that the RPDC panel seeks briefings from CSIRO scientists with strong expertise in climate change modelling, and from the authors of the "Climate Change Impacts on Clarence Coastal Areas" study published in 2008.

2.6.2. Excessive impact and attempts to conceal the magnitude of the operation

2.6.2.1. Excessive impact

"Drawings of the proposed civil works illustrate a program involving the extraction of approximately 2,000,000m³ of suitable material from within Ralphs Bay and the subsequent use of this material."

This scale of impact is excessive and unacceptable. To imagine the scale of such "extraction" activity, members of the assessment panel should picture a towering mound of dredged material, 200m high, 100m wide, and 100m long.

2.6.2.2. Attempts to conceal the magnitude of the operation.

Furthermore, this is not a true indication of the level of devastation actually planned by the developer. Only in Figure 11 of the DIIS (which is not in the Compilation Print Version) is the true extent of this “*approximate*” figure given.

As Figure 11 reveals, the planned total cut volume is 2,337,500m³ and the total fill volume is 2,335,500 m³.

Using the Search tools, it is not possible to find these figures anywhere in the text of Appendix G – Engineering; the DIIS itself or the Executive Summary.

Is it reasonable that a further cut volume of 337,500m³ should be simply omitted from discussion of the volumes to be excavated, by rounding the figure down to a value of, “*approximately 2 million*” every time it appears in the text?

SRB contends this is an unreasonable and intentionally misleading use of “rounding down”, in an attempt to avoid giving an accurate description of the magnitude of the proposed engineering works.

Given the excessive dimensions of the 1.3km “navigation channel”, these should also have been mentioned in this section of the Executive Summary. The proposed “navigation channel” is projected to have “*a bed width of 250m*” (DIIS p. 96) with a depth of 6m. This excessive bed width for a “navigation channel” is surely only necessary because the “channel” is in effect a mine for further fill?

As for the statement on page 95 of the DIIS, “*Dredging operations will involve the extraction of 935,000000m³ of submerged material*”, whilst this was obviously an error (with the true figure of 935,000m³ given on the next page), it hardly inspires confidence in the DIIS if such a significant statistic is “out” by a factor of 10³.

2.6.3. The “*temporary earthen bund*”, Executive Summary page VII

This is a matter of considerable concern, in relation to which SRB will seek leave to present expert evidence at the Hearings.

What would be the effects on water quality in Ralphs Bay as a result of the construction of the “*temporary earthen bund*” “*around the western and southern perimeters of the project area using material sourced from the navigation channel dredging*”? (Executive Summary page VII)

- To what extent would the construction of the “*temporary earthen bund*” involve disturbance of the sediments with the heaviest mercury levels as determined by sediment core testing? Is it not the case that the 8 samples containing mercury above the guideline limit came from the western edge of the proposed development site?
- How stable would the “*temporary earthen bund*” be, especially in extreme weather conditions?
- What would the heavy metal and nutrient levels be in the material used in the “*temporary earthen bund*”?
- What, if anything, would prevent leaching of heavy metals and nutrients from the “*temporary earthen bund*” into the waters of Ralphs Bay?

2.6.4. Water quality impacts

It is claimed on page VII of the Executive Summary that there will be a, “*high quality of discharge water from the dredging operation*”. How high? The Derwent is already one of the most heavily polluted estuaries on the planet, largely due to the impacts of Australia’s oldest and biggest paper mill and zincworks. The *Water Quality Improvement Plan (WQIP) for Derwent Heavy Metals* makes it clear that the objective is to *improve* Derwent water quality. It seems highly improbable the proposed development is compatible with this aim. See quote below from the WQIP, page 1:

“The Derwent estuary is affected by elevated levels of heavy metals in water, sediments and biota – largely the legacy of past industrial practices. While there have been significant reductions in loads and gradual improvements in estuarine condition, further action is needed to reduce loads and to manage risks associated with contaminated sediments and seafood.”

Also on page VII, the Walker Corp’s Executive Summary states that, “*regulatory requirements for water quality release (will be) satisfied*”. Will these water quality requirements result in improvement, maintenance or deterioration of water quality, and, to what extent?

2.6.5. Importation of rock to Ralphs Bay

Re. the, “rock armoured seawalls” mentioned on page VII:

- What is the source of the rock?
- Are new quarries required and if so, where are they to be?
- What is the total tonnage of rock to be imported into Ralphs Bay?
- What is the projected impact of this large scale importation of rock on roads and traffic?
- What is the carbon footprint of this rock transportation activity?
- Are there likely to be shortages of rock for other more worthwhile projects as a result of the very large quantities of rock Walker Corp. plans to relocate into Ralphs Bay?

In relation to this last point, see “*Climate Change Impacts on Clarence Coastal Areas*” report, page 49:

“18. Suitable quarries for rock protection need to be identified and the suitability of their rock for coastal protection needs to be determined.”

A comprehensive search of the Executive Summary and DIIS using the simple search term, “*rock*” reveals no information in relation to the questions above, in either document, other than the vague statement on page 93 of the DIIS, “*Creation of the rock armoured seawall and internal revetment walls will require importation of substantial quantities of material from external sources in the form of rock boulders, pre-mixed concrete and reinforcing steel.*”

SRB submits that, “*substantial quantities*” is an insufficient level of detail for the general reader.

2.6.6. Excessive timeframes with significant loss of amenity for residents (page VIII)

The “*approximately 40 months... timeframe ... based on optimal working conditions only*” for the civil construction works alone (ie 3 years and 4 months), with, “*no allowance ... made for inclement weather, other natural events, or other matters that can not be controlled by the construction team,*” represents a very significant impact for nearby residents and for all residents of the South Arm Peninsula, as they travel past the scene of devastation.

For young children travelling past the site to and from the Lauderdale Primary School for around half of their primary school years, this would be experienced as an infinity of destruction, noise, dust, unpleasant smells and large vehicle movements. The school would presumably operate with frequent background noise for the duration. This is not the kind of experience that people have moved to Lauderdale to find for their families.

The Executive Summary then reports that, “*A civil and infrastructure works program of 7 years is proposed*”, as the islands are further developed and subdivided.

2.6.7. Final completion date withheld from the public in the Executive Summary

The Executive Summary is highly evasive in relation to the final completion date for the development.

The final completion date for the project is a matter of great concern to residents, who have every right to know how long they must expect to endure this radical “makeover” of the place in which they have chosen to make their homes.

Why, then, is there no mention of the estimated completion date in the Executive Summary? Why is it necessary for the general reader to plough on to page 332 of the DIIS in order to discover that:

“The second stage construction phase of the Lauderdale Quay development is anticipated to be undertaken over a 15 year period between the year ended June 2013 and the year ended 2028, and comprises the construction of the built form of the development including 542 dwellings and a commercial precinct.”

SRB contends it was not the Walker Corporation’s intention to make it easy for the general community to become aware of this greatly extended construction timeframe (and large number of dwellings), concluding in 2028 if all goes well.

Residents have every right to know the extent of this proposed impact on their lives, and can be expecting to use this information when deciding,

- Whether to leave the area if living in the immediate vicinity of the construction site;
- Whether to leave the area during the construction phase if they consider themselves unlikely to outlive the ugliest stages of excavation and remodelling of the bay;
- Whether to leave the area in order to place their children in a primary school in more tranquil surroundings (which may be more conducive to their physical, mental, emotional and spiritual health);

- Whether to leave the area due to anticipated traffic congestion making commuting journeys to work and high schools slower than is currently the case;
- Whether to remain and live with the development until its anticipated completion in 2028 (if all goes according to Walker Corp.'s plans).

Furthermore, residents need to take the duration of the proposed works into consideration when attempting to evaluate the risks of their property's value dropping during the short-, medium- and longer-term impacts of the proposed "development".

2.6.8. Lack of transparency around the responsibility for construction styles

In all the Walker Corp. brochures, harmoniously designed houses in pleasing colours are depicted, with attractively matched yachts sailing by and smiling good-looking pedestrians enjoying the facilities with their charming offspring.

The only hint in the Executive Summary that Walker Corp. is not intending to build the houses and has little if any control over their styles occurs on page VIII, in the cryptic statement, *"The program of construction of the ultimate built form is dependent upon the buyer."*

2.6.9. Evasiveness and uncertainty in regard to ongoing responsibility for the development

What is the general reader to make of the statement, *"The Lauderdale Quay development will be managed by a combination of management entities"*?

What management entities? What are they to be responsible for? What guarantees are there that they will discharge their responsibilities satisfactorily? How will their management performance be evaluated and by whom? What penalties are there for failures? This management model is of concern to the general public and should be explained more transparently in the Executive Summary.

The Executive Summary (page VIII) continues, *"The management entities will be responsible for certain aspects of the development."*

Which aspects? Is this known or not known? Why is no simple explanation provided here in the Executive Summary, for the general reader? Use of the Search function to query the full DIIS reveals no further reference to these *"management entities"*, their roles or responsibilities.

Why is so little information provided on this topic? How much genuine commitment is Walker Corp. showing to the sustainable long-term management of its development after it has sold the last block and left?

Finally, this paragraph concludes with the strange statement, *"No impact to rate payers of Clarence City Council will occur as a result of the development with contributions intended by the future residents of Lauderdale Quay."*

What is the general reader to make of this? Are the "intended" contributions guaranteed or not? Are ratepayers guaranteed to experience "no impact" or is this contingent on the "intended contributions"?

Is it not the case that, in Western Australia, state legislation was recently passed, compelling Councils to take on responsibility for costs associated with canal estates, whether they liked this or not?

2.7. Potential Environmental Impacts and their Management (Executive Summary page VIII)

Why use the term, “*potential*”? Walker Corp. knows full well that its proposal is intended to have a massive environmental impact. The cost-benefit analysis depicted in Table ES3 on page XXIV of the Executive Summary clearly indicates that the environmental costs of the project outweigh any economic benefit.

In the first dot point under this heading, the same criticism must be made: why on earth query whether the, “*existing environmental values of the area*” “**may**” be affected (emphasis added)? Walker Corp. knows full well the environmental values of the area **would** be very seriously affected indeed, if the project were to proceed.

2.7.1. Geomorphology and Coastal Processes – language choices (Executive Summary page IX)

The introductory statement to this section hardly complies with the Guideline request that the Executive Summary should be, “*easily read*”.

Instead of, “*and covers supratidal, intertidal and subtidal lands of Ralphs Bay,*” how difficult would it have been for the writers to translate this jargon into, “*and covers land above the high water mark, below the low water mark and in the intertidal zone between the two*”?

What is the meaning, to the lay (or any?) reader, of, “*Both extreme and operational wave impacts*”?

2.7.1.1. Impacts minimised or mention avoided?

How might the, “*small and very localized increase in wave energy due to reflections from the rock armour wall proposed on the outer edge of the reclamation*” affect the safety of windsurfers in Ralphs Bay, especially the inexperienced?

Re.:

“The effects of the slightly modified wave climate on bed shear stress (which is directly related to sediment scour) is very minor with no significant changes in scouring or deposition predicted with regard to the regional geomorphology of Ralphs Bay.”...

Why is the “*regional geomorphology of Ralphs Bay*” chosen as the scale of the area for consideration when scouring of the sediments is discussed on page IX? What about localised effects in the vicinity of the rock armour walls?

The State of the Derwent reports make it clear that the historical legacy of industrial pollution in the Derwent has been ameliorated to some extent by the laying down of cleaner sediments over the most polluted Derwent and Ralphs Bay sediments in recent years, following improvements in the quality of surface runoff and groundwater flowing into the estuary. Thus, cleaner sediments have “capped” some of the most polluted sediments in the profile. The preferred management strategy of the Derwent Estuary Program is, “*Monitored Natural Recovery*”, which can also be translated as, “*Do not disturb Derwent sediments, but instead leave them to be capped ever more effectively by cleaner sediments as the years go by.*”

Any increase in scouring of the sediment profile across the remaining sandflats if the development went ahead could surely result in,

- Disturbance and stripping away of microalgae on the sandflat surface – the producers at the base of Ralphs Bay food chains;
- Potentially, death of burrowing sandflat invertebrates (marine worms, bivalve and gastropod molluscs etc);
- Hence further loss of food resources for resident and migratory shorebirds;
- Remobilisation of metals bound in lower sediment layers and in pore waters, into the parent water body;
- Bioaccumulation and biomagnification of heavy metals in Ralphs Bay food chains, and;
- Siltation of the canal/s of the development, necessitating dredging, which would result in further deterioration of water quality, by resuspending sediments and increasing loads of soluble pollutants into the parent water body.

Where is the proof that there is and would be little or no sediment movement in Ralphs Bay?

Can the Walker Corporation guarantee that changes in hydrology as a result of the proposed “development” would not result in erosion of the superb assemblages of saltmarsh vegetation elsewhere within the area of the extended Ralphs Bay Conservation Area as depicted in Schedule 1 of the Ralphs Bay Conservation Area (Clarification) Act 2006?

2.7.2. Climate change impacts

2.7.2.1. Heightened wind speeds and increased bed shear stress

Re. the statement made on page IX that, *“Heightened wind speeds were found to have potential to cause an increase in bed shear stress.”*

Two questions arise:

- What impacts on the “liveability” of the development follow from the predictive modelling of, *“heightened wind speeds”*?
- How significant would this, *“increase in bed shear stress”* be in terms of erosion of the remaining sandflat adjacent to the development? (see 2.7.1.1 above)

There is a suggestion that Walker Corp. has something to hide here, as the focus of the impact is shifted from the local to the wider Ralphs Bay area, in the statement, “Importantly however, the development will not cause increases in bed shear stresses over Ralphs Bay as a whole.” Whilst “Ralphs Bay as a whole” may not experience increased significant bed shear stress increases, what local effects have been modelled, and with what consequences?

2.7.2.2. Increased nutrient loads?

Re. the statement (page IX) that, *“increased rainfall intensities may have an impact on the effect of nutrient loads within Ralphs Bay”*, how high are these (presumably, increased) predicted nutrient loads in relation to nutrient loads monitored elsewhere in the Derwent by the Derwent Estuary Program (DEP)? Where do the predicted

nutrient levels fall in relation to trigger levels for concern in regard to ecosystem health?

2.7.2.3. Inadequate allowance for sea level rise

As stated in sections 2.6.1 and 2.2.4 of this submission, 0.5m is an insufficient mean sea level rise allowance.

As indicated in the Victorian Coastal Strategy 2008:

“In its Fourth Assessment Report the IPCC projected sea level rise of between 0.18–0.59 metres by 2090–2099 using a hierarchy of models plus additional ice sheet melt of 0.1–0.2 metres. However, the upper values of sea level rise (e.g. 0.59 metres) projected by the models were not considered to be the upper bounds of possible sea level rise by 2099. While there is uncertainty about the quantum of the sea level rise, data provided in the IPCC report shows that the sea level is rising and will continue to rise in the 21st century and in all likelihood beyond.

On the basis of the IPCC report and until national benchmarks 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. In this context, it is useful to recognise that sea level rise will create a spectrum of risk, with the highest likelihood of impacts in the lowest lying areas.

Policy

1 Plan for sea level rise of not less than 0.8 metres by 2100, and allow for the combined effects of tides, storm surges, coastal processes and local conditions, such as topography and geology when assessing risks and impacts associated with climate change...

2 Apply the precautionary principle to planning and management decision-making when considering the risks associated with climate change.

7 New development that may be at risk from future sea level rise and storm surge events will not be protected by the expenditure of public funds.”

As previously mentioned, the “shoreline buffer in the form of parklands” (page X), which has been promoted in the Walker Corp. brochures as an attractive recreational asset, is likely to become instead a saline muddy zone in which grass is unable to thrive due to increasingly frequent salt water inundation.

2.7.2.4. Alleged protection against storm surge and mean sea level rise, page X

Re. the statement, “*The Lauderdale Quay terrestrial and marine environment will protect the existing coastline by acting as a buffer to storm surge and mean sea level rise*”, how can this possibly have any credibility?

Surely;

- “*The existing coastline*” within the development area will have ceased to exist?
- Storm surges and sea level rise south of the proposed “development” would

result in the flow of water into low-lying areas of Lauderdale, regardless of any inflows or lack thereof along the edges of the proposed “development”?

- Lauderdale is situated on a fairly narrow isthmus and would therefore be subject to inundation from the Frederick Henry Bay side (the east) in the event of a significant storm surge event or significant sea level rise impacts?

As the “Climate Change Impacts on Clarence Coastal Areas” report indicates, in relation to homes at Roches Beach, Lauderdale:

“Modelling indicates that under current conditions, a series of storms with a combined 1% AEP (100 year ARI) erosion effect could remove 100 m³ of sand per m of beach, leading to an average erosion of about 25 m inland. This could put approximately 19 of the houses directly behind the dunes at risk as indicated by Figures 2, 3 & 4. However, by 2050, most houses behind the dunes could be at risk.” (page 51)

2.7.3. Land (Seabed) contamination, page X

2.7.3.1. Cadmium

On page X, it is stated, *“one sample contained cadmium in a concentration slightly above the guideline limit”*.

- A search of the DIIS indicates that the description, *“slightly above”* is inaccurate and misleading. Table 14 on page 142 of the DIIS reveals that, in Core 8, the cadmium level was 4mg/kg of sediment, whilst the NODGDM Screening Level is given as 1.5mg/kg. *“Slightly above”* in the Executive Summary therefore refers to a cadmium level 2.67 times greater than the guideline limit referred to in the Executive Summary, which is hardly a *“slightly”* elevated level.
- After discovering the elevated cadmium level in core 8, did Walker Corp.’s consultants return to conduct finer-scale sampling to determine the true extent of the area of above-level cadmium pollution?
- Table 14 only reports data from cores containing metals above the screening levels. The general reader can be expected to find heavy metal pollution a topic of concern, and SRB contends the DIIS should have included *all* metal levels in Table 14, so that the general reader could see how many cores contained sediments close or very close to the NODGDM Screening Levels. Metal levels above the guideline limit could have been given special emphasis by the use of bold type.

2.7.3.2. Mercury

SRB finds the following statements in the next paragraph on page X highly concerning:

“Eight of the 168 samples contained mercury above the guideline limit. Due to the volume of material to be dredged in the vicinity of the areas recorded as containing mercury, the concentrations in dredged material would not exceed guideline limits. Elutriate and leachate testing also confirmed that these metals would not leach into the water column above guideline limits as a result of dredging.”

This is concerning, since:

- Mercury is a highly toxic pollutant posing grave health risks to native biota and to humans consuming Derwent seafood;
- Concerted efforts of the partner organisations of the Derwent Estuary Program (DEP) since its formation in 1999 have resulted in improvements in some indicators of heavy metal pollution in the estuary. The successes of this partnership between state and federal government, the 6 councils fronting the river and major industry bodies should be celebrated, strengthened and built upon – not threatened or unravelled. This is a matter of local, state and federal concern.
- Walker Corp. plans to construct its “*temporary earthen bund*” far out on the sandflats, using material dredged from this vicinity;
- The waters of the bay would surely be contaminated by the disturbance of these sediments during the construction of the “*temporary earthen bund*” and during the bund’s later removal and the relocation of its contents as “fill”;
- The levels of mercury in Ralphs Bay flathead are already high, as indicated in the Derwent Estuary Program’s July 2007 brochure, “*Should I eat shellfish and flathead from the Derwent? - Information for Recreational Fishers.*”

This brochure states:

“Over the past five years, median mercury levels in flathead caught in the Derwent have been 0.51 mg/kg – very close to the recommended maximum standard of 0.5 mg/kg. Larger flathead, and those caught north of the Tasman Bridge or in Ralphs Bay tend to have higher levels, while smaller fish and those caught in the lower estuary have lower levels.”

The DEP’s recommendation is:

*“Limit meals of Derwent flathead to no more than 2-3 times/week, or 1 meal /week for pregnant women and young children.**

**based on FSANZ advice, ‘Mercury in Fish’ (Dec. 2004)”*

The complete DIIS provides little reassurance to the general reader, with the statements on page 141 that the sediment analysis carried out was, “*for total metals (not dissolved)*”. Why were dissolved forms of the metals not considered? Surely these are the most likely forms of the heavy metals likely to be absorbed by organisms? Surely changes are likely to occur in the chemistry of compounds holding heavy metals in Ralphs Bay sediments, as a result of excavation and exposure to air and oxygenated water? Surely pore waters should have been analysed for dissolved contaminants?

Table 14 on page 142 of the DIIS only reports data from cores containing metals above the screening levels. The general reader can be expected to find heavy metal pollution to be a topic of concern, and SRB contends the DIIS should have included *all* metal levels in Table 14, so that the general reader could see how many cores contained sediments close or very close to the NODGDM Screening Levels. Metal levels above the guideline limit could have been given special emphasis by the use of bold type.

In Table 14, we see that core 10 had a mercury content of double the NODGDM Screening Level (SL); core 12 contains mercury at 2.53 times the NODGDM SL and core 13's mercury content was 3.53 times the screening level. These are not trivial levels of mercury pollution.

Page 149 of the DIIS provides further cause for concern:

“Analysis of 168 samples for dredging and seafloor disposal suitability found that mercury was the only metal considered to pose a relatively minor risk due to its presence at concentrations in excess of the NODGDM SLs (equivalent to ISQG-low values) in the shallow upper sandy sediments of two defined areas within the study area. These were the navigation channel and an area adjacent to the western edge (intertidal rim) of the direct study area.”

Since the navigation channel is intended to be the site of intense boating activity, we ask the RPDC to give close examination to risks associated with disturbing polluted sediments in the, *“navigation channel and an area adjacent to the western edge (intertidal rim)”*, especially in the light of elevated mercury levels already present in Derwent biota including flathead, and the current uncertainty as to the form in which mercury and other metals enter Ralphs Bay food chains.

SRB urges the RPDC to investigate closely the following questions:

- At what distances from the areas with above-guideline (or near-guideline) mercury levels will the excavations and works associated with the *“temporary earthen bund”* be carried out? Is it not the case that the *“temporary earthen bund”* is to be constructed from these very sediments, with inevitable pollution of the waters of Ralphs Bay? Is it not the case that the subsequent removal of the *“temporary earthen bund”* at a later stage will result in further reworking of these sediments, exposure to air and rain, and consequent changes in the oxidation states of any compounds currently binding the heavy metals (eg metal sulfides), with the potential for serious impacts on Ralphs Bay and Derwent water quality? Is this construction methodology a cheap, *“Quick and Dirty”* approach?
- When the 8 above-limit samples were identified, did Walker Corp. make any effort to return to the site and resample on a finer scale in order to determine whether the mercury residues were to be found in *“clumps”* or *“hotspots”* or whether the 8 above-guideline samples were instead indicative of an extensive area of heavily polluted sediments?
- Whether or not the total volume of material to be excavated could in effect *“dilute”* the mercury in the sediments, is this an appropriate or legal approach to dealing with toxic pollutants?
- Given that mercury levels in flathead within Ralphs Bay are known to be high, how does mercury in the sediments and waters of the bay pass into food chains, and how confident can we be that Walker Corp.'s consultants have really proved this is not a significant problem?
- What other species of Derwent biota are at risk from the disturbance of sediments containing above-guideline mercury levels, and a return to high levels

of available mercury as experienced in “the bad old days” of the Derwent’s pollution history?

- What might be the impacts of elevated mercury levels on the health of native flora and fauna including both adult and juvenile spotted handfish, *Brachionichthys hirsutus*, especially when compounded by other stresses such as introduced species including the Northern Pacific sea star *Asterias amurensis*? This pest species was not yet in Tasmania during the earlier days of high level industrial pollution of the Derwent, but compounds the threat to the spotted handfish, especially by predated on ascidians (stalked sea squirts) used as a substrate around which the female wraps her egg ribbon.
- How might the health of Ralphs Bay and Derwent biota including the spotted handfish be affected by synergies between multiple threats, such as the interaction of elevated available mercury levels with significant increases in boating traffic and hence the further spread of introduced pest species, pollution from antifoulants and runoff from the proposed “development”, periodic dredging, warming oceans, ocean acidification and increased storm activity damaging benthic habitats including spotted handfish breeding habitat?

It should be noted that, according to table 62 on page 290 of the DIIS, only “Moderate” effectiveness is predicted in respect of mitigation measures proposed by Walker Corp. to reduce the environmental impacts of marine pollution and changes to water and sediment quality, antifoulant contamination and of increased colonisation and spread of marine pests. (Incidentally, we are fascinated to know which marine reptiles the consultants studied in Ralphs Bay!)

2.7.3.3. Potential acid sulphate soils (ASS)

In relation to the comments on page X of the Executive Summary, SRB raises the following concern:

- What is the potential for the *formation* of ASS in the short, medium and long term as a result of the proposed “development”?

Since the DIIS indicates uncertainty regarding the real extent of potential acid sulphate soil problems, the proponent has failed to provide the necessary information for the evaluation of this risk.

“However, it is recognised that further delineation of the ASS present would provide tighter control of its management during dredging and excavation, therefore further coring in the area identified as potential ASS is proposed together with development of an ASS Management Plan according to current best practice detailed design stage of the development.” (Executive Summary page XI)

2.7.3.4. Mitigation

How adequate are the mitigation measures proposed on pages X-XI of the Executive Summary?

According to table 62 on page 290 of the DIIS, only “Moderately” so, in respect of key impacts.

Questions we raise here on behalf of the community are:

- How secure are the silt curtains likely to be, in all wind and weather conditions and at all stages of the tide?
- If metals are to be “stabilised” in retention basins, can the proponent be compelled to capture and remove the “stabilised” metals for appropriate further treatment and/or disposal?

2.7.3.5. Monosulfidic Black Oozes (MBO's)

Although not mentioned in the Executive Summary, monosulfidic black oozes (MBO's) have been a very significant problem in Western Australian canal estates. SRB requests that the RPDC seeks detailed information from Western Australian scientists such as Dr. Steve Appleyard on the conditions leading to MBO formation, and the associated problems with intensely noxious odours arising from hydrogen sulfide production, staining, highly expensive dredge procedures, release of heavy metals from MBO's when dredged, toxicity and destruction of benthic habitats and fauna.

Page 137 of the DIIS dismisses the potential for production of MBO's as unlikely on the basis of low organic carbon, low sulfite levels, adequate mixing and tidal exchange.

- Are these claims well supported by the evidence?
- Are these parameters unvarying throughout the year, and is the data set presented in the DIIS an adequate representation of seasonal variations?
- Could short- and longer-term climatic variations cause changes in these parameters?
- If MBO's began to form, what would/could stop the process?
- If MBO's begin to form, how extensively might they spread?
- What habitats, which benthic organisms may be affected and how acutely?
- What mitigation measures would be proposed and at what cost?

2.7.4. Water quality (page XI)

The DEP has been very successful in improving the quality of stormwater and industrial effluent flows into the Derwent estuary, and it is to be hoped this improvement will continue. The diversion of treated effluent to the Coal River Valley represents a significant investment of Federal funding into reducing nutrient loads in the Derwent. Nyrstar is continuing to invest significant sums into reducing the flow of metals into the Derwent, and is currently focusing on reducing contaminated flows into the Derwent resulting from heavy rainfall events and exceptional stormwater flows.

The success of these joint local / state / federal government initiatives should not be jeopardised by needless disturbance of Ralphs Bay sediments.

2.7.4.1. Concerns relating to toxic heavy metals

SRB is very concerned by the potential for heavy metal release if oxygen levels in Ralphs Bay sediments, pore waters or the water column alter, resulting in changes in the oxidation states of the metals. For instance, page XI of the Executive Summary admits, “*metals do not leach easily (excepting when dissolved oxygen levels are low)*”.

There can be little doubt that oxygen levels at the bottom of the proposed canals will be low, regardless of any *eventual* flushing of these waters after a certain residence time in the canals.

This is especially concerning in the light of the statement on page 101 of the DIIS that, *“The ultimate disposal location for dredge tailings is within the development’s waterways.”*

2.7.4.2. Concerns relating to stratification and oxygenation

Furthermore, we are unimpressed by Walker Corp.’s statement on page 164 of the DIIS, *“Overall it is considered that stratification of the internal waterways will not be of concern and is unlikely to develop under normal seasonal conditions.”* The Derwent is a salt wedge estuary and as such, it is not a question of stratification “developing” but instead of whether the flushing Walker Corp. describes will be able to *break up* the stratified waters, creating a top to bottom mixing scenario to ensure oxygenation of the bottom waters in the canals.

The statement on page XI of the Executive Summary that, “the existing estuary salt-wedge characteristics are not well understood” is simply not good enough. SRB is confident that scientists of the Derwent Estuary Program and from CSIRO would be able to address this question in more detail.

We ask that the RPDC, with the Precautionary Principle very much in mind, examines the proponent’s claims in relation to all these matters with particular care.

2.7.4.3. Concerns relating to nutrient and zinc levels

Re. the statements on page XI that:

“the water quality in Ralphps Bay generally meets ANZECC guidelines (i.e. the bay water quality is generally very good), with the exception of slightly elevated nutrients and zinc levels.”

- Of what use is a “general” reassurance that the waters in a very large bay like Ralphps Bay “generally” meet ANZECC guidelines? The proposed development is for a very specific, low wave-energy, poorly flushed north-eastern corner of the bay, close to sources of urban runoff and at the receiving end of waters pushed in this direction by frequently strong prevailing south-westerly winds.
- If nutrient and zinc levels are, “slightly elevated”, how can the water quality be, “very good”?
- If nutrient levels are even now, “slightly elevated”, what can be predicted in respect of nutrient levels in Ralphps Bay when 542 dwellings have been constructed in the marine environment, with the usual complement of keen gardeners and pets resulting in fertilizer and faecal inputs to the bay as well as litter, general debris and whatever soil, plant material and the like wash off the low-lying parkland areas during high tide events?

The “*slightly elevated ... zinc levels*” in Ralphs Bay are a matter of genuine concern, since zinc is used in the *Water Quality Improvement Plan for Derwent heavy metals* as a proxy for other metals, which occur at lower levels and are therefore more challenging to detect, *but which may have very significantly toxic effects* (eg cadmium, mercury):

*“Zinc was selected as the indicator for this project as it is by far the most abundant heavy metal in the Derwent and can be readily measured in water, sediments and biota, thus enabling the development of calibrated estuary models. **Furthermore levels of most other heavy metals show a strong correlation with zinc levels, and management actions proposed to address zinc contamination should address other metals as well.**” (WQIP page 1) (emphasis added)*

The statement on page XI that, “*The development increases the capacity of the Bay to absorb catchments loads, especially during extreme rainfall events*”, even if sustained by the evidence, raises the question of what will happen to nutrient loads in the Bay during periods of extended drought and/or heat.

Again, we request that the RPDC seeks the assistance of the Derwent Estuary Program in reviewing the DIIS and providing briefings to panel members on these matters.

2.7.4.4. Contradiction between the Executive Summary and the DIIS in regard to the role of sandflats in denitrification

Regarding the role of the sandflats in the nitrogen cycle and nutrient cycling, the Executive Summary states on page XI that, “*Sand flats at Lauderdale are unlikely to play a major role in nutrient cycling and that any potential reduction in denitrification capacity at Lauderdale, following this development, would have little or no measurable impact on ammonia or nitrate in Ralphs Bay.*”

This is entirely at odds with the complete DIIS, which states on page 154-5:

*“Nutrient concentrations show variable behaviour within the bay, but were generally elevated compared to ANZECC & ARMCANZ (2000) trigger values using the 95 percentile species protection level, with the exception of nitrite. **Nitrate and nitrite concentrations in the surface waters of Ralphs Bay were found to be lower than the concentrations deeper in the water column, with maximum concentrations in surface waters only half those in deeper water. This was observed as most likely attributable to denitrification occurring on the sand flats within Ralphs Bay.**” (emphasis added)*

The Executive Summary thus provides a misleading impression to the general public in relation to the importance of sandflat ecosystem services such as denitrification, which essentially “cleans up” the major nutrient nitrogen from the waters of the estuary, sending the nitrogen back into the atmosphere as the relatively inert gas, N₂.

Again, the broader scale of impacts, “*in Ralphs Bay*” in the statement on page XI of the Executive Summary is surely another attempt to shift the focus from the localised impacts of this highly destructive proposed “development” to a broader scale where the impacts will be less easily detected.

The biogeochemistry of sandflats and mudflats is complex, and varies from site to site with particle size, oxygenation, depth of sediments and other parameters. However, it is fair to say that sandflats, mudflats and the benthic sediments of bays and estuaries play important roles in nutrient cycling and regulating the quality of the overlying water body. Costanza *et al.* (Nature 15 May 1997) gave estuaries an annual value of US \$22 832 per hectare for ecosystem services, including nutrient cycling. This was higher than the value calculated for any other ecosystem type on earth.

2.7.4.5. Resuspended sediments

Resuspension of sediments into the parent water body is an almost inevitable consequence of canal estate developments and is one of the reasons these developments are banned in NSW and Victoria. The Executive Summary is not reassuring when it states on page XI that:

“Heavy metal leachate during construction or in the long term from disturbed sediments is not expected to impact on water quality parameters of Ralphs Bay.”

“Not expected to” is hardly the most robust or reassuring of guarantees.

A little further on, the document states:

“The construction of the outer bund will protect the receiving environment of Ralphs Bay and will not contribute to suspended sediment in waters more than 20m from its footprint.”

- So, even considering the rosier scenario Walker Corp. can deliver in its DIIS, the Executive Summary contains the admission that suspended sediments will travel at least 20m from the outer bund. If this is the case, how can Walker Corp. guarantee these suspended sediments will travel no further, given that the heavy metal pollution in Ralphs Bay sediments has already travelled down the estuary from the zincworks over 20km away and from the paper mill much further distant, at New Norfolk? (The mill used mercury in its paper treatments in times past).
- DEP staff and DEP partner Nyrstar carry out biota monitoring for heavy metals, including the deployment of oysters at various locations in the estuary, to determine how much zinc they accumulate in a fixed time. In its efforts to source “clean” oysters for deployment in this way, it has been found that zinc levels in oysters grown as far away from the Derwent as Pittwater are already high enough to be useless for these studies. The source of the zinc in Pittwater oysters is believed to be the Derwent. The DEP has therefore been compelled to go as far from the Derwent as Little Swanport on the East Coast in order to source uncontaminated oysters to provide baseline data and control groups of “clean” oysters. If heavy metals can travel to Ralphs Bay and even to Pittwater from distant sources, how can Walker Corp. credibly claim that resuspended sediments from its “development” will travel just 20m before dropping to the seabed, there to be anchored by mysterious means for all eternity? Does Walker Corp. maintain this process will occur in all conceivable weather conditions combined with every possible state of the tide?

2.7.4.6. Industry best practice load reductions

The Executive Summary no doubt seeks to reassure when it states:

“Industry best practice load reductions of 80% total suspended solids, 60% total phosphorus, 45% total nitrogen prior to discharge to the waterways of the site and to Ralphs Bay will be achieved by the proposed bio-retention stormwater management strategy during the development’s operation.”
(page XII)

However, in an already heavily polluted estuary, it is simply unacceptable that 20% total suspended solids, 40% total phosphorus and 55% total nitrogen should flow into Ralphs Bay in stormwater from an unnecessary and unwanted “development” constructed within the marine environment.

2.7.4.7. Overall water quality impact

“Overall the development will have minimal influence on the water quality of Ralphs Bay during both the construction and operational phases of the project.” Executive Summary, page XII

Once again, the emphasis given is on water quality in the whole of Ralphs Bay, where an influence *is* admitted.

- What of the local impacts on the section of Ralphs Bay shown in Schedule 1 of the Ralphs Bay Conservation Area (Clarification) Act 2006?
- What of the impacts on the Ramsar-quality saltmarsh vegetation communities within this area, which must be protected in the Conservation Area whether or not the development goes ahead?
- What of the impacts on Ralphs Bay biota and food chains?
- What of the impacts on Tasmanians who eat Derwent-caught seafood, especially flathead and bream?

2.7.4.8. Impacts on aquaculture at Pipeclay Lagoon

“There is not predicted impact to the aquaculture industry existing in the greater Derwent Estuary.” Executive Summary, page XII

Save Ralphs Bay Inc. has maintained consistently that the proposed canal estate development poses a risk to water quality and aquaculture operations at Pipeclay Lagoon. A search of the DIIS reveals no definition of the “greater Derwent Estuary” so it is difficult to see what claim Walker Corp. is making with this statement.

CSIRO modelling shows water flows (and therefore possible sediment and/or dissolved heavy metal transport) around the South Arm Peninsula from the Derwent, past Ralphs Bay, round towards and beyond Pipeclay Lagoon. (Figure 6, *General circulation pattern for coastal waters in southeast Tasmania*, RPDC Bruny Bioregion Background Report, page 24).

This is important because aquaculture operations in Pipeclay Lagoon are critically dependent on good water quality. There are 40-50 people directly employed in aquaculture in Pipeclay Lagoon, and 60% of the oyster spat for the Tasmanian and South Australian oyster culture industry is supplied from the oyster nursery Pipeclay

Lagoon. Since oyster production in these two states is valued at \$40 million per annum, this suggests business worth \$24 million per annum is dependent on good water quality in Pipeclay Lagoon. It is no easy matter to resite an oyster nursery.

SRB requests that the RPDC panel seek the advice of hydrologists and sediment transport specialists at CSIRO and of the oyster growers' group at Pipeclay Lagoon, when investigating these matters.

2.7.4.9 Water quality monitoring program

"A surface water quality monitoring program is proposed to ascertain compliance with the performance standards, quality assurance and project objectives" (Executive Summary, page XII)

Why "surface water"? SRB is well aware that surface waters in canal estates elsewhere in Australia can have reasonable water quality and even attractive fish swimming around.

- But what of the water quality at depth, where the most harmful effects may be anticipated? What about oxygen and heavy metal levels in the depths of the proposed canals?
- What about the ambient water quality for benthic communities in the development and elsewhere in Ralphs Bay?

2.7.5. Traffic

"The project will increase traffic on the surrounding road network however it is not likely that operational conditions will be affected, in terms of capacity" (Executive Summary, page XII).

This would be regarded by most local residents as a ludicrous statement. For all those of us who battle through peak hour traffic daily to get ourselves to work and our offspring to school, it is clear there are already capacity issues for commuters from the Eastern shore, most notably:

- Delays and backed-up traffic at the Mornington roundabout, a situation which may or may not be improved by the current roadworks;
- Significant delays and backed-up traffic for long distances on the Tasman Bridge approaches.

With the new residents of the Oakdowns and Glebe Hill developments adding to the traffic congestion for commuters from the South Arm Peninsula into Hobart, it is nonsensical to suggest the addition of construction traffic until 2028 at the earliest and 542 new dwellings in the canal estate would not affect the capacity of the surrounding road network.

Is it the case, as has been suggested to SRB, that a residential development at Tranmere was rejected some years ago, on the grounds that the Tasman Bridge was already at full capacity?

Journey times from the South Arm Peninsula into the city have already increased markedly over the years, as a result of increases in peak hour traffic: residents are unlikely to be impressed by Walker Corp.'s proposal to slow their journeys even further by, "lowering the speed limit on South Arm Road". (Executive Summary, page XII)

Property values within the South Arm Peninsula are affected by various factors, and travelling time into Hobart is one of these. Therefore, to add insult to injury, local residents choosing to move out of the area if the “development” is approved are likely to find their property values have dropped as a result of the anticipated traffic delays, amongst other losses of amenity.

In regard to the unspecified but “*substantial quantities*” of rock (DIIS page 93) to be brought into the bay, general readers in South Arm communities have every reason to be concerned about the associated impacts.

Page 182 of the DIIS provides detail that will be alarming to many local residents:

“It is estimated that approximately 10 trucks per hour could be expected at the peak of the construction phase. As the work force would be variable throughout the project an estimation of 147 vehicles per day, equating to 22 vehicles per peak hour is likely.”

The impact on the local community of these high numbers of large vehicle movements would be very considerable – and it must always be remembered that these imposts are planned in order to construct a deeply unpopular luxury development which provides no essential services to the community, but would instead shatter the peace of South Arm Peninsula communities and permanently damage the treasured sense of place we currently enjoy.

Page 182 of the DIIS continues to paint an unacceptable picture:

“There are a number of issues that are likely to arise from the generation of construction traffic that may affect the external road network within the study area. These issues include the following.

- *The increase in light and heavy vehicle movements travelling on the roads surrounding the subject site.*
- *Pedestrian conflict with heavy vehicle and construction traffic.*
- *The noise and dust pollution generated from the construction and construction traffic.*
- *Deterioration of road pavement due to increase in heavy vehicles.”*

“The increased heavy vehicle traffic is likely to increase the deterioration rate of the roads travelled on to the site.”

And on page 183 of the DIIS, Walker Corp. confirms its development will inconvenience residents with traffic delays:

“Travel Times

The average travel time from South Arm Road to Dorans Road to the Police Academy access in both directions is extended as determined by the modelling. However, travel time does not result in a large increase over 10 years, assuming growth in the area is consistent with the historic growth rates. A slight increase in travel times is likely to be experienced on South Arm Road with the construction of the proposed development mainly due to the introduction of two roundabouts along the South Arm Road.”

The proponent does not seem to consider it necessary to inform the public of the extent of the delays, in the DIIS. In fact, when a figure is finally produced for delays, Walker Corp. chooses to report on the delays to be experienced in 2018, after the major works have been completed. This is an evasive and misleading approach, clearly designed to conceal, not reveal important facts about the impacts of the development on residents' daily lives over many years:

"Average Delays

The average delay measured on the approach to intersections over each modelling period was determined for the year 2018. These show delays of up to 10.97 seconds with the installation of a second roundabout in South Arm Road (with development scenario 2). Delays of less than that would be expected from other intersections in the road network as a result of the proposed development." DIIS page 184

2.7.6. Air

The Executive Summary (page 13) admits there will be noxious smells associated with the proposed development, as would be expected.

"Odour modelling indicated minor exceedance of odour concentrations at a number of residential receivers along South Arm Road."

For residents of a small, quiet, charming coastal community, any "exceedance of odour concentrations" is completely unacceptable. Page 197 of the DIIS admits,

"it is important to realise that compliance with the odour goal does not mean that no odour will be experienced at all times."

In other words, Walker Corp. admits that the excavation of the complete sandflat ecosystem of the development footprint, the death and decomposition of the invertebrate and microbial life-forms of the ecosystem, will not smell pleasant.

All these unpleasant experiences; all these losses of amenity for Tasmanian residents, in order that luxury housing can be built in the marine environment at a time of global warming, sea level rise and rising charges to be placed by regulators on carbon pollution.

SRB urges the RPDC to reject this development in its entirety.

2.7.7. Noise and Vibration

As with the stench of this type of development, Walker Corp. is compelled to admit in the Executive Summary that the destruction of the Ralphs Bay sandflats would be a very noisy business. Page XIII reports that:

"In the longer term the majority of construction work will generate noise levels between 10 – 20 dB(A) above background noise levels and exceed the nominated noise limits."

Why should residents have to endure such imposts and the associated stress, distress and impacts on their mental and emotional health? What if residents of nearby properties are shift workers, needing to sleep in peace during the day?

Together with the visual impacts and unpleasant odours associated with the development, these noise impacts will place an intolerable and unnecessary burden on residents. All this for a “development” opposed by around 70% of the population.

2.7.8. Waste

It is in this section of the Executive Summary that the Walker Corp. most clearly displays its contempt for the intricate web of life currently constituting the sandflat ecosystem of the Ralphs Bay Conservation Area.

Every crab, every marine worm, every *Katelysia* clam or *Anapella* bivalve mollusc, every fragile air breather, every nassarid whelk, all the protozoa, all the microalgae which form the base of the food web, all the bacteria involved in the biogeochemical cycling which maintains water quality in the Derwent – all these wonderful living organisms are merely, “*putrescible wastes*” (page XIII) after they have been bulldozed and left to die and rot.

This is 2009. How can a “developer” intent on this destruction possibly defend such moral blindness, such hubris, such indifference to the fact that human impacts on the environment are destroying ecosystems worldwide, hastening the spread of introduced species and pushing more and more of the species with which we share this earth towards extinction? Is the Walker Corporation even aware of the fact that the planet is currently in the grip of an anthropogenic mass extinction, and that geologists are seriously proposing the naming of the current geological period the “anthropocene” in recognition of the enormous human impacts on the planet, which will be evident in the geological record a million years from now? (see *Zalasiewicz et al 2008*).

If the Walker Corporation or its employees have any inkling of such matters, they appear determined not to care; to allow no human response of empathy or concern. Death, destruction? So be it, if these ruthless operators can bank the profits.

But what of the RPDC, Tasmania’s peak planning body? What of the values enshrined in the “*Tasmania Together*” objectives? What of the values underpinning the State Coastal Policy and Tasmania’s planning system? The RPDC has the sombre duty of weighing the possibility that some individuals may be able to earn cash from this noxious “development” proposal against the distress of all who oppose it and the environmental destruction that would be necessary in order for it to proceed.

2.7.9. Terrestrial Ecology

How can Walker Corp. possibly claim its proposed “development” would have, “*small scale and localised impacts*” on anything, least of all, “*on terrestrial ecosystems, flora and fauna at Lauderdale*”? (Executive Summary, page XIV)

The planned obliteration of the vegetation all along the shoreline by the road, together with the sandspit which currently provides habitat for saltmarsh species would also be a devastating loss of roosting habitat for both resident and migratory shorebirds, which can be seen gathered in large numbers here on a regular basis, awaiting the turn of the tide.

The concluding statement to this section, “*no significant adverse impacts upon terrestrial ecosystems and associated wildlife are anticipated as either a direct or*

indirect result of the Lauderdale Quay development” beggars belief and is hardly worthy of comment other than to say it is demonstrably false.

2.7.10. Avian (Wader) Ecology

The devastating impact of the proposed “development” on both resident and migratory shorebirds, and the Walker Corporation’s determination to press on regardless, is probably the issue which provokes the most deep distress and ire in those opposed to this project.

The concept of “*stewardship*”, the idea that tiny migratory shorebirds should return each year to find their habitats protected from harm, that resident pied oystercatchers should be protected from human impact – this concept belongs to a culture alien to the Walker Corporation and its employees. Presumably, these same individuals would experience a sense of outrage if they saw a domestic animal such as a horse starving to death in a bare paddock? Perhaps these same individuals would invoke laws against animal cruelty or report the owners of the animal to the RSPCA? What mental compartmentalisation is required, then, to propose the deliberate destruction of a vast area of shorebird feeding habitat in order to construct luxury housing with boats moored ostentatiously in view of all who pass by?

Save Ralphs Bay Inc. has a close relationship with Birds Tasmania/Australia on the matter of the Walker Corp.’s proposed canal estate. We do not propose to duplicate the information provided for the RPDC’s consideration by Birds Tasmania/Australia. We concur with and support all statements and evidence provided in the Birds Tasmania/Australia submission, and we urge the panel to consider these matters in great detail as they are of much concern to the wider community.

The following discussion will be confined to an examination of some of the statements made in the Executive Summary.

Many Tasmanians, including members of the SRB working group are outraged by Walker Corp.’s cool admissions of the havoc it intends to wreak in the name of profit. Examples include:

“The proposed Lauderdale Quay development will result in the removal of approximately 52% of the existing intertidal sandflats and associated shoreline habitats at Lauderdale which provide foraging, roosting and nesting resources for resident and migratory waders. The areas of wader habitat to be affected are located in the northern sector of Lauderdale and, based on wader foraging observations, are the preferred foraging areas for most wader species, particularly in summer.” (Executive Summary page XV)

Continuing on from this statement, the usual tricks have been employed by the writers of the Executive Summary, as it dodges from the implied local Ralphs Bay impacts to consideration of the impacts at the much wider Derwent Estuary Pittwater Area (DEPA) level, in order to conceal the magnitude of the impacts on bird populations locally in Ralphs Bay.

A further admission on page XV that, *“The Lauderdale Quay development will also result in the loss of nesting sites for the resident breeding populations of Pied oystercatcher and Red-caped plover” (sic)* is more confirmation of the unacceptable environmental impact of this unnecessary and unpopular proposal.

In regard to its proposed mitigation measures and offsets, the Executive Summary admits on page XV:

“Whilst these measures are anticipated to have a discernible positive effect it is inevitable that the loss of resources, particularly areas of good quality wader foraging habitat, will result in impacts that can not be completely mitigated or offset.”

This is completely unacceptable to SRB and large numbers of Tasmanians, especially since the development provides no much-needed services to the community but would devastate our sense of place, our aesthetic pleasure, our enjoyment of the peninsula we call home, and would delay our journeys, reduce the values of our homes in the short term and almost certainly increase our rates in the longer term.

Impacts on Ralphs Bay populations of migratory birds listed under the federal EPBC Act are concealed using the now-familiar Executive Summary tactic of describing only the impacts on these species at wider geographic levels:

“The impacts of the Lauderdale Quay development on Red-necked stint, Eastern curlew, Double-banded plover, Bar-tailed godwit are unlikely to be discernible at the DEPA, State, National or international levels.” (Executive Summary page XV)

Rest and feeding habitat around the Ralphs Bay sandflats and mudflats is critical for migratory birds, especially since this area is at the southern extremity of the East Asian/Australasian flyway. On arrival at the end of long migratory flights, it is essential that the birds find adequate undisturbed habitat for resting, feeding and moulting. These birds are under pressure from human encroachment on their habitat throughout the world, and have no alternative destination if they arrive at Ralphs Bay only to be met by extensive habitat loss, excessive noise and general disturbance.

With regard to resident species, the Executive Summary admits on pages XV – XVI:

“The Pied oystercatcher, Red-capped plover, Sooty oystercatcher and Masked lapwing are the remaining wader species regularly observed at Lauderdale. None of these species is listed under the threatened or migratory species provisions of either the EPBC Act or the TSP Act. The Lauderdale Quay development will impact upon these species and the nature and scales of these impacts are likely to be discernible at the local Lauderdale and broader DEPA levels.”

The scales of these “discernible” impacts are not disclosed, although Walker Corp. would be well aware that this is an issue of great concern in the wider community. Is the proponent dismissing the concerns of the community or the responsibility we share to protect the habitat of these species, with the statement, “None of these species is listed under the threatened or migratory species provisions of either the EPBC Act or the TSP Act”? Whilst a true statement, this is hardly a justification for large scale habitat destruction, especially given that the proponent has already admitted on page XIV:

“the number of Pied oystercatcher regularly observed at Lauderdale represents more than 1% of the total global population of this species, which satisfies one of the criteria that have been established under the

provisions of the Ramsar Convention for consideration of a wetland area as being a wetland of International significance, this being Criterion 6: A wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of waterbird.”

The discussion of sea level rise impacts on page XVI is insidious. It appears the Walker Corporation is inviting the general public to regard shorebird populations as already doomed in the light of global warming and future sea level rise, and using this as a justification for its proposal to destroy an internationally significant wetland.

This suggestion must be countered by pointing out that:

- global warming impacts are likely to be relatively gradual, unlike the habitat destruction Walker Corp. proposes;
- ecosystems and species may be able to adapt;
- human societies have a responsibility to develop mitigation strategies including assisting inland movement of some coastal habitats; and
- in the face of numerous threats to the survival of our shorebirds a responsible society should not go out of its way to add unnecessary threats.

Is the Executive Summary rejoicing when it states:

“It is also likely that there will be an overall reduction in wader numbers within the DEPA complex with the general status of waterbirds (which includes waders) around the world deteriorating, with an estimated 62% of waterbird populations in Southeast Asia, which is part of the East Asian-Australasian Flyway, either in decline or having gone extinct”?

Perhaps Walker Corp. believes the extinction of shorebirds conveniently removes obstacles to unbridled coastal overdevelopment?

The offsets proposed on page XVI are trivial in comparison to the destruction planned, and their effectiveness is uncertain and probably unlikely, especially since there appears to be no commitment to develop offsets in advance of the planned habitat destruction and to monitor their effectiveness over a number of years before commencing the assault on the sandflats.

What are we to make of the statement that:

“As part of the Lauderdale Quay development Walker Corporation would, in consultation with the Tasmanian State Government and other relevant stakeholders facilitate the securing of a wader habitat offset site”?

The Walker Corporation’s brochures back in 2004 promised a “*new Conservation Area*” south of the proposed development. Apparently the reasoning here is that, if new lines are drawn on maps and new signage is erected, birds will relocate to areas of sub-optimal habitat?

Finally, by way of offsetting, the Executive Summary suggests on page XVII that:

“A funding source for ongoing environmental offset works will be established through the imposition of an annual Environmental Offset Levy

that will affect each individual property that is created by the Lauderdale Quay development.”

Who would pay into such a fund? Is the Walker Corp. promising to make very substantial payments itself from the commencement of the works until all the envisaged properties have been “created” some time in or after 2028? And if a number of blocks remain unsold, is the Walker Corp. promising to continue making the payments on behalf of these vacant blocks? If purchasers of blocks (especially those far away in overseas countries) simply do not pay their contributions, is Walker Corp. guaranteeing to cover all shortfalls, in perpetuity? Is Walker Corp. to be responsible for legal action in pursuit of those property owners who do not pay their contributions?

2.7.11. Aquatic ecology

2.7.11.1. Rich and biodiverse benthic communities

Whilst the Executive Summary claims on page XVII that, *“the diversity and abundance of marine ecosystems and species that would be directly impacted by the Lauderdale Quay development are limited”*, an independent study carried out by Catriona Macleod and Fay Helidoniotis reported that the benthic communities of Ralphs Bay and nearby areas in the Derwent estuary are surprisingly rich and biodiverse. (See Macleod and Helidoniotis 2005).

In stark contrast to the dismissive remarks in the Executive Summary, it is stated on pages 277 – 278 of the DIIS that:

“The majority of the project area encompasses intertidal flats that support a diverse and abundant invertebrate community. Data obtained from intertidal benthic invertebrate surveys of sandflats at Lauderdale and eight other bays, primarily to collect data for wader foraging capacity studies, identified 114 species at Lauderdale, which were dominated by polychaete worms (37 species), bivalve and gastropod molluscs (35 species) and crustaceans (32 species). The high diversity of species and lack of dominance of individual species at Lauderdale is an indicator of good environmental health. Extrapolated average abundance data indicate the presence of approximately 4 billion invertebrates at Lauderdale with 40% of these (1.6 billion) present at the proposed project area.... The highest number of species occurs at the northern project area”.

What are we to make of the “Executive Summary” if the summary process involves transforming *“a diverse and abundant invertebrate community”* into, *“limited” “abundance and species”*?

If the Executive Summary has distorted this report so dramatically, effectively reversing the information supplied by an honest consultant, how many other instances might there be of compounded distortions and changes to the consultants’ reports, going from the Appendices to the DIIS and from the DIIS to the Executive Summary?

SRB strongly requests that the RPDC panel call in at least some of the Walker Corp.’s consultants and question them closely about the accuracy with which they believe their findings have been represented in the DIIS.

2.7.11.2. The spotted handfish – historical, cultural, biological significance

The spotted handfish (*Brachionichthys hirsutus*) is a small and slow-moving fish which prefers to “walk” on its pectoral and pelvic fins rather than swim. It is culturally and historically significant for Tasmania and Tasmanians, since it was first discovered by the French explorer Peron in the late 1790’s, and formally named and described in 1804, making it one of the earliest described fishes from Australian waters (Last & Bruce, 1996). The Allport Library and Museum of Fine Arts holds in its collection a painting of a spotted handfish by William Buelow Gould, ca. 1832, titled, “*The Walking Fish*”.

Previously referred to as, “*the common handfish*” and “*the diver’s friend*”, these quirky and attractive little creatures will sit on a diver’s hand while being examined, photographed or measured. The spotted handfish is endemic to the lower Derwent Estuary and its bays and channels, including Ralphs Bay.

It is worth noting that, while Tasmania is known for having for a wide range of endemic marine species in general, the state has very few endemic marine fish. Furthermore, while the spotted handfish is possibly teetering at the brink of extinction, we are unaware of any other marine fish species that has become extinct since records began. Thus the spotted handfish has the tragic potential to become the world’s first extinct marine fish, or, as it has sometimes been described, “*the thylacine of the sea*”.

The population of the spotted handfish has crashed since the 1980’s, for a variety of reasons thought to include habitat degradation, and it is now classed as Critically Endangered on the IUCN Red List of Threatened Species.

The spotted handfish once occupied extensive areas of clean sand and shellgrit on the seabed throughout the lower Derwent estuary and associated bays including Ralphs Bay. Since it “walks” around on the seabed, the spotted handfish needs a clean, firm substrate. Increased siltation and the consequent “blanketing” of many previously valuable habitat areas with fine, soft sediments may be partly responsible for the species’ decline.

The breeding strategy of the spotted handfish is unusual and places the species at particular risk due to its critical dependence on other benthic organisms, notably stalked ascidians (sea squirts) and algae such as *Caulerpa*. In September, the female spotted handfish lays an egg ribbon containing just 80-250 eggs, painstakingly winding this around the stem of an ascidian or *Caulerpa* growing on the sea bed. The female remains nearby until the baby handfish hatch in December, each one a 5mm replica of the adult, walking on the seabed on its tiny fins.

Clearly, spotted handfish in general and juvenile spotted handfish in particular are acutely threatened by any degradation of benthic habitats, specifically:

- Siltation;
- Resuspension of sediments;
- Heavy metal pollution;
- Other forms of pollution including urban runoff;
- Increased populations of the Northern Pacific seastar, *Asterias amurensis*, which certainly predated on stalked ascidians, thus destroying critical breeding habitat, and may predate directly upon the handfish;

- Physical disturbance of benthic habitats by high-level boating activity or dredging.

Particular difficulties with respect to the recovery of the spotted handfish include its,

- Restricted distribution (lower Derwent estuary and associated bays) and small populations;
- Fragmented distribution (within its range);
- Low reproductive capacity and very low rate of dispersal;
- Hence risk of low genetic diversity within each population, further increasing vulnerability to environmental threats.

The only confirmed breeding colonies of the Spotted Handfish are along the coastline of the South Arm Peninsula, just downstream from the mouth of Ralphs Bay.

2.7.11.3. Threats to the spotted handfish posed by canal estate construction

The Recovery Plan for Four Species of Handfish, Department of Environment and Heritage, states,

*“The identified threats to the survival of the Spotted Handfish are principally those which impact on their habitat, including **siltation caused by coastal development**, and pollution.” (emphasis added)*

SRB contends that the proposed development in Ralphs Bay has the potential to threaten the survival of the Spotted Handfish in the following ways:

- Resuspension of Ralphs Bay sediments into the parent water body;
- Significant degradation of water quality;
- Release of heavy metals into the water column;
- Smothering of seabed habitats;
- Loss of critical spawning habitat due to sedimentation and increased populations of the Northern Pacific sea star;
- Direct health impacts, such as clogging of gill filaments;
- Possible acid sulphate drainage problems, including release of the heavy metals from sediments in a much more bioavailable (and hence toxic) form and direct fish kills from pulsed acid releases;
- Destruction of benthic habitats, anoxia and production of toxic hydrogen sulfide in the event of monosulfidic black ooze (MBO) formation;
- Disturbance by boat traffic;
- Runoff of garden chemicals, driveway oils and fuels, pet faeces and other rubbish and pollutants from the canal estate, directly into Ralphs Bay. Results may include sex ratio changes leading to spotted handfish population failure;
- Antifoulants, paints and oils, polluting Ralphs Bay from marina & moorings;
- Increased risk of spotted handfish poaching for aquariums;
- Possible spraying with pesticide to control mosquitoes, which could have toxic effects on the remnant handfish population.

Page 369 of the DIIS does, in fact suggest that insecticide spraying may be necessary to control mosquitoes which transmit Ross River Fever:

“Insecticide treatments such as larvicides, (sic) adulticides and barrier treatments may be suitable for bodies of water that cannot be removed (i.e. dewatering basin, offset area) Larvicides prevent mosquito larvae emerging from breeding sites as adults and adulticides are lethal to adult mosquitoes.”

In addition, it is possible that flows of pollution-bearing water from Ralphs Bay may affect spotted handfish populations outside the bay, such as the confirmed spotted handfish critical breeding habitat within the Opossum Bay Marine Protected Area (MPA), whose primary objective is protection of handfish.

SRB requests that the RPDC panel considers seeking a briefing from CSIRO scientists in the fields of hydrology and sediment transport regarding the possibility that pollutants disturbed by the proposed “development” might travel to the Opossum Bay MPA or even right around the coast to Frederick Henry Bay, home to spotted handfish and red handfish colonies outside the Derwent estuary.

2.7.11.4.Recovery Plans for the spotted handfish

The joint state-federal funding arrangements for the implementation of handfish recovery plans have been woefully inadequate, with the result that much of the research work planned by CSIRO scientists in recent years has not taken place. Ongoing, comprehensive dive surveys need to be undertaken now and into the future, to establish the current status of this critically endangered (IUCN) fish. Encouragingly, divers report that spotted handfish appear to have returned to some areas of eastern shore habitat in recent months.

SRB urges the RPDC panel to call scientists from CSIRO to provide a comprehensive briefing on the current status, threats to and prospects for recovery of this species.

The objectives of the 1999-2001 Recovery Plan for the spotted handfish were as follows (emphasis added):

*“The overall objectives of the recovery process are to secure existing populations of spotted handfish, **reduce the chances of future decline, enhance populations in areas where numbers have been seriously depleted or lost** and subsequently achieve down listing from the current endangered status.*

The specific short term objectives covered by the period of this Recovery Plan are to:

Ensure the continuance of spotted handfish across their current distribution by developing and implement strategies to facilitate their recovery.

The medium to long term objectives of the recovery plan are dependent on the outcomes of the currently listed actions but, in principle, are to:

Re-establish spotted handfish populations throughout areas of their previous range.

*Achieve permanent down listing from the current endangered status.”
(DEWHA Spotted handfish recovery plan)*

In the current, 2005 Recovery Plan for four species of handfish (including the spotted handfish), the criteria to measure performance of the plan against the objectives are (emphasis added):

- “• *habitat areas for all species are adequately managed and **protected from threats**;*
- *populations **demonstrably increase**, or show signs of stabilising; and*
- *effective management programs to control or minimise the impacts of alien species are in place for all sites where alien species threaten spawning substrate for the species.”*

This recovery plan is obtainable from:

<http://www.deh.gov.au/biodiversity/threatened/publications/recovery/4-handfish/index.html>

Detailed background information on the biology, population status and threats to the four handfish species covered by this plan can be found at:

<http://www.deh.gov.au/biodiversity/threatened/publications/recovery/4-handfish/pubs/issues-paper.pdf>

It should be noted that these objectives cannot simply be met by refraining from bulldozing any particular area of spotted handfish habitat, but by working towards improvements in the health of Derwent ecosystems such that this once-common fish can return to more of its previous habitat.

2.7.11.5. Response to statements in the DIIS concerning the spotted handfish and marine ecosystems in and near Ralphs Bay

Spotted handfish, *Brachionichthys hirsutus*, are indeed found in Ralphs Bay, as the Executive Summary is bound to report. However, the claim that the spotted handfish are located, “*approximately 2.5km to the south-west of the proposed project area*” (page XVII) is not proof that handfish never make use of habitats closer to the proposed “development”, or that they might not make greater use of additional habitat areas within Ralphs Bay in the future.

The proposal to ensure that, “*the development does not increase the prevalence of the exotic northern Pacific seastar within adjacent sectors of Ralphs Bay*” (Executive Summary page XVII) is laudable but surely unachievable? The spread of introduced marine pest species is most notable in areas of heavy boat traffic. One has only to look down into the water below the Dorans Road jetty to see a major infestation of Northern Pacific seastars in this heavily-trafficked area.

The following statements on page XVIII once again illustrate total disregard for the interconnected web of life of sandflat and subtidal ecosystems:

“The Lauderdale Quay development will have localised impacts on marine species that utilise the intertidal sandflats and shallow sub-tidal estuarine beds that will be modified. These impacts will be partially offset by the creation of new marine species habitats within the development’s waterways and associated structures”

For “will have localised impacts on”, read, “will eradicate” or, “will cause local extinction”. The sandflat organisms, by definition, will *not* be likely to occupy “new marine species habitats within the development’s waterways and associated structures” since these represent entirely different habitats and ecological niches.

The recent study by S.S. Cook et al, “Impact of canal development on intertidal microalgal productivity: Comparative assessment of Patterson Lakes and Ralphs Bay, South East Australia” showed that the total microalgal biomass per m² at Ralphs Bay was six times higher than at Patterson Lakes, a 30 year old canal estate in Victoria.

“The relative productivity of Ralphs Bay was four times greater compared to Patterson Lakes where productivity was virtually absent in the subtidal zone of the canal waterway.... Patterson Lakes exhibited 60% lower microphytobenthos species richness than Ralphs Bay.. The proposed canal development at Ralphs Bay is estimated to cause a decrease in microalgal productivity by both reducing available marine substrate (66% reduction) and replacing productive intertidal phytobenthic habitat with nonproductive canal substrate. These combine to cause a decline in productivity of 92% with significant flow-on effects predicted for higher trophic levels such as migratory wading birds.”

The statement on page XVIII that:

“no significant adverse impacts upon marine ecosystems and species are anticipated as either a direct or indirect result of the Lauderdale Quay development”

begs the question of what the Walker Corp. would recognise as a “significant adverse impact”.

2.7.12. Landscape Design and Visual Assessment

2.7.12.1.Landscape concept

Given the beauty of the Ralphs Bay landscapes currently enjoyed by residents and visitors to the area, it is difficult to conceive of the proposed artificial development as a “landscape”. We refer the RPDC to the SRB DVD, “Our Bay, Our Coast, Our Voice”, and to the Ralphs Bay calendars, postcards and greetings cards included with our submission: we hope these can show the members of the panel a little of the beauty we see at Ralphs Bay, and help to convey our sense of how this *natural* beauty should be both treasured and protected.

The eventual visual appearance of the proposed “development” cannot be predicted as its character would be largely determined by the block purchasers’ choices of styles, colours, building materials and the like. As revealed on page 27 of the DIIS, Walker Corp. is well aware that purchasers may wish to construct the largest possible “McMansions” on their blocks and hence the proponent is seeking a Development Plan Overlay (DPO) in the Clarence City Council Planning Scheme, to allow for the possibility of 9m building heights in the canal estate. This would only add to the distress of existing residents whose loss of visual amenity is certain to be very considerable in the event of the development proceeding.

“Insert into the DPO provision for variations to the maximum Permitted and Discretionary height within the Residential zone to 7.5m and 9m respectively.” (DIIS page 27)

2.7.12.2. Visual Amenity

Re. the statement,

“The existing landscape character, panoramas and views that have, or could be expected to have, value to the community whether of local, regional, State, national or international significance have been identified”,

this is quite simply incorrect, and one can only feel sad for the writers of this section of the DIIS and Appendix K3 Visual & Urban Design Assessment. How blind are those who cannot see?

The following is a short list of aspects of the *“landscape character, panoramas and views”* unconsidered in the DIIS but which *“have value to the community”* of South Arm Peninsula residents as we travel daily along the shores of Ralphs Bay:

- The reflections of sky, cloud and sunsets on wet sand and shallow water;
- Vast skies and windswept expanses of open sandflat and ocean;
- Ripples on the sand, lit up by morning and evening light;
- Mist and cloud draped around the slopes and summit of Mt. Wellington;
- Windsurfers hurtling at high speed across the wide expanse of the bay;
- Shorebirds dotted across the sandflats as they feed;
- The tiny red-necked stints, red-capped plovers and double-banded plovers, running along the sandflats, clustered on the sandspit to wait out the high tide or clustered in the shelter of a large clump of *Juncus* reed in the vicinity of the old Caltex service station;
- These tiny birds on sunny winter mornings when the light is low enough to make their white undersides glow in the morning sunshine;
- White-faced herons resting on the branches of a dead tree near the north-eastern corner of the bay;
- Terns perched in a line on ruined timbers sticking up from the water near the spit;
- The rare and treasured sight of an Eastern curlew;
- The crowds of pied oystercatchers, gathered on the spit at high tide;
- The sooty oystercatchers and silver gulls roosting on the spit, each species gathered in a huddle separate from the others;
- The excitement of wild and stormy days, with white capped waves whipped up across the bay;
- The creation of a new ridge of shellgrit thrown up onto the saltmarsh vegetation opposite the Caltex service station in a winter’s storm some years ago, and the subsequent colonisation of this bright, white new bank, first by the saltmarsh species *Suaeda australis* and subsequently by pigface and other saltmarsh plants;

- The sight of pied oystercatchers nesting on this ridge, sitting and sitting for week after week, and
- Night skies of brilliant stars and bright moons in a wide expanse free of light pollution.

These visual delights relate specifically to the proposed footprint of the “development”. Travelling on past the footprint of the proposed development towards South Arm, other scenes include:

- The added interest of the waves overtopping the shoreline opposite the BP service station during high tide events, with wavelets and sea spray blowing across the road;
- The pied oystercatcher/s attempting to nest on the roadside opposite the BP service station despite the perils of the constantly passing traffic.

A little further away, in the southern section of the Ralphs Bay Conservation Area depicted in Schedule 1 of the Ralphs Bay Conservation Area (Clarification) Act 2006, the following visual treats are highly valued by those who pass along the South Arm Highway with their eyes open:

- Groups of herons stepping gracefully among the saltmarsh vegetation or along the sandflats;
- Groups of swans feeding on the small seagrass plants growing on the sandflats, especially in winter;
- The rich textures and colours of the dense saltmarsh communities, especially when viewed in golden morning or evening light;
- The tops of the saltmarsh bushes surrounded by silvery water when the highest tides flood right into the vegetated areas;
- The tiniest of shorebirds scampering along the sandflats;
- The beautiful shelducks, and, if one is lucky, their accompanying ducklings.

On the opposite side of the road in Racecourse Flats, the visual delights include:

- The glowing autumn colours of the widely spread glasswort communities in the saltmarsh;
- The vivid pink splashes of the flowering pigface plants in the spring;
- The black swans and their cygnets; ducks and their ducklings;
- Oystercatchers and other shorebirds and silver gulls roosting on the flats at high tide.

At all these locations we have another much appreciated visual delight – the daily rise and fall of the tide, the high tides and the low – a precious reminder in a busy world of the timeless cycles of nature.

For those of us with children, life in the South Arm Peninsula affords many opportunities to share our appreciation of the beauty of nature.

If we stop the car, park and step out onto the Lauderdale sandflats, there are so many more visual treats awaiting – details of leaf and flower colours in the saltmarsh; fragile air breathers and other shells tossed up on the shoreline; closer views of the shorebirds and the chance to spot the rarer species.

None of this has value to the Walker Corporation; none of it is to be treasured or protected in their view of the world. Sadly, all they see is a “need” for artificial islands, hundreds of houses in the bay, the removal of the inconvenient saltmarsh vegetation along the roadside, removal of the sandspit and the large whitegum tree opposite the pub. For Walker Corp., this is simply a “*land release*” and an opportunity to bank whatever profits can be made from the irreversible desecration of a treasured place.

As the Executive Summary concedes on pages XVIII – XIX:

“The development will be viewed close up from South Arm Road at Lauderdale and the visual impact here is high due to loss of water views, the modification of the natural landform, the loss of vegetated skyline and the dominance of built elements.”

“The highest impact to the view is from those vantage points along South Arm Road that look across the bay to the distant summit of Mt Wellington. The existing view from these vantage points will be altered with a view to a new waterway and new building development.”

The statement on page XIX of the Executive Summary in relation to maximum building heights is at odds with the statement in the DIIS, regarding the requested DPO:

“Insert into the DPO provision for variations to the maximum Permitted and Discretionary height within the Residential zone to 7.5m and 9m respectively.” (DIIS page 27)

This information is not shared with the general reader in the Executive Summary, which states instead, on page XIX:

“Aspects of the design of Lauderdale Quay have been identified as assisting to minimise the visual impact of the development at close range including:

1. maximum building heights of 8m to ensure a low-rise development that sits below the existing vegetation on the skyline at Lauderdale Neck, as viewed from the west;”

Which of these is to be believed: “*maximum discretionary heights of 9m*” or, “*maximum building heights of 8m*”?

2.8. Environmental Management and Monitoring

It is to be sincerely hoped the Environmental Management Plans for this development are never needed, because the RPDC, considering all the risks and the concerns of the community, upholding the values underpinning the State Coastal Policy, sustainable planning objectives of the Tasmanian planning system, findings and recommendations of the Tasmanian State of the Environment Reports and State of the Derwent Reports, giving due consideration to the Water Quality Improvement Plan for Derwent heavy metals, the Recovery Plan for four species of Handfish including the Spotted Handfish, Tasmania Together goals and targets and a variety of other policies and items of legislation, rejects the development unequivocally.

2.9. Economic Impacts

As a community group, we do not propose to give detailed consideration to the topic of economic impacts in this, our general submission. However, we will seek leave to present an expert critique on this matter in the Hearings.

As a general comment, we make this observation: history is littered with numerous examples of activities generally understood to be wrong and now regarded as indefensible. Nevertheless, the proponents at the time presumably felt their activities were justified. Some of the worst excesses of the past century no doubt involved the creation of jobs, the provision of services and the flow of cash within the relevant economies. However, the provision of jobs and services and the flow of cash in an economy is no excuse for poor decision-making.

Whilst we will be providing expert critical analysis of the economic impacts of the proposed “development” in due course, we submit that approval of this Project of State Significance would be wrong for all the reasons stated so far, and this is regardless of any potential economic benefit to the state.

The states of New South Wales and Victoria have tried the canal estate experiment and seen fit to ban these developments on the basis of their experience – regardless of how much cash can flow through the state economy when such developments are taking place. Does Tasmania have to learn from bitter experience?

2.10. Social and Community Impacts

The figures provided on pages XXI – XXII of the Executive Summary do not add up. We are told:

“Of the 1,257 residents anticipated to live in Lauderdale Quay (1,003 adults and 254 children) once fully developed it is expected that:

- 939 people will relocate to the Lauderdale Quay residential precinct from outside CCC, comprising approximately 192 adults with children, 508 ‘empty nester’ couples, 50 lone adults and 189 children.*
- 498 people will relocate to the Lauderdale Quay residential precinct from outside the Derwent Catchment Area, comprising approximately 101 adults with children, 270 ‘empty nester’ couples, 27 lone adults and 100 children.*
- 247 people will relocate to the Lauderdale Quay residential precinct from outside the Hobart Service Area, comprising approximately 50 adults with children, 134 ‘empty nester’ couples, 14 lone adults and 49 children.*
- 93 people will relocate to the Lauderdale Quay residential precinct from outside of Tasmania, comprising approximately 18 adults with children, 52 empty nester couples, 6 lone adults and 17 children.”*

We submit that $939 + 498 + 247 + 93 = 1,777$, not 1,257. Or, are we to deduce that the proponent expects 520 Clarence City residents to move into the development, and has this line been omitted?

We are curious as to the reliability of such predictions for the year 2028, but will leave the matter for specialist analysis. The descriptions are incomprehensible – apart from being “*outside*” CCC, the Derwent Catchment Area or the Hobart Service Area, where are these people coming from? Would it not have been more useful to describe the origins of these proposed new residents, rather than stating which areas they are *not* coming from?

The, “*proposed mitigation measures for management of the potential social and community impacts arising from the development*” listed on page XXII do not appear to address any of the social impacts of major concern to the existing community, such as:

- The ugliness, traffic delays, noise and smells of the early years of the “development” would impact on all members of the community and could reasonably be expected to reduce property values in the South Arm peninsula;
- The proposed “up-market” canal estate would introduce a dramatic separation between “rich Lauderdale” and “poor Lauderdale”, creating social tensions and eroding community connections. The proposal represents a dramatic departure from the gradual integration of new community members over time as individual homes are bought and sold in existing streets, and small subdivisions occur;
- Reports from interstate indicate that, while the “swimming pool mentality” makes canal estates appealing in the abstract, their poor liveability means owners typically resell and move on after only a year or so. This is in contrast to the stable nature of the general Peninsula population and suggests few canal estate residents would become involved in or contribute to the wider community;
- Due to Tasmania's climate, it is likely many homes purchased as second residences would be occupied in summer only, standing empty for much of the year. This would further decrease the likelihood that canal estate residents would integrate well with the wider community and could be a magnet for criminal activity;
- If the “development” was completed and if it became a tourist attraction and fashionable destination, a process of gentrification would be likely to follow, in which property values in the South Arm peninsula would rise, rates would go up and lower-income residents would be squeezed out of the area;
- Cohesive local communities, whose children predominantly attend nearby state primary schools, would be weakened by an influx of wealthier property owners;
- The peace, tranquillity and relaxed lifestyle we value so much would be dramatically altered.

These comments should be read especially in the context that:

- South Arm peninsula residents have made an active choice to trade long and expensive journeys into Hobart for a wonderful lifestyle which we treasure;
- A number of South Arm peninsula residents have relocated to Tasmania to escape precisely this kind of inappropriate development, and are already deeply distressed that what they came to Tasmania to find is now under threat;

- Tasmania’s “brand” and its appeal as a tourism destination is all about being distinctively “natural”, “unspoiled”, friendly and retaining values and community spirit that have been diminished elsewhere.

These are values worthy of protection, and we call on the RPDC to keep them firmly in mind during its deliberations.

2.10.1. Health Impact Assessment

It is to be hoped that the Health Impact Assessment included mental and emotional health including depressive illness arising from the sorrow so many residents would experience if the bulldozers moved onto the Ralphs Bay Conservation Area to begin their destructive work.

Such depressive illness would place strain on the families and relationships of those affected, threatening their mental and emotional health in turn.

The 5 year campaign against the development has already taken its toll, with family activities postponed by those involved in the campaign, parents distracted and children and partners feeling they are not getting as much attention as they would like.

Physical health impacts of the development may be expected to include the following:

- Motor vehicle accidents resulting from increased traffic on the roads and heavy vehicle movements on and off the site of the development;
- Stress due to noise and smells, for residents near the development and the community of the Lauderdale Primary School;
- Toxicity associated with eating Ralphs Bay seafood such as flathead or bream, especially as the DIIS suggests on page 354 that fishing is to be encouraged in the development:

“the Proponent has incorporated provision for fishing jetties and park areas along the waters edge, which will increase public access to the water, and subsequently increase the potential fishing area.”

- Possible increases in mosquito populations, partly linked to climate change and aggravated if the canals flush poorly and brackish water floats on saltier layers beneath;
- Risk of increased transmission of Ross River Fever, which is already endemic in the peninsula;
- Chronic fatigue/post-viral syndrome symptoms persisting for extensive periods of time following Ross River fever infections.

The significance of the Ross River Fever (RRv) risk for residents within the proposed development is underscored in the following extracts from pages 364 – 366 of the DIIS:

“A study by Robertson et al. (2004), which focused on RRv, was undertaken in the municipality of Sorell after Tasmania reported the largest number of RRv infections ever recorded for the state in 2002. The municipality of Sorell is, at its closest point, approximately 10km north-east of Lauderdale Quay. In addition to the cases reported in the Sorell Municipal Area, the study mentions that another 50 RRv notifications of the 117 cases notified state-wide in 2002 were

reported from the residents of the City of Clarence. As such, it is reasonable to expect that the mosquito species and human health impacts found in this study are also likely to be experienced at Lauderdale Quay.”

“The study by Roberston (sic) et al. (2004) collected thirteen species of adult and larval mosquitoes over a four month period from January to March 2002.”

“Of these, Oc. camptorhynchus, a recognised vector of RRv, dominated the collections. This species breed in brackish to fresh ground pools associated with coastal swamps and bushland but also salinity affected areas (Department of Health 2006) and is a major inhabitant of southern coastal Australia within saltmarsh habitats. They can be vicious biters, readily attacking humans and other animals, and will feed during the day, at dusk and after sunset. The study revealed that a combination of spring tides and high summer rainfall produced extensive saltmarsh habitat in the Sorell region, which resulted in unseasonably high densities of this species.”

“The most extensive area of potential mosquito breeding habitat would be from Racecourse Flats and EML, located 1.5 to 2.5km south-east of Lauderdale Quay. In particular, the saltmarsh communities described as ‘Succulent saline herbland’, ‘Saline grassland’ and ‘Saline aquatic herbland’ in the Vegetation Survey and Impact Assessment developed by North Barker Ecosystem Services. Similarly, the saltmarsh habitat at Pitt Water/Orielton Lagoon, located approximately 10km north-east of the study area would also offer breeding habitat. These saltmarsh communities are likely to support ponded areas of saline and fresh water after periods of tidal inundation and/or rainfall. Such environments would provide potential breeding habitat for saline adapted mosquito species such as Oc. camptorhynchus.”

“Breeding habitat would also be provided by the Lauderdale Waterway, located directly opposite the project area (divided by South Arm Road). The Lauderdale Waterway is subject to limited tidal influence and exchange from its western end which would provide passage for the introduction of mosquito predators.”

“Mosquitoes which breed in freshwater environmentswould be provided with potential breeding habitat in features such as waterbodies, depressions, rock pools and tree holes which may occur in the non-saline vegetation communities described as ‘Eucalypt woodland communities’, ‘Coastal E. viminalis woodland’, ‘E. ovata woodland’, ‘Bursaria – Acacia scrub’ and ‘Allocasuarina verticillata woodland’ in the Vegetation Survey and Impact Assessment (Appendix Q).

“Potential freshwater breeding habitat would be provided by surrounding residential areas (i.e. rainwater tanks, garden ponds, containers, tyres, pot plant bases, tins and roof gutters), rural areas

(i.e. dams, waterbodies, watering troughs), and by rubbish and materials with water-holding capacity. One container breeding mosquito species known to occur in the locality with a recognised pest potential is Aedes notoscriptus, which has the capacity to transmit both Ross River and Barmah Forest viruses. These artificial features are unlikely to support predatory species of the mosquito.”

2.10.2. Cultural Heritage

2.10.2.1. Aboriginal Cultural Heritage

Ralphs Bay has cultural significance to members of the aboriginal community as a whale birthing area and as a seasonal swan egg gathering area. Ralphs Bay also contains aboriginal middens. Early interactions between the aboriginal inhabitants of the area and European settlers have been described as positive, with instances of cooperation and mutual help recorded.

SRB contends it would be more respectful to leave Ralphs Bay undamaged than to, erect, *“interpretative signage”* and obtain, *“the relevant permits to disturb Aboriginal sites in the event of known or inadvertent disturbance.”* (Executive Summary page XXIII)

2.10.2.2. European Cultural Heritage and Walker Corp.’s attempts to corrupt our placenames

The Ralphs Bay area has a rich history since the days of early European exploration and settlement, which was barely touched upon in the Executive Summary. D’Entrecasteaux’s early exploration of the place he named “Double Bay”, Robert Mather’s haulage service, and the failed Lauderdale canal are all indicative of a rich history which has received little interpretation or celebration to date. It would be sad if relics of bygone days were destroyed during the proposed development before the local community had even appreciated what they were.

Why does the DIIS repeatedly refer to the *“Lauderdale waterway”* when this is universally known at the *“Lauderdale canal”*? Is there any possibility that *“renaming”* the dead-end canal as a *“waterway”* may be a precursor to *“Stage 2”* of Walker Corp.’s planned development – the reopening of the Lauderdale canal, which was so vehemently opposed by the community in 2004? On page 91 of the DIIS, Walker Corp. even takes the unusual step of changing the wording of the RPDC Guidelines from *‘Canal’* to *‘Waterway’* in section 4.3.1 (4).

What does Walker Corp. have in mind when it declares its intention to,

“Financially contribute to the refurbishment of Lauderdale Waterway”?
(Executive Summary XXVII)

A Google search for *‘Lauderdale waterway’* brings up numerous items related to Fort Lauderdale waterway/s in Florida, including a breathless reference to the *“McMansions”* which can be inspected in this *‘Venice of America’*. Unconvincing comparisons of Walker Corp.’s first offering, *‘Ralphs Bay Village’* with Venice were trademarks of Kevin Hunt, Walker Corp.’s representative in Tasmania, back in 2004.

A Google search for 'Lauderdale canal' on the other hand brings up a combination of Florida and Tasmanian items – one of which features a delightfully “down to earth” photograph of an elderly Tasmanian enjoying his model yachts on a Sunday. This is a wonderful reflection of our sense of place in this community, but it appears the Walker Corp. has something quite different in mind.

The DIIS contains just 8 uses of the term, “Lauderdale Canal” (mainly in tables) but 80 instances of the Walker Corp.’s creation, the “Lauderdale Waterway”.

The Walker Corporation’s presumptuous renaming of the South Arm Peninsula (9 references in the DIIS) as the ‘Southern Peninsula’ (43 references) and the Lauderdale canal as the ‘Lauderdale waterway’ are overbearing and unnecessary.

Perhaps it is part of a deliberate strategy to attack the sense of place experienced by local residents, in a bid to remake our local area in Walker Corp.’s image? If so, this is insidious, unwelcome and most unlikely to achieve anything more than further alienation of the community.

2.11.Net Benefit

On page XXIV of the Executive Summary, Walker Corp. admits that the claimed economic benefit of its proposal (+9) is outweighed by the admitted environmental cost (-10). With a +5 score for alleged social benefit, this leaves Walker Corp. with a Net Benefit figure of +4, which is marginal at best.

Even if the Net Benefit Assessment has been carried out correctly (a matter SRB will seek to challenge in the Hearings), it is nevertheless a *qualitative* assessment, whose figures would appear to be rubbery indeed.

How convenient it is that the weightings used in the net benefit assessment downgrade the value of every cost reported in the table. The 3 economic cost impacts are downgraded to give a score of zero in the table. The 12 social cost impacts are downgraded to give a score of -9. The 22 environmental cost impacts are downgraded so as to produce a score of -18.

However, the 5 claimed *environmental benefits* of the proposal are scaled up to give the princely score of +8 in the table. The 9 claimed beneficial social impacts are scaled up to provide a score of +14.

Only the claimed economic benefit is unweighted: 9 impacts are cited, and their total score is +9.

Whilst it is inevitably the case that some costs or some benefits are more significant than others and there must be a weighting of impacts in accordance with their scale, it is certainly remarkable that the alleged benefits of this proposal turn out to be so very beneficial, and the costs associated with the project fade away in comparison – according to the Walker Corp.’s Executive Summary.

SRB requests that the RPDC panel scrutinises this analysis carefully.

2.12. Commitments

Here, at last, Walker corp. remembers the Precautionary Principle in its Executive Summary. The Precautionary Principle was moved from the back of the Draft Guidelines to the front of the Final Scope Guidelines for the DIIS (Section 1.3), but this clearly does not suit the Walker Corp.

No doubt the commitments made in pages XXV – XXVII are convincing to the Walker Corporation. SRB, however, will continue to do all in our power to ensure these “commitments” are never needed.

We hope the RPDC will put an end to years of anxious uncertainty by rejecting this proposed “development” in its entirety.

3. References

- Australian Government, Department of the Environment and Heritage (2005) *Recovery Plan for the following species of handfish: Spotted Handfish – Brachionichthys hirsutus; Red Handfish - Brachionichthys politus; Ziebell's Handfish – Sympterichthys sp.* [CSIRO #T6.01]; Waterfall Bay Handfish - Sympterichthys sp. [CSIRO #T1996.01]
- Bruce, B.D., and Green, M.A. (March 1998), *The Spotted Handfish Recovery Plan*, Spotted Handfish Recovery Team, ISBN 0 643 061657
- Clarence City Council (2008)
Climate Change Impacts on Clarence Coastal Areas
- Cook, S.S., Roberts, J.L., Hallegraeff, G.M, McMin, A. (2008), Impact of canal development on intertidal microalgal productivity: Comparative assessment of Patterson Lakes and Ralphs Bay, South East Australia, J Coast Conserv DOI 10.1007/s11852-008-0020-0
- Costanza, R., d'Arge, R., de Groot, R., Farberk, S., Grasso, M., Hannon, B., Limburg, K., Naeem, S., O'Neill, R.V., Paruelo, J., Raskin, R.G., Sutton, P. & van den Belt, M. (15 May 1997) *The value of the world's ecosystem services and natural capital*, p.253, NATURE, vol. 387
- Derwent Estuary Program (July 2007), *Should I Eat Shellfish and Flathead from the Derwent?* Information for Recreational Fishers (brochure)
- Derwent Estuary Program (2001), *Derwent Estuary Environmental Management Plan*
- Derwent Estuary Program, State of the Derwent reports
- Derwent Estuary Program (June 2007), Water Quality Improvement Plan for Derwent heavy metals
- Green, M., *Local population of Spotted Handfish in Ralphs Bay*, CSIRO Marine and Atmospheric Research fact sheet
- Last, P.R. and Bruce, B.D. (1997), *Spotted handfish*, Nature Australia, 25(7): 20-21.
- Macleod, C. and Helidoniotis, F. (November 2005), *Ecological status of the Derwent and Huon estuaries, NHT/NAP Project No. 46928*
http://www.utas.edu.au/tafi/PDF_files/NRMHuonDerwentReport.pdf, Published by the Marine Research Laboratories- Tasmanian Aquaculture and Fisheries Institute, University of Tasmania, Private Bag 49, Hobart, Tasmania 7001
- Resource Planning and Development Commission (August 2007), *Final Scope Guidelines for the Integrated Impact Statement (IIS): Proposed Lauderdale Quay development by Walker Corporation Pty Ltd*
- Resource Planning and Development Commission (2006), *Inquiry into the establishment of marine protected areas within the Bruny Bioregion. Background Report*
- Resource Planning and Development Commission (2008), *Inquiry into the establishment of marine protected areas within the Bruny Bioregion. Draft Recommendations Report*

Save Ralphs Bay Inc (March 2009), *Our Bay, Our Coast, Our Voice* (DVD),
<http://vimeo.com/3920575>

Save Ralphs Bay Inc. (2004 – present), Website containing complete archive; submissions; newsletters; media releases etc. www.saveralphsbay.org)

Walker Corporation (9 February 2009), *Lauderdale Quay Draft Integrated Impact Assessment*

Zalasiewicz, J. et al (February 2008), *Are we now living in the Anthropocene?*, *GSA Today* (Geological Society of America) 18 (2): 4–8. doi:10.1130/GSAT01802A.1.

4. Abbreviations, acronyms

ASS Acid sulfate soils

CSIRO Commonwealth Scientific and Industrial Research Organisation

DEP Derwent Estuary Program

DIIS Draft Integrated Impact Study

DPO Development Plan Overlay

MBO Monosulfidic black ooze

RPDC Resource Planning and Development Commission ('the Commission')

Walker Corp. – Walker Corporation

WQIP – Water Quality Improvement Plan for Derwent heavy metals