Visualising the environment: the power of environmental art to encourage pro-environmental behaviour and engender a sense of place

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Faculty of Arts and Business
Abstract

Agenda 21, adopted at the United Nations Conference on Environment and Development in Rio de Janeiro in 1992, established that to achieve a concerted global effort in promoting sustainable development all levels of government need to incorporate environmental concerns within their decision-making processes (United Nations 1992). This thesis explores ways that social planners in government and environmental organisations can integrate environmental art, defined here as any art that aims to stimulate discussion and/or action around the environment, into their environmental education, social planning, and infrastructure processes to encourage environmentally sustainable behaviour at a grassroots level. Environmental art’s ability to affect pro-environmental behaviour change and an individual’s sense of place is investigated by delving into its appeal to people’s emotions, its attracting attention to nature and the environment, and its reinforcement of an environmental sense of place.

The research uses three case studies of an environmental art festival, two public art sculpture installations, and an ecovisualisation on the Sunshine Coast of Australia to analyse environmental art in three situations. It uses a mixed method approach to collect and generate a rich assemblage of data (e.g. questionnaire responses, interview transcripts, and media coverage) to analyse the impetus for, and diversity of responses to, these representations of environmental art. As such, research participants included festival audiences, workshop participants, residents, artists and council employees.

This study focuses on examining the initiatives of a local council (Sunshine Coast Council) and a biosphere organisation (Noosa Biosphere Limited) that deliver environmental art programs. The case studies provide real-world instances of environmental art being used in environmental education initiatives. A complementary case study of environmental art used in the North Devon Biosphere Reserve in England was included to demonstrate the transferability of environmental art to other organisations and regions. From exploring these initiatives, the research asserts that while environmental art may not directly lead to pro-environmental behaviour change, it draws attention to place, allowing opportunities for people to reflect on their environment and what they value in it, which can lead to an intention to act for the environment. By creating a community that considers environmental behaviours the norm, others are inspired to act environmentally.

Keywords

Environmental art, sense of place, pro-environmental behaviour, environmental education, social learning, local government, environmental awareness, public art, biosphere reserve
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This thesis is composed of my original work, and contains no material previously published or written by another person except where due reference has been made in the text. I have clearly stated the contribution by others to jointly-authored works that I have included in my thesis.

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I contributed approximately 70% to each article contained within this thesis. Within the first article, Dr Lisa Chandler contributed approximately 20% while Associate Professor Claudia Baldwin contributed 10%. The second article contained 25% contribution from Associate Professor Baldwin, with 5% contributed by Dr Chandler. Associate Professor Baldwin contributed 5% to the third article, while Dr Chandler contributed 25%.

Statement of Contributions by Others to the Thesis as a Whole

No contributions by others.

Statement of Parts of the Thesis Submitted to Qualify for the Award of Another Degree

None.

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Published Works by the Author Incorporated into the Thesis


Additional Published Works by the Author Relevant to the Thesis but not Forming Part of it

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Chapter 1
Introduction

1.1 BACKGROUND TO STUDY

*Agenda 21*, adopted at the United Nations Conference on Environment and Development in Rio de Janeiro in 1992, established a global acknowledgement that action was required at a grassroots level to encourage sustainable development around the world. The preamble of this highly significant document asserts the importance of action at a local level, and states:

> Humanity stands at a defining moment in history. We are confronted with a perpetuation of disparities between and within nations, a worsening of poverty, hunger, ill health and illiteracy, and the continuing deterioration of the ecosystems on which we depend for our well-being. However, integration of environment and development concerns and greater attention to them will lead to the fulfilment of basic needs, improved living standards for all, better protected and managed ecosystems and a safer, more prosperous future (United Nations 1992).

It further elaborates, that to achieve a concerted global effort to promote sustainable development, all levels of government need to incorporate environmental concerns within their decision-making processes (United Nations 1992). This thesis explores ways that government and environmental organisations can integrate environmental art into their environmental education, social planning, and infrastructure processes to encourage environmentally sustainable behaviour at a grassroots level.

While the environment has been a constant inspiration for artists, since the 1960s environmental art as a movement has evolved to contribute to the communication and encouragement of environmental stewardship. Environmental art is defined here as any artwork that aims to stimulate awareness of people’s relationship with nature as well as art which prompts discussion and/or action around environmental issues. This research suggests that environmental art can be used by government and environmental organisations to engage a community in its own sustainability, both environmentally and socially. Environmentally it educates and provides opportunities to explore nature and to reinforce existing positive environmental values; and socially, the participatory nature of much contemporary environmental art contributes to environmental awareness by offering opportunities for people to contemplate, talk about, and appreciate their environment in situations that stimulate social learning. By encouraging personal and group responsibility for the environment through collaborative engagements with environmental art, pride and action can be engendered that at a local level can enhance a sense of place. This research further recommends that government agencies and environmental organisations can plan for this active community-building and environmental
stewardship by facilitating environmental art through festivals, initiatives and public artworks that educate and engage about the environment.

Environmental art as a movement has enabled artists to communicate their concerns and messages about the state of nature and human influences on the environment. While there are many divergent manifestations of environmental art, which I outline in Chapter 3, the focus of this study is on those forms of environmental art that raise awareness of environmental issues, and human inter-relationships with the environment. Although there is much literature on environmental art, there is little research into its effectiveness in influencing environmental awareness or associated behaviour change. This research explores the effect of environmental art on its audience and the implications for social planners in integrating it into place-based and environmental education programs.

1.1.1 Context

This research arose from the opportunity to study environmentally-themed public artworks that were established under an environmental art framework of a local council on the Sunshine Coast, a region one hour north of Brisbane on the eastern seaboard of Australia. The area is renowned both nationally and internationally for its natural attractions and environmental ethos, with the local Sunshine Coast Council both influencing and responding to this environmentally-focussed community. The Council’s Creative Communities department, of which I was a member, initiated an environmental art framework to underpin its programming and promotion of arts in the region. This situation, rare in Australia, offered an opportunity to study environmental art in a local government context. The case studies that form the basis of this research are also situated in the UNESCO-listed Noosa Biosphere Reserve. The partnership between the Sunshine Coast Council and Noosa Biosphere Reserve Limited in delivering one of the case studies, Floating Land, also provides a non-government context to explore environmental art within the environmental education component of an environmental organisation, in this situation the biosphere organisation.

Sunshine Coast Council’s community engagement processes for setting its strategic direction, conducted between 2008 and 2011, revealed that the most highly valued attribute of living on the Sunshine Coast was the region’s natural environment (Sunshine Coast Council 2011b). In responding to this feedback and contributing to the Council’s mission, ‘to become Australia’s most sustainable region: vibrant, green, diverse’ (Sunshine Coast Council 2013b), the Council’s department responsible for art programming, the Creative Communities department, initiated an environmental art framework that formed the basis of its work. This meant that all programs delivered by the department aimed for environmental sustainability and all artists commissioned by the organisation were responsible for sustainable practices in delivering their projects as well as encouraging the promotion of environmental education within their interactive initiatives. As a result of its innovative use of the
arts to deliver an environmental message, the Council won the inaugural Active Arts category at the National Local Government Awards in 2012 for its approach. This innovative environmental art approach prompted a research project on the implications of environmental art of which this research is one segment, exploring environmental art’s effectiveness as a stimulus for discussion about nature and people’s relationship with it, prompting pro-environmental behaviour and enhancing a sense of place.

During the course of this research the local government of the area underwent drastic changes as a result of community outcry and a public vote. Sunshine Coast Council, which had been created in 2008 by the forced amalgamation by the State Government of three local councils (Caloundra, Maroochydore and Noosa Councils), was de-amalgamated in 2014 to separate out Noosa Council. All three case studies that are represented in this research are located in the area now governed by Noosa Council, with its boundaries also coinciding with the Noosa Biosphere Reserve. In 2006, pre-amalgamation, The Noosa Plan set out the planning framework for the shire, which was re-instated with the return of Noosa Council in 2014. Three of the seven principles underpinning its vision relevant to this study are: social cohesion and community well-being; environmental excellence and sustainability; and artistic and cultural diversity and excellence (Noosa Council 2013, s.1.4.2). The research case studies were facilitated under Sunshine Coast Council, but more importantly were underpinned by The Noosa Plan and engagement with the Noosa community. While the Sunshine Coast Council worked under an environmental art framework, at the time of writing the Noosa Council is still creating its cultural policy and has not yet decided whether it will re-establish this framework.

1.2 DEFINITIONS

For the purpose of this research the following definitions are used:

- Environmental art is defined here as any artwork that aims to stimulate awareness of people’s relationship with nature as well as art which prompts discussion and/or action around environmental issues. Thus, emphasis is given to the artists’ intention rather than materials used, the format, or the location in which it is presented. It can encompass outcomes well beyond the presentation of fine art in a gallery space, including being within a natural environment and using nature as a medium (Spaid 2002). It can involve processes as well as objects; it can be ephemeral or permanent and can range from a sculpture constructed from natural and recycled materials to a multi-media performance (Weintraub 2012). Environmental art can be created by an individual artist but is increasingly becoming a participatory art form that engages communities. The point of difference for environmental art is the intent to express and/or foster pro-environmental awareness and behaviours.
• Pro-environmental behaviour (PEB), also known as ‘conservation behaviour, environmentally friendly behaviour, environmentally significant behaviour, environmentally sustainable behaviour and responsible environmental behaviour’ (Osbaldiston & Schott 2012, p. 258), is any behaviour that is performed with the intention to benefit the environment.

• Sense of place (SOP) is the creation of meaning at a setting by an individual (Williams & Patterson 1996) and incorporates an individual’s feelings created by the physical location, human behaviours and social associations (Stedman 2003). In this study environmental sense of place is defined as an understanding that the environment is intrinsic to, and acknowledged in, that creation of meaning.

• Public art traditionally refers to temporary or permanent artworks presented in openly accessible locations, such as outside public institutions (Kwon 2004; Lacy 1995; Zebracki 2013). Contemporary public art includes integrated and functional artworks in public places, as well as comprising community collaborations in response to social issues (Lacy 1995). ‘It may comprise artists working as members of design teams, festivals, performances, carnivals, firework displays, fellowships or exchanges’ (Selwood 1995, p. 7), and can be a political intervention, a physical artwork, or an educational process such as workshops, artists in residence programs or talks. Public art is becoming increasingly more participatory, and may include projects in which communities work with an artist in a participatory, learning environment and community arts projects which are more community conceived and driven. In these instances community members are involved in creating and/or contributing to the artwork, whether it be a performance or exhibition (Belfiore 2002; Belfiore & Bennett 2007; Lacy 1995; Guetzkow 2002).

• Social learning refers to learning that occurs within a social context, where an individual learns from observations of others and their social interactions within the group. It incorporates attention and retention (remembering what one observed), reproduction (ability to reproduce the behaviour), and motivation (good reason) to want to adopt the behaviour (Bandura & McClelland 1977). Communication and perspective sharing are integral to social learning which can lead to group problem-solving in many contexts (Pahl-Wostl 2002; Pahl-Wostl & Hare 2004).

• Environmental education is education ‘in, about, and for the environment’ (Lucas 1972, p. 19) with its purpose often to provide experiences in the outdoors, information about the environment, and opportunities to learn skills and knowledge that can help the environment (Fien & Tilbury 2002; Monroe, Andrews & Biedenweg 2008).

1.3 PURPOSE OF STUDY

The aim of this thesis is to explore the potential of environmental art as a legitimate resource and approach that can be used by government, environmental organisations and social planners to engage
a community in its own sustainability – environmentally and socially. This research hypothesises that by working with the natural resources in and at a location, environmental art can highlight the natural qualities of the place and its natural environment, reminding and reinforcing to the community the need to protect their environment. Socially, environmental art does more than enhance a sense of place through its focus on an environment. This research further suggests that its highly participatory nature encourages collaboration between members of the audience by encouraging social learning that enhances: sharing of environmental knowledge and skills, a sense of belonging both at the location and within the environmentally-minded community, and place attachment. Studies have shown that those communities that have strong place attachment or identity tend to maintain their communal areas, building more aesthetically pleasing built and natural environments (Vaske & Kobrin 2001; Young 1999). Research has also found that place attachment can lead to pro-environmental behaviour both at the setting and in other areas of the individual’s life (Vaske & Kobrin 2001).

This thesis also aims to explore the social learning that occurs through engagement with environmental art and its contribution to a sense of place that can reinforce or encourage pro-environmental behaviours. Research has shown increasingly that programs incorporating practice-based learning encourage pro-environmental behaviour more effectively than mere informational programs (De Young 1993; Heimlich & Ardoin 2008; Jackson 2005). That is, current literature suggests that learning is more effective and long-lasting ‘through experience and practice’ (Heimlich & Ardoin 2008, p. 224). Jackson (2005) asserts that the more involvement with a decision or activity, the higher the degree of control the participant feels for the activity and the more willingness to engage in activities that lead to trial and error. Through participation and developing skills that are master-able, for example through engaging in opportunities for social learning at environmental art workshops, an individual’s self-esteem is enhanced for performing the action, and behaviours such as pro-environmental behaviour can be encouraged and instilled (Heimlich & Ardoin 2008).

Jackson (2005, p.111) suggests there are four avenues through which governments can encourage pro-environmental behaviour:

1. ‘ensuring the incentive structures and institutional rules favour sustainable behaviour;
2. enabling access to pro-environmental choice;
3. engaging people in initiatives to help themselves; and
4. exemplifying the desired changes within Government’s own policies and practices’.

This research investigates the third and fourth recommendations via case studies. The third recommendation, ‘engaging people in initiatives to help themselves’, is explored through case study one: Floating Land, an environmental art festival that provides an opportunity for the community to instigate and facilitate initiatives that aim to build pro-environmental social norms in both visitors and residents in a setting that encourages engagement and a sense of place. The fourth recommendation,
‘exemplifying the desired changes within Government’s own policies and practices’ is explored via case studies two and three that focus on government-installed public artworks: The People’s Garden ecovisualisation that saw an interactive digital artwork installed in a public place, and the Banksias and Feathers bronze public art sculptures that depict creative responses to local flora and fauna. This research looks at the potential of local government, through incorporating the environment into all spheres of the organisation as suggested by Agenda 21, to demonstrate a holistic approach to sustainability in an attempt to model behaviour that the community can emulate. By creating environmentally-aware policies and practices, in this case in commissioning environmental art for its public art installations, local government can demonstrate its commitment to the local environment. It is anticipated that this research will contribute to supporting government in providing programs that engage the community with the environment, in a bid to encourage sense of place and self-sustainability within their regions.

To date there has been little empirical analysis exploring the impact of environmental art on its audience. There is also scant research on art’s contribution to influencing pro-environmental behaviour change, and the effects of cultural engagement in developing a sense of place. The three case studies provide opportunities to investigate these areas, prompting the research questions below.

1. How does participating in/observing environmental art contribute to pro-environmental behaviour?
2. How does environmental art contribute to an environmental sense of place?
3. How do environmental education initiatives employing environmental art contribute to social learning?
4. How can environmental art assist local government and environmental organisations to encourage pro-environmental behaviour and sense of place?

This research suggests that environmental art is an engaging and imaginative format that can complement written information campaigns to raise awareness and deliver environmental messages. The study investigates the impact of participating in and/or observing environmental art on an individual’s pro-environmental behaviour and their feeling of a sense of place. It explores the value of environmental art as a transformative medium for engaging with the environment and prompting behaviour change intentions, and as a resource for encouraging a community’s pride in its environment and associated enhancement of sense of place. To contribute to real-world outcomes, this exploration also investigates the implications of the art form for government and environmental organisations in building resilient, self-sustaining and cohesive communities.
1.4 SIGNIFICANCE OF RESEARCH

This multidisciplinary research draws on the areas of art history, environmental psychology, human geography, and social/cultural planning to contribute to a better understanding of engaged approaches to social planning through environmental art. It provides greater depth of understanding by using theoretical paradigms from these different disciplines, such as Ajzen’s Theory of Planned Behaviour, Schwartz’s Norm Activation Theory, Value-Belief Norm Theory, Persuasion Theory, Social Learning Theory, to enhance relevance to multiple contexts.

The study explores the under-researched area of the effects of environmental art on its audience within a planning context, based on a local government environmental art framework for providing art programs that is uncommon within Australia. It also contributes to the body of knowledge dealing with community responses to public art. The significance of the research is in demonstrating the benefits of integrating environmental art into infrastructure design and information programs for planners and environmental educators in government and environmental organisations. By examining a number of stakeholder perspectives to explore these effects, this research offers practical policy recommendations that stem from the community, the Council officers working with the projects, and the artists involved.

Through a thorough review of literature on environmental art it has become evident that while the genre aims to influence its audience to act for the environment, there has been very little assessment of its impact, especially quantitative analysis. Research into the effects of environmental art on its audience is limited, with the exception of a number of articles by a few authors that focus on art communicating environmental messages (Curtis 2003, 2006, 2009, 2010; Curtis, Reid & Ballard 2012; Curtis, Reid & Reeve 2014). From an analysis of case studies of art about the environment over 11 years, Curtis et al (2014) concluded that art can contribute to:

- affecting pro-environmental behaviours, values and attitudes,
- raising awareness of consequences of actions,
- building a pro-environmental self-concept,
- ‘unfreezing’ habits,
- developing environmental norms and contributions to pro-environmental initiatives, and
- reducing barriers to adopting pro-environmental behaviours.

This thesis furthers Curtis’ research by collecting data on the effect of environmental art on its audience, the intentions of the audience in acting for the environment as a result of their engagement with the work/s, and the sense of place engendered by participating in/observing environmental art. It is innovative as it provides both quantitative and qualitative analysis that explores the effects of environmental art from the audience, planners’ and artists’ perspectives, as well as investigating the
impacts that an environmental art festival has on the hosting township’s sense of place. The quantitative and qualitative methods used to collect and analyse the data are not often seen in studies on art and its effects.

Sense of place studies have explored many perspectives including, for example, physical and social attachment over various scales of space (Hidalgo & Hernandez 2001), comparisons of place attachment and pro-environmental behaviour between natural and civic locations (Scannell & Gifford 2010), youth attachment through participation in working at a park (Vaske & Kobrin 2001), and the investigation of sense of place through the lens of attitude theory (Jorgensen & Stedman 2001). There has been little research on the enhancement of sense of place through cultural engagement. This thesis explores this perspective.

As part of this study, an innovative public art project was developed that incorporated ecovisualisation, an emerging format within the environmental art movement. This digital public art project, The People’s Garden, provided one of the case studies and involved the use of digital ecovisualisations to engage and educate about the environment. Ecovisualisations are animations that depict environmental messages through imaginatively showing real-time data in visual form. In this case The People’s Garden visualised audience comments in a projected artwork in response to the question ‘what did you do for the environment today?’ The audience communicated with the artwork via SMS messages. A core aspect of this project was an interactive evaluation component, which seldom occurs in such installations (Holmes 2007). It aimed to provide an innovative form of data collection as it used social networking tools as a medium for collecting responses to an artwork in which it was integrated. Unfortunately due to equipment failure there were few occasions that the artwork functioned and consequently insufficient data was collected. Nevertheless, it represents an example of an innovative interactive public artwork which has the potential to engage audiences in reflecting on environmental behaviours in future iterations when technology issues are addressed.

This research also has significance for policy as it explores Sunshine Coast Council’s environmental art framework, which is an innovative initiative in delivering art programs in Australia. As mentioned previously, this environmental art framework was the basis for the Council winning the inaugural 2012 National Local Government Award in the Active Arts category. By exploring an already existing government framework for encouraging environmental art within public art, this research offers tangible outcomes and perspectives for the future of environmental art in social planning and environmental education. By understanding audience responses to environmental art, this research contributes to the fields of both art and planning: it analyses audience responses and environmental art’s contribution to creating or enhancing a sense of place and stimulating pro-environmental behaviour change.
1.5 METHODS

This study uses three case studies to examine how both participation in environmental art and the outcomes of these participatory processes contribute to a community’s enhancement of their own sense of place. A mixed methods approach is used to explore the effect of environmental art on its audience from qualitative and quantitative approaches. The three case studies focus on different aspects of the research as follows:

- **Floating Land** - investigated environmental behaviours and attitudes, and the sense of place of the audience (artists, residents, visitors and participants) via questionnaires containing both qualitative and quantitative measures and interviews at the festival;
- **Banksias and Feathers** - examined sense of place in audience responses to the public artworks via face-to-face questionnaires on the street, and interviewed the artist and planners for their intentions in creating and locating the artworks. A document and media analysis also explored the participatory element of community engagement involved in commissioning the public artworks; and
- **The People’s Garden** - aimed to question the audience about their sense of place and intention to act for the environment as a result of the artwork via an online questionnaire accessed by mobile phone and related website.

The mixed methods analysis of the three case studies enabled:

- investigation of three different forms of environmental art - an event/festival and both static and dynamic public artworks;
- tailoring of the methods of data gathering to suit the individual cases - questionnaires, interviews, document analysis, and media analysis; and
- analysis of the perceptions of broader relevant 'communities' - environmental art audiences, environmental artists, local government planners, and a local community that may or may not ordinarily participate in or reflect on environmental art.

1.6 CHAPTER OUTLINE

Chapter 1 thus far has outlined the background and context for the study, provided definitions and the purpose for the study, and described the research subject. It has also presented the significance of the research and the methods applied to facilitate the study. Chapter 2 describes the three case studies that provide data for the research – **Floating Land** (an environmental art festival), **Banksias and Feathers** (static public artworks), and **The People’s Garden** (a dynamic public artwork in the form of an ecovisualisation). It also describes a complementary case study, that of the environmental art
initiatives of the North Devon Biosphere Reserve, that provides an example of transferability in the third article that forms part of this thesis.

As this is a cross-disciplinary study, Chapters 3 to 6 explore literature from the contributing disciplinary fields of art history, environmental psychology, human geography and social/cultural planning. Chapter 3 looks at the many manifestations of environmental art since the 1960s, the paradigm shifts that occurred as a result of the times and movements in art, and criticisms of the media, the aesthetics and the motivations. It identifies key components of environmental art for the purpose of this thesis. Chapter 4 explores the recent history in the commissioning and planning for public art, including the emergence of ecovisualisations as public artworks, while Chapter 5 explores behaviour change theory to understand what motivates people to act for the environment. It looks at models that help explain the motivations to act pro-environmentally and the obstacles faced when choosing to act environmentally. Lastly it investigates theories that can assist in understanding behaviour change. Chapter 6 reviews sense of place research, outlining common concepts and reasons for its non-inclusion in many areas of research and government planning. It also looks at the relationship between place and acting for the environment, and how it can encourage participation within the community.

Chapter 7 outlines the methods used in this study, while Chapters 8, 9 and 10 present results of the research written as journal publications. Table 1 below outlines the contribution of the publications to the research. Of necessity some information presented in other chapters is repeated in the publications to ensure ease of understanding by different audiences. Lastly, Chapter 11 provides conclusions that respond to the research questions, outlining contributions to knowledge, as well as limitations and ideas for further research.
<table>
<thead>
<tr>
<th>Title</th>
<th>Journal publication</th>
<th>Contribution</th>
<th>Discipline</th>
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<tr>
<td>Re-imagining the environment: using an environmental art festival to encourage pro-environmental behaviour and a sense of place (Chapter 8)</td>
<td><em>Local Environment: The International Journal of Justice and Sustainability</em>, vol. 19, no. 8, pp.1-20. Published 15 Sept 2014.</td>
<td>This article looks at the <em>Floating Land</em> case study, focussing on findings regarding pro-environmental behaviour change and sense of place. By exploring data collected through questionnaires and interviews, it responds specifically to research questions 1, 2 and 4: How does participating in/observing environmental art contribute to pro-environmental behaviour? How does environmental art contribute to an environmental sense of place? How can environmental art assist local government and environmental organisations to encourage pro-environmental behaviour and sense of place?</td>
<td>Social planning</td>
</tr>
<tr>
<td>Planning for an environmental sense of place: community engagement in planning and responding to government-initiated public environmental art (Chapter 9)</td>
<td><em>Journal of Urbanism: International Research on Placemaking and Urban Sustainability</em>. Re-submitted, awaiting review.</td>
<td>This article looks at the findings from the second case study, that of <em>Banksias and Feathers</em>. It continues exploring sense of place resulting from participation with environmental art, in this case in the commissioning process that preceded the installation of ‘two series’ of sculptures. This case study is an example of static public art. Through audience questionnaires, interviews, document and media analysis, the research responds specifically to research questions 2 and 4: How does environmental art contribute to an environmental sense of place? How can environmental art assist local government and environmental organisations to encourage pro-environmental behaviour and sense of place?</td>
<td>Social planning</td>
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Environmental art and the biosphere: the role of environmental art in manifesting biosphere goals by facilitating creative approaches to environmental education (Chapter 10)

*Environmental Education Research.* Submitted, awaiting review.

This article explores the aspects of environmental art that make it an engaging environmental education resource. It looks at how environmental art is used by two biosphere reserves at opposite ends of the world to demonstrate transferability to other biosphere reserves and environmental organisations. By exploring data collected in the Noosa Biosphere Reserve (Australia) through questionnaires and interviews, and data from the North Devon Biosphere Reserve (UK) through site visits, interviews, and document analysis, the article responds specifically to research questions 2, 3 and 4: How does environmental art contribute to an environmental sense of place? How do environmental education initiatives employing environmental art contribute to social learning? How can environmental art assist local government and environmental organisations to encourage pro-environmental behaviour and sense of place?

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<td>Environmental education</td>
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Chapter 2
Case Studies

The primary research method applied in this study is multiple case study analysis to examine environmental art from different perspectives in real world situations. Case studies are useful in researching the ‘hows’ and ‘whys’ of contemporary phenomena (Shakir 2002; Yin 1994), analysing situations through the lens of the audience to provide a wider and richer perspective of the subject of the study (Creswell & Miller 2000). The nature of case studies operating in real world situations enhances their external validity through increased generalisability (Robson 2002), with multiple cases adding academic rigour as ‘evidence from multiple cases is often considered more compelling’ (Yin 1994, p. 45). Consequently, validity is strengthened by looking at more than one setting or context.

For these reasons, this research looks at three case studies that explore environmental art as public art (see Table 2):

- A Festival - Floating Land, a biennial environmental art festival held at Boreen Point
- Static public art installations - Banksias and Feathers, bronze sculptures at Noosa Junction
- A dynamic public art installation - The People’s Garden, an ecovisualisation at Noosa Junction

The first case study, Floating Land, is a 10-day biennial environmental art festival chosen for its natural setting, its use of environmental art as a format for encouraging pro-environmental behaviour, and its location in a village of approximately 300 people that provide a suitable population for sense of place analysis. The second case study, that of two sets of static bronze sculptures, was chosen to garner information about sense of place created by static public artworks that depict an environmental theme. The third case study looks at a dynamic public art project at Noosa Junction Station that incorporates the cutting-edge environmental art format of ecovisualisation. This case study was chosen for its innovation and the opportunity to analyse a work of interactive environmental public art. These three case studies provide opportunities to explore environmental art in both natural and urban settings, with a purposeful and ‘accidental’ audience, and from participatory and observational perspectives. They also provide examples of environmental art initiatives where community engagement was an intrinsic aspect of the process. The festival offered numerous opportunities for community participation in the making and the discussion of the art, while community engagement was a major aspect of the placemaking process that eventuated in the installation of the bronze sculptures. The final case study, the ecovisualisation aimed to engage the community through contributions to the artwork as well as the engagement of university students in creating the work. The case studies are all examples of government-initiated public art initiatives, facilitated by Sunshine...
Coast Council as part of its award-winning environmental art framework for delivering art programs. The *Floating Land* case study is also an example of a government and community organisation partnership in delivering an environmental art program, in this case with Noosa Biosphere Limited. These case studies provide a unique opportunity to explore community engagement under an already established environmental art framework in a local government setting.

**Table 2: Case study features**

<table>
<thead>
<tr>
<th>Format</th>
<th>Floating Land</th>
<th>Feathers and Banksias</th>
<th>The People’s Garden</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Natural setting of shores of Lake Cootharaba, Boreen Point, Queensland, Australia</td>
<td>Urban setting of Noosa Junction, Queensland, Australia</td>
<td>Urban setting of Noosa Junction Station, a transit hub for the tourist destination of Noosa Heads, Queensland, Australia</td>
</tr>
<tr>
<td>Media</td>
<td>Natural and recycled materials, mixed media, light and sound</td>
<td>Bronze</td>
<td>Digital - light and sound</td>
</tr>
<tr>
<td>Audience</td>
<td>Deliberate visitation by all sectors of community</td>
<td>Accidental engagement by passers-by</td>
<td>Accidental engagement by passers-by</td>
</tr>
<tr>
<td>Participation</td>
<td>Workshops, collaborations, participation in/observation of performances, public forums and films</td>
<td>Community engagement that led to commissioning and installation of artworks</td>
<td>Contributions to the artwork through SMS responding to: ‘what did you do for the environment today?’</td>
</tr>
<tr>
<td>Artists</td>
<td>65+ local, national and international artists</td>
<td>One local artist</td>
<td>Five local artists</td>
</tr>
<tr>
<td>Expected audience</td>
<td>5,000 over 10 days</td>
<td>200,000 based on approximately 50 people per hour passing the artworks</td>
<td>15,000 over six months</td>
</tr>
</tbody>
</table>

**2.1 FLOATING LAND**

*Floating Land* has been held over ten days every two years in the winter month of June at Boreen Point, a village located in the Noosa Biosphere Reserve on the Sunshine Coast of Australia. The festival’s format is currently under review for future iterations. The location and natural aesthetics of
the village are integral to the choice of site for the festival as it offers arts activities in the outdoors in a natural setting of land and water that is intrinsic to the production and exhibition of the environmental art.

*Floating Land* aims to encourage appreciation of nature through engagement with art, resulting in environmental awareness, behaviour change and discussion of solutions to environmental issues (Sunshine Coast Council 2012). The festival is based around the creation of artworks by invited international, Australian and local artists over the 10 days along the shoreline of the lake. The audience is invited to watch and sometimes participate with the creation of the installations, as well as to attend workshops, performances, presentations, films and public forums.

The specific iteration of the festival being researched as a case study was held from 31 May to 9 June 2013 and included over 65 artists from New Zealand, the United Kingdom, and Vanuatu as well as from around Australia and the Sunshine Coast region. The 2013 theme was ‘nature’s dialogue’, based on the idea of biomimicry and nature’s inspiration for man-made designs. The artists were requested to respond to this theme in their particular art forms which included visual arts, light and film projections, performance, and music (see Figures 1 to 5 for examples). Accompanying the artworks were walks and talks, films, tours and workshops based on the theme. See Chapter 8 (Paper 1) for more information about *Floating Land* and some of its content.

![Figure 1. Kris Martin, *Floating Land* sign, 2013. Sticks, twine. Boreen Point, Australia. Image Raoul Slater](image)
Figure 2. Bark Lab, *Growth*, Boreen Point, 2013. Mixed media. Boreen Point, Australia. Image Raoul Slater

Figure 3. Michel Tuffery and James Muller, *Reading Clouds – Floating Middens*, 2013. Mixed media. Boreen Point, Australia. Image Raoul Slater
Figure 4. Elizabeth Poole, *BIRD iView*, 2013. Cotton string, DVA mesh. Boreen Point Australia. Image Raoul Slater

Figure 5. Artmakers Noosa, *Apis* Workshop, 2013. Clay, cardboard, found natural objects. Boreen Point, Australia. Image Raoul Slater
2.2 BANKSIAS AND FEATHERS

Two styles of static public artworks were chosen for this case study; one figurative and one abstract. Both series of artworks were produced by local artist Lucas Salton. The first artwork, *Feathers* (2011), is a set of bronze abstract sculptures clustered in the one location (see Figure 6). The 16 feather-like works range in size from two to four metres and extend from a garden bed into the footpath. These artworks were incorporated into a streetscaping project as part of a community-based placemaking program that aimed to activate a pedestrian arcade that connects two main road shopping precincts. This sculptural work was chosen for this study as it is an environmental artwork that does not evoke the environment in a literal manner, and consequently provides an example of a work that could offer a focus for data on audience response to abstract artworks.

The second sculptural work, *Banksias* (2013), is a series of 11 bronze Banksia pods (easily recognisable seedpods from a local native plant) that are located around Noosa Junction in various spaces such as the median strip of the main street and alongside pedestrian crossings (see Figure 7). The sculptures are approximately one metre in height and offer functionality as they enclose colour-changing lights that double as pedestrian lighting at night-time, activating the space for an evening audience. The artworks are distinctly figurative and naturalistic, with their form obvious to the audience, and consequently were chosen to provide data on audience response to figurative works.
2.3 THE PEOPLE’S GARDEN

The third case study was an interactive digital public artwork presented as a projection at Noosa Junction Station, a transport hub linking Noosa Heads to other areas of the Sunshine Coast. The artwork was housed in a glass room at the end of the newly-built bus station. By day the work was presented on four synchronised television screens within the glass ‘pod’ and by night as a large-scale projection on three six-foot screens that dropped down to fill the glass windows. The bus station houses a small concrete viewing platform that allowed commuters to sit and watch the projections while waiting for buses. This amenity was intended to allow for interaction with the artwork and data generation from commuters who acted as an ‘accidental’ environmental art audience.

*The People’s Garden* depicted a growing vine, with growth stimulated by the audience’s input of comments in response to signage that asked ‘what did you do for the environment today?’ (see
Figures 8 and 9). When a participant sent an SMS to the artwork, the vine would instantaneously grow and the comment contributed would rain down in the background of the artwork. These comments would remain for the rest of the day so that the audience could read what other people had done for the environment that day. In addition, on random occasions native animals such as bush turkeys and butterflies would cross the screen in response to SMS contributions. The content of the artwork was environmentally-based and aimed to both reward as well as encourage pro-environmental behaviour through displaying others’ contributions to the environment. It worked on the principle that when people see that others are acting for the environment, they will feel inspired to do the same, otherwise known as creating injunctive norms (described later in Chapter 5).

![Figure 8. One of the artists with The People’s Garden. Light projection. Noosa Junction, Australia. Image Megan Marks](image-url)
The project was a collaboration between the University of the Sunshine Coast and Sunshine Coast Council. Five university students were recruited to create the artwork alongside the University of the Sunshine Coast’s Engage Lab that developed the technical systems for interactivity. Sunshine Coast Council provided myself as the project manager and the equipment and location for the installation of the artwork. Whereas a trial at the University demonstrated its capability, unfortunately due to provision of inappropriate equipment at Noosa Junction, it failed on many occasions and the artwork was only functional for intermittent time periods which did not allow for adequate data collection. Thus the art and its purpose are described in the thesis, but not the anticipated survey outcomes. While it did not provide data, this case study has been included as it was considered an innovative aspect of the research that interactivity with a digital artwork in a public art space be explored. The cutting edge nature of the interactive artwork provides the basis for further important research into audience participation with digital environmental art.

2.4 COMPLEMENTARY CASE STUDY - NORTH DEVON BIOSPHERE RESERVE

The North Devon Biosphere Reserve (NDBR), located in the United Kingdom, was used as a complementary case study within the third article included in this thesis. The data collection for this case study was undertaken by one of my supervisors, and consequently is not treated as a primary case study within this thesis. This region was chosen as it provides an example of another Biosphere Reserve that uses environmental art in a number of initiatives as a resource for environmental education. Data about the NDBR were based on outcomes of interviews conducted with artists, ecologists, arts administrators and Biosphere Foundation members, a document analysis of strategies, reports and teachers’ resources (North Devon Biosphere Reserve 2010, 2012, 2015a, 2015b), and site visits by my thesis supervisor and paper co-author, Dr Lisa Chandler. The third article in this thesis focuses on Floating Land, with information from the NDBR complementing the data collected and conclusions made, illustrating the transferability of environmental art among both biosphere reserves and environmental organisations. More information about the North Devon Biosphere Reserve is included within the article presented as Chapter 10.
Chapter 3
Environmental Art

This chapter examines environmental art literature to provide a background to its recent manifestations and practitioners’ intentions. It outlines some of the many definitions and sub-categories of environmental art, and explores the changes in the movement through an analysis of books, catalogues, articles, websites and blogs which address this topic. The review also explores the paradigm shifts that have influenced environmental art, and reviews criticisms of the movement and responses to those criticisms.

3.1 DEFINING ENVIRONMENTAL ART

Environmental art has manifested since the 1960s in many formats with differing rationales and audiences. Consequently its incarnations and iterations have prompted a range of definitions, with authors using the term ‘environmental art’ interchangeably with other terms such as ‘land art’ and ‘earth art’, while also creating complementary names and sub-genres. Traditionally, environmental art has been an umbrella term that encompasses sub-genres such as eco-art (also known as ecological art or ecoart), ecoventions, earthworks, art in nature and many others (Bower 2012). This review examines the movement and its manifestations to lead to a definition of environmental art for the purpose of this thesis.

Much environmental art literature is written from an art historical perspective and focuses on the early period of the 1960s and 1970s when earthworks or land art emerged as a contemporary art movement. At this time environmental art was referred to as ‘earth art’, ‘land art’ and ‘earthworks’, with the terms used interchangeably (Matilsky 1992; Strelow 2004; Tiberghien 1995). Examples of the varying definitions of environmental art can be seen in Spaid’s (2002) definition of land art as any art that ‘activates the land’, whereas Strelow (2004) contradicts this view, seeing land art as monumental works that may or may not consider environmental impacts, and earth art as work made in nature with natural materials.

Whether referred to as earth or land art, this genre generally involves site-specific sculptural projects that use insitu materials to create new forms, projects that involve importing unexpected objects into the natural setting, environmental works that require time for their evolution, or collaborative interventions in the environment (Kastner & Wallis 1998). Examples of its manifestations are described below.
Land art can involve minimal, ephemeral interventions at a site, for example Richard Long’s *A Line Made By Walking* (1967). By wearing a path into a field through walking, Long sought to represent ideas about time, space and place (see Figure 10). It can also include large-scale sculptural works that are built on a natural site. Michael Heizer’s *Double Negative* (1969-1970) was one of the most controversial works of its time for its enormous environmental impact, involving the excavation of 240,000 tons of earth to create a gap in a valley wall (see Figure 11). Land art can include gallery installations that engage with a site, either through documentation of work at or materials from the site. Hans Haacke’s *Grass Grows* (1969) explored growth and decay by exhibiting a dirt mound growing grass within the Cornell University Gallery as part of the *Earth Art* exhibition of 1969 (see Figure 12). Reclamation art was also an early form of earth or land art that has continued until today. The aesthetic improvement of degraded locations through seminal works such as Robert Smithson’s *Spiral Jetty* (1970) (see Figure 13), which was not originally intended as reclamation art but is seen by some as one of the most influential examples (Kastner & Wallis 1998; Matilsky 1992; Tiberghien 1995), has inspired both artists and governments to work together in artistic projects to rebuild sites of degradation (Matilsky 1992). Lastly, works that involve conserving or reconstituting the natural state of a site, such as Alan Sonfist’s *Time Landscapes* (1965-present) are considered land art. This work involved the replanting of native species indigenous to an area of lower Manhattan, creating a natural park in a highly urbanised setting (see Figure 14) (Andrews 1999). While these works represent early forms of environmental art, it can be seen from the wide range of formats that the movement is not homogeneous, with differing media, intentions and outcomes represented.

Figure 11. Michael Heizer, *Double Negative*, 1969-70. 244,800 ton displacement. Rhyolite, sandstone. Mormon Mesa, Overton, Nevada. 
Source: http://doublenegative.tarasen.net/double_negative.html

Environmental art forms that differ to those of land or earth art, but are still focussed on the environment, are more readily encapsulated by the umbrella term ‘environmental art’. Spaid’s (2002, p.n.p.) frequently cited definition of environmental art conceives of it as ‘generally less monumental [than land art] and tends to employ nature as a medium, so as to enhance the viewer’s awareness of nature’s forces, processes and phenomena’. Below I further define environmental art, encapsulating the importance of artist intention, and the move towards collaboration and participation that is inherent in contemporary environmental art.

Most recently the term eco-art has emerged as a sub-genre and sometimes alternative term for environmental art. Bower (2012) characterises eco-art as ‘a contemporary art movement which addresses environmental issues and often involves collaboration, restoration and frequently has a more ‘eco-friendly’ approach and methodology’. While this term engenders the same qualities espoused in environmental art, it specifically engages with recent explorations of systems thinking that looks at the totality of an ecosystem to engender environmental change (Weintraub 2012). Eco-art specifically focuses on global ecological ideologies (Carruthers 2006), aiming to inspire socio-cultural change that questions modern individualism and anthropocentric perspectives and fosters recognition of the intrinsic inter-relationship between people, the environment and the world as a whole (Gablik 1992; Wallen 2012). Influential eco-artists Newton Harrison and Helen Mayer-Harrison believe
environmental art must incorporate systems thinking to effectively engender environmental change (Kastner & Wallis 1998). Much of their work, including Meditations on the Sacramento River, The Delta and Bays (1976) and The Lagoon Cycle (1985), presents the damage to entire ecosystems in a collage of media, offering holistic community solutions to reclaim degraded land and/or waterways. Eco-art can also emphasise human environmental impacts (Brady 2007). For example, Hehe’s Nuage Vert (2008) highlighted to the residents of Helsinki their combined electricity usage by creating a laser cloud that expanded or contracted, based on real-time data collected from its power plant (Weintraub 2012). From watching this cloud over a series of evenings, the residents were then inspired to limit their electricity use, culminating in a government-initiated event where the residents participated in a communal ‘turn-off’ to see the effects on the laser cloud. Like The People’s Garden, Nuage Vert is an example of an ecovisualisation as it is a real-time visual response to changing data about the environment.

Additionally, many other sub-genres have been identified, including environmental bio-art, body art, ecofeminism, social sculpture, activist art, walking works, generative art and recycled art among others (Weintraub 2012; Wildy 2011). Because there is limited clarity on the definitions of these terms in art historical literature within the context of environmental art, only the well-recognised terms have been outlined here.

In this examination of the definitions of earth art or land art, environmental art, and eco-art, it has been demonstrated that there are many overlapping terms and concepts. While it is difficult to find a single definition, commonly expressed key concepts include the use of natural materials most often in a natural setting to create artworks that communicate about the environment to influence towards pro-environmental attitudes and behaviours. As the next section demonstrates, manifestations of environmental art have shifted over time, broadening to integrate collaboration and participation, new media, formats and environmental issues. We further explore these paradigm shifts to find a definition that encapsulates contemporary environmental art.

3.2 PARADIGM SHIFTS IN CREATING ENVIRONMENTAL ART

The media and formats of environmental art have undergone various changes as a result of a number of paradigm shifts:

- society’s shift from privileging industrialisation to encompassing environmental concerns;
- from the use of natural media in art to using the actual processes of nature to create art;
- from exhibiting in indoor to outdoor spaces, with consequent priority on site;
- increased emphasis within art on participation, process, and social learning;
- increased interdisciplinarity in collaboration including between scientists and artists, and
- emphasis on community works.
The environmental art movement emerged in the 1960s when society was questioning established institutions, moving from acceptance to a challenging of authority (Kastner & Wallis 1998), and from culture to counter-culture (Weintraub 2012). Society shifted from carefree consumption of the bounty of industrialisation to concern for the ramifications for nature. With this societal change artists began negotiating ways in which they could contribute solutions to environmental problems, with some integrating a scientific ethic into their processes and final work. However, the relationship between art and science that has arisen through the environmental art movement is not a new phenomenon. Prior to industrialisation, art and science were closely related (Grande 1994); Constable’s paintings of cloud formations were based on his scientific notes, while some artists such as Da Vinci were polymaths, with their detailed observations and drawings contributing to society as they acted as both scientists and artists. With increased industrialisation and commodification, nature was increasingly seen to be bypassed for man-made substitutes. Since the 1960s many environmental artists have aimed to restore the collaboration between scientific enquiry and art-making, such as Newton Harrison and Helen Mayer-Harrison who use collage, poetry and images to present scientific concepts of environmental degradation of water catchments. There has been much discussion regarding art and science as two differing cognitions and approaches to the world’s problems (Strelow 2004), with scientists seen as gathering data, hypothesising and devising solutions while artists develop the approaches that engage people’s consciences and raise their environmental awareness (Song 2009). One of the case studies of this research, Floating Land, has historically worked on the notion that by gathering a group of scientists and artists together, environmental art provides the medium through which they collaborate to devise solutions to environmental problems, whether this is by creating artworks that engage the public with scientific concepts, or through dialogue between scientists and creative practitioners around environmental issues that can then lead to problem-solving.

One role of artists in their contribution to science is acting as intermediaries, communicating complex scientific concepts where ‘facts and figures do not themselves communicate’ (Potter 2009, p.n.p.). In 1971, land artist Robert Smithson described the necessity of collaboration between artists and scientists, observing that:

the artist and the miner must become conscious of themselves as natural agents ... the world needs coal and highways, but we do not need the results of strip-mining or highway trusts ... art can become a resource, that mediates between the ecologist and the industrialist. Ecology and industry are not one-way streets, rather they should be cross-roads. Art can help to provide the needed dialectic between them (Smithson 1971 cited in Flam 1996, p. 376).
Furthermore, recently artists have contributed to:

botanical and zoological taxonomy ... anatomy and exploration, the merger of science and art in architecture, graphic design and decoration, the evolution of the arts with the science of materials and technology, the use of art in psychiatry to analyse cognition, the use of scientific subjects by artists, and the sharing of analytic tools and philosophical approaches (Curtis 2011, p. 182).

With the advent of social networking and information sharing, more science and art collaborations are being seen than ever before. Geographically dispersed artists and scientists with common themes and motivations are creating communities that can work across the globe as well as across disciplines (Homsy 2012). The Beehive Collective, an art collective based in Maine, USA, ‘continually travel as a decentralized “swarm” in search of new prospects – not pollen-laden flowers, but problem-laden sites where they “cross-pollinate the grassroots”’ (Weintraub 2013, p. 131).

The second paradigm shift came as new media and forms developed within environmental art involving a shift from paint and traditional sculptural materials to an incorporation of an array of natural materials. Artists began using sap, pollen, feathers, bark, bone, branches, stones, discarded manufactured materials, and living plants, microbes, and animals to create their work (Weintraub 2012). Rather than using the materials of nature to create environmental artworks, the processes of nature itself were being relied upon to create the artworks. Tillim (1968) conceived of these shifts as both connecting with and breaking from art historical traditions. He saw earth art as a twentieth-century manifestation of the picturesque whereby nature is appreciated through the work, but in this case the natural setting represented the aesthetic dimension as opposed to a visual depiction in a painting. From this perspective, contemporary expressions of the picturesque might include recreations of natural ecosystems and the revival of urban ecologies (Matilsky 1992), such as Agnes Denes’ work Wheatfield – A Confrontation: Battery Park Landfill, Downtown Manhattan (1982) where the artist planted a two-acre wheat field in downtown New York. In some contemporary forms of environmental art there is no longer an emphasis on the artist as creator/author; rather, such works have become a work of nature rather than the work of the artist, such as those of Andy Goldsworthy that are constructed and either decay, grow or deteriorate over time at the hands of nature. The notion of aesthetics, ‘the study of the mind and emotions in relation to beauty’ is being re-evaluated within environmental art as artists continue to explore different ways in which environmental concerns can manifest through creative practice (Weintraub 2012, p. 33).

Most recently some environmental artists have utilised digital technologies as a medium to encourage pro-environmental behaviour. Ecovisualisations have become an engaging format with audiences as a means of interpreting environmental data as imagery rather than numerically (Holmes 2011). For example, Andrea Polli’s Particle Falls presents air quality in a public wall of digital dots falling like
a waterfall, with the brightness of the particles representing data sent by a nearby air monitor (Chemical Heritage Foundation 2015). When the air pollution reading is high the particles are brighter and larger and when the air quality is good the particles are small and not so bright. The artwork was presented onto the facade of the Wilma Theatre in Philadelphia in 2013 where the public could quickly engage with the local environment through the intriguing and interesting artwork.

Another paradigm shift that influenced and indeed was encouraged by environmental art was a move from exhibiting art in galleries to outdoor spaces, or the ‘terrestrial studio’ as Oppenheim called it (Heizer 1970). This occurred in response to the consumerism of the times, the associated commodification of art, and the perceived cultural elitism of the art world. Heizer (1969, p.n.p.), for example, believed ‘the museums and collections are stuffed, the floors are sagging, but the real space exists’. Consequently environmental artists responded by creating works in and of nature that were unsaleable (Kastner & Wallis 1998; Weintraub 2012). Nature was seen as an ‘antidote for excessive cultural sophistication’ (Heiss 1992, p. 138). Despite these deliberate actions against the cultural orthodoxy, there has been debate regarding the involvement of galleries in the creation of early earthworks with some asserting land artists were not intentionally shying away from galleries, rather that some galleries were financially supporting their works (Kaiser & Kwon 2012). Certainly, many of these works were in fairly remote locations and so not readily accessible. They are primarily known because they were documented through photographs, drawings and films, which were exhibited in gallery spaces, so in that sense, the work continued to sit within the gallery domain.

One significant consequence of the shift from gallery to outdoors was that the site became more important than or integral to the object. Site is fundamental to most environmental artworks, they being ‘in or of the land in such a way that a part of nature constitutes a part of the relevant work ... not only is the site of an environmental work an environmental site, but the site itself is an aspect of the work’ (Carlson 2000, p. 150). Seminal land artist Robert Smithson (1968) believed that place or site was intrinsic to the land art of the time, elaborating that integral to the work were concepts such as the location, the boundaries between the work and viewers, whether the work was inside or outside, and the work’s focus on the centre or periphery. Renowned land artist Dennis Oppenheimer stated he ‘was drawn to ravaged sites’, sites that were not part of a system such as ‘dumps, borders of countries, deserts and wastelands - peripheries’ (cited in Heiss 1992, p. 138). Meanwhile within galleries, the transference of artworks from the wall to the floors inspired a new form of participation that involved more than mere observation from the audience; it involved a questioning of the traditional forms of art presentation, an intrinsic aspect of environmental artworks to come (Sharp 1970; Wallen 2012). The movement from art in galleries that promotes inspection by the cultural elite (Bourdieu, Darbel & Schnapper 1990) to art in the outdoors that promotes interaction by all sections of the community has provided a basis for many environmental artworks and programs.
Many environmental artworks emphasise participation as intrinsic to the work. Participation can take many forms, including collaborating in the production of a work or the processes that lead to it, being in an artwork as a performance, to experiencing emotional affect as a result of engaging with an artwork that stimulates a response. The siting of early earthworks aimed to move art audiences from purely observing to participating in nature and the work (Kastner & Wallis 1998). Many artists use performance, either as ritual to foster shared experiences, or to emphasise the creation of the work in the natural setting, to connect audiences to nature (Gablik 1992). Curtis asserts that art can ‘affect environmental behaviour by increasing an emotional affinity towards nature, generating a cognitive interest in nature, and provoking emotional indignation about insufficient nature protection’ (Curtis 2009, p. 182) (see Figure 15).

Figure 15: How the arts can affect environmental behaviour. NB the model is adapted from Kals (1999) by Curtis (2009) with the shading denoting Kals’ original model

For example, *Plague and the Moonflower*, the focus of a number of Curtis articles (2003, 2006, 2010), was a community production that brought together 170 performers, including collaborations from a number of community arts groups, to present an environmentally-inspired performance in a cattle yard in rural Armidale. ‘The work moves between celebrating the natural environment, reflecting on civilisations that have gone before leaving deserts in their wake, lamenting the destruction of the natural environment by modern industrialised society, and anticipating the eventual rediscovery of nature’ (Curtis 2010, p. 67). Curtis’ study of this performance found many participants were able to express their feelings about the environment through their participation, with one commenting ‘of the
transition from being “entertained” to gaining deeper understanding’ of the environmental message (Curtis 2010, p. 71).

This thesis expands on Curtis’ findings to explore the pro-environmental behaviour change engendered by participating in an environmental art initiative, *Floating Land*, as well as examining the sense of place developed through this participation. *Floating Land* aims to bring an audience into a natural setting to encourage appreciation of the environment as well as to learn about art. ‘By merging arts and culture with science and the environment, the event aims to contribute to positive global change through education and conversations’ (Sunshine Coast Council 2012). Community participation has also been integrated into the planning processes that precede placemaking projects, including public art projects. The *Banksias and Feathers* case study explores the community’s engagement in the processes that led to the precinct revitalisation that resulted in the commissioning of the public artworks.

Lastly, collaborations between artists and other disciplines have been an increasingly frequent characteristic of many forms of environmental art. One form of collaboration is the ecovention, ‘an artist-initiated project that employs an inventive strategy to physically transform local ecology’ (Spaid 2002, p.n.p). Ecoventions are interventions in the environment that involve interdisciplinarity and community participation to affect some form of environmental change. For example, Joseph Beuys’ *7000 Oaks – City Forestation Instead of City Administration* (1982) took a number of years for Beuys and a team of volunteers to plant 7000 oak trees with accompanying basalt stones around the German city of Kassel in an effort to alter the cityscape. Prominent environmental artist Agnes Denes reinforces the interdisciplinary qualities of environmental art when she describes it as a ‘blend of design, landscaping, architecture, urban planning, the social sciences and philosophy – in addition to being art’ (Denes 1993, p. 387). Curtis (2009) believes that from within the many ecoventions that have played out over the last decades, the concept of an ‘ecological aesthetic’ has emerged; that ecological aesthetics combine ecological theory and landscape restoration with environmental art practice to build collaborations that effect environmental improvement and change. Increasingly, environmental artists have integrated interdisciplinarity into their work, collaborating with professionals from other disciplines to create imaginative responses to infrastructure, scientific and environmental projects. The inclusion of the *Banksias and Feathers* artist, Lucas Salton, in the placemaking process conducted by Sunshine Coast Council is an example of an artist working with local government professionals to respond to aesthetic, planning and community needs.

Alongside the paradigm shift from individual to community works came the shift from appreciation of outcomes to an emphasis on process. Many environmental artists focus on their contribution to society rather than the value of their art as a commodity, and it is through these community processes that artists are social transformation catalysts (Kagan 2011). For example, Betty Beaumont’s *Ocean*
Landmark Project (1978-1980) submerged an artificial reef made of recycled coal by-product in the Atlantic Ocean for the rehabilitation of the ecosystem in the region. The final outcome was invisible to the audience, but the process was fully documented and exhibited (Matilsky 1992). Reyes (cited in Cuevas 2003, p.n.p) specifies ‘there is art and there are applied arts, which are functional objects that have a special degree of craftsmanship. But there should be a third category for an art ad usum, an art to be used ... the piece or the artwork operates as a tool, a device or a tactic’.

The engagement of a wide audience in the production of the works, rather than the mere display of a final product, encourages learning as well as involvement and understanding of both the materials (nature) and the processes that solve problems. A Floating Land project, Ghostnets (2011), brought a group of women from Moa Island and Darnley Island in the Torres Strait to present workshops that taught both adults and children about the problem of the ‘ghost nets’, commercial fishing nets that wash up on beaches at the northern end of Australia. A large audience participated in the popular workshops, creating artworks that contributed to a collaborative installation while learning about the danger of the nets to the fauna of the area. Participation was the emphasis behind all of the case studies chosen for this research: Floating Land offered participation throughout the art process, Banksias and Feathers offered community engagement throughout the commissioning process, and The People’s Garden aimed to enable the public to interact with the artwork to see their immediate contribution in creating a shifting daily montage of what they did for the environment.

3.3 CRITICISMS OF ENVIRONMENTAL ART

While environmental art may appear to have noble intentions, it does not go without its critics, especially those that question the land art movement. Criticisms outlined further below include:

- the ecological and environmental costs of production;
- the aesthetic value of some environmental art; and
- the short- and long-term effects of the work.

The most cited criticism of environmental art is the question of whether the work is worth the ecological and environmental costs of its production (Fisher 2007; Kastner & Wallis 1998; Lintott 2007; Maskit 2007). While Fisher (2007) argues that an artwork made from endangered hardwood, if bringing attention to the scarcity of the wood, can be considered justified, Humphrey (1985) contends that an earthwork is ethical only if its impact on the environment is minimal. Many critics found the early land art domineering, believing it to be a masculine subjugation of the environment in the name of technology and progress (Matilsky 1992). Works such as Heizer’s Double Negative (1969) and Smithson’s Spiral Jetty (1970) required the movement of large tracts of earth by bulldozing equipment, with many believing this carving up of the environment was insensitive and attention-seeking. Artist Tavares Strachan defends his work, The Difference Between What we Have and What
we Want (2006), for which he transported a 4.5 ton block of ice from the Arctic to the Bahamas, by commenting that much art is a waste of materials and time due to its experimental nature. He argues that: ‘the desire and goal is more important than anything else ... two thousand years ago, the word waste didn’t exist’ (Strachan cited in Weintraub 2012, pp. 285-286). Lintott (2007, p. 271) concludes environmental art is ‘in the potential service of nature and art appreciation and I do not think that we need to favour one over the other.’ She offers the justification that the importance of the final artwork outweighs the cost of production (Lintott 2007).

The short- and long-term effects of environmental art are a focus for controversy, with reclamation art holding centre position in this argument. Reclamation art can be seen as aesthetically and ethically justified in its actions if it is improving an industrial or environmentally degraded site (Hagerman 2007) but others see it as ‘covering up’ corporate environmental vandalism and ‘akin to forgery’ (Heyd 2007, p. 340; Morris 1980; Weintraub 2012). Some claim the commissioning of artists by corporations is an opportunity for publicity and image promotion, diverting from the damage the corporations had caused through strip-mining and other land degradation practices (Weintraub 2012). It has also been seen as an inexpensive way for corporations to bypass responsibility for full reclamation of flora and fauna at the sites reclaimed. Matilsky (1992) claims few reclamation works restore the habitats or take into account long-term histories or futures that could sustain the ecosystems that had been lost. Morris (1980) outlines the criticism that artists in service of large corporations were at risk of losing art’s freedom, but then mitigates this with the assertion that the role of art has always been to serve the public. While there are many criticisms of reclamation art, the benefits are seen as its ability to make us reflect on the site’s past, transforming the environment as well as preserving its history (Heyd 2007).

While these criticisms can be also made of other art movements, it can be argued that the intent of this movement to encourage pro-environmental awareness and behaviour justifies at least some of its actions. This research aims to investigate the impact of environmental art on its audience and consequently respond to the criticisms with justifications based on the pro-environmental behaviour intentions and sense of place engendered by engaging with the work.

In summary, very little research has been undertaken on the impact of environmental art, with the majority providing purely an art historical perspective of the evolution of the movement. Of the definitions of environmental art reviewed, for the purpose of this thesis, environmental art is any artwork that aims to stimulate discussion and/or action around nature to contribute to solutions to environmental problems. It can be made of many different media such as natural and recycled materials, light and sound, and can come in many different formats, such as installations, photography, writing, and performance. It can be ephemeral works such as those of Andy Goldsworthy that decompose with natural processes, or permanent structures such as public art.
installations. It can be created by an individual artist but is increasingly becoming a more participatory form of art that engages communities. The point of difference for environmental art is that the intent is to foster pro-environmental awareness, attitudes and behaviours. For example, many artworks use natural media, such as clay in ceramics, but what differentiates this from environmental art is the intent. Creating a clay pot is not producing a work of environmental art, but creating a clay pot as part of a workshop intending to discuss the environment or that contributes to a collaboration that looks at solving an environmental problem is environmental art. Therefore this definition of environmental art is based on the rationale of the work – to create environmental awareness, discussions and/or solve environmental problems.

This thesis explores environmental art in the public art context, with contemporary public art incorporating many formats including festivals and installations, the focus of this study. The next section explores contemporary public art, its evolution and presentation as a means of expressing shared community values, with environmental art being the focus.
Chapter 4

Public Art

This section explores the role of public art and its potential to create environmental awareness, reflect a community’s sense of identity and communicate environmental messages through environmentally-themed works. It explores the history and definitions of public art, identifying reasons there is little research into the audience perspective of particular works. It also outlines what some consider ‘good’ public art, and its role in communicating the shared values of a community, as well as providing stimulation for discussion on social issues and contributing to a community’s pride and sense of place. Lastly it elaborates on the emergence of ecovisualisations as an engaging form of public art that engages people with the environment.

4.1 PUBLIC ART IN PLANNING

Since the 1970s public art has moved from the imposition of giant abstract sculptures not intrinsically connected with a site (Kwon 2004) through many manifestations, to festivals and participatory community events that are considered ‘new genre public art’ (Lacy 1995). Whereas traditionally public art commemorated ‘social, civic or national virtues, such as heroism, leadership and achievement’ (Selwood 1995, p. 242), current public art is more about the relationship between the artist and the community, creating processes and outcomes that benefit both parties. Moreso, ‘the language of participation and empowerment has become a convention in urban redevelopment practice’ (Pollock & Sharp 2012, p. 3063).

Kwon (2004) has identified three phases of public art since its most recent renaissance over 40 years ago. The first phase, the ‘art in public places model’ of the 1970s and 80s, describes the commissioning of often large artworks for public spaces. These artworks were seen as gallery or museum works that were merely ‘plopped’ outside, with little attention given to the work being created with site, place or audience in mind. The second phase of public art, the ‘art as public spaces approach’, integrated public artworks into the design of places. In this era public art was conceived as including sculpture or significant works, functional works such as street seating, building features, natural artworks such as landscaped parks, and temporary artworks (Hamilton, Forsyth & De Iongh 2001). Artists were invited to the table as part of the design process and collaborated with planners, architects and landscapers to create more hospitable, inviting and aesthetically welcoming spaces. It was recognised that artists offer creative responses to design and community engagement, as well as acting as social commentators and provocateurs in the design process (ixia 2013a). In response to the previous top-down approach that resulted in unpopular artist-centred public art, this era courted
community feedback to produce works that were both functional and reflected community input (Kwon 2004). This reflects the processes involved in the commissioning of Banksias and Feathers.

The third phase, the ‘art in the public interest model’ describes much of the public art of today. As well as the integrated and functional works of the previous era, contemporary public art also includes community collaborations in response to social issues (Lacy 1995). ‘It may comprise artists working as members of design teams, festivals, performances, carnivals, firework displays, fellowships or exchanges’, and can be a political intervention, a physical artwork, or an educational process such as workshops, artists in residence programs or talks (Selwood 1995, p. 7). Floating Land falls under this definition and can therefore be considered an example of this phase of contemporary public art.

4.2 EVALUATING PUBLIC ART

While there is much research into public art from the perspectives of planners and producers (Barnes et al. 1995; Bianchini & Ghilardi 2007; Hamilton, Forsyth & De Iongh 2001; Miles 1997, 2008; Miles & Hall 2003), there has been little systematic research into the public’s perception of public art (Degen, De Silvey & Rose 2008; Hall & Robertson 2001; Zebracki 2012, 2013; Zebracki, Van Der Vaart & Van Aalst 2010), except for a study that explored the response of an audience towards six public artworks and their placement in the Netherlands (Zebracki 2013). The blind acceptance of public art’s benefit to the community and doubts about social science criteria to measure responses are two of the reasons cited for this lack of research (Hall & Robertson 2001; Zebracki 2013). Criteria that measure the impact of public art as a catalyst in engaging publics with social, environmental or other matters have lacked rigour, while proponents of public art have often relied more on rhetoric than empirical evidence and assertions are not often substantiated (Hall & Robertson 2001; Selwood 1995). Hall and Smith (2005) developed a set of criteria to explain individuals’ perceptions of public art, which include the person’s educational background, familiarity with the work, belief in the appropriateness of the work, its meaningfulness to them, and the use of the artwork as a meeting place or landmark. While the criteria developed by Hall and Smith provide guidelines for generic studies of public art, the purpose of this research is to explore the enhancement of an individual’s sense of place from environmentally-themed public art, and consequently different criteria have been identified.

Research has also focussed on criteria that define ‘good’ public art. First and foremost the artwork must engage an audience that encounters the work in passing, possibly between errands or on a routine commute (Phillips 2003; Zebracki 2013). Public artworks can play a role in a daily routine, offering potential to stimulate thinking, to confirm a community’s values, or to enhance a sense of place for the passers-by that engage with it on a regular basis (Adams 1997). While Selwood (1995, p. 249) believes public art ‘should be attractive, appropriate, inoffensive and give pleasure rather than being ‘challenging’ or stimulating’, Phillips (2003, p. 133) warns that ‘minimum risk art’ may be
aesthetically pleasing but avoids the stimulation of critical discussion which she argues is a role of art in the public realm. Positive perceptions of public art may not necessarily lead to stimulating critical discussion and engagement, but studies by Selwood (1995) reveal that a public art audience is engaged when the artwork has meaning for them and, that is it has either a commemorative or narrative aspect that relates both to the work and the site. The study by Zebracki (2013) on audience reaction to public art in the Netherlands found that figurative public art was perceived more positively than abstract public art, with this study further investigating this assertion. In light of this study, public art that is perceived as environmental art can be accepted as an effective reminder of the local environment and when executed effectively can engage an audience in both the art and nature.

4.3 PUBLIC ART IN PLACEMAKING

The reason for exploring public art in this research is the role it plays in building liveable communities and expressing and communicating the values, whether they be environmental or otherwise, within these communities. Public art’s role in the community has grown in response to the homogenisation in much urban planning in the recent past (Hall & Robertson 2001). It is considered an investment in cultures that contributes to the economic revival of cities through providing a focus for cultural tourism as it creates ‘local distinctiveness’ (Selwood 1995, p. xv). This attracts both new residents and businesses which then create employment, increasing land values, providing attention to otherwise neglected open spaces and communities (Selwood 1995).

Public culture is being revitalised through concepts such as placemaking, ‘the skill of turning public spaces into places which have meaning for people, which give them pleasure to be within, and which resonate with feeling and memory’ (Yencken 1995, p. 11). Cultural theorist Malcolm Miles (2008) believes that the concept of cities needs to be reappraised in order to build sustainable liveable urban areas, and the way to do this is to incorporate a multidisciplinary approach that includes the work of artists. Once again, commentator Patricia Phillips summarises the link between public art and sustainable communities:

What makes cities and communities more liveable, and how does art assist this process? Certainly, examples abound of murals, sculptures, and art-enhanced amenities that unquestionably make cities more attractive and interesting. Presumably, as a consequence, people feel better about their communities and the physical environment. Who can argue that this is not a positive development? But a more aggressive idea of urban liveability embraces ideas of sustainability. Sustainability is not simply the maintenance of an acceptable environmental balance. Sustainability encompasses the vast and intricate web of social, political, economic, and ecological systems (Phillips 2003, p. 133).
So how does public art contribute to the sustainability of urban communities? It does this in three ways: by celebrating local history, by creating a community identity, and by communicating the values of the community (Hall & Robertson 2001). With the erosion of sense of place through homogenised urban planning, public art provides an avenue to commemorate the past events and local history of the area. By celebrating the importance of local history through the commissioning of public art, it demonstrates to the public both a respect for the past of the place as well as a commitment to the current space and the values of communities that inhabit it (Hall & Robertson 2001).

Public art also contributes to a region’s identity, with a 2012 survey by ixia, the UK’s public think tank on public art, finding the most important role for public art was ‘shaping local, regional and national identity’ (ixia 2013b). In the case of the Sunshine Coast, the many public artworks contribute to both the liveability of the region but also to the promotion of the area as a creative and cultural destination for tourists. The environmental nature of the public art discussed in the case studies also aims to reinforce the region’s environmentally-focussed identity. This research will examine how effectively this has been achieved.

Thirdly, public art communicates the shared values and/or concerns of a community, contributing to both its identity and to creating discussion. It can create a focus for the public culture, creating an open political, social and cultural atmosphere (McCoy 1997), while showing a region’s identity, expressing its values, beliefs and dreams (Barnes et al. 1995). Many commentators believe public art should aspire to raise awareness and challenge people to think about issues (Selwood 1995). Patricia Phillips (2003, p. 131) asserts that public art should always deliver a message through sharing a ‘poetic urgency of ideas or issues’, in order to engage the audience passing by in both the artwork and a social message being conveyed. The Banksias and Feathers case study focuses on public art’s contribution to the sustainability of urban communities through communicating the shared values of the community. It explores the engagement process that identified the community’s shared environmental values and the audience response to this representation.

4.4 ECOVISUALISATIONS AS PUBLIC ART

Recently ecovisualisations have been presented as an engaging new format of public art that encourages environmental awareness. Ecovisualisations are ‘data-driven animations that display ecological information of any sort in real time’ (Holmes 2007, p. 154). Previously ecovisualisations were used primarily in energy-consuming products to make consumers aware of their usage, such as indicator-lights in cars that make drivers aware when their speed is fuel-saving. This ‘eco-feedback’ has been recognised as having an impact on energy usage (Seligman & Darley 1977), which has prompted the exploration of the potential of data visualisation through art to engender environmental
awareness. By presenting environmental information in imaginative formats, an audience can be entertained, intrigued and engaged in information that would otherwise be considered too dry when presented as scientific data.

Artists and designers are increasingly exploring the effectiveness of combining art and technology to encourage environmental awareness (Smith 2006). Andrea Polli visualised Philadelphia’s air quality data in her artwork Particle Falls (2013) that was presented publicly as a large-scale projection. The artwork showed a background of blue falling light, with bright fiery spots appearing to represent the pollution particles in the air, as measured by a nearby air quality monitor. This artwork not only engaged the imagination of the audience with the art, but also informed them of the quality of their air and environment. Tiffany Holmes’ artwork, 7000 Oaks and Counting (2006), visualised the energy usage of an office building in an animation displayed in a communal space in an effort to ‘make information that is hidden deep within the building’s infrastructure visible and accessible to the public’ (Holmes 2007, p. 153). Hehe’s Nuage Vert (2008) prompted a community to limit their electricity usage by visualising power plant data in a giant laser cloud above Helsinki. These artworks demonstrate that a community can be engaged in their environment through digital artworks representing data imaginatively.

Through digital technologies enabling real-time responses, ecovisualisations such as The People’s Garden can offer a component of interactivity that provides an added level of engagement with the art and the environment. The case study aimed to explore the impact of dynamic, participatory works on people’s engagement with art as well as the environment. It also was designed to measure the audience interaction with the artwork, providing further insights into the accessibility of ecovisualisations and their effectiveness in communicating data in an innovative way to effect change. By exploring the impact of The People’s Garden on the audience’s environmental awareness and sense of place, the case study would have demonstrated the effectiveness of the format for government and environmental organisations in delivering environmental education.

This thesis explores the potential for environmental art as public art to reflect a community’s sense of place. It also investigates its potential to stimulate thinking and discussion around the environment and consequently asks, can participating in/observing environmental art lead to pro-environmental behaviours? To fully understand how pro-environmental behaviours might be achieved, we must first understand the psychology behind people’s decisions to change behaviours. The next section outlines behaviour change theory that seeks to explain the internal and external motivations behind people’s choices to change behaviour.
Chapter 5
Pro-environmental Behaviour and Behaviour Change

5.1 PRO-ENVIRONMENTAL BEHAVIOUR AND BEHAVIOUR CHANGE THEORY

To understand how participating in and/or engaging with environmental art can motivate change in encouraging pro-environmental behaviour (PEB), it is essential to first look at the underlying motivations for people to act with environmental awareness. Socio-psychological analysis of PEB has helped understanding of the motivations behind people’s choices since the 1970s (Ajzen & Fishbein 1980; Allen & Ferrand 1999; Arbuthnot 1977; Cialdini 2003; Jackson 2005; Osbaldiston & Schott 2012; Stern 2000), while environmental psychologists have investigated rationales for the behaviour. Much of the literature agrees that people act pro-environmentally as a result of internal and external motivations, with models devised to explain the underlying reasons for the behaviour. This section looks at those underlying motivations to acting pro-environmentally, as well as exploring the obstacles to people choosing environmentally sensitive actions, including such factors as consumption behaviours, habit, apathy resulting from repetitive messaging, and tokenism (Cialdini 2003; Jackson 2005). To overcome these obstacles and change people’s behaviours, encouraging pro-environmental action, a number of approaches are used, with further research constantly updating the question of what motivates people to act for the environment.

PEB, also known as ‘conservation behaviour, environmentally friendly behaviour, environmentally significant behaviour, environmentally sustainable behaviour and responsible environmental behaviour’ (Osbaldiston & Schott 2012, p. 258), is any behaviour that is performed with the intention to benefit the environment (Stern 2000). There are three types of PEB:

- environmental activism - participation in environmental groups and demonstrations;
- nonactivist behaviours in the public sphere - actions by others that do not participate in these activities but support or accept environmental public policy; and
- private-sphere environmentalism - consumer consumption and disposal of household products (Stern 2000).

Private-sphere environmentalism is the subject of most PEB research as ‘consumer behaviour is key to the impact that society has on the environment’ (Jackson 2005, p.111). This thesis analyses reactions of the general public to environmental art and consequently focuses on the motivations of nonactivist behaviours in the public sphere and private-sphere environmentalism.

Early research on PEB dates back to studies from the 1970s that focussed on topics such as purchasing drinks in returnable bottles and increasing bus use (Osbaldiston & Schott 2012). Since
then many socio-psychological studies have developed models that attempt to explain PEB, ranging from the early notion that personality and attitudes predicted environmental behaviour and knowledge (Arbuthnot 1977) through to more recent studies which suggest that an effective model must incorporate motivations, attitudes and values, contextual factors, social influences, personal capabilities and habits (Stern 2000).

Initially studies of PEB focussed on attitudinal factors including norms, beliefs and values (Arbuthnot 1977; Stern 2000). These studies were based on the notion that ‘I believe therefore I act’ (Axelrod and Lehman 1993, p. 150). Since this simplistic view was initially purported, there has been little consensus on the effect that attitudes, defined as ‘a general evaluation people hold in regard to themselves, other people, objects, and issues’ (Petty & Cacioppo 1986, p. 127), have on predicting PEB (Heimlich & Ardoin 2008). Furthermore, a well-known meta-analysis of PEB research found that pro-environmental attitudes did not always lead to PEB (Hines, Hungerford & Tomera 1987). For example, a 1972 study on littering found of the 500 people questioned, 94% acknowledged that they accepted responsibility for littering, but only 2% picked up strategically placed litter on the exit of the experimental site (Bickman 1972 cited in Jackson 2005). Research has shown that it requires more than pro-environmental attitudes to motivate pro-environmental behaviour (Heimlich & Ardoin 2008). More recently a further meta-analysis expanded internal motivations to include eight psychological constructs to PEB: problem awareness, internal attribution, social norms, feelings of guilt, perceived behavioural control, attitudes, moral norms, and intentions (Bamberg & Möser 2007). While these constructs have been explored in subsequent studies, the limitations of this paper exclude further analysis here.

Ajzen’s Theory of Planned Behaviour forms the basis of much PEB evaluation research (Bamberg & Moser 2007; Jackson 2005; Kollmuss & Agyeman 2002; Osbaldiston & Schott 2012; Stern 2000) and is the most often cited ‘social-psychological behaviour attitude model’ (Jackson 2005, p. 28). The model (see Figure 15) outlines that individuals intend to perform a behaviour based on:

- their attitude towards the behaviour;
- subjective norms which are their own perceived social pressures; that is, a person’s belief that those close to them will approve or disapprove of the behaviour in question, influencing their decision to perform or not perform the behaviour (Ajzen & Fishbein 1980). This does not take into account moral and ethical values, but rather a belief of what others think (Jackson 2005); and
- perceived behavioural control or whether the person believes they can achieve the behaviour (Ajzen 1991). The concept is that a person who believes they can master an activity is more likely to succeed than someone who doubts their ability (Ajzen 1991). While this may appear obvious, it becomes significant when dealing with attempts at changing behaviour.
As an environmentally-focussed event, *Floating Land* provides an opportunity for individuals to explore their personal beliefs about the environment. This occurs through social learning and the discussion and enacting of social norms, generated while participating in environmental art activities that build creative and environmentally-aware skills in a supportive and engaging arena. This study aims to investigate the environmental attitudes, environmental behaviours, social norms and perceived behavioural control of participants at the festival.

Many cite the usefulness of Ajzen’s Theory of Planned Behaviour due to its simplicity and its translation into a model that has inspired a number of empirical studies (Kollmuss & Agyeman 2002). The few criticisms suggest that the model does not take into account the role of habits, moral factors, and the limitations of individual reason (Jackson 2005), as well as the assumption that people tend to think rationally (Kollmuss & Agyeman 2002). Regardless of these criticisms, the Theory of Planned Behaviour forms the basis of most PEB research.

Much research has purported that it is too simplistic to believe PEB results from purely internal motivations (Jackson 2005). External motivations such as personal norms constructed by social conversations, authority and appearance can all play a role in encouraging PEB. This study investigates the ability of environmental art events such as *Floating Land* to provide stimulus for integrating environmental awareness into personal norms through external motivations such as social learning. This informs Research Question 3: How do environmental education initiatives employing environmental art contribute to social learning?
External factors that can influence PEB include:

- interpersonal influences, community expectations, advertising, government regulations,
- institutional factors, monetary incentives and costs, the physical difficulty of specific actions,
- capabilities and constraints provided by technology and the built environment, the availability
  of public policies to support behaviour, and various features of the broad social, economic and
  political context (Stern 2000, p. 417).

A person’s ability to act pro-environmentally is also based on their locus of control which includes
their confidence in performing the behaviour, their knowledge and skills of how to perform the action,
the time they have to perform it, and their general resources such as literacy, money, social status and
power (Stern 2000).

Schwartz’s Norm Activation Theory is one of the most often cited models for explaining pro-social
behaviours in PEB literature (Allen & Ferrand 1999; Dahlstrand & Biel 1997; Jackson 2005; Stern et
al. 1999). Although this theory deals with pro-social behaviours rather than specifically PEB, it
provides an explanation of why people act pro-environmentally. The theory asserts that people will
enact a behaviour as a result of personal norms which are based on their awareness of the
consequences of their actions, as well as an acceptance of responsibility for those consequences (see
Figure 16) (Jackson 2005; Stern et al. 1999).

![Schwartz’s Norm Activation Theory](image)

**Figure 17: Schwartz’s Norm Activation Theory (Schwartz cited in Jackson 2005)**

These personal norms are underpinned by symbolic interactionism, where the construction of self is
created through social conversations, and negotiated through interactions with others (Mead 1934).
‘Individual choice in this framing of identity is helplessly mired in the fabric of social norms,
expectations and interactions’ (Jackson 2005, p.38). Social norms also dictate the influence of
appearance within social worlds, which can act for or against PEB. For example, residents of 
neighbourhoods are less likely to water their front lawns during drought times when they see that 
others are not watering their garden.

Heimlich and Ardoin (2008) contend another external influence over PEB is authority. Authoritative 
institutions can encourage PEB through a number of avenues that promote action for the environment. 
Governments can provide either inducements or punishments for pro- or anti-environmental 
behaviour. For example, the Sunshine Coast Council through its authority can choose to spend public 
funds on public artworks that represent the community’s shared environmental values. It can also 
punish businesses and individuals who dump waste inappropriately or perform other non- 
environmental actions. Routines can also be moulded through the application of rules by a governing 
body or authority figure. While these rules provide short-term external motivations for PEB, the aim 
is their eventual long-term general acceptance and consequent behaviour change. The concept is that 
people move from routine behaviour performance through rule adherence to post-conscious behaviour 
recognition, that is to think about behaviours critically rather than rely on routine (Heimlich & Ardoin 
2008). Government initiatives, such as water conservation programs that suggest the turning off of 
taps while brushing teeth, are aimed at changing small-scale routine behaviours in order to effect a 
large-scale impact.

More recently literature on PEB has acknowledged the need to explore the interactions between both 
internal and external motivations to understand why people act for the environment. Stern’s Value-
Belief-Norm (VBN) Theory incorporates these motivations to construct a model that explains 
people’s reasoning behind their acting pro-environmentally.

The VBN theory is based on three theories: Schwartz’s Norm Activation Theory; the Theory of 
Personal Values; and the New Environmental Paradigm (NEP) which has since been revised to the 
New Ecological Paradigm (Stern et al. 1999) (see Figure 17). The Theory of Personal Values asserts 
people act environmentally because of self-interest, altruism to other humans, and altruism to other 
species and the biosphere (Stern et al. 1999). People with higher altruistic and biospheric values tend 
to accept the NEP, which is a change in thinking from faith in economics and technology to an 
awareness that humans assume superiority over and have the ability to upset nature, and that there is a 
limit to growth for human societies. With acceptance of the NEP comes knowledge and awareness of 
the consequences to the environment of an action, and subsequently acceptance of responsibility to 
reduce those consequences. Therefore a person with these values, this acceptance of the NEP, and a 
sense of responsibility is more likely to act pro-environmentally. The NEP scale which measures pro-
ecological orientation is perhaps the most used quantitative measure for many PEB studies (Nye & 
Hargreaves 2009; Stern et al. 1999).
Figure 18: Value-Belief Norm Theory (Stern 2000)

This model explains the internal motivations, values and beliefs, combined with external motivations, and altruism towards other humans and the biosphere, that precede PEB. Jackson (2005) asserts that through exploring this and other models, behaviour change can be understood via a framework that describes social and psychological influences on PEB, as well as providing measures for comparisons.

5.2 OBSTACLES TO PRO-ENVIRONMENTAL BEHAVIOUR

Obstacles to PEB include apathy as a result of repetitive and sometimes conflicting messaging, consumption, misguided environmentalism, and habit and routinisation of behaviours. These obstacles may be internally or externally driven. Environmental art initiatives aim to overcome these obstacles by promoting PEB in engaging and interesting formats.

External factors that hinder PEB are many. Lack of income or infrastructure, such as limitations in public transport accessibility or recycling facilities, can make some behaviours difficult for under-resourced communities (Stern 2000). Repetition of a message, from bodies of authority or individuals, also constrains the effect or content of an environmental message and subsequent behaviours (Heimlich & Ardoin 2008), as does conflicting scientific messages that follow certain agendas such as climate change (Jackson 2005). The social emphasis on consumption and the belief in objects as status symbols encourages resource-heavy consumerism that forgoes environmental concern for material ownership. ‘In earlier times what we did or who we knew was important, in modern times it is what we consume’ (Jackson 2005, p.14). Inaccuracies in internal beliefs can also limit PEB. A person may believe they are environmentally aware, but can be misguided in their knowledge about how to act (Jackson 2005). This study aims to garner whether participating in environmental art initiatives can help overcome external obstacles such as ineffective messaging through engaging an audience with environmental messages via this novel format.

Habit formation is a heavily-researched aspect of limitations on PEB. Habits are ‘procedural strategies designed to reduce the cognitive effort associated with making choices, particularly in situations that
are relatively stable’ (Stern 2000, p. 114). Andersen (1982) suggests there are three stages to habit formulation: the declarative stage where the action is chosen, the knowledge compilation stage where the processes are learned, and the procedural stage where the advantages of the new habit are confirmed. Research suggests habits are extremely difficult to break (Dahlstrand & Biel 1997; Stern 2000) with the success of changing behaviour focussed on the ‘unfreezing’ of the old habit and subsequent refreezing of the new behaviour (Dahlstrand & Biel 1997). This process requires the raising of thinking from practical consciousness to discursive consciousness, where behaviours are thought about rather than automatically performed (Spaargaren & Van Vliet 2000). Environmental art projects such as Floating Land promote discursive consciousness by providing a forum for discussion about the environment in an attempt to question and change behaviours through the knowledge compilation and procedural stages.

5.3 PRO-ENVIRONMENTAL BEHAVIOUR CHANGE

Research on encouraging PEB change is constantly evolving. Although much of the literature around behaviour change centres on marketing techniques, the most useful literature to this thesis specifically focuses on mechanisms to encourage PEB change and how to overcome obstacles (Aarts, Verplanken & Knippenberg 1998; Cialdini 2003; Dahlstrand & Biel 1997; Dunlap et al. 2000; Heimlich & Ardoin 2008; Jackson 2005; Kollmuss & Agyeman 2002; Osbaldiston & Schott 2012). This study looks at how environmental art uses these mechanisms to encourage behaviour change.

Information, positive motivation and coercion are three forms of intervention that may affect change (De Young 1993). Although individual change is seen as creating a small difference, aggregate action can impact quite significantly, with final recommendations that a combination of interventions can motivate PEB change (Stern et al. 1999). Outlined below are three avenues to effectively changing behaviours: trial and error, persuasion and social modelling (Jackson 2005). Floating Land provides a social learning environment for individuals to experience trial and error situations while creating environmental art, and offers artists and speakers the chance to model environmental behaviour in an effort to persuade their audience.

Trial and error is integral to engagement with and participation in behaviour change programs. The Elaboration Likelihood Model (Petty & Cacioppo 1981) asserts there are two processes in behavioural change: central processing and peripheral processing. Central processing activates behaviour change by the recipient actively processing a persuasive message, elaborating on its implications, and choosing to integrate it into their value set. Central processing takes a high level of motivation and incurs the most enduring attitude change. Conversely peripheral processing is the superficial acceptance of an attitude by its attractiveness, for example following the advice of a celebrity, which can lead to a lower level of engagement and consequent commitment to the change (Petty & Cacioppo
Osbaldiston and Schott (2012) confirm this, pointing out that low-engagement treatments are appropriate for low-effort behaviours, with high-engagement treatments necessary for high-effort behaviours. The more involvement with a decision or activity, the higher the degree of control the participant feels for the activity (Jackson 2005) and the more willingness to engage in activities that lead to trial and error. Through participation and developing skills that are master-able, building on an individual’s self-esteem for performing the action, PEB can be encouraged and instilled (Heimlich & Ardoin 2008). *Floating Land* data provides insights into the effectiveness of participation within workshops and the influence of workshop facilitators in building confidence and subsequent intentions to change behaviours.

Persuasion is an effective technique for messages that require low engagement and low commitment (Gatersleben, Steg & Vlek 2002). Through persuasion, a response can be ‘primed’ by strategically framing a context (Jackson 2005). Persuasion Theory looks at the effects of this priming, establishing a set of criteria that lead to effective persuasion strategies that include the credibility of the speaker, the persuasiveness of the message, and the responsiveness of the recipient (Hovland 1957). *Floating Land* offers an opportunity to test this by questioning workshop participants about their level of engagement with the workshop facilitators and their environmental intentions as a result of attending the workshops. Opposition to Persuasion Theory asserts that behaviour change can occur without attitude change that is targeted by persuasive messages (Petty & Cacioppo 1981), and that individuals must actively participate in the persuasion process for it to be effective (Jackson 2005). Cialdini (2003) studied a number of public service messages, investigating the effectiveness of aspects of PEB change campaigns. It was found that for persuasion to effectively change PEB it was more effective to describe injunctive norms (approved and disapproved actions) rather than descriptive norms (pointing out what people are doing). *The People’s Garden* aimed to provide a case study where injunctive norms were to be presented through participants contributing ‘what they did for the environment today’. Data was to provide indications of whether the audience were influenced by others’ actions.

Social modelling, the passing of information through demonstration or discussion in which initiators engage in the behaviour themselves, was found to be one of the most effective treatments for encouraging PEB (Osbaldiston & Schott 2012). Symbolic interactionism states humans are motivated to act towards things on the basis of the symbolic meanings they have for them, which are negotiated through social interaction, and that their actions are moderated by an interpretation of the individuals and the situation involved (Blumer 1969). The theory explains that trial and error is complemented by social learning, observing others, and learning through mimicry and responses to others’ trial and error. Social Learning Theory asserts that humans have developed mechanisms whereby they can learn beneficial behaviours and information without expending their own energy by observing others’ trial and error situations. They also avoid fearful or emotional situations by observing others’ experiences. The theory posits that these vicarious experiences have as much impact on our behaviour...
as direct experience, with influential or attractive models asserting the most influence on individual behaviours (Bandura & McClelland 1977). Participants of the Floating Land workshops were questioned about the influence of the facilitators and other participants on their experience, in order to measure the persuasion and social learning experienced.

To encourage PEB change it is important to understand the internal and external motivations that drive people to choose environmentally sensitive actions. Conceptual models provide explanations that aid in understanding these motivations. This section has explored obstacles to pro-environmental behaviour and techniques for overcoming these obstacles. Programs that teach about the environment and individual responsibility for its protection provide social modelling and persuasion, and allow time and resources for trial and error activities that will engender responses leading to deliberation, reflection, and behaviour change. Floating Land is one arena in which creativity is used to bring communities together to model environmental behaviour and to create dialogue that stimulates thinking about the environment and behaviour change. The data collected for this study looks at people’s reasons for acting for the environment, whether they are internally motivated such as through a sense of responsibility, or whether external factors influence them such as persuasion and social modelling.

Intrinsic to internal and external motivations for acting pro-environmentally is the pride and sense of place an individual or community feels for their environment. With this pride comes an increased sense of responsibility and stewardship to care for their surrounds. The next section explores ‘sense of place’ literature and the contribution that a sense of place has to individuals and communities acting for the environment. It looks at the potential role of environmental art in engendering a sense of place to inform Research Question 2: How does environmental art contribute to an environmental sense of place?
Chapter 6
Sense of Place

Government plays a role in influencing the social and institutional context in which individuals choose their behaviours (Jackson 2005). Public art, such as represented by all three case studies, can be used as a resource by government to encourage an environmentally aware community through its contribution to building a sense of place. This research proposes that environmental art, in particular, has the potential to encourage a sense of place that integrates environmental stewardship by: delivering an environmental message in a public arena; creating environmental awareness; and reflecting a community’s sense of identity. This section explores the sense of place research conducted to date, looking at the diverse range of studies conducted in the field, as well as the reasons for its non-inclusion in many areas of government planning and research. In its examination of how the location and nature of environmental art engenders a sense of place, this chapter also explains the relationship between place and acting for the environment, as well as its role in encouraging individual participation in the community. This informs Research Questions 2 and 4: How does environmental art contribute to an environmental sense of place? How can environmental art assist local government and other environmental organisations to encourage pro-environmental behaviour and a sense of place?

As mentioned previously, one of the four avenues in which governments can encourage pro-environmental behaviour is ‘engaging people in initiatives to help themselves’ (Jackson 2005, p. iii). This section investigates this from the perspective of building self-sustaining management and commitment within a community through the development of their sense of place. Jackson (2005) further suggests that government recognises that policies need to engage with social contexts as much as the individual and that behaviour can be effectively changed through building social norms via community-led initiatives.

Research suggests sense of place is integral to effective community planning. Those who are attached to their neighbourhoods are more likely to participate in planning efforts, investing their own time and money into the vitalisation of their community (Manzo & Perkins 2006). These communities interact more with their neighbours and watch over their places, encouraging a sense of safety and social cohesion (Manzo & Perkins 2006). Research has shown communities with residents who are more attached show more outward signs of physical revitalisation (Brown, Perkins & Brown 2003). By building a sense of place the community participates in their own development as a result of positive thoughts, feelings and beliefs about their place. This study explores the sense of place engendered by environmental art in the format of a festival and public art installations.
6.1 APPROACHES TO PLACE

The concept of place was conceptualised in the 1960s, when disciplines other than geography became interested in why people became attached to locations (Bott, Cantrill & Myers Jr 2003). While place has been studied within architecture, anthropology, cultural ecology, environmental psychology, geography, planning and sociology (Brehm, Eisenhauer & Krannich 2006), a number of authors outline reasons for the lack of integration of the concept of place into many fields that would benefit from its inclusion. Disorganisation of the literature (Jorgensen & Stedman 2006), numerous revisions and inconsistencies (Manzo & Perkins 2006), and the vagueness and instability of concepts (Bott, Cantrill & Myers Jr 2003; Shamai & Ilatov 2005) are all cited as reasons for the lack of place integration into many fields. Environmental educators are increasingly looking to place-based initiatives to encourage engagement with the environment, while some planners have integrated placemaking into their processes to enhance stewardship by the community.

Studies of place come from varied disciplines and perspectives. These studies are based on either positivistic approaches, where sense of place is defined by the researcher using quantitative methods and hypothesis testing, or phenomenological approaches where the person/place relationship is investigated through qualitative measures (Jorgensen & Stedman 2006). This study aims to look at sense of place both quantitatively and qualitatively, providing a positivistic and phenomenological approach. Relph (1976) described the lack of focus on place as a result of its being taken-for-granted as an everyday aspect of living, asserting that the phenomenology perspective investigated the ‘essence’ of this reality. The perspectives from which place can be studied include research that focuses on ‘attachments (affect, cognition, and practice), places that vary in scale, specificity, and tangibility, different actors (individuals, groups, and cultures), different social relationships (individuals, groups and cultures), and temporal aspects (linear, cyclical’ (Low & Altman 1992, p. 8). There has been scant research on place concepts associated with engagement with the arts and consequently this study explores this angle.

6.2 DEFINING PLACE

While the concept of ‘place’ is consistently understood in academic literature, the many sub-concepts provide further explanation. The most commonly referenced definition of place is that it is a space that an individual or community has given meaning to (Tuan 1974). It is a multidimensional concept that integrates a setting’s physical characteristics, a person’s individual perceptions, and the actions that occur at that location (Canter 1977). Places have socially constructed rules which define how individuals behave in that location, with ‘place’ continuously being reconstructed through social processes that give the location meaning (Cheng, Kruger & Daniels 2003).
Sense of place, the creation of meaning at a setting by an individual (Williams & Patterson 1996), is the umbrella term for the many sub-concepts of place (Shamai & Ilatov 2005) (see Figure 19 below). It weaves together three components: ‘the physical environment, human behaviours and social and/or psychological processes’ (Stedman 2003, p. 671), and exists in three phases: belonging to a place, attachment to a place and commitment to a place (Kaltenborn 1998). While developing a sense of place is seen as of benefit to communities, it can be argued that it also builds social boundaries that create a distance between ‘us’ and the ‘others’ (Rose 1995).

Within the concept of sense of place come the constructs of place attachment, place identity and place dependence (Shamai & Ilatov 2005). ‘Place attachment’ is a positive bond that develops between an individual and a location or environment (Low & Altman 1992). It occurs when the place fulfils a functional need or goal of the individual (Proshansky, Fabian & Kaminoff 1983), and can vary in scale from an object to the country, the planet or even the universe (Low & Altman 1992). It can manifest via rootedness, which is physical attachment, or via bonding, which is social attachment (Riger & Lavrakas 1981). This thesis focuses on the relationship between place attachment, place identity and creation of pro-environmental norms. Recent research asserts that place attachment can be developed through ‘both direct experiences with places, especially long-term, frequent, and positive experiences, and learning about places from indirect sources rather than direct contact’ (Kudryavtsev, Stedman & Krasny 2011, p. 236). The case studies provide examples of the effort to combine nature and positive feelings to create pro-environmental associations connected with place attachment. Place attachment can have negative consequences such as entrapment through the development of a dependence on social networks or the location that are not beneficial to the
individual (Brehm, Eisenhauer & Krannich 2006; Kudryavtsev, Stedman & Krasny 2011; Manzo & Perkins 2006), but the overwhelming conclusion of the literature is that place attachment encourages participation and a sense of belonging that benefits both the individual and the community.

The most cited definition of ‘place identity’ is Proshanksy’s 1978 assertion that it involves:

> those dimensions of self that define the individual’s personal identity in relation to the physical environment by means of a complex pattern of conscious and unconscious ideas, beliefs, preferences, feelings, values, goals and behavioural tendencies and skills relevant to the environment (cited in Bott, Cantrill & Myers Jr 2003; Jorgensen & Stedman 2001; Muro & Jeffrey 2008).

More simply, it is the integration of the sense of place into one’s identity (Kudryavtsev, Stedman & Krasny 2011; Vaske & Kobrin 2001). Moore and Graefe (1994) define it as the appreciation of a location for its symbolic or emotional connection to the individual, which can be based on experiences such as profound first encounters, or just from living in a place. Place identity promotes self esteem and a sense of belonging (Tuan 1974), with research finding these factors can lead to pro-environmental behaviour both at the setting and in other areas of the individual’s life (Vaske & Kobrin 2001). For example, Sunshine Coast Council’s environmental art framework contributes to a wider vision by the Council ‘to become Australia’s most sustainable region: vibrant, green, diverse’ (Sunshine Coast Council 2011b). Through facilitating and supporting environmental art initiatives such as Floating Land, The People’s Garden and the Feathers and Banksias, the Council aims to create a strong environmental place identity in the community.

‘Place dependence’ is the appreciation of a certain setting for a specific activity (Moore & Graefe 1994). Whereas place identity is an emotional attachment, place dependence is a physical attachment (Vaske & Kobrin 2001). For example, Lake Cootharaba on which Floating Land is set is a prime location in the region for sailing and windsurfing and consequently hosts a Sailing Club. Sailors and windsurfers depend on the physicality of this setting for their enjoyment and satisfaction. Vaske and Kobrin (2001) assert that this dependence increases if the location is close enough for the individual to visit more frequently than other locations with the same amenity. While the other constructs of sense of place are more emotional, place dependence is more of a functional connection to a location.

While place attachment, identity and dependence commonly fall under the banner of sense of place, recent literature has asserted that dependence and identity are constructs of attachment (Kudryavtsev, Stedman & Krasny 2011). While the terms, structures and concepts are still debatable, Jorgensen and Stedman (2001, p. 238) provide a simple summary, positing that:
place identity can be regarded as an individual’s cognitions, beliefs, perceptions or thoughts that the self is invested in a particular spatial setting. Place attachment can be defined in terms of an individual’s affective or emotional connection to a spatial setting, and place dependence can be considered as the perceived behavioural advantage of a spatial setting relative to other settings.

This study explores the ability of environmental art to engender place attachment and place identity in both a natural and urban setting. It looks at how a participatory environmental art festival influences a community’s sense of place by measuring attitudes towards the location before and after the event. It also investigates the place attachment and identity experienced by an audience of environmental artworks in an urban setting.

6.3 PARTICIPATION IN PLACE

Government can reinforce or encourage a sense of place by creating opportunities for people to participate in their communities. Through engagement with their community it naturally follows that individuals will contribute to positive neighbourhood outcomes, to the improvement or maintenance of the place, and/or respond to any threats to the place (Manzo & Perkins 2006). Manzo and Perkins (2006, p. 339) posit ‘both sense of community and place attachment manifest themselves behaviourally in participation’. Likewise, Kaltenborn specifies ‘those with a strong sense of place seem, not surprisingly, more rooted, less indifferent and more committed to solving problems’ (1998, p. 176). Environmental art provides an opportunity for participation within a community that encourages appreciation for and stewardship of nature.

To encourage participation in issues such as the environment, government can take a number of roles. Firstly it can stimulate social conversations through events such as *Floating Land* that provide a venue, format and agenda that steer the population towards a certain topic (Jackson 2005). Secondly, it can provide social learning settings whereby individuals can contribute to conversations which then encourage them to reflect on their own values, increasing opportunities for communities to create their own social norms. When individuals and groups are involved in the discussion and production of norms, such as contributing to placemaking processes as demonstrated in the *Feathers* and *Banksias* case study, they recognise the construction and inclusion of these norms into their place identity and participate in the maintenance of them (Jackson 2005). Lastly, government can provide settings for the effective communication of messages that encourage not only participation in community-building, but also in aspects of community improvement such as environmental care. Vaske and Kobrin (2001, p. 106) observe that ‘projects that have engaged populations in place-based activities have been shown to promote environmentally-responsible behaviour to a greater degree than achieved by merely informing residents about the issues’. By engaging the community in their own place
through participatory initiatives that are both place-based and deliver a message, such as environmental art, environmental pride can be instilled. By combining direct experience and instruction, both place meanings and environmental messages can be conveyed more effectively than through pure instruction (Kudryavtsev, Stedman & Krasny 2011). This study focuses on the *Floating Land* festival to investigate the impacts of direct experience with environmental art, both within workshops and as observers of installations, and the effect this has on the individual’s sense of place and pro-environmental behaviour. It also explores the presentation of environmental art as public art installations which grew out of a community's environmental values, and the effect this has on sense of place.
Chapter 7

Methods

7.1 THEORETICAL FRAMEWORK

This study uses an interpretivist research paradigm that understands an individual’s reality is based on their own socially-constructed interpretations (Creswell 2009). An individual’s perceptions are based on the meanings they attribute to phenomena, with these meanings resulting from life experiences as well as guiding our further life experiences (Chen 2001). Individuals make these meanings through experiences with both internal and external contexts, resulting in thoughts and actions that are concluded from these experiences. Consequently these interpretations are constantly changing, dependent on interactions and context (Burr 2003). In the case of this research we discern whether the contexts of an environmental art festival or being exposed to environmental public art can result in thoughts and actions that reflect environmental awareness. Interpretivism further asserts that our perceptions of reality are built on the foundations of social processes and human interaction and therefore must recognise the actors around us that help us create our realities (Hacking 1999; Fairhurst & Grant 2010). This is especially significant to this research as we explore social learning and the building of social norms via environmental art that encourages environmental awareness.

The interpretivism paradigm was chosen for this study as it is recognised that researchers base their decisions on which epistemology, ontology and methodology to use within their own belief system and presumptions (Dobson 2002). It is understood that in qualitative analysis it is virtually impossible to remove a researcher’s values, with value-awareness providing an alternative that can offer the perspective of the researcher that may give an understanding of the analyses conducted (Sobh & Perry 2006). To understand the researcher values underpinning this study I outline my background. I am a 44-year-old female European Australian with one son. I have lived in countries outside Australia for five years and have travelled extensively in Australia, New Zealand, Europe, and Asia. I am a perpetual student, having worked part-time mainly in government positions while I study. My most recent employment has been in local government art programs, helping organise initiatives such as the Floating Land environmental art festival and The People’s Garden, two of the case studies of this research. I have an understanding of government processes and environmental art as promoted through our initiatives but no other experience with environmental art. I have worked with local environmental artists, but prior to this study my experience of international environmental art has been limited to cursory conversations with international environmental artists that visited the festival. My values have evolved via my background as described but I have aimed to minimise the influence of my values on my findings by the following.
To ensure the rigour of research under an interpretivism research paradigm a number of mechanisms are used. Since each reality explored via interpretivism is that of the participants, many perspectives are required to ascertain a reality that can be extended to populations. The Floating Land case study looked at the realities of the audience, the artists and the residents of the area, while the Banksias and Feathers case study examined the perspectives of the community, the artist and the local government that commissioned the works. Triangulation, or mixed methods, explores a number of contexts to ‘capture a single, external, and complex reality’ (Sobh & Perry 2006, p. 1203). Both qualitative and quantitative measures were used, with the combination of media analyses, document analyses, semi-structured interviews and questionnaires providing broad perspectives of the participants in the case studies. Yin (1994) asserts that exploring multiple case studies offers more ‘useful or important’ information than single case studies, unless that case study is especially rich in information. Consequently three case studies were explored for this research.

7.2 DATA COLLECTION METHODS

A mixed methods approach is applied to this research to establish rigour through enhanced validity and reliability. Mixed methods provide increased certainty through reducing method error, reducing inappropriate uncertainty, and offering opportunities for triangulation, as well as producing a richer analysis based on multiple perspectives (Robson 2002). Questionnaires provided the basis for the data collection as they are the chosen ‘real world’ strategy for some researchers, providing ‘naturally occurring, contextually grounded conversations’ (Robson 2002, p. 231). They are also an efficient way of collecting large amounts of data as opposed to interviews and focus groups which garner the opinions of a smaller sample. For the Floating Land case study, data was collected via:

- self-administered questionnaires provided to the audience, workshop participants, and residents of Boreen Point where the festival was held; and
- semi-structured interviews held with a number of the artists at the festival (see Table 3).

For the Banksias and Feathers case study data was collected via:

- street-intercept surveys administered to passers-by;
- a document analysis of council documents relating to the artworks;
- a media analysis of local articles related to the artworks; and
- interviews with the artist and two council employees that worked on the commissioning and installation of the artworks – the Public Art Officer and the Placemaking Co-ordinator.

For The People’s Garden case study data was intended to be collected by:

- a questionnaire delivered through a website accessed by participants via their mobile phones.
More details of these methods are outlined below. With the outcomes from this study aiming to provide real-world analysis as part of policy research, the methodological triangulation of interviews, questionnaires, documents and media provides an analysis made all the more comprehensive through multiple perspectives and levels of data collected.

**Table 3: Data generation techniques for case study populations**

<table>
<thead>
<tr>
<th>Case Study</th>
<th>Population</th>
<th>Data Generation Technique</th>
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<tbody>
<tr>
<td><em>Floating Land</em></td>
<td>Boreen Point residents</td>
<td>Self-administered postal questionnaire pre- and post-festival</td>
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<tr>
<td></td>
<td><em>Floating Land</em> general audience</td>
<td>Self-administered questionnaire</td>
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<td></td>
<td><em>Floating Land</em> workshop participants</td>
<td>Self-administered questionnaire</td>
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<td></td>
<td><em>Floating Land</em> artists</td>
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<td><em>The People’s Garden</em></td>
<td>Noosa Junction Station audience</td>
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<tr>
<td><em>Feathers and Banksias</em></td>
<td>Community</td>
<td>Street-intercept interviewed questionnaires</td>
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<td></td>
<td>Artist</td>
<td>Artist interview</td>
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<td></td>
<td>Council employees</td>
<td>Placemaking Co-ordinator and Public Art Officer interviews</td>
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<tr>
<td></td>
<td>Council</td>
<td>Document analysis</td>
</tr>
<tr>
<td></td>
<td>Community/council</td>
<td>Media analysis</td>
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</table>

Each case study aimed to collect data on different aspects of the research. The relationship between the data collection methods and the research questions is shown in Figure 20. The *Floating Land* case study aimed to collect data on the contribution of environmental art to encouraging pro-environmental behaviour and sense of place, the effects of social learning on participants, and how local government and other organisations can use environmental art for environmental education (Research Questions 1, 2, 3, and 4). The *Banksias* and *Feathers* case study collected data on how environmental art contributes to an environmental sense of place and how local government and environmental organisations can encourage pro-environmental behaviour and a sense of place through environmental art (Research Questions 2 and 4). *The People’s Garden* case study aimed to collect data on how environmental art contributes to an environmental sense of place and how the building of social norms via social learning can lead to pro-environmental behaviour (Research Questions 2 and 3).
**Figure 20: Relationship between methods and research questions**

**RESEARCH QUESTIONS**

1. How does participating in/observing environmental art contribute to pro-environmental behaviour?
2. How does environmental art contribute to an environmental sense of place?
3. How do environmental education initiatives employing environmental art contribute to social learning?
4. How can environmental art assist local government and environmental organisations to encourage pro-environmental behaviour and a sense of place?
To ensure rigour, triangulation of methods and surveying of different populations, the methods chosen demonstrated:

- effectiveness of three different types of environmental art were assessed - an event/festival, a dynamic public art installation in the form of an ecovisualisation, and static public art;
- different methods of data gathering were used – document analysis, media analysis, questionnaires, and interviews; and
- perceptions of broader relevant ‘communities’ were analysed - environmental art audiences, environmental artists, council employees, and a local community that may or may not participate in environmental art.

### 7.2.1 Floating Land Audience Questionnaire (see Appendix A)

This questionnaire, of which 120 were collected, provided a macro-level insight into the responses to the artworks from the Floating Land audience, while the workshop questionnaire and artist interviews honed in on a micro-level perspective of participation in the environmental art event. The Floating Land audience questionnaire offered a combination of open-ended, tick-box and Likert scale options for closed questions, forming the basis of the large sample macro-level data collection. It asked respondents about their level of participation in Floating Land via programmed events that they attended, whether they had attended previous festivals, and how long they spent at the festival. It also measured their environmental behaviours and attitudes via scales adapted from Steg (1999 cited in Gatersleben, Steg & Vlek 2002), which were chosen for their questioning of current real world environmental habits and issues, and were adapted to the local context. I adapted commonly used scales and adjusted them to what was meaningful in this situation and location. Scales tease out general attitudes rather than basing attitude analysis on one question (Robson 2002). Variables included demographics, levels of participation, and time spent at Floating Land.

This questionnaire was delivered in a marquee on the shores of Lake Cootharaba as part of the Floating Land festival. As the festival is set outdoors during the wintertime ‘The Reading Room’ provided an indoors-style oasis, a lounge room equipped with comfortable furniture and books on environmental art. This setting provided a comfortable environment to engage with questionnaire respondents, offer them the opportunity to participate in the study, and to ensure validity of responses by ascertaining the level of engagement with the questionnaire by the respondents. ‘The Reading Room’ was advertised in the program as open from 10am to 4pm daily to capitalise on the other activities offered during this time and to reach a maximum audience. The questionnaire was offered to self-selecting respondents who entered ‘The Reading Room’.
7.2.2 Floating Land Workshop Participant Questionnaire (see Appendix B)

A separate Floating Land workshop questionnaire, that received 30 responses, offered both Likert scale and open-ended questions to participants in the Floating Land workshops to enrich the information collected in the general audience questionnaire. Internal validity of the study was enhanced through the surveying of workshop participants who demonstrated a concerted engagement with the festival (Creswell & Miller 2000). The questionnaire was offered by myself at the end of six various workshops to elicit individual perspectives on participation and outcomes from the workshop, with participants self-selecting to participate. The aim of this questionnaire was to provide further insights from those who engaged further with the festival by participating in activities offered. This questionnaire explored the level of the participants’ engagement with the workshop, whether the social atmosphere contributed to their learning about the environment, and if the natural setting contributed to their environmental education experience.

7.2.3 Boreen Point Residents Questionnaires (see Appendices C and D)

Standardised pre- and post-event questionnaires were hand-delivered to the approximately 200 households of Boreen Point to provide a comparative analysis of resident experience before and after the festival. Thirty-six participants returned both questionnaires. The open-ended, Likert scale and tick-box questions provided further validity to the study by offering a complementary perspective of Floating Land from the viewpoint of a resident and participant/non-participant. The questionnaire investigated residents’ environmental behaviours and attitudes and their involvement in Floating Land 2009, 2011 and 2013. It also focussed on their sense of place before and after the Floating Land festival as measured by an adaptation of place scales devised by Jorgenson and Stedman (2006) and Kaltenborn (1998). Variables included demographics, length of time living in Boreen Point, and participation levels with previous Floating Land festivals.

7.2.4 Banksias and Feathers Audience Questionnaire (see Appendix E)

This questionnaire, that received 200 responses, took approximately ten minutes to complete and was designed for quick delivery so as not to disrupt pedestrians as they walked through the area. The questions were based on a study by Zebracki (2013) and were tailored to collect an audience response to environmental themes, as well as local place concepts. Two different sets of questions were delivered for two types of respondents: residents and visitors. All participants were questioned about their reason for visiting the place, their regularity of visit, and where they lived. They were also asked if they had spoken to other people about the artworks and whether they believed public art was a reasonable format to deliver a ‘message’. An open-ended question asked respondents to determine how they felt or what they thought about the artwork. Residents were asked about the enhancement of their place identity as a result of the installation of the artworks via questions regarding pride in their
community. They were also asked about their sense of Noosa being an environmental place and whether that enhanced their intention to act for the environment. Visitors were asked if the artworks reinforced their sense of Noosa as an environmental area and whether that prompted a desire to return to the area.

7.2.5 The People’s Garden Audience Questionnaire (see Appendix F)

This questionnaire was intended to be conducted as part of the interaction with the digital public artwork, with delivery via a website once the participant had contributed to the artwork via SMS. Individuals waiting at Noosa Junction Station were invited via signage to scan a QR code (Quick Response barcode) with their mobile phones to participate in the study. The questionnaire was delivered via a link to a website, and was designed to be brief to ensure a reasonable response rate. It asked questions regarding the individual’s interest in and understanding of the artwork, their response to the urban setting and contribution of the artwork to sense of place, and intentions to talk to others about the work. As a contingency to low mobile phone participation, random interviews were to be conducted with people observing the artwork at the bus stop. This information was intended to draw conclusions about social and individual learning, and the effectiveness of the artwork for learning. Unfortunately, as previously stated, the equipment supporting the artwork was poorly configured and the artwork was rarely functional.

7.2.6 Floating Land Artist Interviews (see Appendix G)

Interviews allow the exploration of a number of perspectives, offering a further enrichment of the data collected by questionnaires (Robson 2002). Six of approximately 65 artists participating in Floating Land were interviewed, with those chosen including four Sunshine Coast artists, an interstate artist, an international artist, a digital artist, an ecovisualisation artist, artists working with natural materials, a long-time environmental artist, an emerging environmental artist, a first-time Floating Land artist, and an artist that has participated in a number of Floating Land festivals. Semi-structured open-ended interviews allowed for responses to direct questions as well as offering an exploratory approach that gleaned new insights and concepts. The Floating Land artists were questioned on the intent of their work, the motivation for their Floating Land project and for becoming an environmental artist, their experience with environmental art and other environmental art projects.

7.2.7 Banksias and Feathers Artist Interview (see Appendix H)

The artist behind the two public artwork installations used as the case study is Lucas Salton. He was asked via telephone in a semi-structured interview about his intentions and influences that informed the creation of his artwork, his integration of the environment into his works, his intentions in
conveying environmental and educational messages, and the process of working with local government.

7.2.8 Banksias and Feathers Council Representative Interviews (see Appendix I)

Two Sunshine Coast Council representatives were interviewed: the Public Art Officer, and the Placemaking Co-ordinator, both of whom worked with the artist during the commissioning and installation processes. They were questioned via telephone interview about why the artist was chosen, the placemaking concepts relevant to the choice, why locations were chosen, who the expected demographic of the artworks was, and the relevance of the choice to educating the public about the environment.

7.2.9 Banksias and Feathers Document and Media Analysis

To further investigate the context of the public artwork installation at Noosa Junction, a document analysis reviewed Sunshine Coast Council and Noosa Council documents in relation to the community engagement involved in the precinct revitalisation project that inspired the commissioning of the public artworks and their subsequent installation. Local media in the form of newspaper articles was also reviewed to glean further details of the community’s engagement in the project and installation of the artworks. Further details of this analysis are presented in the article published about the findings (see Chapter 9).

7.3 DATA ANALYSIS METHODS

The data was analysed using frequency distributions, percentages, patterns, measures of central tendency, measures of variability, and cross-tabulations to determine relationships between variables such as levels of participation and pro-environmental behaviour change, and the relationship between social learning and engagement with the message. Questionnaires were devised with analysis in mind, to ensure the data collected responded to the research questions. The quantitative data was input manually into an Excel spreadsheet in order to ensure clean data was entered as well as providing an avenue for the researcher to engage with the content. The data was then transferred to SPSS for further statistical examination.

The qualitative data was explored manually for consistent themes and insightful quotes. Analysis was both exploratory and confirmatory, searching for patterns and correlations to see where relationships were strong or weak, demonstrating which mechanisms were working in which contexts (Robson 2002). The data was also coded by identifying commonalities. This coding helped identify similar phrases, themes, patterns, relationships, sequences and differences. From this a number of informed
generalisations were made which contributed to the body of knowledge by linking to existing constructs and theories (Robson 2002).

7.4 APPROACH TO ADDRESSING LIMITATIONS OF METHODS

There were some limitations to the methods of this study, with measures taken to counter and minimise the effects from these limitations. Methodological triangulation offered validity while a personal audit trail of all data collection before, during and after the data collection period was recorded to ensure reliability. This audit trail minimised the deficiencies of humans as analysts by providing an account of the data analysis process justifying interpretations and conclusions made (Robson 2002).

Pilot testing of questionnaires on work colleagues, Boreen Point residents, previous Floating Land artists and participants, and members of the public ensured relevant and unambiguous questions. During Floating Land, reactivity from participants was reduced by offering self-completing questionnaires in comfortable surrounds with little interference from myself. The collection of data through questionnaires offers the condition of self-reporting which can be affected by the individual’s feelings of peer pressure or needing to please (Wood 2004). While this is relevant in any questionnaire collection, the sample size and statistical analysis attempt to compensate for the significance of these situations.

While participant enthusiasm levels may be high during the study events, this feeling of excitement was expected to diminish, with intentions that are proclaimed in questionnaires not acted on in reality. While this is understood as a particularly human trait, research has found that while intentions do not always lead to a person actually changing their behaviour, they are acknowledged as the best indicators of change to pro-environmental attitudes and beliefs (Jackson 2005).

Boreen Point is known to have limited and unreliable internet coverage. To ensure maximum data was collected during Floating Land, all questionnaires and interviews were paper-based to insure against any technical problems at the time. This was likewise for the face-to-face public art questionnaires, to ensure no loss of data.

From the data collected and analysed, three journal articles were written (one published and two under review) to disseminate the findings. The first article reports the findings from the Floating Land case study, while the second article furthers these findings through the exploration of the Banksias and Feathers case study. The third article explains the nuances of environmental art that make it an effective environmental education tool, and provides examples that demonstrate the transferability of environmental art to other governments and environmental organisations.
Chapter 8

This article looks at the Floating Land case study, focussing on findings regarding pro-environmental behaviour change and sense of place. By exploring data collected through questionnaires and interviews, it responds specifically to research questions 1, 2 and 4: How does participating in/observing environmental art contribute to pro-environmental behaviour? How does environmental art contribute to an environmental sense of place? How can environmental art assist local government and environmental organisations to encourage pro-environmental behaviour and sense of place?

Re-imagining the environment: using an environmental art festival to encourage pro-environmental behaviour and a sense of place


INTRODUCTION

Through Agenda 21, adopted at the 'Rio' conference in 1992, the nations of the world recognised that local-level action was critical to the success of sustainable development. The agreement identified that all levels of government need to incorporate environmental concerns within their decision-making processes, specifically referring to engagement at the grassroots level to ensure co-operation and change towards sustainable development (United Nations 1992).

This research explores one local government’s imaginative approach to encouraging environmental awareness in its community. The community art event Floating Land, the case study examined here, is held biennially over ten days in the UNESCO-listed Noosa Biosphere Reserve, north of Brisbane in Australia. The festival provides an opportunity for 5,000 participants to become involved in environmental art through workshops, exhibitions, presentations, and performances. It brings an audience into a natural setting to engage with art. By ‘merging arts and culture with science and the environment, the event aims to contribute to positive local, national and global change through education and engaging conversation’ (Sunshine Coast Council 2012).

Environmental art can invite curiosity and present ideas in innovative or unexpected ways. It can stimulate imagination and hands-on interaction, encouraging participation and opportunities for social learning as well as reflection on environmental behaviours. Additionally, presenting artworks in nature can assist in the re-imagining and appreciation of place. Through these processes environmental art can connect people with what they value in their environment and consequently
motivate them to employ sustainable practices. This study argues that the integration of environmental art through local government events is a useful approach in holistic social planning, to strengthen sense of place and foster pro-environmental behaviours at a grassroots level.

This research builds on a previous study undertaken at Floating Land, and reported in this journal (Chandler & Baldwin 2010). That research used Photovoice techniques to garner the artists’, visitors’ and the local community’s responses to environmental art which addressed climate change and sea level rise. One of the study’s findings posits that people will more likely identify specific pro-environmental actions (in that study, in relation to climate change) if they are associated with a specific place. It also suggests that sharing personal constructs about climate change among participants could elicit a strong motivation to act. This was reinforced by a perception that collaborative actions could achieve meaningful progress. The study revealed that the Floating Land event contributed to building adaptive capacity and reinforced the essential role of local people in engendering positive change, thus manifesting not only the aims of the Biosphere Reserve, but also Agenda 21.

However, given the aims of that study, the small sample size, and the methods used, it was apparent that more in-depth assessment could be valuable in examining some of the outcomes of festival participation for both the audience and the local community. As a result, the study reported here uses a larger sample to capture participants’ experiences. It investigates the event’s impact on the audience’s intention to positively change their behaviours towards the environment and explores whether it contributed to an enrichment of their sense of place.

This study is informed by a number of disciplines including environmental psychology, human geography, social planning and art history, and consequently draws on diverse literature. A brief overview is provided here of environmental art and some of its manifestations and approaches. Key concepts in relation to sense of place are presented as well as aspects of pro-environmental behaviour that are relevant to this study.

ENVIRONMENTAL ART

Art is often concerned with challenging boundaries. Consequently there are many conceptions of what constitutes environmental art (Gablik 1992; Kastner & Wallis 1998; Lippard 1997; Matilsky 1992; Wallen 2012; Weintraub 2012). It is defined here as any artwork that aims to stimulate awareness of people’s relationship with nature as well as art which prompts discussion and/or action around environmental issues. Thus, emphasis is given to the artists’ intention rather than materials used, the format, or the location in which it is presented. It can encompass outcomes well beyond the presentation of fine art in a gallery space, including being within a natural environment and using
nature as a medium (Spaid 2002). It can involve processes as well as objects; it can be ephemeral or permanent and can range from a sculpture constructed from natural and recycled materials to a multi-media performance. Environmental art can be created by an individual artist but is increasingly becoming a participatory art form that engages communities, as demonstrated in this case study. The point of difference for environmental art is the intent to express and/or foster pro-environmental awareness and behaviours.

Environmental art emerged in the 1960s and has subsequently taken many forms with differing rationales and audiences. Some early manifestations, often referred to as earth art or land art, involved the use of natural materials to create large-scale sculptural projects in remote locations. While these did draw attention to specific environments, they were largely concerned with challenging the nature of art and in removing it from the constraints of a gallery system (Kastner & Wallis 1998). Other strands of environmental art have involved more minimal incursions in the landscape such as ephemeral works which may employ natural materials that break down over time, highlighting nature’s processes and cycles (Matilsky 1992). Some forms have taken a community-oriented approach and may privilege dialogue, social learning and process over the production of a specific art object (Eernstman et al. 2012; Kester 2004; Strelow 2004). An activist stance informs artist interventions in the environment, sometimes called ecoventions which ‘employ an inventive strategy to transform a local ecology’, such as imaginative reclamations of degraded sites (Spaid 2002, p.n.p). Ecological art or eco-art is increasingly used to describe artworks which are informed by ecological rather than anthropocentric perspectives. Eco-artists consider sustainability, interdependence and the totality of ecosystems and often draw on systems thinking as an approach to environmental change. They may work in a transdisciplinary manner, collaborating with scientists to communicate complex issues in imaginative ways in order to raise environmental awareness (Carruthers 2006; Spaid 2002; Wallen 2012; Weintraub 2012). By fostering a sense of the world as ‘a place of interaction and connection’, eco-artists encourage audience/participants to consider their relationship and ‘mutual dependence’ with the environment and consequently to reflect on environmental behaviours (Gablik 1992, pp. 150-1). Additionally, works that are related to or created in specific locations can highlight ‘the “special” qualities of place embedded in everyday life’ (Lippard 1997, p. 37).

Environmental art literature has provided few studies of the art form’s impact, with quantitative analysis near non-existent; thus this research contributes to this domain. Several investigations by Curtis (2003, 2006, 2009, 2010, 2011; Curtis, DJ, Reid & Reeve 2014) examine the effect of art in building environmental awareness in rural contexts, providing valuable insights. Curtis’ 2010 study involved interviews with audience and participants of a community arts project that culminated in an environmentally-based performance. It found that the event instilled a ‘rich emotional response’ that could lead to community building, environmental awareness and consequent pro-environmental behaviour change (Curtis 2010, p. 65). It is this strong emotional response elicited by environmental
art that makes it an effective format for environmental communication. Many participants were able to express their feelings about the environment through their participation, with one commenting on 'the transition from being "entertained" to gaining deeper understanding' of the environmental message (Curtis 2010, p. 71). This research expands on Curtis’ findings to further explore environmental art’s impact.

**SENSE OF PLACE**

Festivals provide an engaging opportunity for the communities in which they are held to reflect on, reinforce and celebrate their identities and share their values with visitors. This can enhance both a resident’s and a visitor’s place meaning and attachment to place, that is, the positive bond between an individual and location (Low & Altman 1992). Place attachment is driven not only by the attributes of the physical setting, but also by the social context, activities, and social interactions and constructions at the location (Kyle & Chick 2007; Stedman 2003), which a festival can offer in abundance.

Place attachment is one construct within the overarching concept of sense of place which is defined as the creation of meaning at a setting by an individual (Williams & Patterson 1996). It encompasses three components: ‘the physical environment, human behaviours and social and/or psychological processes’ (Stedman 2003, p. 671) and is found to be related to factors such as the length of time a person has lived in or stayed in an area as well as community involvement (Larson, De Freitas & Hicks 2013). Besides those who are ‘deeply rooted’ to a place (Hay 1998), visitors to an area can also find place meaning through a significant experience, or appreciation of its aesthetics or restorative value (Kianicka et al. 2006). This research examines an environmental art festival’s capacity to enhance a sense of place for both residents and visitors. We suggest that it can achieve this through two key mechanisms:

- the collective presentation of engaging artworks and related activities which encourage social interaction and stimulate discourse and reflection; and
- placing artworks in nature to return focus to everyday environments and draw attention to the place.

A festival such as *Floating Land* provides opportunities for local communities and visitors to strengthen their attachment and for locals to re-imagine their place. At *Floating Land*, artworks were located in the environment, on or beside the lake, to remind residents of the beauty of their village in order to enhance their place attachment. Research suggests that those who are attached to their neighbourhoods are more likely to participate in planning efforts, investing their own time and money into the vitalisation of their community (Manzo & Perkins 2006). Such communities interact more with their neighbours and watch over their places, encouraging a sense of safety and social cohesion. In this case, by focussing on the local environment through an environmental art festival that
promotes a strong sense of place, we envisage that the community is motivated to engage in environmental stewardship as a result of positive thoughts, feelings and beliefs about their place.

Through enhancing a sense of place, government can seek to influence individuals to engage in pro-environmental behaviours. One of the four avenues in which it can encourage pro-environmental behaviour is ‘engaging people in initiatives to help themselves’ (Jackson 2005, p. iii). This research focuses on a festival that aims to encourage a community’s pro-environmental behaviour and initiatives through the development of its sense of place. Governments also play a role in influencing the social and institutional context in which individuals choose their behaviours (Jackson 2005), especially so with local government that has grassroots involvement and contact with local communities. By displaying injunctive social norms, those that might be expected of the community, behaviour can be effectively influenced via community-led initiatives. *Floating Land* provides a local government-initiated space to express environmentally aware norms and values in a community that highly values nature and pro-environmental behaviours. By delivering environmental messages and building social cohesion, this government initiative aims to contribute to both a strong sense of place and pro-environmental behaviour change.

**PRO-ENVIRONMENTAL BEHAVIOUR**

Much of the pro-environmental behaviour literature agrees that people act for the environment as a result of both internal and external motivations (Ajzen 1991; Allen & Ferrand 1999; Arbuthnot 1977; Cialdini 2003; Jackson 2005; Osbaldiston & Schott 2012; Stern 2000). Many socio-psychological studies have developed models that attempt to explain pro-environmental behaviour, ranging from the early notion that personality and attitudes predicted environmental behaviour and knowledge (Arbuthnot 1977) through to more recent studies which suggest that an effective model must incorporate motivations, attitudes and values, contextual factors, social influences, personal capabilities and habits (Stern 2000). This study focuses on the external motivation of adherence to social norms in deciding to act for the environment.

External motivations manifested through personal norms constructed by social conversations, authority and appearance can play a role in encouraging pro-environmental behaviour. Schwartz’s Norm Activation Theory is one of the most often cited models for explaining pro-social behaviours in this area of literature (Allen & Ferrand 1999; Dahlstrand & Biel 1997; Jackson 2005; Stern et al. 1999). Although the theory deals with pro-social behaviours rather than specifically pro-environmental behaviour, it provides an explanation of why people act pro-environmentally. The theory asserts that people will enact a behaviour as a result of personal norms which are based on their awareness of the consequences of their actions, as well as an acceptance of responsibility for those consequences (Jackson 2005; Stern 2000). These personal norms are underpinned by symbolic
interactionism, where the construction of self is created through social conversations, and negotiated through interactions with others (Mead 1934). ‘Individual choice in this framing of identity is helplessly mired in the fabric of social norms, expectations and interactions’ (Jackson 2005, p. 38). *Floating Land* created a temporary community where the norm to act with environmental awareness was communicated via social learning, with residents and visitors returning to their permanent communities with a notion of shared values.

There has been scant research on how cultural or artistic initiatives might impact on pro-environmental behaviour and initiate changes in individuals or communities. This study aims to show, from both qualitative and quantitative perspectives, that environmental art festivals can be one strategy in the complex network of factors that are employed to motivate pro-environmental behaviour.

**FLOATING LAND**

*Floating Land* has been chosen as the case study for this research as it is the signature event of an environmental art framework developed within Sunshine Coast Council. This local government entity services a population of 250,000 in a region that is well known for its environmental ethos. The council developed the framework to support artists and programs associated with sustainable practices in enhancing environmental awareness, and as one manifestation of its overarching vision ‘to be Australia’s most sustainable region – vibrant, green and diverse’ (Sunshine Coast Council 2011b). Initially conceived as an ‘art in nature’ outdoor sculpture event, *Floating Land* has been presented biennially since 2001, as a community-focussed festival involving local, national and international artists in producing works which generate environmental awareness, dialogue and reflection on place. Since 2009, the event’s main location has been at the pristine lake-side setting of Lake Cootharaba at Boreen Point – a village within the Noosa Biosphere Reserve. Recent festivals have introduced themes including climate change and rising seas (2009) and water culture (2011). This study examines *Floating Land* 2013, which adopted the theme ‘nature’s dialogue’ to explore intersections ‘between artistic perspectives, the principles of natural design and community dynamics’ (Sunshine Coast Council 2012). The theme drew on the concept of biomimicry and nature’s inspiration for innovative human designs. Presented from 31 May to 9 June 2013, the festival included over 65 local, national and international professional artists working in diverse formats including site-specific sculpture, light and film projections, music and sound, written and spoken word, dance and performance. The creative works were complemented by workshops, talks, films, tours and a conference, all connected with the event’s aims and theme.

The artists responded to the theme and approached environmental awareness in diverse ways, as the following examples indicate.
• Figures 1 and 2: *Reading Clouds - Floating Middens* by Maori artist Michel Tuffery and Australian James Muller, highlighted Pacific peoples’ inter-relationship with the environment. The large organic forms, constructed from renewable weed fibre and positioned in the lake, acknowledged the significance of shells in Maori and Aboriginal cultures. At night, imagery projected onto the shells suggested ways in which Pacific peoples have built observational knowledge of clouds, currents and other natural signs to literally and metaphorically navigate their environment. The day and night artwork spectacle drew wide media coverage and attracted an audience specifically entranced by the imagery. It exposed the audience to an artwork that acknowledged ‘the history, physical geography and navigational links of the wider Pacific region and its peoples’ (Sunshine Coast Council 2013a), inspiring dialogue and reflection on place as well as people’s dependence on the natural world. Photos James Muller.

• Figure 3: The Leweton Cultural Group from Vanuatu formed part of a large Indigenous component of the festival which acknowledged extensive traditions of sustainable environmental practices and inter-relationships with nature. This cultural group performed songs, told stories, and held workshops that communicated their strong interconnection with their environment. Photo Raoul Slater.

• Figures 4 and 5: Two interconnected sculptural works located in the lake were based on the julara, the local Kabi Kabi people’s name for mullet. Simon and Adrienne McVerry’s colourful *Julara* sculptures represented the importance of this fish to the ecosystem of local lakes and rivers (Figure 4). This was complemented by the *Julara Fishnet Weaving* project which explored humans’ relationship with the mullet through weaving workshops. It included a leaping school of julara woven from locally sourced Cats Claw weed vines by Kris Martin (Figure 5). This was accompanied by a suspended net constructed from local bark and fibre string by Kabi Kabi artists Lyndon Davis and Brent Miller who also shared their knowledge of natural signs and cycles related to the julara. Photos Raoul Slater.

• Figure 6: *Converging Realities* by Judy Barrass was situated in a tiny unnoticeable grove at the end of the road beside the lake-edge. The artist aimed to bring attention to a little-known place on the lake, showing its beauty and inspiring the audience to look around for other unrecognised places of beauty. The artwork also incorporated digital imagery which was projected onto the installation at night, turning this intimate space into a magical environment and reminding the audience that natural places have several states of being. In each of its states the installation represented the interplay that takes place between humans and natural places. Photo Raoul Slater.

• Lenni Semmelink’s *Earthsong* was located within a grove of trees by the shoreline. Microphones placed beneath the water and within the trees enabled visitors to immerse
themselves in the bio-acoustics of the site. Participants could hear the resonant sounds of waves and trees and interact with these amplified sounds through their own movements within the space. This engaging work enabled visitors to experience an ‘ordinary’ place in new ways, to hear sounds that might typically be overlooked and to better appreciate the rhythms and processes of the natural world.

Figure 1. Michel Tuffery and James Muller, *Reading Clouds - Floating Middens*, 2013. Mixed media. Boreen Point, Australia. Photo James Muller

Figure 2. Michel Tuffery and James Muller, *Reading Clouds - Floating Middens*, 2013. Mixed media. Boreen Point, Australia. Photo James Muller
Figure 3. Leweton Cultural Group, Boreen Point, Australia. Photo Raoul Slater

Figure 4. Simon and Adrienne McVerry, *Julara on Weyba*, 2013. Hoop pine, stained glass, metal, paint. Boreen Point, Australia. Photo Raoul Slater
Figure 5. Kris Martin, *Julara*, 2013. Cats claw vine, twine. Boreen Point, Australia. Photo Raoul Slater

Figure 6. Judy Barrass, *Converging Realities*, 2013. Sticks, light projection. Boreen Point, Australia. Photo Raoul Slater
Individually and collectively these works and others aimed to generate dialogue and reflection on place as well as humans’ dependence on the natural world, to encourage an appreciation and valuing of the local environment and of individuals’ inter-relationship with it. This study sought to gauge the impact of these engagements in enhancing participants’ sense of place and commitment to protecting their natural environment.

**METHOD**

A case study is used to examine environmental art responses from different perspectives in real world situations. Case studies operating in real world situations enhance their external validity through increased generalisability (Robson 2002). They are useful in researching the ‘hows’ and ‘whys’ of contemporary phenomena (Shakir 2002; Yin 1994), analysing situations through the lens of the ultimate audience to provide a wider and richer perspective of the subject of the study (Creswell & Miller 2000).

The data generation techniques included four questionnaires administered to three populations involved with the festival: the *Floating Land* audience, participants of the *Floating Land* workshops¹, and pre- and post-festival questionnaires to the residents of Boreen Point. Table 1 below outlines the content and intent of the questionnaires. The *Floating Land* audience questionnaire was aimed at garnering the general audience’s response to the festival. The workshop participants’ questionnaire investigated the contribution of workshops and social learning in encouraging pro-environmental behaviour change. The residents’ questionnaire explored their sense of place before and after the festival.

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¹ The *Floating Land* workshop participants were both residents and other visitors that had taken the initiative to visit the festival at a specified time to attend the workshops. Consequently they showed a greater level of engagement with the festival than those who attended to merely to observe the sculptures and artworks. The respondents to the questionnaire were self-selecting.
Table 1. Content of questionnaires delivered at *Floating Land* environmental art festival

<table>
<thead>
<tr>
<th>Questionnaires</th>
<th>Content</th>
<th>Investigating</th>
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<tr>
<td><em>Floating Land</em> audience</td>
<td>Festival participation level Environmental behaviours Environmental attitudes Environmental discussions Open-ended questions on: Why attended festival Favourite aspect of festival Intention to change environmental behaviour Influence of festival or artworks</td>
<td>General audience’s intentions to change their environmental behaviours as a result of the festival</td>
</tr>
<tr>
<td><em>Floating Land</em> workshop</td>
<td>Festival participation level Environmental discussions Workshop outcomes Open-ended questions on: Why attended workshop Most memorable aspect of workshop Intention to change environmental behaviour Environmental inspiration</td>
<td>Workshop participants’ intention to change environmental behaviour in response to participating in a workshop</td>
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<tr>
<td>participants</td>
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</tr>
<tr>
<td>Boreen Point residents</td>
<td>Length of time as resident Previous and 2013 festival participation level Environmental behaviours Environmental attitudes Open-ended questions on: Influence of festival or artworks on environmental behaviours Influence of festival or artworks on sense of place Intention to change environmental behaviour NB Post-festival questionnaire contained further questions on sense of place</td>
<td>Boreen Point residents’ sense of place as a result of the festival and intention to change environmental behaviours and attitudes pre- and post-festival</td>
</tr>
<tr>
<td>pre- and post-festival</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The method of delivery was different for each questionnaire. The audience questionnaire was delivered in ‘The Reading Room’, a lakeside marquee equipped with comfortable furniture and environmental art books, providing a warm, ‘homely’ environment to engage with self-selecting questionnaire respondents. The workshop questionnaire was presented at the end of workshop sessions by the primary author, with fewer respondents providing data as they were reluctant to remain once the workshop had finished. The residents’ pre- and post-festival questionnaires were delivered to 200 households in the township via letterbox drops.
This mixed methods study involved questionnaires that contained checklists, and Likert response format and open-ended questions, which were then complemented with interviews with artists. All data collection adhered to standard best practice ethics procedures and approvals. Environmental behaviours and attitudes were measured through a series of questions adapted from scales devised in Steg (1999 cited in Gatersleben, Steg & Vlek 2002), which were chosen for their questioning of current real world environmental habits and issues. Quantitative analysis was performed using SPSS with significance determined using Chi² tests and level of significance defined as a P value less than 0.05. If a P score is not given, there was not a statistically significant difference, however the data is reported as it is noticeably different and of interest. Tests of level of significance were not performed on the data from the Floating Land workshop or Boreen Point resident questionnaires due to limited sample sizes. Qualitative analysis was performed by coding responses into themes for comparison.

RESULTS AND DISCUSSION

The following response rates were obtained for each questionnaire:

- **Floating Land** audience questionnaire – 120 respondents
- **Floating Land** workshop questionnaire – 30 respondents
- Boreen Point resident pre-festival questionnaire – 60 respondents
- Boreen Point resident post-festival questionnaire – 36 respondents

In spite of small sample sizes in some cases, the data provided the following information. It created a profile of those participants that intended to change their environmental behaviour as a result of attending the festival. It also demonstrates the importance of the credibility of workshop facilitators in persuading for environmental behaviour change, and it supports the case that art can encourage the ‘re-imagination’ of one’s surrounds, enhancing a sense of place and environmental stewardship.

**What encourages behaviour change: profile of behaviour-changers**

Within the Floating Land audience questionnaire respondents were asked if they intended to change their environmental behaviour as a result of attending the festival. Of the 120 responses, 41% indicated that they did intend to change their behaviour, 43% responded that they did not, and 16% gave no indication. A number of respondents indicated on the questionnaires that they believed they already adopted pro-environmental behaviours and therefore had no intention to change. ‘Intention’ is the focus here because there are few studies that have effectively measured behaviour change, and thus intention is considered a reasonable predictor of environmental behaviour (Jackson 2005). Those that indicated an intention to change will henceforth be called ‘behaviour-changers’, while those that reported no intention will be referred to as ‘non-behaviour-changers’.
In order to garner a better understanding of the profile of a behaviour-changer, a number of closed-response questions were asked regarding demographics, festival participation, and environmental behaviours and attitudes. Qualitative questions asked about reasons for attending the festival and favourite aspects. Below is an analysis of the data collected from these questions comparing the responses of behaviour-changers and non-behaviour-changers (see Table 2).

**Table 2. Comparisons of quantitative data between behaviour-changers and non-behaviour-changers**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Behaviour-changers</th>
<th>Non-behaviour-changers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number % of sample</td>
<td>Number % of sample</td>
</tr>
<tr>
<td>(n=120)</td>
<td>(n=120)</td>
<td></td>
</tr>
<tr>
<td><strong>Time spent at festival</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 2 hours</td>
<td>4 3</td>
<td>3 3</td>
</tr>
<tr>
<td>2-5 hours</td>
<td>19 16</td>
<td>24 20</td>
</tr>
<tr>
<td>5-10 hours</td>
<td>10 8</td>
<td>5 4</td>
</tr>
<tr>
<td>10-30 hours</td>
<td>6 5</td>
<td>6 5</td>
</tr>
<tr>
<td>30 hours +</td>
<td>10 8</td>
<td>14 12</td>
</tr>
<tr>
<td><strong>Participation at festival</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artist/organiser</td>
<td>10 8</td>
<td>15 13</td>
</tr>
<tr>
<td>Volunteer</td>
<td>8 7</td>
<td>3 3</td>
</tr>
<tr>
<td>Workshopper</td>
<td>8 7</td>
<td>7 6</td>
</tr>
<tr>
<td>Observer</td>
<td>23 19</td>
<td>27 23</td>
</tr>
<tr>
<td><strong>Previous Floating Land experience</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First-timer</td>
<td>28 23</td>
<td>27 23</td>
</tr>
<tr>
<td>Second-timer</td>
<td>7 6</td>
<td>11 9</td>
</tr>
<tr>
<td>More than second-timer</td>
<td>14 12</td>
<td>14 12</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-25 years</td>
<td>2 2</td>
<td>1 1</td>
</tr>
<tr>
<td>26-35 years</td>
<td>4 3</td>
<td>5 4</td>
</tr>
<tr>
<td>36-45 years</td>
<td>10 8</td>
<td>10 8</td>
</tr>
<tr>
<td>46-55 years</td>
<td>13 11</td>
<td>15 13</td>
</tr>
<tr>
<td>56-65 years</td>
<td>16 13</td>
<td>16 13</td>
</tr>
<tr>
<td>65 years +</td>
<td>3 3</td>
<td>5 4</td>
</tr>
<tr>
<td><strong>Residence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boreen Point</td>
<td>8 7</td>
<td>9 8</td>
</tr>
<tr>
<td>Sunshine Coast</td>
<td>31 26</td>
<td>26 22</td>
</tr>
<tr>
<td>Other</td>
<td>10 8</td>
<td>17 14</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>32 27</td>
<td>28 23</td>
</tr>
<tr>
<td>Male</td>
<td>10 8</td>
<td>20 17</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uni</td>
<td>31 26</td>
<td>27 23</td>
</tr>
<tr>
<td>Not Uni</td>
<td>13 11</td>
<td>21 18</td>
</tr>
<tr>
<td>Other</td>
<td>3 3</td>
<td>3 3</td>
</tr>
</tbody>
</table>

*Responses do not add to 120 as there were a number of invalid responses. Percentages are based on total sample size of 120.*
It was found that the length of time the participant stayed at the festival, how they participated (i.e. as an artist, volunteer, organiser or observer) and if they had visited the festival previously showed no significant difference between behaviour-changers and non-behaviour-changers ($p=0.391$, $p=0.481$, $p=0.701$ respectively). Demographic variables such as age and gender also demonstrated no significance to a participant’s intention to change their behaviour ($p=0.186$ and $p=0.156$ respectively). Residence location showed some significance ($p=0.02$), with Sunshine Coast residents more likely to intend to change their behaviour than Boreen Point residents or visitors from elsewhere. Whether a participant had attended university showed no significant difference in response ($p=0.176$), but interestingly, while 53% in the sample that attended university fell in the behaviour-changers group, only 38% without university qualifications indicated an intention to change their behaviour. A Netherlands study on determinants of environmentally significant behaviour also found that respondents with a higher level of education reported that they performed more pro-environmental behaviours (Gatersleben, Steg & Vlek 2002).

The participants were also tested on how many of twenty environmental behaviours they currently performed in order to ascertain the difference in behaviours between those who intended to change behaviour and those who did not. These behaviours were adapted for local relevance from Steg (1999 cited in Gatersleben, Steg & Vlek 2002) and included statements such as ‘I pick up litter in public’, ‘I separate my recyclable waste’, and ‘I catch public transport when I can’. Again there was little significant difference in number of current environmental behaviours performed between behaviour-changers and non-behaviour-changers. Only two statements showed significant difference, ‘I water my garden with grey water’ ($p=0.042$) and ‘I re-use plastic takeaway containers’ ($p=0.037$), but this gives little insight into differences between behaviour-changers and non-behaviour-changers.

While participants’ environmental behaviours were similar between groups, some attitudes tested showed a marked difference in response between behaviour-changers and non-behaviour-changers. The questionnaire asked participants to indicate agreement/disagreement with twelve environmental statements adapted from Steg (1999 cited in Gatersleben, Steg & Vlek 2002). While most responses were similar between those that intended to change behaviour and those not, there was a marked difference in responses to a number of statements (see Table 3).
Table 3. Comparisons of reported environmental attitudes that differed between behaviour-changers and non-behaviour-changers

<table>
<thead>
<tr>
<th>Environmental attitude</th>
<th>Behaviour-changers (n=49)</th>
<th>Non-behaviour-changers (n=52)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>% of behaviour-changers sample</td>
</tr>
<tr>
<td>I am optimistic about the environmental quality in the future</td>
<td>23</td>
<td>47</td>
</tr>
<tr>
<td>A better environment starts with the individual</td>
<td>46</td>
<td>94</td>
</tr>
<tr>
<td>It is normal to want to help the environment</td>
<td>41</td>
<td>84</td>
</tr>
<tr>
<td>I feel guilt about the state of the environment</td>
<td>27</td>
<td>55</td>
</tr>
</tbody>
</table>

In response to ‘I am optimistic about the environmental quality in the future’, a greater number of behaviour-changers showed agreement than non-behaviour-changers. While 47% of behaviour-changers agreed, only 23% of non-behaviour-changers showed optimism. The statement ‘a better environment starts with the individual’ was agreed with by 94% of behaviour-changers, but only 69% of non-behaviour-changers agreed. Schwartz’s Norm Activation Theory (1977) asserts that people will enact a behaviour as a result of personal norms which are based on their awareness of the consequences of their actions, as well as an acceptance of responsibility for those consequences. These results support the notion that those with a sense of responsibility, a sense of optimism and a strong locus of control, i.e. those that feel their actions can make a difference, were more likely to intend to change their behaviour.

The questionnaire statement ‘It is normal to want to help the environment’ typifies the festival’s focus on creating a community where pro-environmental behaviours are the norm. Respondents to the statement reported a noticeable difference in number of agreements between the behaviour-change and non-behaviour-change groups. While 84% of behaviour-changers agreed that ‘it is normal to want to help the environment’, only 65% of non-behaviour changers agreed. Cialdini (2003) found advertising campaigns that depicted injunctive rather than descriptive norms, that is, campaigns that depicted what was desired rather than the behaviour that is most often performed, prompted a better response in regards to mobilising action. The nature of Floating Land as an environmentally-focussed festival provided an arena depicting the injunctive norm of pro-environmental living in an attempt to positively portray environmental change and action. Interestingly, 14% (17 from 120) of the whole sample population disagreed with this statement, from which it can be inferred that they believed it is not normal to help the environment.
Guilt was another theme of the environmental statements that showed a marked difference between behaviour-change and non-behaviour change groups. ‘I feel guilt about the state of the environment’ prompted agreement by 55% of the behaviour-changers while it prompted agreement from only 37% of non-behaviour-changers. Guilt often leads to pro-social behaviour to compensate for the perceived damage caused by the individual (Baumeister 1998), which may explain the higher percentage of behaviour-changers among those that felt guilt compared to those that did not intend to change their behaviour.

Many participants attended the festival for reasons other than the environment, but indicated that they intended to change their behaviour as a result of the festival. Participants commented that they came to the festival to ‘participate in the involvement of ecological and conservation issues with the community through art and dialogue’ and because the festival offered an ‘interesting creative friendly low-key specific environmentally aware consciousness raising day out and in a beautiful location.’ Of the 70 responses to ‘what made you want to attend Floating Land?’ 61 asserted that they came to the festival for reasons other than the environment. Of those 61, twenty-nine intended to change their environmental behaviours as a result of the festival. That is almost a quarter (24%) of the total sample population of 120 that came to the festival without environmental intention, and left with an intention to change their behaviour.

**Encouraging behaviour change: the art of persuasion**

The Floating Land workshop participant questionnaire was completed by 30 respondents, and elaborated on themes investigated in the Floating Land audience questionnaire through open-ended qualitative questions. Although there were not as many responses to this questionnaire as the Floating Land audience questionnaire, it does provide further insight into the experiences of the festival audience.

The questionnaire asked respondents about their experience of the workshop in relation to interaction with others and the teacher, and what they found most memorable. The dedication and personalities of the facilitators were considered the most memorable aspect by 30%, while 23% enjoyed the practical skills that they learned. Twenty per cent recognised that the other participants were the most memorable aspect of the workshop with one respondent claiming they enjoyed ‘people helping each other after they learnt a technique (children and adults together)’. The atmosphere was commented upon by 13% of participants, with one enjoying ‘the zen of it’. While the workshops provided a comfortable atmosphere for social learning, dialogue and reflection and appreciation of surrounds, few respondents commented on the environment as being a memorable aspect. Only one participant commented on the nature of the workshop as being ‘peaceful and relaxing, calm water with beautiful things around’ as most memorable.
Thirty per cent commented that the most memorable aspect was the influence of the facilitators. Social modelling, the passing of information through demonstration or discussion in which initiators engage in the behaviour themselves, has been found to be one of the most effective treatments for encouraging pro-environmental behaviour (Osbaldiston & Schott 2012). Behaviour change theory also points to the persuasive power of respected identities teaching and communicating messages. Persuasion theory cites the importance of the credibility of a speaker for effective message delivery, and through persuasion a response can be ‘primed’ by strategically framing a context (Jackson 2005). Respected weaving and environmental artist Kris Martin framed a ‘Cat’s Claw’ weed eradication message within a weaving workshop at Floating Land that resulted in one respondent commenting that they intended to change an environmental behaviour as a result of the workshop: to perform ‘more Cat’s Claw control’.

The data collected indicates that the respect for the facilitators of the workshop had a direct impact on the participants, with one respondent calling it ‘wisdom talk from the teacher’ and another claiming what was most memorable was ‘the strong connection Bev (an Indigenous weaver) has to her culture and the passionate and reverent way she expresses it’. This message of the insights of Indigenous cultures into historical precedents of environmental stewardship and a sense of place was a strong focus of the Floating Land program. Respected and credible facilitators can inspire and persuade for pro-environmental behaviour change through workshops that deliver environmental messages in a creative and engaging way.

Re-imagining nature – art in outdoor spaces

The Floating Land audience was asked an open-ended question to elicit their favourite aspect of the festival. Responses fell into the themes of: artworks (22%), artworks in the setting (19%), connecting with others (12%), the setting (8%), cultural aspects (8%) and participation (8%). Only one person commented on the didactic information as being their favourite aspect of the festival, and this participant did not intend to change their behaviour. This could be due to the low profile or non-existence of written environmental material presented by the artists, as the nature of the festival was to demonstrate through example and immersion rather than hard-copy instruction.

Floating Land is one of a growing number of festivals in Australia that situate art in the outdoors to not only highlight and take advantage of the aesthetics of nature, but also to encourage the re-imagination of the environment. The art in the setting, in and around Lake Cootharaba, was the favourite aspect of 19% of the respondents. Two participants commented that their favourite aspect was ‘the lake being highlighted by art’, and ‘seeing the landscapes, peoplescapes, artscapes in their various changing/evolving states’. The aesthetics of ‘evolving states’, which is synonymous with much environmental art, prompted a number of comments including that the ‘installations make me
look at the environment in new ways (the shells are fantastic). Love to watch them change over the week’ (see Figures 1 and 2).

The site is fundamental to most environmental artworks, being ‘in or of the land in such a way that a part of nature constitutes a part of the relevant work ... not only is the site of an environmental work an environmental site, but the site itself is an aspect of the work’ (Carlson 2000, p. 150). Of the 23 who most appreciated the artworks in the setting, 14 intended to change their behaviour. This was the highest rate of behaviour-changers among the themes of the favourite aspects of the festival. Although there may not be a direct link between the appreciation of the art in setting and the intention to act pro-environmentally, it can lend support to the notion that placing artworks in nature can assist in the re-imagining and appreciation of the environment, enhancing individuals’ and communities’ sense of place, and consequently encouraging the desire to act as environmental stewards. The re-imagination of nature and the appreciation of the local environment were further supported by Boreen Point residents within their responses to whether *Floating Land* had influenced how they felt about living in the village. One respondent commented ‘some art transformed the quite ordinary to something … amazing!’

**Sense of Place – encouraging environmental stewardship**

Sixty local residents responded to the pre-festival questionnaire, with 36 responding also to the post-festival questionnaire. 75% felt that *Floating Land* made them more proud of Boreen Point, 47% agreed that they wanted to do more for the community since the festival, 44% wanted to do more for the environment, 53% felt they were more a part of the community, and 83% wished for *Floating Land* to continue (see Table 4). 25% agreed with all the comments: they felt more proud, wanted to do more for the community and the environment, and felt they were more part of a community since attending the festival. This positive response demonstrates the sense of place engendered by this particular environmental art festival and contributes to the notion that a sense of place should be considered in planning for self-sustaining communities. Those who are attached to their neighbourhoods are more likely to participate in planning efforts, investing their own time and money into the vitalisation of their community (Manzo & Perkins 2006).

**Table 4. Sense of place responses from Boreen Point residents post-*Floating Land* festival**

<table>
<thead>
<tr>
<th>Sense of Place Statement</th>
<th>Number (n=36)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wished for <em>Floating Land</em> to continue</td>
<td>30</td>
<td>83</td>
</tr>
<tr>
<td>More proud of Boreen Point since <em>Floating Land</em></td>
<td>27</td>
<td>75</td>
</tr>
<tr>
<td>Felt influenced by <em>Floating Land</em></td>
<td>21</td>
<td>58</td>
</tr>
<tr>
<td>Felt more a part of community since <em>Floating Land</em></td>
<td>19</td>
<td>53</td>
</tr>
<tr>
<td>Wanted to do more for community since <em>Floating Land</em></td>
<td>17</td>
<td>47</td>
</tr>
<tr>
<td>Wanted to do more for environment since <em>Floating Land</em></td>
<td>16</td>
<td>44</td>
</tr>
<tr>
<td>Felt influenced about the environment by <em>Floating Land</em></td>
<td>16</td>
<td>44</td>
</tr>
</tbody>
</table>
When asked if *Floating Land* had influenced how the residents felt about Boreen Point, 58% said that it had influenced them. In elaboration, they commented primarily about the environment and the sense of community, including ‘it reinforced our desire to keep/conserve what we have and what we value i.e. a pristine environment’, and ‘the evolution of *Floating Land* since we have lived here has given me a deeper awareness of the importance of sharing our appreciation of a natural, unspoilt area’. The sense of community was also highlighted: ‘Reinforced a sense of community and why I love where I live - a truly beautiful place,’ and ‘although I have lived in Boreen Point for 15 years this was the first time I really immersed myself in *Floating Land* and I thoroughly enjoyed myself - felt very connected to community and beauty of Boreen Point. Feel proud and grateful to live in such a beautiful place.’

The appreciation of the artistry of the Boreen Point community was also highlighted, with one artist involved commenting ‘the process of organising the art group exhibit was divisive and stressful but it brought about stronger bonds between some of the artists which was positive. I also felt proud to see the general public enjoy Boreen Point - I always love that.’

The residents were asked if *Floating Land* influenced how they felt about the environment. 44% responded that it had, commenting on their enhanced desire to protect it: ‘makes me more aware of my environment - reminds me to take care of it. Be more careful what we do to it.’ One respondent believed the festival had ‘not so much influence as most residents live here because of the environment,’ concluding ‘but makes one more determined to protect and respect it.’

**CONCLUSION AND RECOMMENDATIONS**

Environmental art festivals can be facilitated by local and other tiers of government as an imaginative format to foster an environmentally-aware community. This research focussed on an environmental art festival held within a biosphere reserve that used artworks in a natural setting to attract its audience. This community was offered opportunities visually and through workshops, performances and presentations to re-imagine their environment, with the intent of encouraging pro-environmental behaviour change and enhancing the community’s sense of place.

Through a series of questionnaires, the environmental behaviours, attitudes and experiences of the festival were gleaned from the audience, workshop participants, and residents of the hosting township. It was found that the greatest difference between behaviour-changers and non-behaviour-changers was their attitudes towards the environment: attitudes that included optimism, a sense of responsibility, personal and social norms and guilt showed the most marked difference between groups. Those that felt a strong locus of control, that their actions could make a contribution, were also more likely to change their environmental behaviour.
It was also discovered that the facilitators were cited by many who participated in the workshops as the most memorable aspect of the learning, confirming the notion in persuasion theory that the credibility of the speaker is important in delivering a persuasive message. Via social learning, workshop participants and the general *Floating Land* audience participated in a community where environmental awareness and values were extolled, with the intention of their integrating new norms learned or reinforcing established norms at the festival into their daily lives.

The favourite aspect for many participants of the festival was the art in the setting, which was an attractant of the festival. The aim was to encourage the community to re-imagine their surrounds through the placement of artworks in the everyday scene of the lake, to encourage a sense of place and subsequent pro-environmental behaviour change. It also brought a new curious audience that had been lured by surreal media images of artworks on the lake. These audience members that may not have already been artistically-interested or environmentally-aware were then exposed to a community that demonstrated pro-environmental norms.

From these conclusions the following recommendations can be made for government bodies that are seeking imaginative formats for delivering environmental messages and building a sense of place:

- Environmental art festivals can encourage pro-environmental behaviours by fostering environmental attitudes in the community such as optimism, a sense of responsibility, a locus of control, and demonstrating social norms that are environmentally-oriented. By presenting a positive image of a community that acts for the environment, visitors to the festival that engage via social learning can return to their daily lives with new pro-environmental norms or a reinforcement of their established environmentally-aware norms;

- Environmental messages can be delivered effectively via workshops with credible facilitators. It was shown that the respect for facilitators was the most memorable aspect of workshops, with this offering an effective resource for local government to deliver persuasive environmental messages; and

- Environmental stewardship can be encouraged through enhancing an individual’s sense of place, which can be re-imagined through environmental art that engages a community with its surrounds. Local planners can encourage pro-active stewardship by a community for its place by re-attracting residents’ and visitors’ attention to their environment, reminding them of the beauty of their place and why they chose to live or visit there.

The *United Nations Conference on Environment and Development* in Rio de Janeiro in 1992 set the agenda for government to integrate an environmental ethos into their decision-making processes. Through developing a holistic response to environmental problems and integrating the environment into all spheres of planning and delivery, government bodies can model behaviour and attitudes that
lead to the understanding by communities that pro-environmental behaviour is the norm. An environmental art festival is one way of modelling behaviour as well as delivering environmental messages with imagination and fun to encourage this understanding.
Chapter 9

This article looks at the findings from the second case study, that of Banksias and Feathers. It continues exploring sense of place resulting from participation with environmental art, in this case in the commissioning process that preceded the installation of two series’ of sculptures, providing a case study example of static public art. Through audience questionnaires, interviews, document and media analysis, the research responds specifically to research questions 2 and 4: How does environmental art contribute to an environmental sense of place? How can environmental art assist local government and environmental organisations to encourage pro-environmental behaviour and sense of place?

Planning for an environmental sense of place: community engagement in planning and responding to government-initiated environmental art as public art


INTRODUCTION

Commissioning public environmental art is one way in which governments can reinforce a community's environmental values, encourage a sense of place, and promote environmental awareness. By integrating environmental principles into their many processes, programs and outcomes, governments can model a holistic approach to sustainability (United Nations 1992). This paper reports on a case study from a broader research project that explores community engagement with public environmental art. In this study we examined the way an Australian community contributed to the integration of its shared environmental values as part of a local council’s community-based placemaking process which resulted in two public sculptural installations. The effect of the sculptures on community members’ environmental sense of place was assessed through surveys of audience responses. The rationale for the study was to examine if, by engaging the community with its place and environment, local government can stimulate an environmental awareness that then leads to stewardship of that place and environment (Manzo & Perkins 2006).

Environmental art, as a form of public art, offers an imaginative format to communicate environmental messages in a setting that is highly visible to the community as an everyday reminder of its ‘green’ sense of place. While there are many definitions of environmental art (Brown 2014; Gablik 1992; Kastner & Wallis 1998; Lippard 1997; Matilsky 1992; Wallen 2012; Weintraub 2012), for the purpose of this article we define it as any artwork that aims to stimulate discussion and/or action around nature to create awareness of the environment. The art can be created from many
different media such as natural and recycled materials, or light and sound, and can come in a variety of formats such as installations, photography, writing, and performance. It can manifest as ephemeral works that are erased by natural processes, or permanent structures such as public art installations characterised by those within this study. It can be created by an individual artist but has evolved, like contemporary public art, to be more participatory by engaging communities in its development and interpretation. This study explores a case study in Australia in which a regional local community was engaged in the planning of a public art process that commissioned environmental artworks, focussing on the environmental sense of place engendered by this process.

ENVIRONMENTAL SENSE OF PLACE

Sense of place is defined as the creation of meaning at a setting by an individual (Williams & Patterson 1996). Research suggests that sense of place is integral to effective community planning and cohesion, with those attached to their neighbourhoods more likely to participate in planning efforts, investing their own time and money into the vitalisation of their community (Brown, Perkins, & Brown 2003; Manzo & Perkins 2006). These communities interact more with their neighbours and watch over their places, encouraging a sense of safety and social cohesion (Manzo & Perkins 2006). By building a sense of place the community participates in their own development as a result of positive thoughts, feelings and beliefs about their place.

In our study we refer to environmental sense of place as an understanding that the environment is intrinsic to, and acknowledged in, that creation of meaning (see Figure 1). One of the sub-concepts of sense of place is place identity, defined as the integration of a sense of place into one’s identity (Kudryavtsev, Stedman & Krasny 2011). Place identity has been shown to promote self esteem and a sense of belonging (Tuan 1974), which can lead to pro-environmental behaviour both at the setting and in other areas of the individual’s life (Vaske & Kobrin 2001). Our research focuses on the capacity of public environmental art to enhance place identity.
ENVIRONMENTAL ART

Environmental art has manifested in many formats with differing rationales and audiences. In the 1960s and 1970s environmental art emerged as a contemporary art movement, with the most prominent form being ‘earthworks’ or ‘Land Art’ that involved the construction of vast sculptural works from natural materials, often located in inaccessible landscapes (Matilsky 1992; Strelow 2004; Tiberghien 1995). This movement was born at a time when society was questioning established institutions, with a focus of Land Art being to challenge the notion of art as a commodity and to present it outside a selective gallery setting (Kastner & Wallis 1998). This period also saw the development of the environmental movement that promoted a questioning of unfettered consumption and industrialisation, and a concern for the ramifications for nature. Some artists responded to this societal change by adopting an ecological perspective, emphasising the interconnectedness and mutual interdependence between humans and nature (Gablik 1992; Matilsky 1992; Spaid 2002; Strelow 2004). These ideas also manifest in a ‘new participatory paradigm’ for art practice in which ‘the world becomes a place of interaction and interconnection’ and boundaries ‘between art and audience … disappear’ (Gablik 1992, pp. 150-1). The resulting strand of environmental art, termed ecological art, often encompasses participatory practices and collaborations with scientists, environmentalists and communities to address environmental issues. Such work can involve activism and practices that are concerned with dialogue and innovative environmental problem-solving rather
than a singular art object (Spaid 2002; Wallen 2012; Weintraub 2012). Other forms of contemporary environmental art may be object-based and of an ephemeral or permanent nature but with an underlying intention to generate awareness of the environment or to generate dialogue and/or action. The public artworks selected for this study are not works which would typically be considered within the activist or ecological art stream of environmental art practice, nevertheless they have been generated through participatory community processes, they reflect collective environmental values, and raise awareness of the environment.

Very little research has been undertaken on the impact of environmental art. Recent analyses have focused on the philosophies behind environmental art (Kagan 2011) and the exploration of community-based initiatives that are based around the production or presentation of this genre (Brown 2014; Weintraub 2012). Research into the effects of environmental art on its audience is limited, with the exception of a few articles that provide qualitative analysis of the use of environmental art in building environmental awareness (Baldwin & Chandler 2010; Curtis 2003, 2006, 2009, 2010; Marks, Chandler & Baldwin 2014). There is little quantitative analysis of audience responses to environmental art (Marks, Chandler & Baldwin 2014), and no analysis of the genre within the urban placemaking and planning context. This study aims to address this by investigating the process which enabled a community to influence placemaking through public environmental art, and by examining the resulting public response to two public environmental art installations.

**PUBLIC ART**

The case studies chosen for this research provide examples of recent public art, which has undergone a significant evolution over the past four decades. In many ways this change has paralleled that of environmental art, particularly the move towards community collaboration in the art-making process and the integration of social themes. Public art has shifted from the ‘plop art’ of giant abstract sculptures installed outside public institutions (Kwon 2004, p. 65), to ‘new genre public art’ that focuses on engaging a community with issues relevant to them through traditional and non-traditional forms of art, with an emphasis on the interaction rather than the outcome (Lacy 1995).

While there are some criticisms of Kwon’s (2004) analysis of public art (Kester 2004), she has identified three phases of public art planning since its renaissance over 40 years ago. While the analysis is based on the history of public art in America, similar experiences can be seen in the Australian context. The first phase, the ‘art in public places model’ of the 1970s and 80s, describes the commissioning of often large artworks for public spaces, which were seen as gallery or museum works that were merely ‘plopped’ outside with little attention given to site or place. The second phase of public art, the ‘art as public spaces approach’, integrated artworks into the design of places. In this era conceptions of what constituted public art were extended to include: sculpture or significant
works; functional works such as street seating and building features; natural artworks such as landscaped parks; and temporary artworks (Hamilton, Forsyth & De Jongh 2001). In this era artists were invited into the design process and collaborated with planners, architects and landscapers to create more hospitable, inviting and aesthetically welcoming spaces. It was recognised that artists offer creative responses to design and community engagement, as well as acting as social commentators and provocateurs in the design process. In response to the previous top-down approach that resulted in unpopular artist-centred public art, this era courted community input to produce works that were both functional and better accepted (Kwon 2004).

The third ‘art in the public interest model’ phase features community collaboration in response to social issues (Lacy 1995). Public art in this era often aims to prompt discourse, acting as both a catalyst and conduit that encourages a ‘vibrant cultural, social, and political atmosphere that is essential to meaningful civic discussion’ (McCoy 1997). This third phase operates well within a placemaking mode of planning. Placemaking is a place-based approach which involves people in how their public spaces look, feel and operate, to discover what they want and expect from a space (Projects for Public Spaces 2013). It is about creating inclusive, community driven design in the built environment to create places of meaning, and neutral areas for people to meet, socialise and observe (Brunnberg & Frigo 2012). Placemaking strengthens the connection between people and the places they share and aims to strike a balance between the built, social, ecological and spiritual qualities of a place (Projects for Public Spaces 2013). Placemaking contributes to revitalisation projects, ‘both materially and imaginatively, and, within this, public art and participation have become part of the rhetoric of regeneration’ (Pollock & Paddison 2014, 85). This study refers to artworks that could be attributed to Kwon's second and third phases, developed as part of a placemaking approach. It illustrates that the three phases are not necessarily distinct.

**METHOD**

This article describes one of three case studies that provide the basis for a wider research project exploring audience responses to environmental art. Case studies are useful in researching the ‘hows’ and ‘whys’ of contemporary phenomena (Shakir 2002; Yin 1994), and can be used to analyse situations through the lens of the audience to provide a wider and richer perspective of the subject of the study (Creswell & Miller 2000). The study examines the efficacy of two series of public sculptures in Noosa Junction, north of Brisbane, Australia, in encouraging an environmental sense of place. The two installations were chosen as they formed an integral part of a precinct revitalisation project. The placemaking process that integrated input from the artist and the community provides an example of phases two and three of public art planning as described above. Both of the sculptural works, *Banksias* and *Feathers*, were designed as part of an ‘art as public spaces approach’, with the
artist commissioned as a member of the design team working on the streetscape revitalisation process. The artworks provide both interest and functionality by housing lighting for evening activation of the precinct (Kwon's phase two). They also fit into the ‘art in the public interest model’ as the commissioning process involved community collaboration in deciding themes and priorities in a placemaking process, with the aim being to stimulate discussion around human interaction with the environment (Kwon's phase three).

Location

The artworks are located in Noosa Junction, an activity centre in the Noosa Shire (population approximately 60,000 in 2012), located at the northern end of the Sunshine Coast on the east coast of Australia (Figures 2 and 3). Noosa Junction is approximately one kilometre from one of Australia’s most visited national parks, Noosa National Park, and the renowned tourist strip of Hastings Street which runs alongside a white-sand beach and is a major drawcard in attracting both national and international tourists. As such, Noosa Junction's typical street shopping precinct competes with the main tourist strip of Hastings Street, other nearby shopping precincts, and a major shopping centre. The tourist market though, is seen as the ‘cream’ on top of local spending for Noosa Junction traders (Sunshine Coast Council 2010a) and is consequently included in this study. The location was chosen as the area and community are renowned for their well documented environmental and inclusive values (Baldwin & Bycroft 2009). Council’s dedication to retaining the environmental quality of the area for which tourists visit, and of which local residents are proud, is reflected in its Biosphere Reserve status and in *The Noosa Plan* (Noosa Council 2013), the planning framework for the Shire. Three of the seven principles underpinning its vision, and most relevant to this study, are: social cohesion and community well-being; environmental excellence and sustainability; and artistic and cultural diversity and excellence (Noosa Council 2013, s.1.4.2).

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2 In 2008, Noosa Council was one of three local councils that were forcibly amalgamated by the State Government to make the greater Sunshine Coast Regional Council. In 2014, after six years of community outcry and a public vote, Noosa Council became its own standalone entity once again. The sculptures in the case studies were installed under Sunshine Coast Regional Council, but were underpinned by *The Noosa Plan* and engagement with the Noosa community.
The artworks

The artworks, one figurative and one abstract, were both produced by local artist Lucas Salton. *Feathers* (2011) is a set of bronze abstract sculptures clustered in the one location (Figure 4). The 16 feather-like works range in size from two to four metres and extend from a garden bed into the
footpath. These artworks were especially commissioned to contribute to the activation of a pedestrian arcade that connects two main road shopping precincts, as well as to hide an electrical box. The second sculptural work, *Banksias* (2013), is a series of 11 bronze Banksia pods (easily recognisable seedpods from a local native tree) located around Noosa Junction in the median strip of the main street and alongside pedestrian crossings (Figure 5). The sculptures are approximately one metre high and offer functionality as they enclose colour-changing lights that double as pedestrian lighting at night-time, activating the space for an evening audience. The artworks are distinctly figurative and naturalistic, with their subject obvious to the audience. In creating these works, the artist’s intention was to encourage an awareness of and appreciation for the local environment.

The research approach

Document analysis, media analysis, interviews and surveys were used to obtain an in-depth understanding of the experiences of the artist, the local government project co-ordinators, and the community in the design and reception of the artworks.

Document analysis, media analysis and key stakeholder interviews

Document and media analyses and interviews were undertaken to provide background on the community engagement in placemaking that led to the commissioning of the public artworks and an insight into the motivation for themes chosen. The media analysis explored 15 articles in the local media spanning two years, searching for themes of community engagement, placemaking, environment, and creativity. Sunshine Coast Council documents relating to the revitalisation and placemaking project as well as relevant policies and plans were reviewed for the same themes. Interviews were conducted with the three key stakeholders related to the community engagement processes for the precinct revitalisation project and subsequent installation of the artworks: the artist,
and Sunshine Coast Council’s Public Art Officer, and the Placemaking Co-ordinator employed at the time of the installation of the works.

Audience survey

Surveys were administered to 200 passers-by at the location of the artworks to ascertain the community’s response to the artworks and their corresponding environmental sense of place inspired by the works. The one-page survey was delivered by intercepting pedestrians on the main street of Noosa Junction through the months of November 2013 and February 2014 in order to capture a holiday and non-holiday period. Two-hundred surveys were collected; one-hundred at each artwork site at different times of day. All survey participants were unique responders, and were questioned about either the Feathers or the Banksias.

The survey, refined through pilot studies, was designed to take approximately ten minutes for quick delivery to attract participants as they walked through the area. The questions were informed by a study by Zebracki (2013) but adapted to address the focus of our study. Zebracki’s survey provided succinct questions to garner the first reactions of the audience to public art, with his study one of the few that presents clear findings about how public art is perceived. The questions were tailored to collect an audience response to environmental themes, as well as local place concepts, including attributes of the audience perception of public art such as: match between artwork and place (Kwon 2004); invitingness or inclusiveness (Massey and Rose 2003); and meaningfulness (Ward Thompson, Patrizio & Montarzino 2005). All participants were questioned about their reason for visiting the place, their regularity of visit, and where they lived. To determine ways in which the artworks might communicate and/or generate discussion, participants were also asked if they had spoken to other people about the artworks and whether they believed public art was a reasonable format to deliver a ‘message’. An open-ended question asked respondents to determine how they felt or what they thought about the artwork.

Different sets of questions were added for the two types of respondents: residents and visitors. Residents were asked about the enhancement of their place identity as a result of the installation of the artworks via questions regarding pride in their community. They were also asked about their sense of Noosa being an environmental place and whether that enhanced their intention to act for the environment. Visitors were asked if the artworks reinforced their sense of Noosa as an environmental area and whether that prompted a desire to return to the area. SPSS was used to analyse the data, with results shown as percentages.

We acknowledge that the short response time and survey format may have precluded deep individual reflection on the artworks, however we intentionally aimed to capture the way people typically experience the sculptures during everyday life. For this reason we did not consider focus groups
which would distort the experience, or social media with which we could not guarantee a sufficient response rate. Similar to Zebracki (2013), we undertook quota sampling, resulting in 200 surveys administered at this location, compared to Zebracki’s average of approximately 180 per locality.

RESULTS AND DISCUSSION

Community values expressed through engagement

In 2009, the Noosa Junction Traders Association approached what was then Sunshine Coast Council to create a plan to enhance the precinct streetscape in a bid to lessen the impact of the loss of customers to a major shopping centre that was being built nearby (Sunshine Coast Council 2010a). After a four-month process that included a community survey of 100 business owners and customers, community workshops, and meetings with local community representatives and business owners, the Noosa Junction Commercial and Economic Planning Strategy was developed (Sunshine Coast Council 2010a). This document, developed from community consultation, proposed establishing the Noosa Junction brand ‘through celebrating local Gubbi Gubbi [Indigenous people], history, landscape, biosphere [reserve] and Noosa lifestyle stories’, with an emphasis on nurturing and activating the natural beauty of the area to position Noosa as a ‘green town’ (Sunshine Coast Council 2010a, p. ii). It distinctly outlined the feedback that the Junction community wanted to ‘differentiate itself as “Art Garden Place Essence” through landscaping and public art’ (Sunshine Coast Council 2010a, p. i). These community priorities highlight the final outcomes that focussed on art, nature and enhancing a sense of place around these themes.

While analysis of local media showed little coverage of the public artworks, many articles highlighted the associated community engagement, and very often within the first two sentences. The analysis showed a dedicated effort to include the community in the master planning of the area that led to the installation of the environmental artworks:

- eleven articles referred to the Master Plan community consultation process that informed the decision to incorporate environmental art into the streetscaping projects;
- three articles described The Junction Story project, a storytelling project that aimed to inform the branding behind the Master Plan;
- four articles invited people to the community consultation event; and
- three articles announced the display of the draft master plan for feedback.

The above strategy then led to the Noosa Junction Placemaking Master Plan (Sunshine Coast Council 2010b). Artists were brought in as part of the design team, while community engagement in the form of walking tours, storytelling, meetings, forums, displays and presentations featured strongly in
deciding the final themes and priorities in setting Noosa Junction’s future sense of place (Sunshine Coast Council 2010d). The placemaking project engaged the community in creative processes, with the Master Plan encouraging ‘an open sharing environment to promote creativity and innovation and holistic outcomes for the project’ (Sunshine Coast Council 2010d, p. 1). The local media reported:

People were drawing, doing doodles and sketches and writing poems and telling us their short and long-term views and ideas for what they want to see happen in the Junction ... People see the Junction as the natural heart of Noosa – they want to bring in the surrounding national park and Pinaroo Park, the flora and fauna and really capture the essence of the place (The Noosa Journal, 18 March, 2010, p.n.p.).

The report on the placemaking process commented on the effectiveness of engagement, noting:

The recent program of Noosa Junction storytelling is a great initiative to create a sense of place … As well as achieving the built environment outcomes … it is also important to continue implementation of community events and activities to create culture associated with and community memory and stewardship of the place (Sunshine Coast Council 2010c, p. 22).

This approach, synonymous with the ‘art in the public interest’ model of public art, created a revitalised streetscape that included the public artworks studied here, developed as a result of the community’s endorsement of nature as a theme. The responses of the audience to the artwork and their subsequent enhancement of sense of place are investigated below.

The community was further engaged in the design process via a design charrette held with artists and members of a reference group to brainstorm concepts and decide priorities, themes and concepts for the public art. A presentation was then held for the wider community with the artists unveiling their first stage concepts. Feedback was collected, with the Council through its public art advisory panel deciding on the final artists and concepts (J. Franklin, personal communication, 26 May, 2014). Lucas Salton, the creator of Banksias and the Feathers, was engaged as one of two artists who joined the design team in the revitalisation of the Noosa Junction streetscape (Sunshine Coast Council 2010b). He reported that his brief reflected the responses from community feedback: to create artworks that represented ecological connections between local flora and fauna and linked with the nearby bushland Pinaroo Rotary Park (L. Salton, personal communication, 29 May, 2014). The community engagement process brought out its shared values and priorities in regards to the place, resulting in sculptures that presented the importance of the local environment for the wider community.

**Documents focus on planning for the environment and creativity**

While the media analysis highlights the importance of community engagement, the document analysis of Sunshine Coast Council reports demonstrates firstly the environment, and secondly creativity, as foci for the future planning of Noosa Junction. The document analysis also established that Council,
on advice from external consultants, aimed to underpin the work with a strong placemaking theme (Table 1).

Table 1: Document analysis of Sunshine Coast Council documents searching for themes of placemaking, community engagement, environment and creativity

<table>
<thead>
<tr>
<th>Document</th>
<th>Description</th>
<th>Inclusion themes – placemaking, community engagement, environment and creativity</th>
</tr>
</thead>
</table>
| Noosa Junction Commercial and Economic Planning Strategy | Places Noosa Junction in context among other surrounding centres to identify strategies to achieve its preferred position as a competitive commercial precinct. | • Strongly emphasises a placemaking approach which has subsequently fed into further planning documents for Noosa Junction. Provides key issues for placemakers and gives opportunities to overcome these issues.  
  • Environmental emphasis: ‘position Noosa Junction as a “green town”’ (p.39).  
  • Asserts creativity as a potential option for the future economy of Noosa Junction through ‘transform[ing] Noosa Junction into a knowledge and creative industries hub’ (p.40), with public art complementing this vision.  
  • Suggests Noosa Junction should differentiate itself from other local business centres with the theme of ‘Art Garden Place Essence’ through landscaping and public art (p.i). |
| Noosa Junction Placemaking Strategy Consultation Summary – Opportunities and Constraints | Outlines practical opportunities and constraints of hard infrastructure. | • Suggests placemaking of Noosa Junction to bring nature into the street through ‘improved physical, visual, and symbolic connections’ (p.13). |
| Noosa Junction Placemaking Strategy Consultation Summary – Planning and Policy Review | Places the Noosa Plan as Noosa’s guiding policy document in relation to the Placemaking Strategy. | • Notes Noosa Heads locality code within The Noosa Plan asserts ‘the aesthetic and cultural values of the natural environment should be maintained through scenic vistas from the streets through to public spaces, the National Park and Noosa Hill’ (p.8). |
| Noosa Junction Placemaking Strategic – Schematic Masterplan Report | Provides a framework for the improvement of street amenities, aligning with the Placemaking Strategy. Gives practical options for revitalisation project. | • Includes sections on sense of place, greening the Junction, integrated art, and six pages on results of consultation.  
• Greening the Junction section states that the environment has a ‘deliberate influence over all other aspects of the Placemaking Strategy’ (p.23).  
• Integrated art section recognises the engagement of the public sector and private sector and the artist as part of the design team. Synonymous with Kwon’s (2004) second and third phases. |
| Noosa Junction Placemaking Strategy Consultation Summary | Outlines community consultation process and responses leading to the Placemaking Strategy. | • States that ‘through community consultation the Master Plan encourages an open sharing environment to promote creativity and innovation and holistic outcomes for the project’ (p.1).  
• Shows that the emphasis on Pinaroo Park which inspired the artworks was derived through the community consultation and subsequently included in the tender process in commissioning the artists for the public art projects. The final outcome was the sculptures presented in the case study which represented local flora and fauna as found in Pinaroo Park. |
| Public Art Policy | Outlines framework and principles that underpin public art installation on the Sunshine Coast, including Noosa Junction. | • First outcome is the ‘development of an innovative, environmentally and economically sustainable, well-maintained public art program’ (p.4). Emphasises the importance of the environment in the policy and program, underpinning the support of environmental art within the council.  
• While not directly mentioning Placemaking the policy outlines ‘planning for public art projects will take into account the context of a place to ensure artworks reflect and contribute to the unique character and identity of local communities’ (p.7).  
• Recognition of the importance of community engagement in guidelines: ‘Meaningful and relevant community engagement’ |
engagement on particular projects will help to ensure public art is culturally appropriate and fosters community ownership’ (p.7).

<table>
<thead>
<tr>
<th>The Noosa Plan</th>
<th>Provides a framework for managing development within the Noosa Shire. Based on the community vision (as developed by community sector boards) it summarises the strategy adopted by the planning scheme to achieve the desired environmental outcomes. These visions include ‘Noosa is an inclusive community renowned for its creativity, innovation, vision and entrepreneurship where sustainability underpins excellence’ (p.1).</th>
</tr>
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<tbody>
<tr>
<td>•</td>
<td>Within the arts and heritage sector vision it is outlined that the community will be ‘renowned for the way we encourage and achieve artistic and creative excellence, innovation and participation that enriches all facets of our local way of life and our community’ (p.1-2).</td>
</tr>
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<td>•</td>
<td>Highlights that the Noosa community ‘respects and appreciates its environment and has goals of environmental excellence” and “seeks built environments which fit into and do not dominate the natural environment’ (p.1-2).</td>
</tr>
<tr>
<td>•</td>
<td>Incorporates an environmental sector vision which states: ‘The Noosa community has a commitment to environmental excellence and sustainability. The impact of human settlement has been minimised’ (p.1-2).</td>
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This document analysis outlines the underpinning principles of placemaking, environmental awareness and creativity that emerges from, but also contributes to, the community engagement evident in the region. We now examine both artist and community perspectives.

**Artist perspective**

The artist (Lucas Salton) was involved in the community engagement process and consequently responded to the values expressed by the public. *Feathers* was created in response to community feedback which reflected a desire to bring attention to the local flora and fauna. Salton addressed this by focusing on the vulnerable native Glossy Black Cockatoo that inhabits the Pinaroo Rotary Park behind the shopping strip (L. Salton, personal communication, 29 May, 2014). *Feathers* alludes to both the cockatoo’s striking plumage as well as leaf-like forms, while *Banksias* (see below) references local trees frequented by the birds as shelter and a food source. While the works are stand-alone, they are also interconnected representing the feathers of the black cockatoos and their food source Banksias. Collectively the works refer to the ecological relationship between local flora and fauna, as well as humans and nature. The artist intentionally created *Feathers* as an abstract work, aiming to ‘engage the viewer’s eye and make them think about what they are’ (L. Salton, personal communication, 29 May, 2014). Thus, he deliberately used abstraction or an open-ended form to
encourage interaction and a dialogue with the viewer. On a more pragmatic level, the sculptures were also intended to hide an unsightly electricity box, and were designed to integrate into their surroundings as a subtle artwork.

For the Banksias, the artist was inspired by a photographic study he conducted in Pinaroo Rotary Park to investigate textures, forms and possible subjects for the artwork. The resulting work drew on personal, cultural and environmental influences. Salton selected Banksia seed pods as his subject matter because they reflected his childhood memories of the whimsical Banksia Man from May Gibbs’ Australian classic story, Snugglepot and Cuddlepie (Gibbs 1918), while also communicating awareness of the park and the Glossy Black Cockatoo. Salton observed:

I wanted to teach people about the beautiful Black Glossies [Cockatoos] and for them to realise how close they are. The more they know about them, the more likely they are to look after their habitat and that of Pinaroo Park and anywhere around the Junction (L. Salton, personal communication, 29 May, 2014).

Thus, the artist’s intentions were to foster a sense of place as well as to educate, raise awareness, and encourage a valuing and stewardship of the local environment. The artist also responded to the brief to create sculptures that could double as functional street lighting at pedestrian crossings, aligning with the ‘art as public spaces’ phase of public art.

**Audience perspective**

The audience perspective was investigated through face-to-face surveys of 200 people: 119 (60%) residents and 81 (40%) visitors to the area. Twenty-seven (33%) of the visitors were international guests and 54 (67%) from around Australia, with the majority coming from large cities where public art is commonplace. Of the respondents, 112 (56%) were female and 73 (44%) male, with a relatively equal distribution of ages. A quarter of the local respondents worked in Noosa Junction, providing further insights from those that pass and/or see the artwork on a regular basis. It must be noted that some invalid responses were given to a number of questions so percentages are of valid responses (indicated where necessary by $n = \#$).

**Encouraging an environmental sense of place**

A number of environmental themes emerged in response to the question: ‘What does this artwork make you feel or think about?’ which was designed to explore the audience’s interpretation of the sculptures (i.e. meaningfulness). Over a quarter of the 100 responses to the Banksias (27%) commented on the sculptures representing nature, with 11 of those responses referring specifically to the nature of the local area. Respondents commented on ‘the beautiful natural surrounding areas’ and that it ‘gives an image of untouched wilderness,’ showing interpretations referred to the beauty of the
local area. In comparison, only nine of the 100 Feathers responses (9%) associated the sculpture with nature, and only two of those referred to the nature of the locality. The intention of the Council’s placemaking strategy was to bring nature into the street through ‘improved physical, visible and symbolic connections’ (Sunshine Coast Council 2010d, p. 13), with the Banksia responses in particularly demonstrating that this was effectively interpreted.

Residents were questioned about their pride in the area and whether the artwork contributed to this pride (Figure 6). Sixty-eight per cent (68%, n=120) responded that the artwork did contribute to their pride in the area. This is relevant as people who feel a pride in their place are more likely to show stewardship behaviours (Manzo & Perkins 2006). When asked if the artwork reinforced the area’s environmental image, 64% of residents (n=121) believed it did and 24% did not.

![Figure 6. Residents’ responses to sense of place questions](image)

Responses by both visitors and residents to figurative and abstract works were also investigated. In comparing responses to the environmental theme of the Banksias and the Feathers, 75% (n=61) of residents believed the Banksias (figurative work) reinforced the area’s environmental image, whereas only 53% (n=59) saw the Feathers (abstract work) as representing the area’s environmental image. This indicates that figurative works that are obvious or literal depictions of the environment may be understood more easily by the general public as environmentally-themed works. This is also consistent with the responses to the open-ended question above.

To investigate whether the area’s environmental focus was considered part of the residents’ place identity, they were asked if they were already proud of the area’s environmental image. Place identity is linked to pro-environmental behaviours performed at a specific setting (Williams & Patterson 1996) but can also contribute to a flow-on effect in other settings (Vaske & Kobrin 2001). In this instance, public art can contribute to an individual’s place identity in reinforcing that they live in an
environmental area, which can encourage environmental awareness and action both in the public space as well as at home. Ninety-six per cent (96%, n=117) of residents responded that they were proud of the area’s environmental image and 4% responded they were not (see Figure 6 above). This response was expected as the area is renowned for its environmental ethos. It must be taken into account that the visitors and new residents are those already attracted to an area that offers nature as its drawcard, thus the public artworks can be seen as reinforcing rather than initiating a community’s environmental awareness.

While a large percentage of respondents felt proud of the area’s environmental image, only 42% (n=106) believed that this then made them want to do more for the environment, while 35% believed it would not. Fifteen per cent (15%, n=106) responded that they might take action, but 8% did not know, and 47% of the sample of 200 did not respond, possibly for reasons of personal philosophies. It cannot be concluded that the installation of public environmental art can inspire people to act for the environment, but findings show it can contribute to an environmental sense of place which reinforces people’s feelings of awareness and appreciation of their environment. Further study is required to investigate whether an environmental sense of place leads to action.

Public art’s contribution to encouraging environmental tourism

The questions to visitors to the area aimed to glean whether the works directed their awareness to the environment and whether the area’s environmental image contributed to their desire to visit more. Sixty-four percent (64%, n=78) of visitors believed that the sculptures reinforced the area’s environmental image, while 23% disagreed (Figure 7). The council’s Public Art Policy (Sunshine Coast Council 2011a) determines that ‘planning for public art projects will take into account the context of a place to ensure artworks reflect and contribute to the unique character and identity of local communities’ with this response showing a significant proportion of visitors acknowledged the public artworks represented the identity of the area. Visitor responses showed 36% (n=78) found the Banksias effectively represented the environmental image of the area, with 29% reporting the Feathers portrayed this. Many of the visitors interpreted the abstract Feathers as surfboards which supports the beach image of the area, while some did not recognise the Banksias as they were unfamiliar with native flora. This expectation of recognition of local fauna places an emphasis on local knowledge that appeals to the local residents, but may not engage visitors.
When asked if the area’s environmental image contributed to visitors wanting to return to the area more, 53% responded yes (n=53), and 25% no. While representation of the area’s environmental image may contribute somewhat to return visitation, the area is well-known for its natural attractions so the public artwork alone cannot be expected to bring people back. Commissioned public environmental art does however add to the holistic approach of natural and cultural tourism that the area is renowned for, contributing to the attraction of the area for interstate and international visitors.

Dialogue and reflection on the art

Participants were asked if they had spoken to others about the artwork to garner their level of engagement with the artwork via discourse. Thirty-four percent (34%, n=194) of respondents reported speaking to others about the artwork, with 80% of those being residents of the area. Sixty-three percent (63%) were residents that passed the public artwork daily, 23% weekly, and 3% monthly, indicating that the more regular the contact with the work, the more likely the participants were to enter into dialogue with others about it. This suggests that public art is better situated in active locations to encourage exposure and engagement with the work. Zebracki (2013) too, found in his study that those who frequently visited the area and were familiar with the artwork were more positive about its appropriateness and meaningfulness. Further study would be required to ascertain the focus of conversation about the artworks and whether the participants explored the environmental theme or the aesthetics of the work.

Of the respondents that reported speaking to others about the artworks, 58% were from responses to Banksias and 42% from Feathers. When referring to Feathers, respondents who had discussed the art were slower to respond to the question ‘What does this artwork make you feel or think about?’ prompting more thought as it was not initially obvious what the sculpture was depicting. While 85% of the Banksias’ audience who had discussed the art recognised what the artwork represented, only 7% recognised what the Feathers’ represented, and of those some commented that this was only
because they had read about the sculptures in the newspaper. While the *Banksias* commanded attention, and then mostly praise, the *Feathers* went largely unnoticed by the audience, but when prompted stimulated more thinking and imagination. As one participant commented: ‘Does it matter [what they think of the sculpture]? It will be different for everyone who sees it.’ Themes that emerged from responses to the *Feathers* included the beach, Indigenous past, leaves and nature; all valid and interesting themes. While the *Banksias* encouraged recognition of the local environment, the *Feathers* appeared to stimulate the audience’s imagination as a result of their abstract form. This achieved the artist's aims which were for the *Feathers* to be ambiguous and ‘off kilter’ to encourage people to think about what they were (L. Salton, personal communication, 29 May, 2014).

**Public art as medium for messages**

Respondents were asked if they liked the idea of public art having a message. Of the 200 respondents, 86% indicated that they liked it and 6% said they did not. The remainder were undecided. One participant commented ‘No point having it [public art] without a message.’ This offers an insight into the potential of public art as a local government resource to deliver messages in a public arena that offers wide exposure to a large demographic. The notion that the audience is not offended by a specific message confirms that this form of infrastructure can provide an avenue of communication via an engaging and imaginative format.

**CONCLUSION**

This study, which forms part of a broader research project investigating audience responses to environmental art, focussed on two public art installations. A document analysis, media analysis, and key stakeholder interviews explored the context, motivation, and community engagement involved in planning the two artworks. A face-to-face questionnaire was used to elicit local and visitor perceptions of the artworks in relation to sense of place and environment, level of engagement with the works through stimulating discourse and reflection, and opinions about using public art to deliver a message.

By engaging the community in the placemaking process, governments can encourage the expression of shared values that provide themes for final artworks that reflect the priorities of the community as well as enhancing the likelihood of acceptance of the works. From the data collected it was found that the artworks contributed to a sense of pride in respondents in both their place and the environmental image of the area. Local governments often invest in such art with an expectation that sense of pride instils place identity in a community which will lead to stewardship of both the area and the environment. The community engagement process in placemaking ensured that local community values were represented in the final outcomes. The majority of respondents liked the idea of public art
having a message, confirming that public art is a viable, imaginative, engaging, and acceptable communication tool.

Similar to Zebracki’s study (2013), the figurative works prompted a more positive response, whereas the abstract works stimulated more reflection as respondents thought about what the sculpture made them think or feel. The figurative artwork (*Banksias*) was more clearly representative of the natural ethos of the area and consequently reinforced the environmental image more than the abstract work (*Feathers*). Primarily residents rather than visitors spoke to others about the *Banksia* artworks, but the abstract *Feathers* prompted more diverse responses and curiosity as their form was not immediately clear.

In conclusion, if local governments are to invest in public environmental art, the following aspects, drawn from the study should be considered:

- the artwork contributed to both a pride in place and reinforced place identity and the area’s environmental values to many of its audience;
- people were more likely to interpret the figurative artworks as environmental as they recognised the representation;
- pride in an area’s environmental image did not necessarily lead to an intention to act more pro-environmentally;
- the more exposure to the sculptures, the more likely the person was to enter into discourse about it;
- the environmental ethos of a place (but not necessarily the public art itself) can act as a drawcard to increase return visitation;
- the audience in this research accepted public art as a medium to deliver social messages; and
- community engagement in the placemaking and commissioning process ensured the communication of local community values.

This study shows that local governments can commission public environmental art to reinforce a community’s shared values, encouraging an environmentally-aware community. While this research deliberately focussed on placemaking, sense of place and environmental messaging for comparison with the other case studies which are part of the broader project, future studies could delve into which aspects of public art best engage the community about the environment. Placemaking which inspires public environmental art is just one tool through which government can deliver environmental values with imagination and ongoing engagement. By demonstrating a holistic approach to integrating the environment into all spheres of service provision, governments can model a commitment to environmental sustainability.
Chapter 10

This article explores the aspects of environmental art that make it an engaging environmental education resource. It looks at how environmental art is used by two biosphere reserves at opposite ends of the world to demonstrate transferability to other biosphere reserves and environmental organisations. By exploring data collected in the Noosa Biosphere Reserve (Australia) through questionnaires and interviews, and data from the North Devon Biosphere Reserve (UK) collected through site visits, interviews, and document analysis, the article responds specifically to research questions 2, 3 and 4: How does environmental art contribute to an environmental sense of place? How do environmental education initiatives employing environmental art contribute to social learning? How can environmental art assist local government and environmental organisations to encourage pro-environmental behaviour and sense of place?

Environmental art and the biosphere: the role of environmental art in manifesting biosphere goals by facilitating creative approaches to environmental education
Submitted by M. Marks, L. Chandler and C. Baldwin to Environmental Education Research on 4 April 2015.

INTRODUCTION

Environmental education can be conducted in diverse ways and through a range of methods. Our research explored how imaginative environmental art installations and programs represent one approach that can engage audiences in building understanding about the environment. We looked at how environmental art has been used in two Biosphere Reserves (BRs) at opposite sides of the world to imaginatively realise BR environmental education goals. The Noosa (Australia) and North Devon (UK) BRs are proactive in engaging local communities through multiple environmental art initiatives involving artists working in collaboration with scientists, ecologists and educators. Through an examination of their initiatives using a range of approaches, we investigate the effectiveness of environmental art as an innovative format useful to BRs for building awareness and supporting environmental education.

BIOSPHERE RESERVES AND ENVIRONMENTAL EDUCATION

By definition, BRs encompass significant ecosystems and communities of stakeholders that work to balance biodiversity conservation and sustainable use (UNESCO 2015). Operating within UNESCO’s Man and the Biosphere (MAB) Programme, the BR initiative was launched in 1976 and is now represented by 631 BRs in 119 countries (UNESCO 2014b). The difference between the BR program
and other environmental programs is its focus on human involvement with nature, with the program aiming to ‘reconcile conservation of biodiversity, the question for economic and social development and the maintenance of associated cultural values’ by acting as ‘living laboratories’ that provide demonstration sites to share knowledge and create environmentally-themed discussion and programs (UNESCO 1996, p. 3). The Reserves function as ‘learning sites’ to ‘promote sustainable development based on local community efforts and sound science’ and seek to ‘demonstrate innovative approaches to conservation and sustainable development’ (UNESCO 2014b). A global survey of BRs affirmed their value as ‘potential learning sites’, providing ‘platforms for mutual and collective learning’, but stated that many did not take advantage of this function (Schultz and Lundholm 2010, pp. 645-647).

The importance of environmental education in BR ‘learning sites’ is emphasised in the framing document, *The Seville Strategy* (UNESCO 1995), as BRs seek to ‘promote the exchange and transfer of knowledge on environmental problems and solutions, and to foster environmental education for sustainable development’ (UNESCO 2014a). The Strategy offers Goal II, Objective III.3 that focuses especially on environmental education: ‘encourage local communities, school children and other stakeholders in education and research within biosphere reserves’ and ‘promote the development of ecology field educational centres within individual reserves, as facilities for contributing to the education of schoolchildren and other groups’ (UNESCO 1996, p. 10). UNESCO further refers more broadly to environmental education as a:

...process in which individuals and the community gain awareness of their environment and acquire the knowledge, values, skills, experiences and also the determination which will enable them to act - individually and collectively - to solve present and future environmental problems (UNESCO 1987, p. 6).

This paper explores initiatives in two BRs in which creative thinkers and practitioners were integrated within educational strategies to imaginatively realise BR aims, with artists operating in partnership with local communities, biosphere governing boards, scientists and educators. As Monroe, Andrews and Biedenweg (2008) suggest, different educational initiatives can be employed depending on the educator’s purpose. They define four kinds of environmental education interventions based on their objectives, of which the category ‘Building Understanding’ most aptly aligns with the North Devon and Noosa BR initiatives. Key goals of such interventions are: ‘To exchange ideas and provide dialogue, to build a sense of place, to clarify and enhance the understanding of information and issues and to generate concern’ (Monroe, Andrews & Biedenweg 2008, p. 212). As demonstrated later in this paper, both the Noosa and North Devon BR initiatives employ the use of participatory, multi-disciplinary place-based learning to achieve these goals. Well-designed approaches such as these that involve communication sharing and experiential learning ‘in the field’ can be an effective means of improving educational methods, inspiring and motivating learners, and building understanding.
(Monroe, Andrews & Biedenweg 2008). Furthermore, when contexts are provided for dialogue between people with different perspectives, this facilitates the possibility of ‘learning between different knowledge systems, such as indigenous knowledge, local ecological knowledge [the ecological knowledge of the actual resource-users and local institutions (Olsson & Folke 2001)] and scientific knowledge’ (Schultz & Lundholm 2010, pp. 645-646). Participation in engaging environmental art initiatives that bring together different disciplines in a place-based setting can lead to discussions that expand awareness and understanding of the environment.

ENVIRONMENTAL ART FOR ENVIRONMENTAL EDUCATION: GENERATING AWARENESS AND DIALOGUE

Environmental art is a diverse field of creative practice that can incorporate works that engender an appreciation of nature, as well as works that ‘employ nature as a medium’ (Spaid 2002). It primarily involves art created with the intention of drawing attention to nature and raising awareness of environmental issues (Brown 2014; Gablik 1992; Kastner & Wallis 1998; Lippard 1997; Matilsky 1992; Wallen 2012; Weintraub 2012). Environmental art can be permanent or ephemeral and created in any format such as sculpture, photography, multimedia or performance. When it is located in a specific environment it can highlight ‘the “special” qualities of place embedded in everyday life’ (Lippard 1997, p. 37).

Contemporary environmental art works often convey a notion of the world as ‘a place of interaction and connection’ (Gablik 1992, pp. 150-151). Ecological or eco-art is a form of environmental art underpinned by ecological perspectives that further highlight the inter-relationships between humans and nature and conceives of them as functioning within interconnected systems. It often has an activist intent, emphasising process, cross-disciplinary collaboration and community engagement processes rather than a final art object (Spaid 2002; Wallen 2012; Weintraub 2012). Typically environmental art works do not present ideas in a didactic manner but rather communicate in imaginative and sometimes open-ended ways. This opens a space of questioning, fostering a ‘dialogical exchange’ that is further enriched if the work’s presentation involves a participatory component (Gablik 1992; Kester 2004, p. 90). Such approaches can encourage participants to contemplate their relationship with the environment and to reflect on environmental behaviours (Gablik 1992, pp. 150-151).

Environmental art can perform this educational function by engaging people with the environment in particular ways. It can generate dialogue, stimulate creative thinking, elicit emotional responses and offer opportunities for participatory practices that allow people to reflect on what they value in their environment (Chandler, Baldwin & Marks 2014). Additionally, art which is situated in and is about the environment can encourage a sense of place in individuals and communities that can lead to
environmental stewardship (Chandler, Baldwin & Marks 2014). We suggest that the integration of environmental art within BR educational programs does not replace, but rather complements scientific and other primarily information-based education. We explore how creative communication approaches can complement scientific discourses by translating complex concepts into ‘meaningful, attractive and accessible form[s] of information’ (Sheppard 2012, p. 35) and how artists can apply innovative thinking to re-envision environmental issues in imaginative and memorable ways. When such engagement with environmental art is enhanced by social interaction, discussion, reflection, experiential learning and educational activities, these processes can support increased environmental awareness and stewardship by drawing out environmental values, because people need ‘to care about’ relevant issues in order to be motivated to take action (Lorenzoni, Nicholson-Cole & Whitmarsh 2007, p. 446).

This paper investigates the effectiveness of environmental art as a resource for learning and consequently seeks to add to the discussion about the role of environmental education within BRs. The authors (Marks, Baldwin & Chandler 2014) have conducted a study of audience responses to the Noosa BR-supported environmental art festival, Floating Land, which demonstrates the impact of environmental art initiatives in influencing participants’ intentions to act on environmental concerns. We draw on that study to consider in broader terms the approaches employed by both the Noosa and North Devon BRs. In doing so, we aim to increase public awareness of BR aims and outcomes and to support ‘developing effective learning networks’ and ‘shared learning strategies’ to serve the aims of the MAB program (Meijaard, Denn, & Mous 2010, p. 4). To date, reviews and academic research about BRs have focussed primarily on governance aspects (Stoll-Leemann & Welp 2008; Sundberg 1998; Xu et al 2006; Schultz, Duit & Folke 2011; Lu et al 2003; Bell 2006; Edge & McAllister 2009; Lambert 2008; Mercer & Hyman 2009; Price et al 2010; Reed & Egunyu 2013); ecotourism (Maikhuri et al 2000; Kent et al 2012; and environmental education through community-based environmental monitoring, and partnerships in learning and research (Schultz & Lundholm 2010; Pujadas & Castillo 2007; Reed et al 2014; Reed & Massie 2013). We have not however, found any documentation or evidence of environmental art being used to encourage environmental awareness and skills in BRs other than in Noosa and North Devon.

**NOOSA BIOSPHERE RESERVE’S ENVIRONMENTAL ART INITIATIVES**

The Noosa Biosphere Reserve, designated in 2007, was the first BR in the state of Queensland, Australia. It is renowned for its natural features: beaches and coastal areas, a lake and river system, coastal and hinterland townships, rural farmland, state forests and the popular Noosa National Park. In manifesting BR aims of promoting ‘harmony between people and nature through education, conservation and sustainable development’ (Noosa Biosphere 2012), the Noosa BR includes the arts as a means of engaging the community. Its Green Art fact sheet identifies the region’s ‘strong focus
on art and environment activities’, acknowledging the arts as ‘crucial to developing a positive engagement with our natural surroundings and with our more-than-human future’ (Noosa Biosphere 2012). *Floating Land*, an environmental art festival held biennially within the Noosa BR, manifests some of these goals along with other Noosa BR-supported environmental art initiatives, such as the annual Biosphere Art Prize that encourages work responding to the local environment and/or raising awareness of environmental issues. The prize also has an educational component, having supported the mentorship of an emerging artist (2012) and an artist residency in local schools (2014-15).

As the flagship event for the Noosa BR, *Floating Land* has been the focus of the authors’ research on environmental art. The festival was initially conceived as an ‘art-in-nature’ outdoor sculpture event in 2001, evolving to become a community-focused festival involving local, national and international artists in producing works which aim to generate environmental awareness, dialogue and reflection on place. Since 2009, the event’s main location has been at the pristine lake-side setting of Lake Cootharaba at Boreen Point, a village within the Noosa BR. Recent festivals have introduced themes including climate change and rising seas (2009), water culture (2011) and nature’s dialogue (2013), with the latter drawing on the concept of biomimicry and nature’s inspiration for innovative human designs. The 2013 festival, held over ten days, included over 65 professional artists, including indigenous artists from Australia and the Pacific region. Practitioners worked in diverse formats including site-specific sculpture, light and film projections, music and sound, written and spoken word, dance and performance, with many works situated in or around the lake. The past three iterations of *Floating Land* have also incorporated specific educational programming to support the festival’s focus on informal social learning, or learning that occurs in a social context where individuals observe each other and learn from their social interactions within that group (Bandura & McLelland 1977). At *Floating Land* 2013, the creative works were programmed alongside workshops, talks, films, and tours. Complementing learning in the field was the associated *Balance-Unbalance International Conference* that brought international and national scientists and artists together to ‘explore intersections between nature, science, technology and society as we move into an era of both unprecedented ecological threats and trans-disciplinary possibilities’ (Sunshine Coast Council 2013a, p. 41). The event is also enriched by extensive community consultation and partnerships with local universities, environmental groups and eco-tourism businesses.

**NORTH DEVON BIOSPHERE RESERVE’S ENVIRONMENTAL ART INITIATIVES**

The North Devon Biosphere Reserve (NDBR) is located in the southwest of England and was the first BR designated in the UK in 1976. Similar to the Noosa BR, it has diverse ecosystems including coastal and rural environments, river networks and no single major town centre, with the Reserve’s core at the estuary of the Taw and Torridge rivers. Like the Noosa BR, cultural heritage is also acknowledged as being an important quality of the NDBR that frequently works with artists ‘to
inspire, entertain and educate’ (North Devon Biosphere Reserve 2015a). The NDBR’s aims in engaging communities with the biosphere and facilitating environmental education through the arts are outlined in its North Devon’s UNESCO Biosphere Reserve Arts Strategy (North Devon Biosphere Reserve 2010). This identifies NDBR intentions to ‘engage with local people and to explain the “complex concept” of the Biosphere Reserve’ through developing partnerships between the BR, arts organisations and schools (North Devon Biosphere Reserve 2010, p. 5).

The NDBR has undertaken various arts initiatives with project partners, including Sea4Life, which brought together ecologists, artists and schoolchildren, some of whom were trained as mentors, to collaborate in field activities aimed at increasing their understandings of coastal ecology. Another project, Confluence, involved four artists working with the University of Plymouth’s i-DAT (Institute of Digital Art and Technology), NDBR staff and schoolchildren in gathering and interpreting environmental data collected by remote sensors called ECOIDS, placed along the River Torridge. Artists worked with the schoolchildren to transform the data for presentation in imaginative ways, also creating individual works based on their own experiences with the project. These were all presented to community members in a public program, including travelling roadshows, enabling multiple opportunities for dialogue. A third initiative, Giants in the Forest, presented several giant wicker heads interwoven with native woodland plants and suspended in trees overlooking the River Torridge on the popular Tarka Trail walking and cycling track. Visitors were encouraged to upload to the project’s website photos of the plant-festooned heads that grew and changed as the seasons progressed. In 2012 and again in 2014, storytellers engaged with over 400 primary schoolchildren in the field in creating imaginative tales related to the Giants in the Forest. The project aimed to ‘raise awareness of the Biosphere’s Nature Improvement Area work’ in habitat restoration, and more broadly, ‘to inspire people to think about their surroundings, how they are changing and their place in shaping that change’ (North Devon Biosphere Reserve 2015b).
OUR APPROACH

Noosa BR's *Floating Land* and the three NDBR initiatives all involve inter-disciplinary, place-based, constructive learning approaches, undertaken within specific sites. By involving ecologists, scientists and research they contribute in building knowledge, and by involving imaginative approaches they encourage community engagement with relevant issues. Our research focuses on how their environmental art initiatives can encourage awareness that leads to caring for the environment, and in relation to the goals to 'build understanding', identified earlier. We structure our analysis around ways in which these projects enable participants: ‘to exchange ideas and provide dialogue, to build a sense of place, to clarify and enhance the understanding of information and issues and to generate concern’ (Monroe, Andrews & Biedeweg 2008, p. 212).

Our analysis draws primarily on a study we undertook about the *Floating Land* 2013 event. Three groups of participants were invited to complete surveys: the festival audience, workshop participants, and local residents. The audience respondents were self-selecting, completing surveys at the festival in the ‘Reading Room’, a marquee especially set up as an outdoor living room to attract participants to sit, relax and complete the survey. The workshop participant respondents were also self-selecting, volunteering to complete a survey when distributed by the authors after workshop sessions. Of the estimated 5,000 attending over the 10 days of the event, 120 festival attendees and 30 workshop participants completed surveys. While there was no attempt to achieve a proportional gender/age sample, the respondents generally appeared to be representative of attendees, with females and age...
groups between 36 to 65 years old providing the majority of responses. Two hundred residents of the local village, Boreen Point, received both pre- and post-festival surveys as a result of a letterbox drop. In spite of reminders, 36 (18%) local residents responded to both the pre- and post-surveys.

We measured, through separate questionnaires for each group, the level of engagement with environmental themes, environmental attitudes and behaviours, sense of place indicators, and participants’ intentions to change behaviours as a result of attending the festival. The questionnaires were constructed using adaptations of scales of environmental behaviours based on Steg (1999 cited in Gatersleben, Steg & Vlek 2002) and scales of sense of place devised by Jorgenson and Stedman (2006) and Kaltenborn (1998). Both Likert scale and open-ended questions were asked to garner qualitative and quantitative data. SPSS was used to statistically analyse the quantitative measures such as correlations between environmental attitudes and behaviours and intention to change behaviour, and festival participation and intention to change behaviour. This paper focuses further on the qualitative responses that were explored for recurrent themes and richer insights into the audience’s, workshop participants’ and residents’ response to the festival.

Due to the different format and timing of North Devon BR environmental art initiatives, the NDBR case did not replicate the methods used for Noosa BR, but was based on outcomes of a total of four detailed interviews conducted with an artist, an ecologist, an arts administrator and a Biosphere Foundation member, all of whom had been involved with NDBR projects, a document analysis of strategies, reports and teachers’ resources (North Devon Biosphere Reserve 2010, 2012, 2015a, 2015b), site visits and additional informal interviews with artists and ecologists. Thus, rather than providing an identical comparative analysis, the NDBR is used to supply further evidence and enrich the discussion about environmental art as a learning strategy for the MAB program. The following analysis demonstrates environmental education through environmental art initiatives in the two case studies, structured around qualities of dialogue, idea exchange, awareness and care for the environment, and sense of place.

**HOW ENVIRONMENTAL ART FOSTERS DIALOGUE, IDEA EXCHANGE AND PARTICIPATORY PRACTICES**

The Noosa BR’s *Floating Land* event and the NDBR *Confluence, Giants in the Forest* and *Sea4Life* projects all involved participants engaging with art works created within or in response to local environments. In each case these initiatives were enriched by a strong educational component incorporating multi-disciplinary input and participation, social learning and opportunities for idea exchange, dialogue and reflection. An example from *Floating Land* is the presentation of three interconnected sculptural works located at the lake that drew attention to the importance of the julara
fish (the local indigenous Kabi Kabi people’s name for the mullet) within the ecosystem of local waterways (see Figures 2 and 3).

Simon and Adrienne McVerry’s colourful Julara sculptures were positioned within the lake, Kris Martin’s Julara Fishnet Weaving project included a leaping school of julara woven from locally sourced Cats Claw weed vines, and Kabi Kabi artists Lyndon Davis and Brent Miller drew on traditional knowledge to create a sculptural suspended net constructed from local bark and fibre.
Two workshops enabled participants to discuss and reflect with the artists and each other on the works, create related artefacts from natural materials, further understand the role of the mullet within indigenous and non-indigenous knowledge systems, and also to explore the inter-relationships with the local environment. Respondent comments from questionnaires demonstrate the variety of learnings that the participants experienced as a result of the workshops, from using natural art materials, to learning about the julara, to thinking about the environment, and indigenous practices:

‘... the importance of using natural materials for art, instead of consumerism of art materials’ (female, 56-65 years old)

‘... learning a technique which I can easily remember and adapt at home, using fibres I already have in my garden’ (gender, age unknown)

‘... sense of creating something from nature’ (female, 46-55 years old)

‘... more aware of the lake and its “contents”’ (female, 46-55)

‘... how time and environment are related, handcraft, slow process, hard works vs fast production, easy fix, disconnect from being busy’ (female, 36-45 years old)

‘... learning to shape the fish. An ancient skill for 21 Century’ (female, 56-65 years old)

‘... the exhibition of the fish out of the water display speaks to me, the way the government doesn't understand how important conservation really is’ (female, 46-55 years old)

In our surveys, Floating Land participants commented on the positive impact of these reflective, social learning experiences and the benefits of engaging with others to consider environmental issues. Responses reflected a sense of interconnection with others and of concern for the environment:

‘So many people here - feel more positive about possibilities’ (female, 46-55 years old)

‘I feel more hopeful to meet so many others who care about ecology’ (female, 46-55 years old)

‘... seeing that other human beings (artists) love the planet passionately and grieve /care for what we do to it’ (gender and age unknown)

When asked about their favourite aspects of the festival, participants commented on the social interaction:

‘... the opportunity to see ecological art work, meeting environmentally conscious community and talk about all related issues with participants and attendees’ (male, 26-35 years old)

‘... the art / talking to like-minded people. Learning’ (gender unknown, 65+ years old)
Such comments suggest a valuing of the role of dialogue, learning and community generated through the event. It also demonstrates the techniques used were effective in ‘building understanding’ by promoting the exchange of ideas and providing dialogue, leading to participants generating concern (Monroe, Andrews & Biedenweg 2008).

The NDBR’s *Confluence* project brought together four project partners, eight schools and over 500 students and teachers to trial ‘the use of the arts and creative approaches to community engagement, in relation to environmental issues’ in a Biosphere Reserve. The project sought to ‘raise awareness’ and involve local people ‘in monitoring their environment’ and ‘encourage behaviour change among local communities’ (North Devon Biosphere Reserve 2012, p. 1, 2, 6). Although this ambitious project had some setbacks involving technologies and timing, it nevertheless represented an imaginative constructive learning environment which exposed students to artists, the BR and university staff, and enabled them to learn in cross-disciplinary ways. Referring to the learning outcomes, one teacher commented that the project: ‘helped us develop understanding of local environment’ and contributed to understandings of ‘the use of data and interpretation of data’ (North Devon Biosphere Reserve 2012, p. 27).

Opportunities for further cross-disciplinary dialogue and idea exchange also occurred when 63 educators, technologists, artists and environmentalists participated in a seminar linked with the *Confluence* project. Additionally, three community roadshows were staged, as well as a final exhibition which received almost 700 visitors. This was presented in a five-metre immersive dome containing interpretive material and art works, some of which were projected onto the dome’s interior walls. Visitors referred to the innovative and engaging nature of the experience with comments including:

‘Interesting and something new that you don’t come across every day. Bringing art and knowledge together’

‘Really inspiring, great to follow, like a journey of our local river’

‘I really appreciate the integration of science and art’

‘... innovative, stimulating and lots to learn’

One visitor also commented on their initial reluctance to see an art exhibition but that after speaking with staff and engaging with the exhibition they left ‘amazed’ (North Devon Biosphere Reserve 2012, p. 7, 14-17). Such comments from both the Noosa and North Devon BRs data support the notion that environmental art fosters dialogue, idea exchange and participatory practices by engaging audiences through imaginative place-based initiatives.
HOW ENVIRONMENTAL ART CAN ENCOURAGE AWARENESS THAT LEADS TO CARING FOR THE ENVIRONMENT

Environmental art can draw attention to the environment in imaginative ways that encourage a caring and consequent stewardship, because, as stated earlier, people need ‘to care about’ relevant issues in order to be motivated to take action (Lorenzoni, Nicholson-Cole & Whitmarsh 2007, p. 446). Studies by Curtis (2006, 2010) have considered ways in which art events that connect people with environmental issues can foster environmental engagement and encourage behaviour change. Curtis’ 2010 study of an environmentally-based performance found that the event instilled in the participants a ‘rich emotional response’ that could lead to community building, environmental awareness and consequent pro-environmental behaviour change (Curtis 2010, p. 65). Many of his participants were able to express their feelings about the environment through their participation in the creative performance, with one commenting on ‘the transition from being “entertained” to gaining deeper understanding of the environmental message’ (Curtis 2010, p. 71).

The learning communities generated within Floating Land led many participants to feel more positive about their capacity to enact change. Survey results revealed that 41% of the Floating Land audience intended to change their environmental behaviours as a result of attending the festival. Many participants attended the festival for reasons other than the environment, but indicated that they intended to change their behaviour as a result of the festival. Of the 70 responses to ‘what made you want to attend Floating Land?’ 61 asserted that they came to the festival for reasons other than the environment. Of those 61, twenty-nine intended to change their environmental behaviours as a result of the festival. That is almost a quarter (24%) of the total sample population of 120 that came to the festival without environmental intention, and left with an intention to change their behaviour. The focus is on intention as research shows that intention is considered a reasonable predictor of environmental behaviour (Jackson 2005).

Creative approaches can support particular forms of environmental engagement, which can be defined as one’s ‘personal connection with’ the environment and ‘what people know, feel and do in relation to’ environmental concerns (Whitmarsh, O’Neill & Lorenzoni 2011, p. 3). At Floating Land, the beauty and dramatic impact of some works fostered engagement by generating thoughtful and felt responses that enabled participants to reflect on what they valued in their environment. The Reading Clouds – Floating Middens installation by Maori artist Michel Tuffery and Australian artist James Muller (see Figures 4 and 5) provided a day and night spectacle that gained wide media coverage. The sculptures attracted a wide audience that were then exposed to an art work which acknowledged ‘the history, physical geography and navigational links of the wider Pacific region and its peoples’ (Sunshine Coast Council 2013a). The large organic forms, constructed from renewable weed fibre and positioned in the lake, referred to the significance of shells in Maori and Aboriginal cultures, highlighting the Pacific peoples’ inter-relationship with the environment. At night, imagery projected onto the shells suggested ways in which Pacific peoples have built observational knowledge of clouds, currents and other natural signs to literally and metaphorically navigate their environment. Participant comments reflected strongly-felt reactions to the work and their relationship with nature:

‘The use of natural materials like the shells and fish in the water has drawn my attention to the beauty and delicacy of the environment on the coast’ (female, 56-65 years old)

‘They fit so beautifully with the surrounds’ (female, 36-45 years old)

‘The art work acts to lift my spirits and reinforce my existing love of being in the natural environment’ (female, 46-55 years old)

The emotional response to the beauty of artwork not only attracted a wider audience, but also raised awareness, reminding people of the beauty of their place and their inspiration to act as stewards towards it. Our surveys of Floating Land participants revealed emotional responses generated through experiencing the art works and the festival:

‘Reinforced and ignited my passion for the environment and appreciation of nature and my passion for wanting to communicate this to other people’ (female, 26-35 years old)

‘The green art movement on the coast has inspired me to get involved and take it further’ (female, 26-35 years old)

‘Makes you think! I really care about our lovely land’ (female, 56-65 years old)

In terms of the NDBR, one artist revealed how the Confluence project boosted his environmental knowledge and motivated him to become further involved, noting:
I have gained a deep insight into the task of managing and protecting a special landscape. I was pleased to encounter very keen and committed individuals in the locality - both professional and voluntary - and hope to find ways to revisit the area and carry on aspects of the project (North Devon Biosphere Reserve 2012, p. 23).

The Confluence roadshows that presented the project to the wider community demonstrated how imaginative approaches can engage diverse audiences, with one of the roadshow reports noting: ‘Most [visitors] interested and engaged with different aspects … Surprising number of over 60s engaging with the idea of the ECOIDS and the work of i-DAT. Had a good buzz and there were always people in the room’ (North Devon Biosphere Reserve 2012, p. 12). Environmental art, while engaging people through imaginative art and activities, can also act as a trigger and inspiration for engagement and action. This does not negate the need for clear scientifically-informed information, but rather suggests that environmental art can complement such forms of communication by encouraging awareness that can lead to caring for the environment.

HOW ENVIRONMENTAL ART CAN ENCOURAGE A SENSE OF PLACE

Environmental art attracts its audience into the outdoors, providing opportunities to re-draw attention to the environment while also offering imaginative experiences that can remind people of the beauty of their place. As Carlson (2000, p. 150) suggests, in many instances: ‘Not only is the site of an environmental work an environmental site, but the site itself is an aspect of the work’. Outdoor festivals such as Floating Land, and place-based learning initiatives such as the NDBR’s Confluence, Giants in the Forest and Sea4 Life, provide opportunities for local communities to strengthen their sense of place through reminding or re-attracting their attention to their environment. Sense of place is defined as the creation of meaning at a setting by an individual (Williams & Patterson 1996), and encompasses three components: ‘the physical environment, human behaviours and social and/or psychological processes’ (Stedman 2003, p. 671). Both residents and visitors can find place meaning through a significant experience (Kianicka et al. 2006), such as participating in an environmental art initiative. Outdoor festivals and place-based learning initiatives provide opportunities for communities to have positive social experiences as well as positive environmental experiences at locations that can enhance a sense of place.

Environmental education can instil or further enhance an individual’s and a community’s sense of place (Kudryavtsev, Stedman, & Krasny 2011), a key factor in ‘building understanding’ (Monroe, Andrews & Biedenweg 2008). At Floating Land, art works were located in the environment, on or beside the lake, to provide an experience that reminded residents of the beauty of their village in order to enhance their place attachment. Data from Floating Land surveys revealed that the local community of Boreen Point where the festival was held benefited the most in terms of re-imagining
their place and feeling inspired to take on further stewardship of their environment. Of the 36 respondents (out of approximately 200 adult residents) to a pre- and post-festival questionnaire, 75% indicated that the festival made them feel more proud of their village, while 44% wanted to do more for their environment as a result of attending the festival. Respondents commented that:

‘... [the festival] reinforced our desire to keep/conserve what we have and what we value i.e. a pristine environment’

‘The evolution of Floating Land since we have lived here has given me a deeper awareness of the importance of sharing our appreciation of a natural, unspoilt area’

In regards to enhancing their sense of place, 53% said that they felt more a part of their community since the festival, while 47% agreed that the event made them want to do more for their community. Respondents’ comments included:

‘... [the festival] reinforced a sense of community and why I love where I live - a truly beautiful place’

‘Although I have lived in Boreen Point for 15 years this was the first time I really immersed myself in Floating Land and I thoroughly enjoyed myself - felt very connected to community and beauty of Boreen Point. Feel proud and grateful to live in such a beautiful place’

The three NDBR initiatives were designed to foster a sense of place in participants by enriching understandings of specific environments through place-based activities that involved experiencing and engaging with those environments in multi-faceted and multi-disciplinary ways. Confluence involved the visualisation of live environmental data generated from particular sites such as a local watercourse, in ways that revealed the invisible and facilitated fresh understandings of the local environment. Sea4Life incorporated field activities examining BR coastal and estuarine environments employing both scientific enquiry and creative practice such as observing and recording beach debris before incorporating it into imaginative art works. For Giants in the Forest, school children engaged with the living sculptures on the Tarka Trail, and were encouraged to weave layers of information about botany, history and geography with their imaginative experiences of place. The project’s educational resources reflect on the role of this creative initiative in fostering a sense of place, noting: ‘Having memorable times in nature helps connect children (and all of us) to where we live and increases a sense of belonging and ownership’ (North Devon Biosphere Reserve (2015c, p. 3).

Through initiatives such as these, by focussing on the local environment through an environmental art festival and by implementing imaginative place-based activities that promote a strong sense of place, BRs can motivate communities to engage in environmental stewardship as a result of positive thoughts, feelings and beliefs about their place.
CONCLUSION

Our primary study focused on an analysis of the environmental art festival, *Floating Land* within the Noosa BR, with examples from the NDBR used to support the contention that environmental art can be a useful resource for BRs to achieve their overarching educational goals, as effective learning sites for environmental education. We suggest that there is sufficient evidence in our research to demonstrate that environmental art can engage an audience by imaginatively presenting the environment in participatory place-based initiatives.

The environmental art initiatives explored in this study have:

- fostered dialogue and idea exchange, with our Noosa BR study showing that many festival participants felt more positive about their capacity to enact change as a result of their social learning;
- encouraged interdisciplinarity via the presentation of forums and the creation of art works that introduced scientists, artists, environmentalists, educators and the community to one another to stimulate discussion and thinking about innovative solutions to environmental issues;
- encouraged awareness through engagement and education that can lead to caring for the environment;
- engaged an audience in place-based learning and drew attention to the local environment. By placing art works in outdoor sites, the audience’s attention is drawn to their everyday spaces with surveys finding that many residents re-imagined their place and felt a reinvigorated appreciation of it; and
- enhanced a sense of place for many of the participants. The Noosa BR study found that local residents felt more a part of their community, and as a result wanted to do more for their environment and community.

We have shown how environmental art has been used in two BRs to foster dialogue, idea exchange and participation. We have also demonstrated how it can build a sense of place, as well as awareness that can lead to caring and an intention to act for the environment. In this way, activities of the two BRs align with Monroe, Andrew and Biedenweg’s (2008) environmental education interventions to ‘build understanding’. Further research could provide a systematic comparative analysis between BRs and their learning approaches; compare BR environmental art initiatives in greater depth and investigate the long term effects of such events; and explore whether emotional responses and motivations do actually lead to environmental action and/or stewardship.

By facilitating enjoyable and imaginative environmental art initiatives, BRs can encourage social learning, skill-building, and potentially attitude and behaviour change. The Noosa and North Devon...
BR environmental art festivals, installations and workshops have shown that environmental art is one initiative that is transferable to other BRs, and also other community or government initiatives that aim to encourage environmental education. BRs can indeed act as ‘potential learning sites’, ‘providing platforms for mutual and collective learning’ (Schultz & Lundholm 2010, pp. 645-647) and we urge greater exploration of innovative approaches in this domain.
Chapter 11

Conclusion

11.1 RESEARCH AIMS AND QUESTIONS ADDRESSED

The main aim of this thesis was to demonstrate ways in which government, environmental organisations and social planners can use environmental art as a resource to encourage pro-environmental behaviours and a sense of place. It looked at the ways a local government body (Sunshine Coast Council) and an environmental organisation (Noosa Biosphere Limited) integrated environmental art into their environmental education programs, in the form of an environmental art festival and public artworks, to provide a model for other organisations that can benefit from this imaginative format. By exploring two avenues in which Jackson (2005) suggests government can encourage environmental behaviour – that of engaging people in initiatives to help themselves, and exemplifying pro-environmental behaviours in government’s own practices – it investigated the effects of a festival and public art installations to discern whether these initiatives actually resulted in pro-environmental behaviours. It also further explored the effects of social learning and participation, inherent in environmental art, on people’s intentions to act pro-environmentally and their resultant sense of place, and discussed the benefits of environmental art as a resource for environmental education.

The research informed three inter-related articles. The first article explored the effectiveness of environmental art in prompting pro-environmental behaviours, a sense of place, and social learning in a festival format. The second article built on the findings from the festival case study and further explored the sense of place prompted by environmental art, this time focussing on its presentation in the format of static public art. The final article looked at environmental art’s potential as a communication device for environmental education and emphasised its transferability to other organisations by describing the experiences of two biosphere reserves on opposite sides of the world. The first two articles focussed on local government initiatives, while the final article explored environmental organisations’ programs to demonstrate the usefulness of environmental art in both instances.

The aim of the research and the articles was to answer the following research questions.

11.1.1 How does participating in/observing environmental art contribute to pro-environmental behaviour?

Environmental art offers a welcoming space for individuals and communities to collaborate and participate in activities and exhibitions that stimulate creative thinking, elicit emotional responses and
generate dialogue (Chandler, Baldwin and Marks 2014). While this research does not confirm that this directly leads to pro-environmental behaviour change, it offers that environmental art is a particularly engaging, novel, aesthetic, social educative approach to engaging people with the environment that can contribute to behaviour change. By encouraging emotional responses to the environment via art, a community can be inspired to care about their place and consequently enact pro-environmental behaviours (Curtis 2009). An audience can be attracted to exhibitions, workshops, performances and forums for reasons other than engaging with the environment, and as experienced by many respondents at the *Floating Land* festival, can leave with an intention to change their pro-environmental behaviours.

Environmental art is one resource that can be used by environmental educators to ‘build understanding’ by presenting information in a way that complements scientific discourses. It offers opportunities for people to exchange ideas, enhance their sense of place, clarify information and generate concern for the environment (Monroe, Andrews & Biedenweg 2008). For example, eco-artists specifically represent the environment in a systems thinking paradigm that looks at the totality of the ecosystem, creating imaginative art that reinforces the concept of humans as part of nature rather than distinct from it. In response to this, artists at *Floating Land* 2013 worked with the theme of ‘biomimicry’, presenting artworks that aimed to ‘build understanding’ about humans’ place within nature in an effort to encourage stewardship for the environment. The festival’s interdisciplinary approach encouraged dialogue between people with different perspectives, drawing from varying knowledge systems. Environmental knowledge from Australian and Pacific indigenous peoples, scientific perspectives and local ecological understandings were brought together through the festival and communicated in creative and informative ways. *Floating Land* offered an opportunity for the audience to reflect on their place in nature by building understanding and creating a space for dialogue with others with different perspectives. As a result of attending the festival and engaging in presentations of artworks, workshops, forums, performance and film in and about the environment, many of the research participants offered that they intended to change their pro-environmental behaviours.

Through commissioning public art with an environmental theme, government and other commissioning organisations can present an everyday reminder of the environmental ethos that they wish to instil in their audience. By presenting environmental messages in an imaginative format that stimulates questioning, a wide audience can be exposed to environmental messages in their everyday life that can trigger a reflection on the environment and what they value about it. *The People’s Garden* aimed to do this through digital interaction with the artwork. The *Banksias and Feathers* case study showed that people do recognise environmental themes, and the relevance of the representations of local flora and fauna inspired them to think about and feel pride in their local environment. It also demonstrated that there was a strong environmentally-focussed place identity already present in the
The community engagement process involved in commissioning the artworks ensured that community values were represented in the subsequent artworks. While it cannot be summised that this leads directly to pro-environmental behaviour, it can be said that it generates an environmental sense of place that can lead to pro-environmental behaviours.

### 11.1.2 How does environmental art contribute to an environmental sense of place?

This research has found that environmental art contributes to an environmental sense of place through providing opportunities for communities to re-imagine their environment, and through reinforcing environmental awareness and place identity. It does this in four ways:

- Presenting engaging artworks and activities that encourage social interaction, stimulating discourse and reflection about the environment (discussed in the next section);
- Placing artworks in nature to return focus to an individual’s everyday landscape and drawing attention to their place;
- Enhancing pride in an area through environmentally-themed artworks that encourage a proud environmental community as well as local distinctiveness; and
- Providing opportunities for the community to participate in the processes involved in commissioning and producing artworks, as well as interacting with the final artworks.

The most-cited favourite aspect of the *Floating Land* audience was the art placed in the local setting, with comments by both visitors and residents asserting that it highlighted the beautiful landscape. Many residents further commented that the artworks re-attracted them to the beauty of their environment and that they felt re-invigorated to act as stewards for it. They indicated that as a result of the festival they felt proud of their village, more a part of their community and wanted to do more for the environment.

Public art can offer an everyday reminder of the environment. While residents live as part of their environment every day, the art acts as a kind of trigger, as a ‘sign’ that causes passers-by to look at the ‘ordinary’ in a new way (Selwood 1995). Evidence from this research suggests that artworks enliven built spaces, not only enhancing a connection with art in our urban environment, but also encouraging reflection and discussion about the artworks and their themes, in this case the environment. Through exploring the *Banksias* and *Feathers* public art installations, that come under the third phase of the current model of public art, the ‘art in the public interest model’ (Kwon 2004), it was found that the environmental theme was not only recognised, but reinforced the pride felt by individuals in the environmental awareness of its community. Through the community engagement process that formed part of the revitalisation project that led to the commissioning of the public artworks, the community’s shared value of environmental awareness was identified. The resident
audience responses confirmed that the environmental themes were recognised and that it did make them proud of their place. Many responded that they were already proud of the environmental nature of their community, and that the sculptures made them more proud, reinforcing their environmentally-themed place identity.

11.1.3 How do environmental education initiatives employing environmental art contribute to social learning?

This research found that the two main ways in which social learning was enhanced through environmental education initiatives employing environmental art was through depicting social norms and via offering situations in which credible facilitators can persuade their audience through fun and engaging workshops.

Symbolic interactionism asserts that individuals construct their sense of self through interactions with others (Mead 1934); in the case of Floating Land, among a community of festival-goers where environmental norms were expressed. By spending time within a temporary environmental community created by the festival, audience members were exposed to an arena where environmental awareness and behaviours were considered the norm. Personal norms are constructed via social conversations, and can play an important role in environmental education. Schwartz’s (1977) Norm Activation Theory asserts that people will behave as a result of personal norms that are developed as a result of the individual’s awareness of the consequences of their actions as well as acceptance of responsibility for those actions. The responses of Floating Land participants confirmed this, with many behaviour-changers indicating that they felt a personal responsibility for the state of the environment. A high percentage of behaviour-changers also believed it is normal to want to help the environment, demonstrating their belief that they already have environmentally-significant personal norms. It must also be noted that non-behaviour-changers may not have intended to change their behaviours because they considered themselves already environmentally aware and already performing sufficient pro-environmental behaviours.

Much environmental art involves participation in the creation and exhibition of work (Gablik 1992). The very nature of engagement with others in collaboration and discussion promotes social learning that can create a community where environmental awareness is the norm. This was seen in the biosphere reserve examples where the environmental art provided social interaction, experiential learning and educational activities. Many Floating Land survey respondents commented that they came to the festival for the art, but as a result of attending were intending to change their behaviour in order to preserve and/or improve the environment. This ‘accidental demographic’ were lured to an environmentally-focused event through environmental art, where educators could then deliver their
message in imaginative, engaging and interesting ways to an audience that may not normally engage with environmental messages.

The other way in which social learning was found to be effective in this scenario was through offering space for persuasion by knowledgeable and credible facilitators. The *Floating Land* workshop facilitators were considered the most memorable aspect of the workshops by many respondents. Social modelling is considered one of the most effective strategies for encouraging pro-environmental behaviour, with persuasion theory pointing to the persuasive power of respected identities to communicate messages (Osbaldiston & Schott 2012). The responses from the *Floating Land* workshop participants showed that the facilitators indeed had an influence on the participants, and that they made the workshops memorable.

Through exploring two biosphere reserve case studies on opposite sides of the world, it was demonstrated that environmental education initiatives employing environmental art promote social learning that can lead to pro-environmental behaviour and a sense of place. By encouraging the creation of personal norms through discussion with others that provide vicarious accounts of experiences with the environment and opportunities for reflection, the audience was engaged in reflecting on their own environmental behaviours and attitudes. The environmental art also engaged a new audience in both art and the environment, and offered an opportunity for different perspectives and disciplines to come together to discuss and think about nature. By exploring the two case studies it was demonstrated that environmental art is an effective resource for environmental education, and is transferable to other environmental organisations and regions around the world.

11.1.4 How can environmental art assist local government and environmental organisations to encourage pro-environmental behaviour and a sense of place?

This research explored the initiatives of a local government body and the Noosa Biosphere Limited (as an example of an environmental organisation) to find that environmental art can be used by these organisations to:

- engage an audience;
- offer opportunities for participation in the processes of artwork creation and interaction with the artwork;
- stimulate interdisciplinary dialogue towards environmental issues and solutions;
- re-imagine nature and reinforce environmental awareness;
- enhance an environmentally-focussed sense of place;
- persuade towards environmental awareness;
- create a community where environmental awareness is considered a norm; and
- encourage positive attitudes that enable pro-environmental behaviours.
By presenting a holistic approach to the environment, government and environmental organisations can model behaviours that represent the goals of Agenda 21, aiming to achieve a global effort at sustainability by incorporating environmental concerns into all aspects of decision-making (United Nations 1992). This research explored environmental art initiatives that incorporated the environment in both process and infrastructure, as well as program facilitation. The Banksias and Feathers case study looked at the integration of environmental art into a revitalisation project, while the Floating Land case study explored the facilitation of environmental art in a participatory festival.

As a result of this research, I argue that government and environmental organisations can promote environmental awareness and behaviours through environmental art. By offering opportunities for participation and engagement with activities and installations, they can deliver messages in an imaginative format that complements scientific discourse about nature and environmental issues. While it cannot be shown that environmental art can directly lead to pro-environmental behaviours, it can encourage a pride in local nature that leads to an environmental sense of place. By presenting a community that demonstrates environmental norms, individuals are more likely to act for the environment to participate in the community’s shared values.

11.2 CONTRIBUTION TO KNOWLEDGE

This research has looked at environmental art through an environmental psychology, human geography, social planning and art history lens. It has formed the basis of three articles that have: investigated the effectiveness of environmental art in encouraging pro-environmental behaviour via a festival format; reported the audience response to public artworks that aim to enhance an environmental sense of place, and demonstrated the transferability of environmental art as a result of its ability to engage and teach about the environment. Through six questionnaires of different populations, seven artist and two council employee interviews, document and media analyses of two case studies that focussed on a festival format and public art installations, the research has drawn on the above disciplines to contribute to the fields of social planning and environmental education.

This study contributed to art history as it synthesised literature on environmental art to outline the paradigm shifts that have evolved since the 1960s. It looked at audience response to environmental art in specific contexts, the festival and public art format, that have rarely been researched. Its often participatory nature, set in the outdoors, allows for the audience to become more involved in both the art making and the site of the artwork, building an appreciation for creativity and the environment within which it is made. It has found that the social learning that accompanies much environmental art is effective in achieving the intentions of environmental artists, to create discussion around the environment. While it may not lead directly to action, it contributes to a holistic approach to the
environment, providing yet another avenue to stimulate care and action in a community in encouraging stewardship for nature.

This research contributed to the field of environmental psychology by finding that those who intended to change their behaviour as a result of attending *Floating Land* had attitudes that aligned with both Ajzen’s (1991) Theory of Planned Behaviour and Schwartz’s (1977) Norm Activation Theory. Ajzen (1991) asserts that attitudes, subjective norms and perceived behaviour control affect people’s choices, with the results of the *Floating Land* case study showing that behaviour-changers presented with positive attitudes towards the environment, a belief that it was normal to help the environment, and that change started with the individual. Schwartz’s (1977) Norm Activation theory states that people are influenced by their own personal norms which are based on an awareness of the consequences of their actions and accepting responsibility for those consequences. *Floating Land* behaviour-changers felt guilt about the state of the environment and felt that ‘a better environment starts with the individual’, inferring that they understand that they are responsible for their actions and that the consequences of their actions contribute to a better environment.

This study has also contributed to human geographies by exploring people’s sense of place as a result of engaging in or passing by environmental art. While place concepts have been explored from a number of angles, art’s effect on sense of place has not been researched extensively. This study responded to this by exploring the effect of festival participation on an audience’s sense of place, as well as the pride felt as a result of environmental public art installations, providing insights into the use of environmental art in enhancing a sense of place. It found that an individual’s and a community’s sense of place, and in this case environmental sense of place, can be enhanced by festivals and public art that demonstrate the shared value of environmental appreciation. It has shown that by participating in environmental art as part of a festival that both the audience and the residents can re-imagine their landscape and feel pride and an enhanced place identity that then encourages a heightened intention to act for the environment.

This research has contributed to the field of social planning by exploring the environmental art initiatives of a local government body and environmental organisation to assess its efficacy in affecting pro-environmental behaviours and a sense of place. By investigating the *Agenda 21* (United Nations 1992) notion that government should integrate sustainability into its processes and planning in an effort to provide a holistic approach to the environment, this research focussed on case studies that evolved as a result of a local government’s award-winning environmental art framework. The study investigated this unique situation to provide a model for other government bodies and environmental organisations. It found that festivals and public art provide effective communication tools to deliver messages about the environment, which enhance engagement with, and care for, the environment. For governments and community organisations that aim to encourage environmental
awareness this provides a model for communication that enhances engagement through the imaginative format of environmental art. This research has contributed to environmental education by demonstrating the potential of environmental art as a communication tool for government and environmental organisations. There is limited quantitative research on the effects of environmental art on its audience. This mixed methods study provided a qualitative and quantitative analysis of a number of relevant ‘communities’, that of audience, artists, residents, and council employees, to garner a broad picture of the effect of environmental art on those involved. It looked at aspects of contemporary environmental art that make it an engaging format in which to communicate about environmental matters, namely its participatory, cross-disciplinary, collaborative, and site-specific approaches. From this research it can be asserted that environmental art is an imaginative resource that can engage an audience in environmental messages.

11.3 LIMITATIONS OF RESEARCH

Audience response to art is a complex concept to measure due to its subjectivity, the difficulty in qualifying and quantifying emotional responses, and reaction time may occur anytime from instantaneously to days, weeks, months or years later. This means that it is impossible to truly measure an individual’s reaction to artworks. In order to glean the information required from the audience, workshop participants, and residents, simple closed questions were asked that directly requested opinions on specific aspects of their response to the artworks. Open-ended questions were also asked to stimulate thinking about the works and what they represented to the participants, but targeted questions ensured a direct response to collect data that answered the aims of the study.

The often-stated subjectivity of qualitative research was acknowledged within this research. Sense of place research is often criticised as it is based on qualitative responses about the concepts of place, which are seen as personal constructs and consequently difficult to measure. The same can be said of responses to art. To ensure a rigorous study of both sense of place and art response, methodological triangulation was used in a study that offered a broad range of perspectives in response to environmental art through multiple case studies, methods and populations. Quantitative data was collected to provide further analysis that ensured this mixed methods study was thorough.

Behaviour change, and especially pro-environmental behaviour change, is difficult to measure. Within research disciplines it is understood that without committing to a longitudinal scientific study that measures people’s environmental behaviours quantitatively, it is difficult to glean if change has occurred. Consequently the notion of intention to change behaviour was considered within this study. While it is acknowledged as not being a perfect predictor as it is self-reporting, it is considered the best predictor of behaviour change available (Jackson 2005), and consequently used for this study as it is the best measure determined at this point of time.
The *People’s Garden*, while an innovative artwork, was compromised by the quality of the equipment used for the artwork. It was acknowledged that the already established digital system was primitive as it had been installed years before. Modern equipment, and the establishment of the system by a qualified expert would have provided a higher chance of the artwork functioning. The equipment failure was out of the project group’s control, and consequently any further projects would need to be built on an understanding from the outset of the ability of the group partners to fulfil their roles. In regards to collecting data from such a project, contingency plans that included manually-delivered questionnaires and extra time would be required to ensure data could be collected.

### 11.4 FURTHER RESEARCH

While this study has demonstrated the legitimacy of using environmental art as a resource for government and environmental organisations to encourage pro-environmental behaviour and a sense of place, it has prompted areas for further research. Responses to art, and furthermore environmental art, are not often measured. For further contributions to the body of knowledge focussing on audience responses to environmental art, research could ascertain participants’/observers’ environmental learnings from the environmental artwork, whether they understood the ideas communicated through the work, and if they would have learned or understood more if there were didactics or other forms of communication associated with the piece. Future artworks could be constructed with the research in mind, with pieces presented with or without didactics and/or other forms of supporting communication such as artist talks, and comparisons made between learnings. Further research could also explore different ways in which environmental art can be used as an educational tool, focussing on the different approaches that can be utilised for most effect, such as schools programs, workshops, installations, and forums. This would also benefit environmental education in offering an informed argument on the benefits of specific presentations of environmental art as imaginative resources for engaging an audience with environmental messages. Because creating an emotional affinity to nature is an important effect of art events such as these (see Curtis 2009; Kals et al, 1999), future research could determine how events such as *Floating Land* affirm people’s relationship with the natural environment, enable them to reflect on humanity’s relationship with the natural environment, and the level to which it moved their emotions.

To further research into the concepts of place in contributing to social planning, studies could delve into whether an environmentally-focussed place identity translates into pro-environmental behaviours. It could explore the relationships between an individual’s environmental sense of place and the level of pro-environmental behaviour that that person commits to. While this research compared the pre- and post-festival behaviour changes of the residents of Boreen Point where *Floating Land* was held, comparative studies could explore the pro-environmental behaviour changes that may occur as a result of the enhancement of sense of place inspired by different formats of environmental art.
Further research could also benefit social planning by investigating the experiences of those involved in local government community engagement strategies involving environmental art. While this research described the engagement involved in the placemaking process of Sunshine Coast Council in commissioning the *Feathers* and *Banksias* artworks, it would be beneficial to survey the participants involved throughout the process to measure their place identity, environmental learnings, and consequent pro-environmental behaviours as a result of participation.

This study focussed on the region of Noosa that is already renowned for having an environmental ethos. It would be interesting to repeat the study in an area that does not already have this well-established environmental awareness, and to measure intentions to change pro-environmental behaviours and a sense of place as a result of environmental art presented in these areas. It would be beneficial to measure if engagement with environmental art prompted a greater or lesser intention to change behaviours in individuals who do not already hold a high esteem for the environment in their place identity.

Contributions could be made to the field of environmental education by exploring the benefits of social learning by measuring the level of discussion entered into by participants/observers of environmental art. While this study asked if the audience entered into discourse about the artworks in both the *Floating Land* and *Banksias* and *Feathers* case studies, it did not question with whom or how long after they had participated/observed the artworks that they entered into discussion. The audience could be questioned on the discourse that they entered into, whether it was environmentally-based, with whom they entered into discourse, and how long after observing/participating in the art that they entered into this discourse. This could also form the basis of artworks constructed with the research in mind, with various formats tested for the efficacy in promoting discourse. This would also provide informed impetus for environmental educators in choosing environmental art formats that encourage discussion and contemplation.

*The People’s Garden* provided an innovative and engaging case study that could form the basis for further research. While the artwork did not collect data in this instance, it is included in the research as it provides an innovative format for gathering data as well as engaging a community in its environment. Further research could explore the audience response to an environmental artwork that offers such interactivity, with individuals actually contributing to, and creating, the artwork. It could investigate whether this interactivity heightens a person’s environmental awareness, or to what extent it encourages discourse or reflection. Further study could also measure the readiness of a community to interact with digital artworks, or as in this instance ecovisualisations, and whether this makes these formats effective communicators of environmental messages. With ecovisualisation growing as an emerging and interesting art form, the impact of dynamic, participatory works on people’s environmental engagement and the effectiveness of ecovisualisation as a mode for communicating...
meaningful data in an innovative way that effects change would provide an insightful avenue for further research.

Responses to these questions and further research would provide more evidence that environmental art is an effective tool for government and environmental organisations to engage people at a grassroots level in pro-environmental behaviours and enhance their sense of place.
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APPENDIX A

Floating Land Audience Questionnaire

How much time have you spent at Floating Land this year overall?

<table>
<thead>
<tr>
<th>Less than 2 hrs</th>
<th>2-5 hrs</th>
<th>5-10 hrs</th>
<th>10-20 hrs</th>
<th>20-30 hrs</th>
<th>30 hrs +</th>
</tr>
</thead>
</table>

How have you participated or intend to participate in Floating Land? (Please circle as many as are relevant)

<table>
<thead>
<tr>
<th>Artist</th>
<th>Volunteer</th>
<th>Attended workshop</th>
<th>Organiser</th>
<th>Just looked / looking</th>
<th>Other</th>
</tr>
</thead>
</table>

What years have you attended Floating Land previously? (Please circle as many as are relevant)

<table>
<thead>
<tr>
<th>2001</th>
<th>2003</th>
<th>2005</th>
<th>2007</th>
<th>2009</th>
<th>2011</th>
</tr>
</thead>
</table>

If you did attend Floating Land in previous years, how did you participate?

<table>
<thead>
<tr>
<th>Artist</th>
<th>Volunteer</th>
<th>Attended workshop</th>
<th>Organiser</th>
<th>Just looked / looking</th>
<th>Other</th>
</tr>
</thead>
</table>

What is your involvement with Boreen Point? Please tick as many as are relevant.

<table>
<thead>
<tr>
<th>I live here</th>
<th>I visit family/friends here</th>
<th>I use the lake for recreation</th>
<th>I've never been here before</th>
<th>I've only come for Floating Land</th>
<th>Other</th>
</tr>
</thead>
</table>

What made you want to attend Floating Land?

________________________________________________________________________________________________________________________________________

What has been your favourite aspect of Floating Land? Why?

________________________________________________________________________________________________________________________________________

Your environmental behaviours - please tick as many as are relevant.

<table>
<thead>
<tr>
<th>I pick up litter in public.</th>
<th>I separate my recyclable waste.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I take my own shopping bags to the supermarket.</td>
<td>I re-use plastic takeaway containers.</td>
</tr>
<tr>
<td>I look for 2nd hand items when I need something.</td>
<td>I catch public transport when I can.</td>
</tr>
<tr>
<td>I own a fuel efficient car.</td>
<td>I carpool when I can.</td>
</tr>
<tr>
<td>My car is my only means of transport.</td>
<td>I walk to places less than 1km away.</td>
</tr>
<tr>
<td>I take short showers to conserve water.</td>
<td>I have a dishwasher.</td>
</tr>
<tr>
<td>My washing machine is water efficient.</td>
<td>I wash my car with a bucket rather than hose.</td>
</tr>
<tr>
<td>I water my garden with grey water.</td>
<td>I am on town water and hose my garden more than three times weekly.</td>
</tr>
<tr>
<td>I compost my garden waste.</td>
<td>I throw my garden waste in the rubbish bin.</td>
</tr>
<tr>
<td>I pull out weeds in public places.</td>
<td>I take sick/injured native animals to the vet.</td>
</tr>
<tr>
<td>I use pesticides.</td>
<td>I give to environmental charities.</td>
</tr>
<tr>
<td>I do volunteer work with the environment.</td>
<td>I buy locally produced food.</td>
</tr>
</tbody>
</table>
Your views on the environment - please tick as many as are relevant.

| The attention given to climate change is exaggerated. | I am optimistic about the environmental quality in the future. |
| People will not change their behaviour unless the government gives the right example. | A better environment starts with the individual. |
| Saving threatened species is unnecessary luxury. | It is normal to want to help the environment. |
| I help the environment as much as my friends and family do. | I help the environment more than my friends and family do. |
| The government should put more money towards environmental festivals. | I act environmentally because everyone else does. |
| I help the environment more than other people I know. | I feel guilt about the state of the environment. |

On a scale of 0-5 where 0 denotes ‘not at all’ and 5 denotes ‘completely’, how environmentally aware would you rate the Sunshine Coast community?

| 0 | 1 | 2 | 3 | 4 | 5 | Don’t know |

Since visiting Floating Land do you intend to perform any of your environmental behaviours more often?

Yes  No  If yes, which behaviours?

On a scale of 0-5, where 0 denotes ‘not at all’ and 5 denotes ‘completely’, how effective would you rate the festival format for delivering an environmental message?

| 0 | 1 | 2 | 3 | 4 | 5 | Don’t know |

Has the festival or any individual artwork influenced how you feel about the environment? In what way?

At the festival how long have you talked with artists about the environment?

Not at all  0-30 mins  30 mins-1hr  1-2 hrs  2-3 hrs  3 hrs +

At the festival how long have you talked with people other than the artists about the environment?

Not at all  0-30 mins  30 mins-1hr  1-2 hrs  2-3 hrs  3 hrs +

Your age (only respond to this survey if you are over 16):

| 16-25 | 26-35 | 36-45 | 46-55 | 56-65 | 65 + |

Highest level of education achieved:

| Primary school | High school | TAFE cert | Uni degree | Postgrad | Other |

Postcode: __________________________  Gender: Male  Female

Thank you for your time in completing this survey. If you would like to add anything, please speak to the facilitator.
Floating Land Workshop Participant Questionnaire

Workshop Title: ________________________________

How much time have you spent at Floating Land this year overall?

<table>
<thead>
<tr>
<th>Time Range</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 2 hrs</td>
<td></td>
</tr>
<tr>
<td>2-5 hrs</td>
<td></td>
</tr>
<tr>
<td>5-10 hrs</td>
<td></td>
</tr>
<tr>
<td>10-20 hrs</td>
<td></td>
</tr>
<tr>
<td>20-30 hrs</td>
<td></td>
</tr>
<tr>
<td>30 hrs +</td>
<td></td>
</tr>
</tbody>
</table>

What years have you attended Floating Land previously? (Please circle as many as are relevant)

<table>
<thead>
<tr>
<th>Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td></td>
</tr>
</tbody>
</table>

If you did attend Floating Land in previous years, how did you participate?

<table>
<thead>
<tr>
<th>Role</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Artist</td>
<td></td>
</tr>
<tr>
<td>Volunteer</td>
<td></td>
</tr>
<tr>
<td>Attended workshop</td>
<td></td>
</tr>
<tr>
<td>Organiser</td>
<td></td>
</tr>
<tr>
<td>Just looked / looking</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

What is your involvement with Boreen Point? Please tick as many as are relevant.

<table>
<thead>
<tr>
<th>Involvement</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I live here</td>
<td></td>
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<td>I visit family/friends here</td>
<td></td>
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<tr>
<td>I use the lake for recreation</td>
<td></td>
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<tr>
<td>I’ve never been here before</td>
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<tr>
<td>I’ve only come for Floating Land</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

What made you want to attend a Floating Land workshop?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

What was most memorable about the workshop?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Did the workshop inspire you to act more environmentally?
Yes  No

If yes, how?
________________________________________________________________________

________________________________________________________________________

At the workshop how long have you talked with artists about the environment?

<table>
<thead>
<tr>
<th>Time Range</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td></td>
</tr>
<tr>
<td>0-30 mins</td>
<td></td>
</tr>
<tr>
<td>30 mins-1hr</td>
<td></td>
</tr>
<tr>
<td>1-2 hrs</td>
<td></td>
</tr>
<tr>
<td>2-3 hrs</td>
<td></td>
</tr>
<tr>
<td>3 hrs +</td>
<td></td>
</tr>
</tbody>
</table>

At the workshop how long have you talked with people other than the artists about the environment?

<table>
<thead>
<tr>
<th>Time Range</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
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<tr>
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<td></td>
</tr>
<tr>
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</tr>
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<td></td>
</tr>
<tr>
<td>2-3 hrs</td>
<td></td>
</tr>
<tr>
<td>3 hrs +</td>
<td></td>
</tr>
</tbody>
</table>

Since visiting Floating Land do you intend to perform any environmental behaviours more often?
Yes  No

If yes, which behaviours?
________________________________________________________________________
On a scale of 0-5, where 0 denotes ‘not at all’ and 5 denotes ‘completely’, how effective would you rate the festival format for delivering an environmental message?

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Don’t know</th>
</tr>
</thead>
</table>

On a scale of 0-5 where 0 denotes ‘not at all’ and 5 denotes ‘completely’, how environmentally aware would you rate the Sunshine Coast community?

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Don’t know</th>
</tr>
</thead>
</table>

Has the festival or any individual artwork influenced how you feel about the environment? In what way?

________________________________________________________________________
________________________________________________________________________

Please tick as many as are relevant.

- I learned about the environment from other workshop participants.
- Other workshop participants helped me with my artwork by giving advice or hands-on help.
- I became more confident about my ability to help the environment through this workshop.
- The workshop has motivated me to help my community more.
- The government should put more money towards environmental festivals.
- I help the environment more than other people.
- I feel guilt about the state of the environment.
- I learned from the workshop facilitator.
- I intend to do more to help the environment since taking this workshop.
- I learned practical skills in the workshop that will help the environment.
- The workshop has made me proud to be a part of Floating Land.
- I act environmentally because everyone else does.

Home Postcode: ___________________________ Gender: Male / Female

Your age (only respond to this survey if you are over 16):

<table>
<thead>
<tr>
<th>16-25</th>
<th>26-35</th>
<th>35-45</th>
<th>46-55</th>
<th>56-65</th>
<th>65+</th>
</tr>
</thead>
</table>

Highest level of education achieved:

<table>
<thead>
<tr>
<th>Primary school</th>
<th>High school</th>
<th>TAFE cert</th>
<th>Uni degree</th>
<th>Postgrad</th>
<th>Other</th>
</tr>
</thead>
</table>

Postcode: ___________________________ Gender: Male

Female

Any other comments you’d like to make about Floating Land or this workshop?
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Thank you for your time in completing this survey.
# Boreen Point Residents Pre-Floating Land Questionnaire

## How long have you lived in Boreen Point:
- Less than 1 year
- 1-3 years
- 3-10 years
- 10 years+

## What years have you attended Floating Land previously? (Please circle as many as are relevant)
- 2001
- 2003
- 2005
- 2007
- 2009
- 2011

## If you did attend Floating Land in previous years, how did you participate?
- Artist
- Volunteer
- Workshop participant
- Organiser
- Just looked
- Didn’t attend

## How much time did you spend at Floating Land 2011?
- None
- Up to 1 hour
- 1-3 hours
- 3-5 hours
- 5-10 hours
- 10 hours+

## How much time do you expect to spend at Floating Land 2013?
- None
- Up to 1 hour
- 1-3 hours
- 3-5 hours
- 5-10 hours
- 10 hours+

## How do you intend to participate in Floating Land 2013? (Please circle as many as are relevant)
- Artist
- Volunteer
- Workshop participant
- Organiser
- Just looking
- Not at all

## Please tick the relevant columns for the following questions:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Totally disagree</th>
<th>Disagree</th>
<th>Don’t know</th>
<th>Agree</th>
<th>Totally agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boreen Point is the best place for doing the things I enjoy most</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel attached to this place</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would like to contribute to making this town an even better place to live</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am willing to invest both time and money to benefit this town</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am proud to live in Boreen Point</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boreen Point comes alive when Floating Land is on</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Floating Land is good for Boreen Point</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boreen Point is an environmentally aware town</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Sunshine Coast is an environmentally aware region</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental problems have consequences for my life</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental problems are a risk for the future of my children</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We should be careful with our natural environment because we depend on it</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The attention given to climate change is exaggerated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am optimistic about the environment in the future</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A better environment starts with myself</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Too much attention is paid to environmental problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>People who do not take the environment into account try to escape their responsibility</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>People will not change their behaviour unless shops sell more environmentally friendly products</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The government should put more money towards environmental awareness programs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saving threatened species is unnecessary luxury</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
How often do you (please tick in relevant column): Daily Weekly Monthly Yearly Never

Separate your recyclable waste?
Take your own shopping bags to the supermarket
Buy recycled toilet paper?
Buy biodegradable washing powder?
Pick up litter?
Give to charities that are not environmental?
Give to environmental charities?
Volunteer in environmental work?
Volunteer in environmental work in Boreen Point?

On a scale of 0-10 where 0 denotes ‘not at all’ and 10 denotes ‘completely’, how environmentally aware would you rate the Sunshine Coast community? Why?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

From previous visits to Floating Land, has the festival or any individual artwork influenced how you feel about living here in Boreen Point? In what way?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Your email or mailing address if you would like a summary of the findings from these questionnaires:

________________________________________________________________________

Your age (Only respond to this survey if you are over 16):
16-25 26-35 36-45 46-55 56-65 65+

Gender: Male / Female

Highest level of education achieved:
Primary school High school TAFE certificate
University degree Postgraduate degree Other

Any other comments you’d like to make about Floating Land?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
APPENDIX D

Boreen Point Residents Post-Floating Land Questionnaire

How much time have you spent at Floating Land 2013?

<table>
<thead>
<tr>
<th>Less than 2 hrs</th>
<th>2-5 hrs</th>
<th>5-10 hrs</th>
<th>10-20 hrs</th>
<th>20-30 hrs</th>
<th>30 hrs +</th>
</tr>
</thead>
</table>

How did you participate in Floating Land 2013? (Please circle as many as are relevant)

<table>
<thead>
<tr>
<th>Artist</th>
<th>Volunteer</th>
<th>Attended workshop</th>
<th>Organiser</th>
<th>Just looked / looking</th>
<th>Other</th>
</tr>
</thead>
</table>

Has Floating Land or any of the individual artworks influenced how you feel about living here in Boreen Point?
Yes  No
If yes, in what way?

Has Floating Land or any of the individual artworks influenced how you feel about the environment?
Yes  No
If yes, in what way?

Has Floating Land made you more proud of Boreen Point?  Yes  No
Has Floating Land made you want to do more for your community? Yes  No
Has Floating Land made you want to do more for the environment? Yes  No
Do you feel more a part of your community since Floating Land? Yes  No
Would you like Floating Land to continue? Yes  No
Do you think a Floating Land artwork should remain as a permanent artwork? Yes  No

Has Floating Land impacted on you in any other way?  Yes  No
If yes, in what way?

Since visiting Floating Land have you changed any of your environmental behaviours?
Yes  No
If yes, which behaviours?

<table>
<thead>
<tr>
<th>How often do you (please tick in relevant column):</th>
<th>Daily</th>
<th>Weekly</th>
<th>Monthly</th>
<th>Yearly</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Separate your recyclable waste?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Take your own shopping bags to the supermarket</td>
<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Buy recycled toilet paper?</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td></td>
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<tr>
<td>Pick up litter?</td>
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<td>Give to charities that are not environmental?</td>
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<td></td>
</tr>
<tr>
<td>Volunteer in environmental work?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volunteer in environmental work in Boreen Point?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Please tick the relevant columns for the following questions:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Totally disagree</th>
<th>Disagree</th>
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<td>Boreen Point is the best place for doing the things I enjoy most</td>
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<td>The Sunshine Coast is an environmentally aware region</td>
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<td>We should be careful with our natural environment because we depend on it</td>
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<td>A better environment starts with myself</td>
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</tr>
<tr>
<td>Saving threatened species is unnecessary luxury</td>
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Your email or mailing address if you would like a summary of the findings from these questionnaires

________________________________________

Your address (Very important) that you include this as it is the way that the researcher can compare your responses to this questionnaire with your responses on the previous questionnaire. Your address will not be seen by anyone but the research team, stored in a safe and secure location, and disposed of once the PhD thesis has been submitted.

________________________________________

Any other comments you’d like to make about Floating Land or your community?

________________________________________

________________________________________

________________________________________

Thank you so much for taking the time – I really appreciate it.
This survey is in relation to the public artworks at Noosa Junction – Bronze Banksias and Feathers.

1. What does this artwork make you feel or think about?

2. Are you a Noosa resident? Yes No

   IF YES:
   2a. Does this artwork contribute to your level of pride in this area? Yes No Maybe Don’t know
   2b. Does this artwork reinforce this area’s environmental image to you? Yes No Maybe Don’t know
   2c. Are you proud of this area’s environmental image? Yes No Maybe Don’t know
   IF YES 2d. Does this make you want to do more for the environment? Yes No Maybe Don’t know

   IF NO:
   2e. Does this artwork reinforce this area’s environmental image to you? Yes No Maybe Don’t know
   IF YES 2f. Does this contribute to you wanting to visit this area more? Yes No Maybe Don’t know

3. Do you like the idea of public art having a message? Yes No Maybe Don’t know

4. Have you spoken to other people about the artwork? Yes No

5. What is your reason for visiting Noosa Junction? Shopping Working Dining Attending school Holidaying Other

6. Which describes best how often you come to Noosa Junction?
   Daily Weekly Monthly Yearly This is my first time

7. Postcode/country

8. Gender Male Female


10. Is there anything else you would like to add?
APPENDIX F

The People’s Garden web questionnaire

Please complete the following survey if you are aged 16 or over.

Do you plan to tell your friends about this artwork?

Does this artwork make you like Noosa more?

Does this artwork make you proud of Noosa and/or the Sunshine Coast?

Do you like that this artwork has an environmental message?

Do you think it would be a good idea to have more public artworks delivering environmental messages?

Are you more motivated to take action to help the environment because of the artwork?

What do you think the message of the artwork is?

Age:

Postcode:

Male / Female
APPENDIX G

Floating Land artist interview questions

Interviewer: I would like to begin by asking you some questions about your interest in environmental art in general, and then ask about your project at this year's Floating Land.

General questions

How long have you been involved in environmental art?

Why did you get involved in environmental art?

Has environmental art made you more environmentally aware?

What have you learned about the environment through your involvement with environmental art?

Are you more motivated to take action to help the environment because of your involvement?

Is your work always onsite?

Do you create work in urban or natural settings?

How do you feel about the locations where you create your work?

Have you ever been commissioned by government bodies to create your environmental artwork?

What kind of feedback have you had about this work?

Floating Land

What is the artistic intent behind your project?

What is the environmental intent behind your project?

Does your work include collaboration?

What kind of feedback have you had about this work?
APPENDIX H

Banksias and Feathers artist interview questions

*Feathers*: what was your intention with the artwork?

How long was the process from start to finish with council?

Was there an environmental element?

Was there an educational element?

*Banksias*: what was your intention?

What did you want to say about Noosa?
APPENDIX I

Banksias and Feathers council employee interview questions

Why was this artwork chosen?
What placemaking concepts were relevant to the choice? Space activation?
Why did you choose that location?
Was there community engagement involved?
What was the aim? To beautify or to create discussion?
Was education involved in the decision-making?
Was the history of Noosa relevant to the choice?
Were you especially catering to tourists or residents?
Was the idea to reinforce the area’s environmental image?