Un-cloaking the Estuary: the current state of the uMngeni Beachwood Mangroves unveiled through Creative Practice-Led Research

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Abstract

This creative Practice-Led Research study arose from explorations of the uMngeni Beachwood Mangroves Estuary, situated in Ethekweni municipal area, KwaZulu-Natal, South Africa. The Estuary is of significant environmental importance to the area, but the biodiversity is threatened by pollution, invasive alien vegetation and species, as well as encroaching urban development. Within the broad context of global warming and climate change, raising awareness of the importance of biodiversity is paramount. The artist-researcher lives near the Estuary and knows it intimately. Through this study, she aimed to develop new ways of making visible the state of the Estuary, as opposed to simply repeating typically didactic environmental education messages.

The artworks arose from an artmaking heuristic of wandering and meditating in the Estuary, collecting discards and natural artefacts. These items were incorporated into mixed-media artworks utilising natural materials from the Estuary, fabric rejects, hand-made dyes, stitching, printing and painting methods. Out of this practice, the research questions emerged and developed. This thesis is the exegesis accompanying the body of work exhibited at the culmination of the research. The study is draws on the philosophies of Deep Ecology by Naess, Weintraub's Eco-Materialism, and current theories of plant life which challenge human-centric views. Zen Buddhism, Sumi-e painting, and the artist's working life experiences in the clothing industry exerted influences on the work. The cyclical cross-pollination of the art practice with theory, journal writing, visual documentation, walking and meditation, led to un-envisaged creative developments. The processes are recorded extensively in a series of workbooks which enhance the text and the viewing of the artworks.

Engagement of the senses through meditation revealed miniscule realities and the innate reparative mechanisms of the plants together with further discoveries in literature. Sublimation of painting and drawing skills made way for the artefacts of the Estuary to lead the way. This culminated in the creation of cloaks, unexpected somatic forms, in which the wearer may be absorbed into the translated realities of this Estuary and its life forms. The initial negative assumptions about the environmental degradation of the Estuary shifted to a more positive outlook, that of reparation. The intrinsic nature of the Estuary plants to repair damage helps to strengthen this eco-system, partially offsetting the ongoing degradation. The revelation of these positive elements was an unexpected outcome of this research, offering hope.

Keywords:

Practice led research, Eco art, global warming, climate change, Anthropocentricism, Eco-Materialism, plant philosophy, Zen Buddhism, environmental repair, pollution, somatic, interconnectedness.

Declaration

I, Denise Ingrid Adams, declare that

1. The research reported in this thesis, except where otherwise indicated, is my original research.
2. This thesis has not been submitted for any degree or examination at any other university.
3. This thesis does not contain other persons' data, pictures, graphs or other information, unless specifically acknowledged as being sourced from other persons.
4. This thesis does not contain other persons' writing, unless specifically acknowledged as being sourced from other researchers. Where other written sources have been quoted, then their words have been re-written but the general information attributed to them has been referenced. Where their exact words have been used, then their writing has been placed in italics and inside quotation marks, and referenced.
5. This thesis does not contain text, graphics or tables copied and pasted from the Internet, unless specifically acknowledged, and the source being detailed in the thesis and in the References sections.

Signed

30 March 2026

Supervisors' signatures:

1. …[redacted]…….. 30 March 2026

2. ……

Acknowledgements

This thesis is dedicated to the Louis Van Loon, founder of the Buddhist Retreat Centre, who introduced me to Zen Buddhism and Sumi-e.

I am grateful too for the encouragement and insightful guidance of my supervisors, Dr. Louise Hall and Dr. Kathy Patrick, and to Dr. Caroline Birch who competently assisted with editing.

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Chapter 1: Introduction

I am an artist who lives near to the uMngeni Beachwood Mangroves Estuary, near the city of Durban in KwaZulu-Natal, South Africa. The Estuary and its natural surrounds are close to my heart, and I walk there almost daily. As a child, the surrounding coastal bush was my playground. Hiking and meandering in our local forests and game reserves, identifying plants, trees, mammals and birds, continues to be the focus of my recreation. It is a site of meditation, and much of my artwork is inspired and informed by this environment, elements of which I have incorporated into my artmaking. These practices add depth to engaging non-representationally with nature in artmaking.

This written submission documents my examination of the current realities of the Estuary through my creative practice as an artist. In line with my Practice Led Research methodology (PLR), the artmaking component catalysed the research questions (Bolt, 2006, p. 2; Gray & Malins, 2016, pp. 16, 104; Sullivan, 2010, p. 119). The questions directed how I explored my ongoing concerns for the plight of the Estuary. This includes the literature I referenced to explore this topic, my choice of theoretical frameworks, and the ways in which my artmaking practice evolved.

The artworks arose from my artmaking heuristic of wandering and meditating in the Estuary and collecting discards and artefacts. A crucial aspect of this process has been recorded in my Workbooks (1-10, 2021-2024). Reflective journaling offers an important element of rigour in PLR where I recorded the ‘how’ rather than ‘what’ of my spontaneous practice. (Schön, 1991, cited in Gray & Malins, 2016 p. 22; Gray & Malins, 2016 pp. 61-62). These Workbooks have been an integral part of my PLR. Here, I recorded my processes and experiences, which are often challenging to describe in words.

1.1 Background and motivation for the study

As a concerned resident of the area for over thirty-four years, I have witnessed the increasingly visible pollution of the uMngeni river Estuary, in the form of garbage, slime, dead fish and unpleasant smells. This river is indeed a “vein of the planet” (Fowkes & Fowkes, 2022, p. 81), vital to the residents of KwaZulu-Natal, providing water for agriculture, industry and housing, sustaining vegetation and life in general. In theory, The Constitution of the Republic of South Africa Act promotes the prevention of pollution and ecological degradation (Section 24, Act

108 of 1996). If this law was enforced, the Beachwood Estate Development would not have been passed, as it is situated in a declared conservancy. I show photographs and documents pertaining to this development in Workbook 10 (2021-2024, pp. 487-488). Recently the South African Government introduced the *Climate Change Bill* (B9-2022), although it is not yet passed (University of Cape Town (UCT), and the African Climate and Development Initiative (ACDI) 2022).

Destruction of biomes (a group of ecosystems occupying a large area) and diminishing biodiversity (Noyes & Lema, 2015, p. 670; Raven, et al., 2011, cited in Cafaro, 2015, p. p. 388) result from pollution. The future predictions for the environment are thus alarming (Raven, et al., 2011, cited in Marques, 2020, p. 251). Examples of diminishing species are the Common river frog *(Rana angolensis*) (https://ewt.org.za/what-we-do/saving-species/amphibians/), and the Blue Crane *(Indwe, Grus Paradise)* (South African National Biodiversity Institute, 2015). Dead fish viewed on the Estuary banks are likely the result of unseen contaminants such as micro-plastics ingested by juvenile fish (Naidoo, et al., 2020, p.1). Air pollution and visible garbage are current indicators of degradation in the Estuary, which in the long term could inflict further damage on this eco-system.

The ongoing pollution of the uMngeni and its Estuary indicates the lack of government and provincial interventions. A budget has been allocated, but how much will be utilised for the maintenance of this specific Estuary is confidential (Zondi, M., 2024). A further plan originated in 2015 for a funded collaboration of Environmental Affairs Republic of South Africa, Green Fund, the Development Bank of Southern Africa (South African National Biodiversity Institute, University of KwaZulu-Natal), Ground Truth, Future Works, Zunckel Ecological & Environmental Services (Pringle, Bredin, McCosh, Jewitt, Hughes, de Winnaar, Mander, Blignaut, Zunckel, Dini, 2015, pp.1-4). At this stage, it seems to be the local Non-Government Organisations (*Green Peace, Green Warriors, Eco-warriors, Adopt-a-River*, *Green Corridors*, *WESSA*) who are making concerted efforts to curb the pollution in the river through garbage collections and litter booms that trap the garbage. These are voluntary human reparations in response to the visible reality of the Estuary's degradation.

As stated above, the context of global warming, climate change and pollution in this Estuary is central to this art research project. This is further discussed in section 2.2. Unquestionably, climate change is causing rising sea levels (Blankespoor, et al., 2017, p. 478; Fowkes & Fowkes, 2022, p. 254; Mgadle, et al., 2022, p. 180) and other adverse weather conditions. There

are predictions of the encroachment and obliteration of certain coastlines, notably the East African coastline (Mather, 2012, p. 237; Mgadle, et al., 2022, p. 180; Swanepoel & Sauka, 2019, p. 2). The uMngeni Estuary is a part of this coastline and will consequently be affected.

A further concern is the hotel and residential development of Beachwood Golf Club, by Beachwood Investments (Pty) Ltd. This Beachwood Estate Development encroaches on the upper portion of the mangrove forest which is part of the geographic site of this research (Erf 3485 (currently zoned Private Open Space), and Erven 2229 and 3147).The application to rezone and carry out this development was approved by the eThekwini Municipality, July, 27, 2023 (Appendices 3). The Environmental Impact Assessment (EIA) application and SPLUMA (rezoning) application would have been considered. Ongoing citizen protests date back to 2013, but eThekwini Municipality spokesperson, Gugu Sisilana, said that the appeal against Beachwood Investments (Pty) Ltd. was heard and dismissed on November 21, 2023 (Singh, 2023, p. 1). The buildings will partly cover the Estuary floodplain, evident from the approved plan in Workbook 10 (2021-2024, pp. 474,475) and the approval document listed in Appendices 3. As of January 2025, development has begun, trees have been removed and bulldozers are clearing the floodplain. Unquestionably this will significantly impact on the ecology of the Estuary indicating its further long-term degradation.

This site represents a microcosm of the urgent concern for the state of mangroves globally. The effects of climate change, such as the degradation of mangroves (Gilman, et al., 2008, p. 237) and of global coastal zones (Lu, et al., 2018, p. 671) are relevant to my research of the state of this specific Estuary (Berjak, et al., 1986, p. 73). Carbon emissions from road transport on the M4 highway and Kenneth Kaunda Road pass directly over this site (Thambiran & Diab, 2011, p. 2683). Dispersal of air pollution in Durban is tabulated by Jury and Buthelezi (2022, p. 1-2). The literature mentioned above contextualizes this investigation into the direct impact of pollution on the Estuary.

Below is an aerial photograph of the Estuary and surrounds. My home is situated in the top left corner of this photograph.

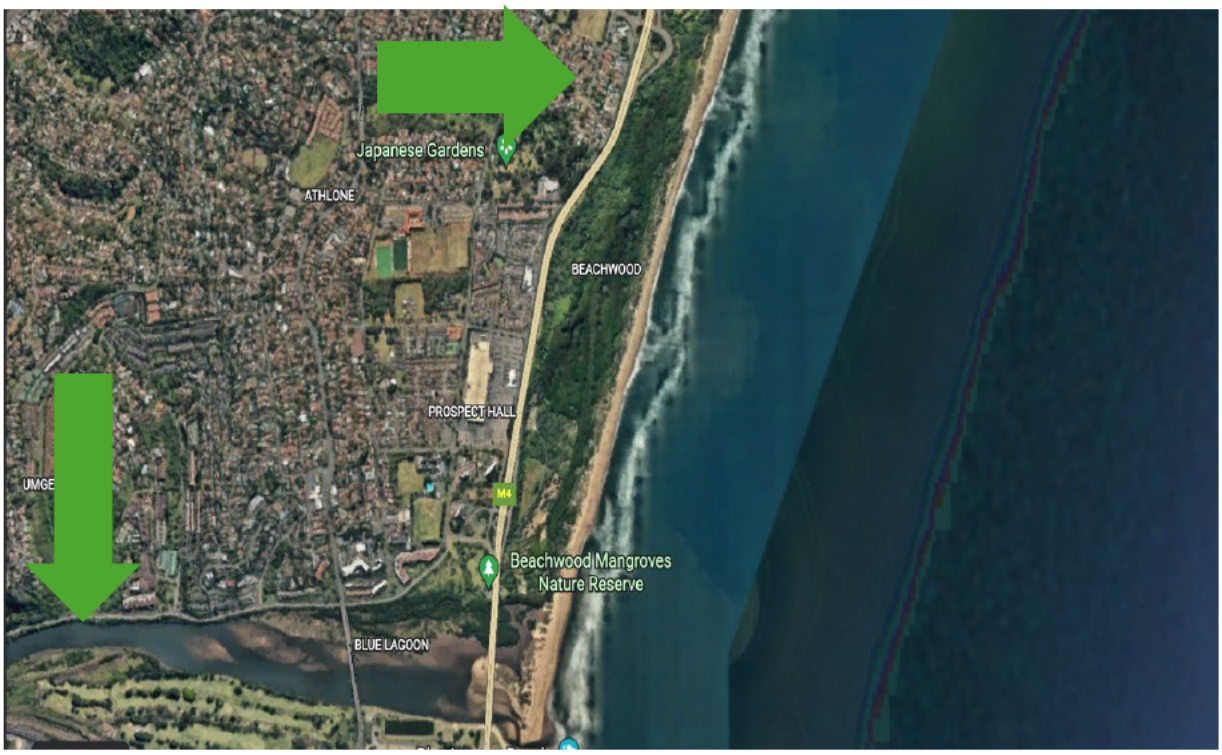

Figure 1. Google Earth. (2022). uMngeni Beachwood Mangrove Estuary, Durban. *[Satellite photograph]. Durban, KwaZulu-Natal, South Africa.*

The mangrove trees in this Estuary have been visibly multiplying, since the destructive floods of 1987 (Badenhorst, et al., 1989, p. 13) and the forest now extends up the river. Mangrove trees may indeed be active as bioshields (Blankespoor, et al., 2017, p. 479; Naidoo, 2016, p. 102; Gilman, et al., 2008, p. 237), offering natural infrastructure and some protection from rising sea levels. However, this depends on a number of factors, such as forest density, diameter of stems and roots, forest floor shape and the tidal stage when the wave enters the forest (Blankespoor, et al., 2017). Additional attributes of the mangrove trees are discussed in Chapter 2.

1.2 The emergence of research questions

In searching for literature and artists to contextualise and scaffold my research, I realised that many artists address environmental concerns. However, many address global environmental realities in literal and didactic ways, with a clear and expected message. My creative investigation of environmental challenges is specifically local, being geographically very close to my home, while informed by the global issues. This indicated to me an original contribution that research through my artmaking could make. The expansion of my creative practice and

literally, my studio space, into the Estuary suggests this research is a unique exploration. Additionally, this artmaking research endeavours to address global environmental issues through translations, as opposed to realistic representations in typically educational ways.

My main research question emerged out of my practice, as follows:

How can I use and transform my experiences and art making materials into artworks through excavating my concerns for this site-specific Estuary?

These sub-questions followed on from the above main question:

1. How can I translate my experiences and art making materials into artworks that excavate my concerns for this Estuary?
2. How can I create artworks that transcend a literal and didactic interpretation of my concerns?
3. In what ways might I display these artworks that additionally highlight the degradation and reparation of the Estuary's environmental situation?

These enabled me to address the following objectives:

1. To excavate my concerns for the Estuary through translating my experiences through my artworks and art making materials.
2. To create artworks that transcend a literal and didactic interpretation of my concerns.
3. To display these artworks in ways that additionally highlight the degradation and reparation of the Estuary's environmental situation.

1.3 Rationale for my practice

The originality of this project lies partly in my own approach to the source from which I draw my creative practice. Nature, the main source of inspiration, for me means, "the phenomena of the physical world collectively, including plants, animals, the landscape, and other features and products of the earth, as opposed to humans or human creations" (Oxford Reference Online). My experience of the techniques and the all-natural materials of *Sumi-e*, or Japanese Ink Painting, enables me to work from nature in a non-representational way.

Sumi-e is unplanned, intuitive painting, involving risks with unexpected outcomes. All-natural materials are employed including unsized paper or silk as a painting base. The artist stands and

uses the upper torso to paint, preceded by a martial art and meditation. My summing up of a noteable *Sumi-e* artwork is as follows: capture of the essence of a natural form, landscape or figure, unpainted white space, economy of brush marks, incorporation of *Chi,* subtle tonalities between black and pale grey.

Another central creative source is my experiences of working for most of my career in fashion design and textiles. My design background equips me to conceptualise two-dimensional drawings as three-dimensional garments, in considering the properties of the textiles and their suitability for envisaged 'body' shapes (signifying style and silhouette). This aspect is dealt with in Chapter 3 in the discussion of the development of my artworks into garments, cloaks and chairs. This aspect of my practice highlights the formative influence of my work experiences. For decades I suppressed my fashion design background to create fine art. During my fine art training with University of South Africa (UNISA), Pretoria (which I completed in 1989), I was constantly criticised for the design elements in my work. I was therefore surprised by the unexpected appearance of garments in this artmaking research. On reflection their emergence became a potent and dynamic means of exploring my inextricable connection and culpability (I used chemical materials in manufacturing contributing to carbon and river effluents), in the current environmental crisis of global warming and climate change.

This research is topical and timeous. The urgency of increasing global warming and climate change is evident in the literature. Global warming is said to be unprecedented with temperatures rising rapidly (McPherson, 2021, p. 1). Demos (2013, p. 1) speaks of the multifaceted crisis of climate change. Although fossil fuels are termed the "climate forcer" (United States Environmental Protection Agency, 2023, p. 1), I agree that the precursors of climate change are not only fossil fuels (discussed in Chapter 2.1). Climate change cannot be solved with a single remedy.

1.4 Summary of thesis

Chapter 2. Contextual Review

Chapter 2 presents and interrogates the literature to give overall context to the research, both theoretically and methodologically. The research questions lie at the heart of this PLR, which expand and direct the theoretical and creative practice research components. The literature and other sources contextualise my experiences of walking, meditating and collecting artefacts in

the Estuary, developing my Workbooks (2021-2024), written texts, and creative processes, all part of this PLR.

Chapter 3. Moving On

This chapter excavates my research questions. I interrogate the ways in which my creative processes, handling of materials and art works evolve, I present the insights that arise from these developments. My research methods triggered ways of understanding that allow me to access smaller realities such as noticing microscopic flowers as well as deeper aspects, such as the interconnectedness of the Estuary with the life beyond its boundary. These discovered realities play an important part in translating my concerns for the Estuary into artmaking research. This body of artwork culminates in a group of works that are rooted in my somatic research experiences and the resurfacing of my fashion and textiles experience. My final artworks are pivotal in this research and signify a major shift evident in the diversity of materials used and the unexpected emergence of three-dimensional cloaks. All the submitted artworks have evolved through excavating my research questions and from cues proffered by my processes, journalling and Workbooks 1-10, (2021-2024). These developments are traced in this chapter. I draw links to the theories, literature and artworks of selected artists that contextualize this study.

Chapter 4. Conclusion

Here I reconsider my research questions within the PLR framework. The intentional integration of personal practices – walking and meditating in the Estuary – led to the development of deeper somatic awareness. This provides a means of connecting more closely with the realities in the Estuary and finding smaller unexpected aspects, as mentioned above and in Chapter 3. I examine how PLR enabled me to explore my research questions, and the ensuing shifts and insights. I review the ways in which the artworks and processes of my selected artists have affected my understanding of my creative processes, of PLR, and of climate change in the Estuary and globally.

1.5 Conclusion

This Practice Led Research has led to a deeper appreciation of the value of our environment in general, and of my relationship with this specific Estuary, particularly with the plants. My

resonance with, and concerns for nature, echo the Zen Buddhist belief in the value of all nature for humans (Cooper & James, 2005, p. 23) and respect for natural beings, called for by James (2003, p. 143). Javanaud (2020, p. 2) speaks of how meditation boosts "ecological inter-connectedness". This is further discussed in Chapters 2 and 3, where I consider how aspects of Buddhist teachings share a few common denominators with Eco-Materialist philosophy and the Deep Ecology of Arne Naess. Zen Buddhism underpins my aspirations for deepening my connections with nature and the uMngeni Estuary. Nhat Hanh (2020, p. 71) discusses the human connection with nature in *How to Connect*, emphasising that we humans need to "change the way we see the world". I am slowly moving to fulfil this intention.

Figure 2. Adams, I. (2018). Untitled*. [Sumi-e on Japanese paper]. 90 cm. x 150 cm. Personal Collection. Durban, KwaZulu-Natal, South Africa.*

For this research I realised that I could no longer create art for my own aesthetic pleasure, or to express the beauty found in nature (such as the Figure 2, *Untitled* above). Nor could I create classical botanical art, when my concerns for the present and future of the Estuary dominate my thinking. Arnold circumscribes classical botanical art as 'informative, descriptive, accurate and

mimetic' and portraying 'truth to beauty' (2001, pp. 143-145). My aims differed. I believe that artmaking is one way of confronting the realities of climate change affecting this specific site.

Art engagement is viewed as one of several ways in which to examine the realities of climate change (Demos, 2013, pp. 2, 4). Demos (2013, p. 9) acknowledges the importance and effectiveness of democratic dialogue between grass roots organisations and Non-Governmental Organisations. This was apparent when I attended the conference titled *TCI 2022 Global Conference: Sustainable Clusters for all , held* 9th-11th November 2022, in Durban. This conference represented activist criticism of international climate change conferences being ineffective. NGO'S offered potential sustainable solutions, such as art, for dealing with climate change. I assist in occasional public Estuary beach clean-ups and people who are out-of-work are employed part-time to help with garbage collections (M. Burger, "personal communication," September 24, 2022). Another positive action was the G-20 Beach Clean-up Drive at the Estuary (May 21, 2023), which I participated in. This collective stewardship between the Consulate General of India and Ethekwini Municipality, is aimed to generate sustainable blue economies for future generations (see photographs of this in Workbook 10 (2021-2024, p. 491).

I considered how my artmaking might translate my experiences and materials into artworks that reflect my concerns, as articulated in the main research question. Savage promotes co-constructive relationships between conservationists and artists (Aloi & Savage, 2020, p. 204; Bukula, 2022). In this project, I developed relationships with the volunteers, organisers of NGO's, botanists and activists connected with the Estuary. These persons contribute their knowledge, helping with plant and bird identification, including explanations of the reparative measures being taken to alleviate the pollution in the Estuary.

As discussed, this dire ecological situation catalysed my creative processes, prompting mindful excursions, and spontaneous collecting of artefacts. These collections represent my resonances with the plants and my experiences in the Estuary. The collection process and relevant literature expanded my knowledge of plant identification, their reproductive systems and adaptations to the saline and freshwater conditions of the Estuary. The Estuary provides a home and nursery for creatures, invertebrates, birds, insects, fish, and of course, plants which are vital to this eco-system (Berjak, et al., 2011, p. 8). Knapp (2019, p, 164) maintains that plants are "essential to our existence". Marder (Irigaray & Marder, 2016, p. 131) states: "Without plants we cannot continue to live".

Chapter 2: Contextual review and Methodology

In this chapter consists of sub-sections which together cover three important aspects of this study, as follows:

- Climate change and the Estuary site
- Theoretical framework
- The research methodology

In PLR, Gray and Malins (2016, pp.12-14) note the value of the contextual review, to situate the research by introducing the relevant sources, theory and research methodology (2016, p. 12). My creative practice is formed by- and rooted in my *Sumi-e* practice, and my uses of unusual materials. These helped me to identify an area of my work to excavate, a lacuna which defined the scope of this study, and what it might yield that is relevant to the expansion of artistic practice (Gray & Malins, 2016, p. 36). Contextualising the practical investigation aspects makes the research methodology more rigorous and motivates findings more strongly.

Knowledge beyond existing boundaries (Sullivan, 2010, p. 112) might be generated by linking and exploring relevant texts through this study's creative art practice. The role of journalling is a vital link in this process (Gray & Malins, 2016, p. 15). In this study, I document my journey in ten Workbooks (2021-2024). Although these Workbooks are not fully representative of my entire artmaking research process, they are indispensable for revisiting my notes, photographs, plant identifications, dead ends and possible artmaking leads. The visual degradation in the Estuary positions this "living inquiry" (Springgay, et al., 2008, cited in Sullivan, 2010, p. 58) as relevant and timeous. In my view, the uMngeni Estuary is a microcosm of estuaries nationally and globally. Increasing media coverage of the effects of climate change, are noted in Workbook 10 (2021-2024, pp. 484, 486, 488) and in 2.1.

The overlap between philosophy, art and research is discussed by Cazeaux (2017, p.1). He promotes the value of philosophy because it initiates thinking and questioning. At the start of this research project, I did not anticipate that philosophy would assist in self-expansion, nor that plant philosophy might be an influence. Both aspects have unexpectedly impacted on this venture. The type of knowledge this practice-led study draws on and in turn generates is enhanced by the recent discoveries of plant philosophy, particularly by Andreyev (2021), Irigaray and Marder (2016) and Kaza (2019). These, together with other philosophies, such as

Eco-Materialism and Zen Buddhism will be discussed later in this chapter to support relevant plant philosophies. Additionally, artworks reflecting environmental concerns and those artists whose art making processes trigger ideas for mine, will contextualize my creative research.

Broadly situated within Eco-art, my art practice is integral to examining the realities of this Estuary. Eco-art, or Ecological art, may be said to be an artistic practice promoting environmental issues. Weintraub (2019, p. 4) advocates the coalescence of philosophy, ecology and art and promotes Eco-material art (Weintraub, 2019, p.17). This research project encompasses "an aesthetic practice", a coalescence of philosophy, art, research, and ecology, under the umbrella of Eco-art. The artworks of Herman De Vries, Janet Laurence and Es Devlin contextualises this creative research although they are not self-proclaimed Eco-artists. However, their artworks resonate in part with my research concerns, as I explain later in this and the following chapters. This literature, and the above artists' artworks reveal the gap which this study occupies. The originality of this research lies in my non-representational and non-prescriptive art works, and in my research space being specifically linked to my home. The following headings deal with various aspects of this contextual review and contain references to artworks.

2.1 Climate change and the Estuary site

Climate change and the effect on the estuary is situated within the broad context of anthropocentricism and global warming,[1] focusing on the pollution. Artists referencing climate change in science/art publications are found in Aloi (2019), Andreyev (2021), Black (2021), Demos (2013), Fowkes and Fowkes (2022), Jeanson and Mansvelt (2022), Parrika (2015) and Weintraub (2006, 2014, 2019). These will be referred to in Chapter 3.

As climate change impacts on the writings of scientists, theorists and philosophers, my selection of literature exposes the degrading effects of climate change on Estuary

[1]Anthropocentrism is defined as "regarding man as the central fact of the universe, to which all surrounding facts have reference" (Onions, T.C. (1973). Anthropocentricism. In Shorter Oxford English Dictionary, Volume 1., 3rd ed.). There is contention as to whether Christianity can be blamed to be the root of Anthropocentric beliefs (Kuper, 2014, p. 267). This Bible verse (Genesis 1: 26) states that man is the dominion of all things on earth.

environments. There are historical aspects to climate change that are still active**.** The Anthropocene governance of this planet (Barad, 2011, p.122; Braidotti, 2019, p. 32; Kolbert, 2019, para.1), denotes the current geological epoch in which Humanistic attitudes are said to promote human exceptionalism (Barad, 2011, p.123; Braidotti, 2019, p. 31; Fowkes & Fowkes, 2022, p. 272, Irigaray & Marder, 2016, p. 166; Marder, 2014, p. 47; Weintraub, 2006, p. 55). Humanism is broadly defined as a human-centered view that is active in secular and scientific spheres (Malpas & Wake, 2013). A definition in the Shorter Oxford English Dictionary (1973) applies: "devotion to human interests" (Volume 1, 3rd ed. C.T. Onions, p. 931). Humanism focuses on individual achievement, scientific accomplishment and secularity.

Humanism (Fox & Aldred, 2019, p. 8; Marques, 2020 p.32; Cole & Malone, 2019, p. 393) may be understood as a form of hegemony, labelled by de Souza Santos (2007, p. 50) as "abyssal western thinking". Humanism is thus thought to be implicated in global warming and climate change (Kuper, 2014, p. 2; Sólon, 2018, p.110; Nhat Hanh, 2008, cited in Javanaud, 2020, p. 4). Humanism is relevant to this research because the assumption that people are more important than other life forms has had detrimental consequences for nature and life in general on the planet. In this research I view a Humanist attitude as hegemonic, so I aspired to connect with Estuary life as a participant, rather than a human with superior claims to natural resources. This practice is framed by the philosophies of Naess, Marder, Irigaray, and influenced by Zen Buddhist literature, the teachings of Van Loon (1935-2024) and Nhat Hanh (1926-2021). These avoid centring humanity, and this aligns to the paradigm of my creative research.

The root of the Anthropogenic climate crisis (Fowkes & Fowkes, 2022, pp. 6, 67; Marques, 2020, pp. 391-392) is attributable to a number of factors such as: globalisation of the fossil-fuel industry (Demos, 2013, p. 4; McPherson, 2021, p. 3), the history of colonialist expansion and industrialisation, racism, capitalism (Marques, 2020, pp. 285, 294); and the appropriation of land (Rosenberg, 2019, para. 1). An example that is close to home is the forced removals of persons of colour in Durban to make way for white residences. This has been locally termed the 'bleaching" of Durban and was also inflicted on the Estuary area (Rosenberg, 2019, para. 1). The term "racial Capitalocene", coined by Vergès (n.d., cited in Fowkes & Fowkes, 2022, p. 232), could be said to apply to South Africa. Capitalocene broadly views the degradation of our planet as attributable to capitalism according to Marques (2020, p. 32).

The South African history of Apartheid is implicated within this system of exploitation and suppression. This emanated initially from mineral mining which generated money and power

for white colonialists (Marumo, 2020, para. 1; Munnik, 2010, pp. 1- 4). This is historically relevant to Anthropocentricism and climate change, revealing that South Africa is not exempt from climate change responsibility. That we continue to degrade our environment indicates that Anthropocentrism continues in human attitudes and practices. The state of our rivers and the environment are detrimentally affected by non-sustainable living, consumerism, industry, mining, agriculture, poor education and diminishing forest reserves[2]. These factors contribute further to global warming and climate change and is relevant to the examination of Estuary realities in a local context. Evidence of these factors is discernible in the polluted uMngeni Estuary.

The repercussions of climate change effects the ongoing equilibrium and biodiversity of the Estuary, as mentioned in Chapter 1. The detrimental effects on species indicators, or bio-indicators, losses of habitats, disease, infertility and genetic mutations (see Chapter 1) can in turn lead to "interspecies genocide" (Cafaro, 2015, p. 387). This includes the encroachment of invasive plants and insects.

Diminishing biodiversity is happening more quickly than the last great extinction 65 million years ago (Marques, 2020, p. 251). The Estuary will not be unaffected. The ongoing contamination, attributable to industry, general human activity and carbon levels, is visible (garbage, oil slicks, non-bio-degradable plastic, e-waste, sewerage (Goba, 2021) and 'unseen' (air pollution, micro-plastics, e-Coli and residues of medicines, agricultural chemicals, municipal and industrial effluents, many of which are toxic (Goba, 2021).

The following citations present realities of the uMngeni river and are applicable to this Estuary. Detected in the uMngeni river were organochlorine pesticides (Birungi, et al., 2018, p. 232); micro-plastic ingestions by fish species (Naidoo, et al., 2020, p. 1); and the spill-off of pollutants from the land in the catchment area of the uMngeni water supply (Namugize, et al., 2018, pp. 248-249). Birdlife (a publication with contributions by scientists, bird groups and

[2] World-wide egalitarianism with equitable living standards for all humans, care for the environment and sustainable ways of living such as growing vegetables, recycling, reducing transport costs are a few of the ways in which citizens can contribute. These are heralded by grass roots bodies and NGOs as reparative measures (Bukula, 2022; De Landa, 2006; Johnston, 2017).

ornithologists) reported a seventy percent decline in waterbirds in the Durban Bay area (Taylor & Peacock, 2018, p. 31). The outcomes of research on the mitigating effects of climate adaptation and biodiversity conservation in South African coastal cities (Swanepoel & Sauka, 2019, p. 13), are not visibly apparent in this Estuary, apart from the garbage collections, mentioned in Chapter 1.

Some current effects of global warming are tidal surges, floods and rising sea levels. In Durban, erosion of the dunes bordering the Estuary and the flooding of areas in the Estuary, are occurring. These problems were forecast by Mather (2012, p. 237), Mgadle, et al. (2022, p. 180) and Swanepoel and Sauka (2019, p. 2). Photographs of the aftermath of these occurrences are shown in Workbook 10 (2021-2024, pp. 463-468). Flooding damages the roots of the Black mangrove tree (*Bruguiera gymnorrhiza,isiHlobane*). This was communicated to me when viewing the damage in the Estuary, after the August 2022 floods (B. Pather, Conservation manager, Ezemvelo, "personal communication," August 27, 2022). Mangrove root decomposition can release carbon stored in the roots, severely exacerbating carbon air pollution (Alongi 2014, p.195; Ouyang, et al., 2017, p. 54) and further reducing coastal water quality and biodiversity. Such outcomes can affect fish and crustacean nursery habitats (Gilman, et al., 2008, p.238), acidify the ocean (Marques, 2020, p. 289) and cause a decline of phytoplankton (Marques, 2020, p. 296).

Conferences are held world-wide on climate change, where fossil fuels and carbon levels are promoted as the main perpetrators. However, carbon dioxide and methane are just two of forty gases heating the earth (McPherson, 2021, p. 3). Greenhouse gases are only one element of the causes of climate change. It appears that earth has entered the phase of the third mass extinction (Cellabos, et al., 2017, 2020, cited in McPherson, 2021, p. 2) or the sixth mass extinction (Cafaro, 2015, p. 387; Marques, 2020, p. 252). Urban developments, such as the Beachwood hotel and residences as mentioned in Chapter 1, threaten the estuarine ecology and biodiversity, positioning the investigation of this Estuary as relevant to local and global concerns.

2.2. Embodied Knowledge

My art practice together with the scientific literature is pertinent to expanding my knowledge of Estuary realities and thus to excavating the research questions. It is through interactions with this specific Estuary, which is the part of "my world," where "that knowledge emerges" (Osberg, et al., 2008, cited in Green, 2015, p. 8). It is through the translations of the literature

research, my experiences, explorations and intuitive processes into artworks, that I build my knowledge. The artefacts and materials within the artworks embody knowledge. Biggs (2016, p. 5) does not dispute that artefacts embody knowledge, but states that they require context or text to advance our understandings of the artefact. This is discussed further in Chapter 3.5 where I explain that my ways of diversifying my materials create altered realities, through layering, printing, applying ink and collaging with them in new contexts. I will discuss the embodiment of knowledge in more detail in Chapters 3 and 4.

Figure 3. Herman De Vries, H. (1994). rosa canina*. 80 cm. x 76 cm. Private Collection. Courtesy of Herman De Vries*

For example, my sense of the urgency of the vulnerable situation in the Estuary impelled me to incorporate noxious waste and pollutants into *Frog Kaross* (Figure 21). Green (2009, cited in Green, 2015, p. 8) speaks of the "emergent quality to research-as-practice". *Frog Kaross* conveys emergent qualities as a result of excavating Estuary realities, experimenting with and the intuitive handling of the materials, as well as consulting literature. This recalls De Vries' creative processes, as evident above in *rosa canina* (Figure 3). Both artworks carry meaning imbued within the materials, which may arouse feelings in the viewers of unpleasant tactile

imaginings, or possible memories. The display of prickly stems is a surprising reality, resonating with my incorporation of noxious chemicals. De Vries is one of the artists central to contextualising this creative research.

De Vries believed in the equality of all things (Gooding, 2005, p. 77). This is in opposition to the hegemonic thinking of Humanism hence De Vries' title, *rosa canina,* has no capital letters. Thinking in binaries with the superiority of humans prevailing over all life, distinguish Humanistic thinking, contradicting De Vries' beliefs in equality of all life. The re-naturalisation of De Vries' 'wild lands' shows that he values nature. A photograph of thorny stems, *rosa canina*, shows sections of the wild rose plant, without leaves, seeds or flowers. This subject is not inviting for viewers because it suggests that the thorns might prick, causing pain. In my view, the rigidity and linear arrangement of these stems is a dynamic contrast to the organic variety and beauty of each stem. One may wonder why De Vries selected such thorny stems. Rose blooms may be considered a clichéd form of beauty, but De Vries is offering the overlooked parts of plants for consideration. A possible explanation could be that for De Vries these thorny stems are an integral part of *rosa canin*a blossoms.

The inclusion of pollutants as art materials leads me to consider artists who also employ similar waste materials. There are a significant number of artists who use garbage and whose concerns for climate change and pollution are partly aligned with my own. An example is H.A. Schult's (1939-) *Corona Save the Beach Garbage Hotel* (Figure 4) shown below.

Figure 4. Schult, H. (2010). Corona Save the Beach Garbage Hotel*. [Photograph]. Rome, Italy. https://www.itsnicethat.com/articles/2763-ha-schult-save-the-beach*

My aims in this research differ from those of Schult in the installation *Corona Save the Beach Garbage Hotel*. I chose this work because Schult uses the actual garbage, covering the walls with it. In my view, the title and installation are both realistic and didactic. In contrast, I explore the realities of this Estuary and translate these realities in unusual ways, to address the gap I have identified in global environmental artworks. Further, the site of my research and artworks is located close to my home, the installation of Schult's is not connected to his home. Schult is a German artist who was commissioned by Corona beer to make a work focusing on the coast of Italy (Bec, 2010). There is no shortage of artists who use garbage and waste as artmaking material[3]. I have focused on international artists because this research arises from global concerns. Workbook 1 (2021-2024, pp. 14) shows an artwork where I use Estuary garbage as material. This is unsuccessful which I record as a "dead end" (2021-2024, p. 14).

Figure 5. Adams, I. (2022). Found 'dead' artefacts. *[Leaf litter and creeper]. 20 cm. x 30 cm. Personal Collection. Durban, KwaZulu-Natal, South Africa.*

[3] Artists using garbage to create art are: H. A. Schult (beach trash), Robert Bradford (recycled toys), Steven Rodrig (electronic discards), Jason Mercier (celebrity discards) and Derek Gores (media trash).

Leaf litter and dead artefacts could be considered as garbage, but dead leaves are not devoid of life, they have value, they contain life (Bani, et al., 2018, p.75) and *Chi.*[4] Here I am differentiating my creative practice through the incorporation of unconventional materials. Dead organic materials are "a key process of biogeochemical cycles in forests" (Bani, et al., 2018, p. 75; Mugwisi, 2017, p. 162). Decomposition is symbiotic in nature. Symbiosis[5] and *Chi* are intrinsic to the interconnectedness which exists between living organisms.

2.3 Estuary Meanders

Walking and hiking in nature reserves has been part of my life since adulthood.[6] Walking in the Estuary area provides a valuable tool for excavating the research questions. There are scant local publications relating to the Estuary. Berjak, et al. (1977, 1986, 2011) present information on the life in the uMngeni Beachwood Mangroves Estuary. Jacana (2001, pp. 6-8) discusses mangroves, and Nichols and Fairall's guide (1992, pp. 42-47), details a walk in this specific Estuary.

My art processes begin with mindful walking called *kinhin* (a Zen Buddhist practice) to absorb the forest atmosphere. This relates to the practice termed 'forest bathing', *shinrin-joku.*[7] Five scientists (Park, et al., 2009) conducted field experiments of forest bathing in twenty-four forests across Japan. Their research outcomes showed that forest environments could lower concentrations of cortisol, pulse rates and blood pressure. This suggested the effective use of

[4] Namely the 'spirit' or energy inherent in all things, such as nature (Adams, 2019, p. xxi)

[5] My understanding of symbiosis in this context is the sharing between organisms, which is mutually beneficial. In Chapter 3 I discuss this in more detail.

[6] Examples are: Estuary walks done with Rosemary Harrison (North Durban Honorary officer of Beachwood Mangroves, KZN Wildlife); Margaret Burger (WESSA, KZN Chair and member of uMngeni Estuary Conservancy); tree and flower walks done with botanists Eugene Moll and Elsa Pooley; hiking in the Drakensburg; wilderness trails in Umfolozi / Hluhluwe Game reserves, Moremi and Chiefs Island, Okavango, Botswana; Namibia; hiking trails in the Cape (Tsitsikama, Outeniqua, Otter Trail, Nature's Valley and the Cedarberg).

[7] In 1982, Tomohide Akiyama of the Japanese Ministry of Agriculture, Forestry and Fisheries, coined the term *shinrin-joku*. (Plevin, 2018, p.17).

forest resources in stress management, health promotion, rehabilitation, and in the possible prevention of disease. The benefits of forest bathing are referenced by Andreyev (2021, p. 144); Irigaray and Marder (2016, p. 41); Li (2018, p. 5); Naht Hanh (2020, p. 27), Park, et al. (2010, p.18) and Wohlleben (2015, p. 223; 2022, p. 124).

The chemical compounds (phytoncides; Hine, 2019)[8] that are emitted from the leaves of trees are said to be "plant antibiotics" which protect plants from fungal spores (Li, 2010, p. 11; Wohlleben, 2022, p. 120). During forest bathing one absorbs these chemicals which enhance immunity, physical and mental health (Li, 2010, cited in Wohlleben, 2022, p. 121). The benefits of enhanced mental health may contribute to calming one's mind and body in meditation. This practice is conducive to unveiling my senses (see sub-section Awakenings in 3.5). Sensory experiences and somatic feelings add depth to the process. This together with my other idiosyncratic methods offer a distinctive set of research methods (see 3.3., page 79), where I describe my *Sumi-e* processes involving somatics. In addition, mindful walking, forest bathing and meditation affect my 'self' and my creative processes.

Walking is recognised as an activity which promotes the appreciation and connection with nature, and is enjoyed by Naess (1989, p.11) and Thoreau (1962, p. 369). This is a regular pastime for De Vries, where he wanders on his self-wilded lands, which he has restored with wild plants (Gooding, 2005, p. 76). Walking in the Estuary underpins my relationship to this Estuary. It is an integral 'tool' in my data collecting processes and catalyses an embodied understanding of the data. Walking and communing with nature enables focused sight and hearing and generates emotions. Marder says that walking (2014, p. xviii; Irigaray & Marder, 2016, p. 161) provides intimate insights and practical suggestions for being *with* nature rather than *in* nature. These opinions have reinforced my approach of mindful walking, forest bathing and sitting in meditation, as purposeful ways of connecting with and identifying realities of the Estuary. These activities assist in tackling my research questions in novel ways, providing insights and unexpected understandings.

[8]'Phytoncides' are defined as "volatile antimicrobial organic compounds derived from trees...that are emitted as a means of defence against airborne pathogens ... claimed to boost human immune function." (Hine, 2019, p.4884).

Naht Hahn (2008, p. 22) suggests that with mindfulness one can see walking "as life". Hahn (2008, p. 7) suggests one should expand awareness to include the rest of one's body by living in direct and constant mindfulness of the body. This indicates the importance of somatic perception. Matsunobu (2012) cited in Sheng (2012, p.141) speaks of "mind-body oneness". Walking is indeed a somatic experience of "mind-body oneness". Mindful breathing techniques and mindful walking connect my body and being with the Estuary. These ways of being offer the potential for creating an "eco-somatic" relationality with the Estuary (Eddy, 2017, p.1; Karahan, 2022, p. 62; Rufo, 2022, p. 6). My feelings for the Estuary plants affect my being and I feel compelled to find ways of preserving these artefacts of the Estuary. I am aware of my somatic complicity in the unfolding of the artworks discussed in Chapter 3. This somatic awareness stems from both the experiences above and my literature investigations. Mindfulness and my ensuing somatic awareness are important ways of excavating the Estuary realities. The links between literature, exploring these realities, my feelings for the Estuary and my evolving creative practice all overlap and interconnect in this multi-faceted PLR. My research questions and aims, presented in Chapter 1, result from the above PLR interconnections.

2.4. Estuary plant life

The emerging field of plant behaviour describes the growing awareness of the potential and value of plants. The relevance for this creative art practice/research will unfold. The literature referenced below assists in extending my knowledge of the plants and endorses my experience that plants do indeed help me to examine my concerns for the Estuary.

Estuary plants are essential to this creative practice partly because plants are vital for our survival. "Plants are multicellular organisms in the kingdom Plantae that use photosynthesis to create their own food and produce most of the world's oxygen" (Hine, 2017). Loss of plants impacts on the health and reparation of all life on earth (Irigaray & Marder, 2016, p.131; McDonald, et al., 2020, p.1). Constitutional law in Switzerland, 2008, declared "the dignity of plants as living beings" (Fowkes & Fowkes, 2022, p.145). The Rights of Nature (Chapter 7 of The Equadorian Constitution, 2008; Fowkes & Fowkes, 2022, p.166) presents specific laws on the protection of plants. Marder (Irigaray & Marder, 2016, pp. 208, 210) speaks of the "self-giving" of plants. Plants give us food, shade, medicine, oxygenates the air, and are necessary for all life on earth. At the start of this research project, my involvement with plants was

somewhat distanced. As I have progressed and expanded my knowledge of plants in the Estuary, I realise that my connections with plant life are deeper than initially understood. The diagram of *The phylogenetic tree of life* shows the bacteria[9] shared by human and all life forms, illustrating our deep connections.

Human bodies are eco-systems (Andreyev, 2021, p. 139) containing a community of trillions of bacteria and other microorganisms called the microbiome (Davenport, et al., 2017, p.1). In this we are related to other species (Davenport, et al., 2017, p.1), repositioning our interdependence as human biomes (Gilbert, n.d., cited in Fowkes & Fowkes, 2022, p. 215). As such, humans are not superior to, but part of the broad ecology of the Earth. We are "entangled in more-than human communities" (Fowkes & Fowkes, 2022, p. 224). As a human I am physically related to, and connected with, plant life. A with leaves of a plant (Marder, 2014, p.159) our skin breathes through our pores and unconsciously senses humidity, temperature, light and vibrations. This connection with plants offers a subtle form of knowledge, presented further in this chapter where deeper realities of the plants are uncovered. These forms of knowledge, including my somatic complicity, have come to light through literature and connecting with the Estuary.

The scientific literature on plants of the area is vital for identification, and for extending my layman's knowledge of plants. Additional knowledge enhances my appreciation of the value of plants and weeds[10]. Weeds are a part of this Estuary community (Von Ahlefeldt, et al., 2003; Berjak, et al., 1986, 2011; Boon, 2010; Dugmore & van Wyk, 2008; Grant &Thomas, 1998; Pooley, 1998)[11]. Communication between plants is presented by the art historian and curator, Giovanni Aloi (2019, pp. 79, 260), biologist Sheldrake (2020, p. 150), and forester Wohlleben

[9] Andreyev (2021, p. 140) shows this diagram.

[10] A definition of weeds in the Oxford English Dictionary (2019) applies: Weed: "Any herbaceous plant not valued for its usefulness or beauty or regarded as a nuisance."

[11] Harvesting plants in the Estuary is not permitted. However, weeds are freely available from the vacant land, and from pavements and parks in the surrounding area.

(2015, pp. 6-13). This subject continues to be contentious.[12] On Google Scholar alone, there are more than one hundred listings of citations and publications promoting the subject of plant communications. The most common communications appear to be through intercellular and mycorrhizal associations, where cues are received and transmitted, and through the emission of biochemicals from roots and leaves (Irigaray & Marder, 2016, p.122). I am not educated in science and much of this literature is beyond my understanding.

The innate abilities of plants to respond and act to stimuli such as temperature, smells, light, humidity and vibrations may be associated with 'plant agency'. Plant agency is discussed by Aloi (2019, pp. 79, 260; Concilio & Fargione (2021, p. 2); Fowkes & Fowkes (2022, p. 133) and Tanaka (2022, p. 120) and is also termed plant intentionality or phytophenomenology (Marder, 2014, p 118). Marder says that this is the intrinsic uniqueness of every plant form and is shaped by individual plant responses to the environment (Irigaray & Marder, 2016, p. 118).

The installation *Revolutions* (2015), by Boursier-Mougenot, (1961-) is discussed in 2.4 and is an example of a Science-art project that attributes agency to trees (Fowkes & Fowkes, 2022, p. 133), thereby causing one to re-think trees (Aloi, et al., 2019, pp. 79, 260). This work was exhibited in the French Pavilion at the 56th Venice Biennale (https://www.biennialfoundation.org/2015/04/the-project-revolutions-by-artist-celeste-boursier-mougenot-accompanied-by-curator-emma-lavigne-will-transform-the-french-pavilion-into-an-oneiric-and-organic-island/). This work comprises three pine trees which are installed inside on wheeled bases. The trees' mobility allows them to respond to light, temperature and humidity by adapting new positions according to their resonances with the stimuli.

My expanding knowledge of the innate abilities of plants is crucial. Plants become the focal point of unveiling the realities of degradation and reparation of the Estuary. Plant

[12] Professor Eugene Moll, University of the Western Cape, botanist and author, presented: Botanical reflections of a South African botanist-KZN nurtured. He refuted 'plant communication' and noted that *The Hidden Life of Trees* (Wohhleben, 2015) was awarded the Pulitzer prize for fiction. (2024, October 3-4. Decolonising the botanic gardens? Present and Future Botanic Gardens in South Africa [Symposium] Durban Botanical Gardens, Durban).

communication seems to be integral to the survival of the estuarine community. This is evident in the ways in which the plants assist each other (Aloi, 2019, pp. 79, 260; Sheldrake, 2020, p. 150; Wohlleben, 2015, pp. 6-13). Plant propagation is vital to reparation, and it is through pollination that the Estuary plants reproduce and strengthen the community. Additionally, insects and birds are key pollinators and link the Estuary with the outside world.

A high diversity of wild pollinators are considered to be vital for pollination of all plants including weeds (Brossi & Briggs, 2013, cited in Marques, 2020, p. 267; Carvalheiro, et al., 2008, p. 1419) and for maintaining the Estuary's biodiversity (Marques, 2020, p. 267). Weeds are self-seeders and are opportunistic, establishing themselves in arid and vacant spaces in the Estuary. I continue to identify weeds in the Estuary and surrounds. I am learning about their medicinal and nutritional uses (Dugmore & van Wyk 2008; Von Ahlefeldt, et al., 2003) through walks inspired by N. Brighton (2020, 2023; 'weedy activist', 'personal communication', November 12, 2022), and through her publications. Weeds are praised by Fowkes and Fowkes (2022, p. 152) as "climate adapters" being resilient to unstable weather. They are considered as "the botanical vanguard" of the "earth's response to climate change" (Fowkes & Fowkes, 2022, pp. 144,145). The attributes of weeds described above suggest that Fowkes and Fowkes acknowledge the agency of weeds.

This interest in weeds has disrupted my life-long attitude towards them. Discovering the agency and reparative value of weeds signifies a bold shift in my thinking. This continues to evolve through my Estuary excursions and exposing myself to new possibilities and new literature. Weeds are another important aspect of the Estuary realities. They expanded my initial intentions of focusing on only indigenous plants.

Many weeds are alien plants and there are plenty of weeds growing within the Estuary. Alien plants are classified, in three categories by SANBI (South African National Biodiversity Institute) "red invasive" being the most threatening to indigenous biodiversity. "Riparian zones remain among the most threatened of all ecosystems, under increasing pressure from anthropogenic and environmental stressors, with elevated risk of invasion by alien species" (Baattrup-Pedersen, et al., 2013 cited in Pattison, et al., 2017, p. 424).

Visible evidence of the alien vegetation and contamination of this riparian zone in the Estuary alerted me to this aspect of degradation. The conservation approaches of Ezemvelo

and WESSA,[13] exercise discretionary measures in the Estuary. For example, the Triffid weed (*Chromolaena odorata, eseshumi*)[14] has been eradicated, but the alien eucalyptus trees on the north-western side of the river are not considered a threat as they are not affecting the Estuary biodiversity by multiplying (M. Burger, 'personal communication', November 29, 2022).

My aim is to creatively excavate my research questions in order to present a body of artworks, functioning as translations of the current realities of the Estuary, with an explanatory text. These insights together with my belief in the *Chi* or spirit of plants demonstrate that plants are a prime source of knowledge for creating artworks that express the realities of pollution and reparation in the Estuary. Plants have been used as subject matter and materials, expressing concerns for the loss of forests. A good example of this is Joseph Beuys' (1921-1986) *7000 Oaks* (De Wachter, 2021). This work validates my use of plant materials to highlight the plight of plant environments. Artists such as Daniel Steegman Mangrané (1977-)[15] and Amar Kanwar (1964)-,[16] have used film to air their views on threatened forests and land. Such collaborations with artists and scientists, falls within a framework of Eco-art/Eco Materialism. Although I have not taken a Science-Art route in this PLR, the Science-Art texts of Aloi, (2018, 2019), Fowkes and Fowkes (2022) and Weintraub (2014, 2019) offer alternative viewpoints which affect my thinking. This in turn influences my creative processes and feeds into my text. These references are discussed in Chapter 3 in conjunction with my artworks and those of my selected artists.

[13] Ezemvelo. This South African governmental organisation manages wildlife conservation and biodiversity in the province of KwaZulu-Natal, where the Estuary is situated (the official name is the KwaZulu-Natal Nature Conservation Board. WESSA is the Wildlife and Environment Society of South Africa.

[14] In this text I refer to the Botanical name of the plant in English, followed by the Latin and IsiZulu names.

[15] *Living thoughts: The Word for World is Forest.* [Exhibition]. (February 16 - May 6, 2019. Nottingham Contemporary, Nottingham, United Kingdom. https://www.e-flux.com/criticism/263869/daniel-steegmann-mangran-s-the-word-for-world-is-forest).

[16] *The Scene of Crime*. [Exhibition]. (2011. New Delhi, India. *https://tba21.org/scene_of_crime*). This is a film showing landscapes on the brink of annihilation in Odisha, India.

Publications by botanists on trees and weeds in this area are sparse. Tree listings of the uMngeni River Mouth compiled by Harrison (2013) is a useful guide. Publications by Boon (2010); Dugmore and van Wyk (2008); Grant and Thomas, (1998); Moll (1981); Pooley and Balkwill, et al. (2004), supply further information on trees in the area. Trees of the adjoining forest and surrounds are incorporated within this research.

2.5 Meditation and Zen Buddhism

There are more than 200 types of Buddhism. The path that I follow is Japanese Zen Buddhism, not strictly defined as Mahayana. Van Loon stated that one should not become fixed on one type of Buddhism ("personal communication," December 19, 2022). In 1980 Louis van Loon founded the Buddhist Retreat Centre in Ixopo, KwaZulu-Natal. He taught Zen Buddhism at the University of Durban-Westville and the University of Cape Town. I learnt *Sumi-e* from Van Loon and took over the teaching of this art practice when Van loon retired. Chapters 3 and 4 recount how meditation during forest bathing in the Estuary facilitated emergent knowledge through my art marking.

Although I have been aware of forest bathing (*shinrin-joku)* since I studied *Sumi-e*, it is only through this research that I have tried out various meditative practices in the Estuary. I would sit in *Shikantaza* ('just sitting', during meditation), in the Estuary, as opposed to the privacy of my home. Breath is a vital aspect of meditation practice. "Breath is the bridge which connects life to consciousness" (Naht Hanh, 2008, p.15). Deep breathing is indeed the root of mindfulness, meditation and yoga practice. Over the last four decades my early morning ritual has comprised of deep breathing techniques (mostly *nadi shodhana pranayama,* alternate nostril breathing) incorporated into my practice of yoga, *Qigong* and meditation (*zazen*). Meditation may be an "overused term" (Black, 2021, p. 72), but this enduring practice together with *Sumi-e* painting, gradually steered me towards Zen Buddhist thinking and ways of being. Meandering in the Estuary and surrounds, I spontaneously collect artefacts. A chance form of collecting is described by De Vries to be "the poetry of the moment" (Gooding, 2005, p.63), aligning with the Zen Buddhist concept of transience or impermanence (Matsunobu, (2012) cited in Sheng (2012, p.140). This describes my collecting of artefacts in the present moment.

Respect and appreciation of nature is fundamental to Zen Buddhism (Batchelor & Brown, 1992, p. 71; James, 2003, p. 147; Javanaud, 2020, p. 2; Nhat Hanh, 2020, p. 71) and extends to respect for artefacts that are no longer living (Bani, et al., 2018, p. 75). The connection with

Chi or spirit, through resonance with nature, is fundamental to meditation and *Sumi-e*. This applies equally to artefacts found in the Estuary. *Chi* can be detected through sensors in a laboratory set-up. These enable a student to measure his own *Chi*/energy, using "controlled breathing and concentration to enable meditation and a state of *Chi*" (Sato, 2010, p. 19). The connection with *Chi* in this creative research is a subjective intention. Lange Berndt's (2015, p. 34) opinion that materials have "life" is, in my view, synonymous with the *Chi* embodied by my materials and the artefacts collected onsite. These carry the spirit and histories of their provenance**.** *Chi* may be considered a similar concept to "*élan vital"* or "vital spirit" (Bergson, n.d., cited in Lange-Berndt, 1015, p. 19).

"Moral conduct" (Dumoulin, 1976, p. 11; Naess, 1989, p. 85; Weintraub, 2014, p. 7), namely awareness of the earth and care for all beings, is prescribed by Zen Buddhism (Batchelor & Brown, 1992, p. 71; Javanaud, 2020, p.10; Sahm, 2003, p.112; Nhat Hanh, 2020, p. 32) as well as De Vries (Gooding (2005, p. 12). As an artist addressing ecological abuse (Krajewska, 2017, p.22), "ethical" behaviour aligns with the aims of this research. Compassion without judgement (Nhat Hanh, 2020, p. 56) and ethical behaviour (Naess, 1989, p. 85) are seen as ways of living (Batchelor & Brown, 1992, p. 34), caring for others and the environment.

2.6 Materiality

The concept of materiality in art (Ingold, 2012, 2014; Lange-Berndt, 2015; Leddy, 2019) is essential to this research. Engaging with materiality addresses the entanglement of somatic engagement and material flow, and relates to the above-mentioned notion of *Chi*, spirit somehow detectable in one's experience with materials and artefacts. In this creative research my materials direct my intuitive and playful processes even as I direct them. That is, the materials are in a mode of 'becoming' (Ingold, 2012, p. 435) and materiality emerges through unplanned translations of the *Chi*-imbued artefacts.

In my practice, I played spontaneously with the found artefacts, papers, feathers, leaves, seeds and papers, "following" these materials (Ingold, 2012, p. 435) and experimenting with them, combining them intuitively. Barad's (2014, p. 175) opinion that "meaning is material" endorses Lange Berndt's (2015, p. 13) view that materials are "complicit" in creative production. She considers that materials are changeable through handling, interactions and chemical reactions (2015, p.12) creating channels of meaning (2015, p.15). Elkins (2003, cited in Lehmann, 2012,

p. 9) states that “their very materiality … stalls the flow of intellectual thought”. This statement by Elkins implies that no purposeful thinking takes place during creative process. Artefacts from the estuary transformed through the recontextualising action of practice, reiterating Ingold’s concept that materials flow and are not static (2012, p. 435), rather than an impediment to thinking (Elkins, 2003, cited in Lehmann, 2012, p. 9). Materiality is form and meaning “created through and during interaction” (Raff, 1994, cited in Lehmann, 2012, p. 12). Ingold (2012, p. 434) speaks of histories emerging through understandings of materials.

Sullivan (2010, p. xxii) states that human understanding may be “beyond the scope of explanatory systems”. Indeed, there are times when I can neither recall or explain how I created something, nor what its meaning is. Gray and Malins (2016, p. 15) suggest that by taking things apart, knowledge and understanding may emerge. In this way, materiality is a key phenomenon in my implementing PLR in my artmaking: bundle-steaming textile or paper with leaves and carbon ink is a process where the outcomes cannot be predicted. One cannot plan or envisage an end. Pre-determined routes do not allow for creativity, “they block” (Morgan, 2014, cited in Birch, 2023, p. 83). The risk of unplanned outcomes became exciting and challenging – an extension of my previous *Sumi-e* practice.

Below is a portion of an artwork in progress. Figure 6 shows the leaves of the Tree fuschia *(Halleria lucida, iminza*), a tree favoured by birds, insects and bees for its profuse flowers and nectar (Boon, 2010, p. 530, Jacana, 2001, p. 93). Bundle steaming with its leaves results in an expressive impression of leaves. This demonstrates how the materials influence the outcome. One of the materials I employ to reflect the violence pollution inflicts on the Estuary is carbon ink. Materiality speaks through the layering of these material impressions, including the textural traces of the crumpled cloth. The work embodies an acknowledgement of the value of this tree for bird and insect life, and of the value of birds and insects to the pollination and propagations of plants.

Figure 6. Adams, I. (2022). Steamed bundle dyeing. [Pure 'unfinished' linen, carbon ink, leaves]. 205 cm. x 45 cm. Personal Collection. Durban, KwaZulu-Natal, South Africa.

Lange-Berndt (2015, p. 14) considers that material complicity in artmaking is a form of agency inherent in the materials. Lange-Berndt (2015, p.16) suggests that to open the meaning of materials, such as the combined pollutants of the Estuary (see *Frog Kaross*, Figure 21), one may reveal non-art associations. My materials are juxtaposed, damaged, enhanced and melded, resulting in new material configurations. These echo Ingold's view of the flow of materials and their "becoming".

This can be seen in Figure 7 below, *Embracing; First Cloak of the Estuary* (2021-2023). Although the artwork was incomplete, the materiality of the embedded artefacts and the textures of violent elements (such as the carbon ink and snippets of oil-encrusted feathers) is evident. Bundle-dyed prints of various Estuary leaves are indistinct in places, and fragments of a petiole, or a vein of a leaf, indicate the source visually. The *Chi* or spirit of the materials – the soft handle,[17] the hand-inking, the all-natural textiles – highlight the haptic effects of materiality. This artwork led me towards an unforeseen series of cloak forms.

[17] Soft handle is a technical term for the feel and drape of textiles.

Figure 7. Adams, I. (2021-2023). Embracing; First Cloak of the Estuary. *[Cloak comprised of cotton, linen, silk, mixed media, fish skeletons, bark and leaves]. 300 cm. x 2000 cm. circumference. Personal Collection. Durban, KwaZulu-Natal, South Africa.*

Materiality continued to manifest in the translations and transformations of my artmaking processes, in found materials re-contextualised on the textile surface of this cloak. This alters the meaning of the materials while they determine the form and meanings of the cloak. A meandering line of stitched fledgling feathers embellishes the textile panel and is unrelated to the original bird form. The origin is known to me (feathers from a recently hatched fledgling), but a new function is a textured, fluffy line of demarcation evoking multiple connotations through various mental and bodily senses.

Figure 8. Laurence, J. (2019). Worlds that Disappear. *[Duraclear on shinkolite acrylic, aluminium oil pigment]. 250 cm. x 150.4 cm. Collection: ARC ONE Gallery, Sydney . https://arcone.com.au/janet-laurence-artist-profile*

Similarly, the material intelligence in '*Worlds that Disappear'* (2019, Figure 8), by Laurence, shimmers through the textural effects of the forms which hover and recede in misty shrouds. Laurence has layered and manipulated an acrylic sheet, layering gloss varnish and aluminium with oil pigment. Shiny areas alternate with matt, smooth surfaces with jagged textures. Laurence's chemical-heavy materials are representative of degradation.

Laurence's installation *Deep Breathing: Resuscitation for the Reef* (Figure 29) evidences the damage to The Great Barrier Reef, Australia. The materials speak through juxtapositions of reflective glass tubing, jars and mirrors receding and hovering, and preserved corals and fish. Laurence's combination of chemical and organic materials resonates with my diverse material combinations, making his work an important contextual reference in this study. The human-manufactured chemical materials Laurence has selected are possibly similar to the kind of disturbing effluents, pollutants and waste that I find and use as materials. Our materials differ in that Laurence's embody causes of pollution, whereas mine offer evidence of degradation on natural forms. For me, the choice of artmaking materials aligns with ethics embodied by the Eco-materialist attitude towards materials (Weintraub, 2019, 21).

De Vries also uses the juxtaposition of contrasting materials. His photograph, *rosa canina* (Figure 3), is mounted on smooth white paper against which the prickly rose stems bristle. De Vries's practice resonates with mine in that he chooses to work with wild plants from his own land. In *rosa canina* he has selected only the stems of the rose plants, translating these through photography and framing. The materiality of these is enhanced by the contrast between such diverse materials.

Figure 9. Devlin, E. (2022). Come Home Again. *[Exhibition] (September 16-25, 2022). Tate Modern, London. United Kingdom.* https://www.wallpaper.com/art/es-devlin-come-home-again-tate-modern

Es Devlin's illuminated dome, *Come Home Again* (Figure 9) is covered with drawings of threatened species of birds, bats, reptiles, insects, moths, beetles, wildflowers, fish and fungi. These creatures and plants are angled and layered, some extending outwards. The swirling, dipping and soaring forms imbue the surface with energy, enhanced by the internal shimmering light within the form. The installation aimed to draw attention to the conservation of biodiversity of London, where the flora and fauna list contains 243 endangered species. (Design Indaba, 2022) The designer's approach aligns with Eco-materialism, in that her interpretation represents all natural life forms in London as being equally important as humans. The natural materials were not gathered from nature, but were recycled after the installation. The physical positioning of the work outside the Tate Modern gallery, a repurposed industrial power station, and directly across from St Paul's Cathedral, a site of spiritual rituals, with the river Thames between them, is integral to the installation. The sounds of the depicted creatures could be heard by the audience, and during the Cathedral's Evensong. (The World Around, 2023) As an installation, sight, sound, space and place merge into a material experience quite different to my evocations of estuary life, but linked to my practice thematically and in attention to seemingly small details of creatures and life forms.

The three above-mentioned artists express different material awarenesses through their choices and use of materials, to further themes emerging from their environments. The ways in which I intuitively follow my materials and act with them (Lange-Berndt, 2015, p. 13) leads to unexpected outcomes. The relevance of materiality drives the exploration of my research into how to represent and express my concerns for the Estuary through translating its realities into artworks. Materiality is the dominant force in these creative processes.

2.7 Theoretical Framework

PLR is an expansive qualitative research design, where methodologies are led by theories of practice leading to emergent knowledge. In addition, anthropocentrism and human exceptionalism lead Cole and Malone (2019, pp. 159-163) to signal the need for an "overhaul" of philosophical approaches to the environment. This chapter explores how plant philosophy, and Eco-Materialism together provide theoretical concepts useful to my excavating of my research questions through my practice.

2.8 Philosophical Orientation

I draw primarily on aspects of the Naess' (1973) *Shallow and Long-Range Deep Ecology Movement*[18]. This was because Naess' Deep Ecology was mentioned by several philosophers, listed in the Footnote below[19]. As this study evolved, my focus shifted towards Eco-Materialism (Weintraub, 2014, 2019), New Materialism (Alaimo, 2012; Barad, 2007; Braidotti, 2013, 2019; Demos, 2013; Fox & Aldred, 2019; Roussel & Fell, 2018; Weintraub, 2014, 2019) and Zen Buddhism. The latter offers a way of being in the world and is another strong influence on my creative practice. Latterly, my readings of Marder (2014; Irigaray & Marder, 2016) have resulted in shifting my focus to the interrelation of Naess' Deep Ecology nature philosophy, the plant philosophy of Marder and Weintraub's guide for Eco-Materialist artmaking, as seen in Figure 10. The concept of "self-realisation" (Naess, 1989, pp.19, 1, 35, 173, 218; Naess, *et al.,* 2008, p. vii)[20] can be seen in the diagram. Self-realisation is also described by Zen Buddhist writers as being an "expansive sense of one's 'self'" (Cooper & James, 2005, p. 32).

My PLR methodology has also enabled me to approach this research through newly awakened somatic awareness. This has emerged from the influences above in conjunction with my walking, meditating and artmaking experiences in the Estuary. The literature on somatics (Dean, 2012; Haas, 1996; Rufo, 2022) endorse my ways of connecting with the Estuary (see section 3.13). I visualise sitting in *Ceremonial Chair 2* (Figure 65) and ask myself "will the feathers soothe or scratch?" (see Workbook 9 (2021-2024, p. 452). This chair is an embodiment of my somatic awareness.

[18] In this thesis I am not incorporating the theories of the 'Shallow' (Naess, 1989, p. 96, Harvey, 2006, p. 181), which encompasses 'egalitarianism' (Weintraub, 2014, p. 9; Naess,1989, pp. 113,116; Naess 1973, cited in Luke, 2002, p.179; Naess, 1989, p. 91; Gough & Smith, n.d., p. 39) and 'sustainability' (Naess, 1989, pp. 91, 113, 116; Weintraub, 2014, p. 9; Johnston, 2017, pp. 2, 3). These are broader long term global proposals.

[19] Deep Ecology is referred to by, among others: Anderson and Guys (2012, p. 226), Gablik (1995, p. 239; Sessions (1995, pp. 156-184).

[20] Guattari's 'Ecosophy' (2000, cited in Antonioli, 2018, p. 2) differs from that of Naess' (1973). Guattari names three ecologies: the environment, social relations and human subjectivity.

Braidotti's concept of an "expanded self" (2019, p. 42) and the process of "becoming," (Braidotti, 2019, p. 36) are aspirations for myself in this project and in my personal life. "Becoming" of materials (Ingold, 2012, p. 435), is a different concept which I explained on p. 36). In part this means thinking beyond binaries[21] (Barad, 2011, p.123; Braidotti, 2019, p. 33; Irigaray & Marder, 2016, p. 2011). In the context of this research, I subsequently engage sincerely with the Estuary and the non-human lives within, with the aim of dismantling the dividing line between my human self and the Estuary inhabitants. Weintraub (2006, p. 66) suggests that the way forward lies in unravelling solutions for overcoming binaries through altered ways of thinking. This opinion confirms my cultivation of inter-connectedness with non-human life, such as the plant life in the Estuary and aligns with Naess' (1989, p.85) and Marder's (Irigaray and Marder, 2016, p. 161) opinions.

PLR is centred on creative practice. PLR and the action within nature proposed by Marder, such as walking (2014, p. xviii; Irigaray and Marder, 2016, p. 161), being *with* nature rather than *in* nature. Action within nature is oppositional to abstract theorizing (Naess, 1989, p. 15; Naess et al., 2008, p. 2). These practical aspects of philosophy are said by Naess to be intuitively developed over time spent in nature (2008, p. 2). This is a practical means of excavating my research questions and possibly influencing my processes and data. Chapter 3 demonstrates the ways in which my action within the Estuary, through meditative walking and being 'with' the Estuary facilitates sensory experiences. This vital aspect enables a deeper examination of the research questions.

Batchelor and Brown (1992, p. 74) suggest that "personal fulfilment is found through developing an "interdependence" with nature, not an "independence". Maintaining a personal independence from the Estuary is a form of binary thinking, a view I held before I embarked on this project. These views of Naess (2008), Marder (Irigaray & Marder, 2016) and Batchelor and Brown (1992) resonate with my approach. Chapter 3 explains how their views contextualise my artmaking research.

Marder speaks of cultivating "vegetal sharing" (Irigaray and Marder, 2016, pp. 211, 208) by connecting with plants through our five senses of seeing, hearing, touching, smelling and

[21] Binaries are also referred to as dichotomies (Fox & Aldred, 2019, p. 1).

tasting. This is also referred to by Ling (2022, pp. 1-2) as a part of forest bathing. Marder views this as a means of "awakening… our …intersoul" (Irigaray and Marder, 2016, p. 210). This awakening of my senses assists in discovering deeper realities of the Estuary, presented in Awakenings, 3.5). These effects arise from probing more deeply into my art processes and my 'self' through meditation. This resonates with a quote from Dögen (1200-1253), who was a Zen Sōtō Buddhist and Haiku poet (Batchelor, 1997, p. 91).

> *To forget yourself is to be awakened by all things*.

For me this offers a way of becoming an impermanent 'self' and maintaining open-mindedness to the possibility of 'awakening'. This is an aspirational goal. Applying the philosophies mentioned above takes the form of spending time in nature in order to enhance my connections with plant life. In line with PLR, these practices are rooted in theory and thus deepen the excavation of the research questions through the unfolding of my creative practice. Chapter 3 investigates this.

The context of this project necessitates investigations into climate and plant science literature. In conjunction with this, the theories and philosophies provide tools for thinking and questioning. New Materialist and Eco-Materialist theories share some concepts with Naess (2008), Marder (Irigaray & Marder, 2016) and Zen Buddhism (Nhat Hanh, 2020; Van Loon "personal communication," 2017 - 2023). These overlaps can be seen in Figure 10 below. Broadly speaking New Materialism is a coalescence of philosophy and ecology (Alaimo, 2012; Barad, 2007; Braidotti, 2013; Demos, 2013; Fox & Aldred, 2019; Weintraub, 2014, 2019).

Political ecology (Demos, 2019, p.1) and sustainability, issues that are pertinent to New Materialism, are not included in this text. These comprise culture, politics, gender, science, feminism, egalitarianism, sociology and censorship which are broadly covered by the Deep Ecology of Guattari (2000, cited in Antonioli, 2018, p. 2; see Footnote 37). Eco-Materialist art is a view of the world and 'a code of conduct' (Weintraub, 2014, p. xiv) translated into materials, matter, materiality, public display and science within the context of ecology and the environment (Weintraub, 2014, p. 15).

In Weintraub's (2019, pp. 20 - 22) view, natural materials should be used, or the materials that show evidence of harm to the environment, such as pollutants. These facets of Eco-Materialism

apply to my artmaking, my outlook and my materials ethic[22] for this research project. This is indeed part of my "ethical" awareness (Weintraub, 2006, p. 81). Unearthing the realities of the Estuary for this research does not mean removing or damaging plants. The Estuary's borders are permeable, which allows me to identify plants on the surrounding verges and vacant lots. Weeds are one instance where I do remove plants from these surrounding areas before they are mown or poisoned.

Below is my summary diagram showing a triangulation of the influences and philosophies that are pertinent to this investigation.

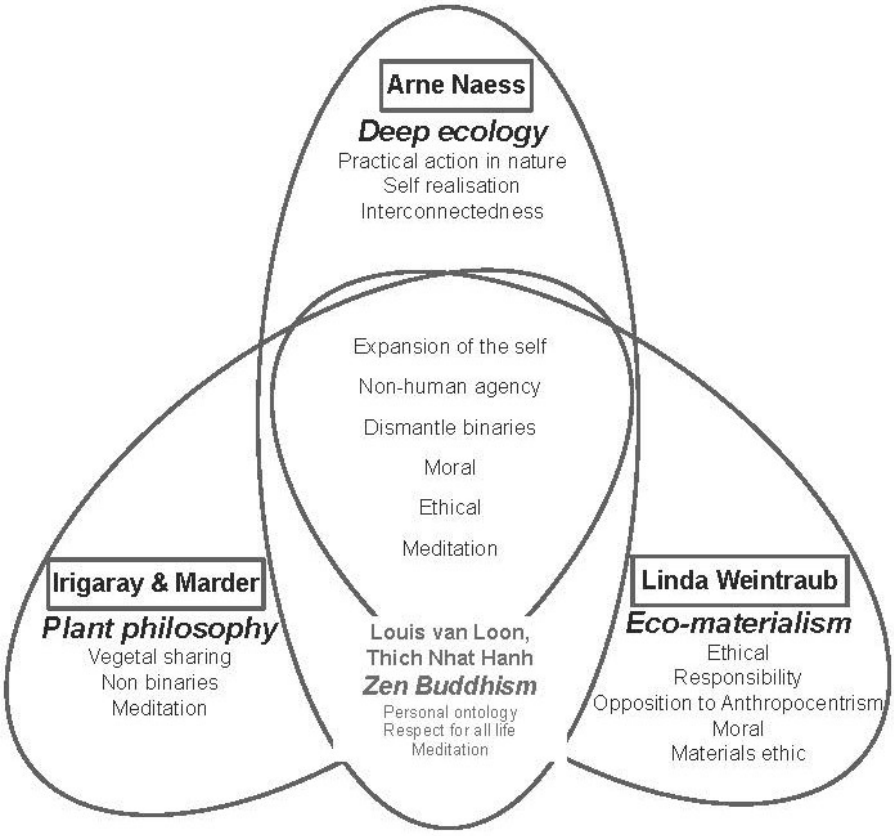

Figure 10. Adams, I. (2023). Triangulation of Influences and Philosophies. *29 cm. x 22cm. Personal Collection. Durban, South Africa.*

[22] I refer to Weintraub's publication *Eco material guide to Art production* (2019, pp. 20-22). My focus on all natural materials supports this opinion, and the incorporation of noxious substances is necessary to convey the reality of the situation within the Estuary.

The above diagram notes the intersections and commonalities existing between Marder, Naess, Eco-Materialism and Zen Buddhism, although each phrases these in different ways. I understand the following as common denominators: potential expansion of the self, non-human agency, sharing of all life (where humans are not dominating and exploiting nature, but respecting all life forms), non-binaries, moral and ethical behaviour. The investigations of theories and philosophies provide the framework for examining my research questions and for the influences on myself and my creative production.

2.8 Research Methodology

I introduce the various methods used in this Practice Led Research. PLR aligns with aspects of qualitative research. Reflexive thinking encompasses the development of mindful sensory experiences and a personal critical curiosity. Exploratory and performative methods are strong components in this PLR. Everything presented in this section is a means of excavating of my research questions and constitutes this multifaceted PLR.

2.9 Practice Led Research

Meditative meandering, the Estuary and the plants exert unexpected influences on the ways in which I handle my 'self', my artmaking, my Workbooks and journalling. All these aspects are integral to excavating the research questions. As mentioned previously the practice of *Sumi-e* continues to influence my approach to my creative processes. Later in this this research project my working life skills unfolded. The understandings and emergent knowledge that arise during this process are interwoven between my walking, meditation, Workbooks, journalling, experiences, heuristic, processes, text and artworks.

PLR is an appropriate methodology to address the research questions because it integrates practical and theoretical research, with each aspect complementing, expanding and strengthening the other. PLR thus becomes an idiosyncratic practice "leading the research" (Throp, 2016, p. 5). Haseman (2006, pp. 100-101) describes PLR as "exciting," and "unruly" and with the potential for "experiential" discoveries". Indecisiveness, tensions between insights and particular understandings help to forge an "internally conflicting enterprise" (Mihilache, 2019, p. 4).

These exploratory aspects, the conflicts and unexpected outcomes of this project underscore that PLR is uniquely adaptable to the idiosyncrasies of my, and other artists' art practice. Resonances, inspirations and contradictions between creating art and writing generate further insights in this PLR. Sullivan (2010, p. 245) suggests that contradictions and conflicts are useful and necessary to conducting visual arts research. Diverse ramifications and ambiguities offer a multi-faceted investigation and expanded view, as opposed to a vertical investigation (Smith & Dean, 2014, p. 3). These together create a deep-reaching assemblage which is greater than the sum of its parts. Mäkelä and Nimkulrat, (2018, p. 3) speak of experiential knowledge which in this project resonates with my experiences of deeper realities discovered through meditation and somatic perceptions (discussed in 3.13).

My art practice, together with my materials, is indeed intrinsic to my research methods and knowledge production (Throp, 2016, p. 9). This serves to excavate my first question which leads to examining the realities of the Estuary and translating these realities in non-realistic and non-prescriptive ways, addressing Question 2. Chapter 3 explains these processes in conjunction with the artworks.

The research activities, together with my creative processes, lead me to investigate my chosen artists' artworks and opinions. Where I find thought provoking opinions or theories, I reference these in my text, showing how these cross-pollinate with my creative processes. Collaborations between artists and scientists, artists and conservationists indicate national and global concerns for environmental and ecological matters. These artists' artworks are contextualised within my criteria for this research project addressing the gap of artworks bound in this PLR.

PLR is not a straightforward process, considered "complex" (Smith and Dean, 2009, p. 5) because of the diverse ramifications leading from my constant playing, experimenting with my materials, outcomes of dead ends and creative spurts. This research is centrally positioned within performative research methods (B. Bolt, "personal communication," March 3, 2023; Cazeaux, 2017, p. 38; Haseman, 2006, pp. 102-106; Østern, et al., 2021, p .272). This exploratory way of creating artworks leads to unpredictable outcomes. Haseman (2006, p. 103) suggests that qualitative research relies on words as data, whereas performative research is a "multi-method" led by action and practice.

This PLR incorporates aspects of a qualitative inquiry, described as the "what" (the Estuary), the "how" (my research methods situated within a PLR framework) and "why" (my concerns for the degradation of the Estuary) (Gray & Malins, 2016, pp. 12, 36; Silverman, 2017, p. 18).

2.10 Qualitative Inquiry

Cousin (2010, p. 9) suggests that open-mindedness and objectivity in ways of seeing and thinking describe an expansive and open-ended qualitative inquiry. I would add to this that reflexive thinking assists in maintaining open-mindedness which contributes to rigorous research.

The philosophies above combine with my personal ontology, observations and experiential knowledge in the investigation of the research questions. My personal ontology is my sense of being in the world, my personal identity which has been unfolding through deeper connections with the non-human life in the Estuary. I began as an independent observer, yet the Estuary has become complicit in the slow unfolding of my 'self' and in being 'with' the many realities of the Estuary. My mindfulness enables multiple sensory experiences in the Estuary expanding my knowledge of smaller thing. Development of these senses are further discussed in 3.6 and 3.13. Examples of sensory experiences are:

1. olfactory: sweet perfumes of blooms and noxious vapours of the polluted river.
2. auditory: chirping of sparrows and twittering bronze mannikins, croaking frogs.
3. haptic: satiny gloss of new Red mangrove leaves (*Rhizophora mucronata, umhlume*) and the dry, crusty bark of the Forest mahogany (*Trichillia dregeana, umkhuhlu*).

2.11 Reflective and Reflexive thinking

The reflective practice of Somerville is described by herself as a "methodology of emergence." (Green, 2015, p. 9). This can be a useful to approach to my experiences of dead ends, indecisiveness and spurts of creativity, when reflecting on my art processes. Reflection after action and "reflection-on-action" (Schön, 1991, p. 128) is relevant to this investigation because this might bring to light a lead or insight that I have overlooked. Although "reflection-on-action" is considered by Schön to be implicit in performative methods (Workbook 4, 2021-2024, p. 202), I find that I need to intentionally apply this mode to considering my questions and assessing my data.

Reflexive thinking offers a means of re-thinking that stimulates a personal and critical curiosity. Reflexive research methods (Cousin, 2010, p. 9) imply standing away from the habitual thinking self. This is described as "standing outside the self" (Bolton & Delderfield, 2018, p. 14). Bolton (Bolton & Delderfield, 2018, p.14) states that the reflexive thinker needs to "stand back from belief and value systems and habitual ways of thinking." I take my understanding of objectivity from Bolton's statement.

Additionally, I need to overturn *a priori* assumptions of how to examine my research questions and maintain open-mindedness in finding new ways of examining the Estuary's realities. Davies (1999, cited in Cousin, 2010, p. 11) aptly defines reflexivity as a "turning back on oneself". I interpret this as a way in which I research myself, shown in the following paragraph.

I realise now that my assessments of sensory experiences within the Estuary are an aspect of reflexive thinking. Identifying somatic aspects of my artworks that came about through somatic immersion in the Estuary, have unravelled through thinking reflexively about these mindful sensory experiences. Somatic experiences were also communicated by anonymous wearers of the cloaks (*Uncloaking the uMngeni Estuary*, 16-23 July, 2024). These are listed in Workbook 9 (2021-2024, pp. 456 F2- 456 H2). The development of an "eco-somatic" (Eddy, 2017, p. 1; Karahan, 2022, p. 62; Rufo, 2022, p. 6) relationality with the Estuary is possible. Reflexive thinking indeed assists in observing the Estuary from within, revealing deeper aspects of the Estuary. An example of the within of the mangrove trees is my discovery of their innate abilities to adapt to the estuarine conditions and to propagate through their unique hypocotyls. Reflexive thinking connects leads and understandings with the relevant literature. This allows my performative and exploratory processes to expand, giving rise to new knowledge. As journalling and notetaking offer great freedom, I realise the need for responsible-interpretations.

2.12 Research Methods

My research methods used in my practice are:

1. photography, sketching, journalling in my Workbooks, printing, identifying, pressing plants, embroidery, collecting Estuary artefacts, stitching, searching for artists, consulting literature and theories, translating findings in the Estuary into artworks.
2. Performative methods rooted in *Sumi-e* processes which follow Zen Buddhist principles
3. Skills from my working life in the clothing and design industry

4. Involvement of personal practices, such as meditation, mindful walking

My ‘self” is one of the research tools where my own creative processes and the Estuary connect. My Workbooks (1-11, 2021-2024, pp. 1- 491) show photographs of the ongoing degradation in the Estuary, examples of my creative processes and experiments with materials. Observing, collecting artefacts, photographing, somatic knowing, happen throughout my ongoing walking (the last mentioned is an integral part of this PLR). Journalling, recording these estuarine experiences, printing, materials, identifying the plants and pressing these, compound together with theories and literature. This constitutes my body of research tools. These also translate materials into artworks, responding to and somewhat directed by material intelligence or “agency” of the artefacts and substances. (Lange-Berndt, 2015, p. 16) All of these in turn contribute to my findings.

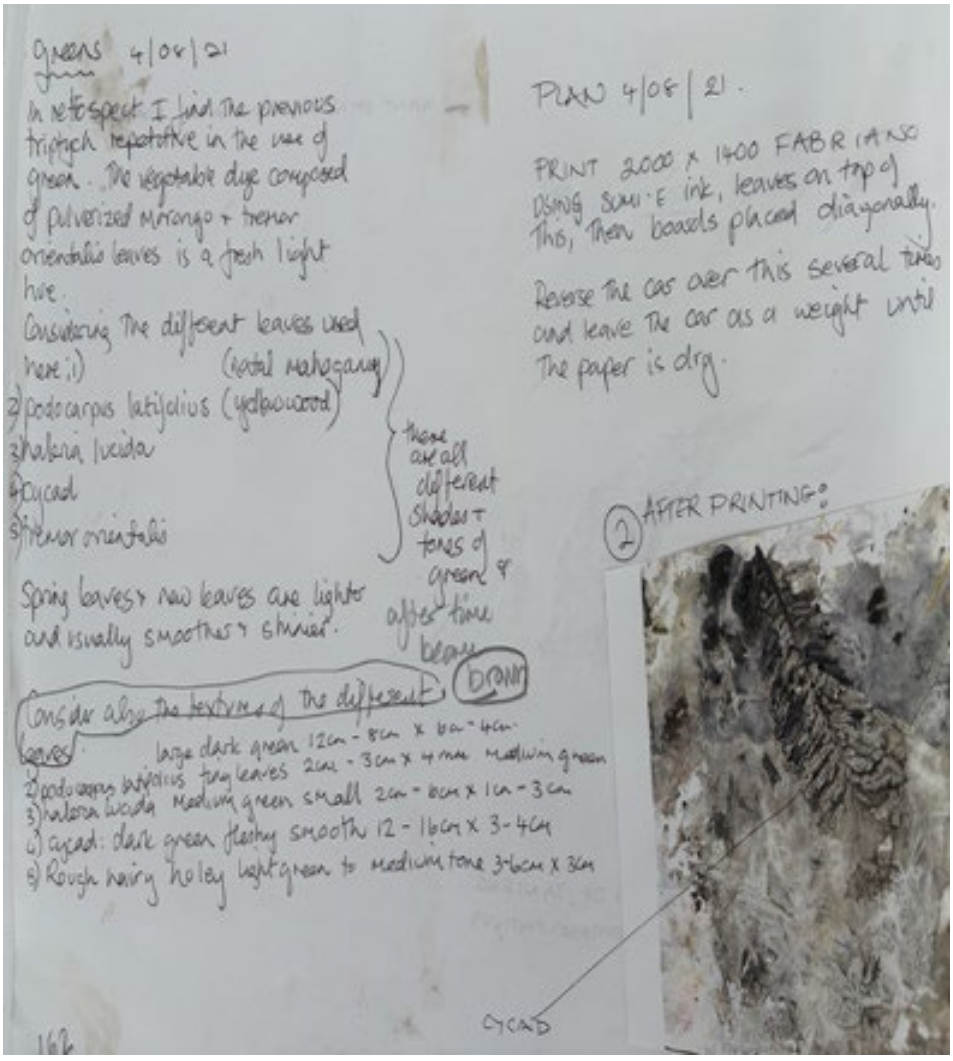

Figure 11. Adams, I. 2024. Workbook 3, 2021-2024, p. 162 [Photograph]. Personal Collection. Durban, KwaZulu-Natal, South Africa.2.13 Performative methods

Performative methods are integral to this creative research. The following authors refer to performative methods: E. Barrett ("personal communication," 2023); Cazeaux (2017, p. 38); Haseman (2006, pp. 102-106); Denzin and Lincoln (1995, p. 2); Østern, et al., (2021, pp. 272-289). Intuitively playing with materials entangled with spontaneous processes, is aptly described as a "dive- in" to see what the outcomes emerge (Haseman, 2006, p. 4).

Performative methods, implicit in *Sumi-e* processes (Adams, 2019, p. 120), are powerful tools for exploring the research questions. Biggs (2016, p. 3) speaks of the expansion of knowledge being "subject to understanding". Variations in my processes and understandings of the outcomes can confuse and provoke, leading to both dead ends and possible revivals. Here the importance of reflective practice emerges – the intersection of action and reflection leading to more action is documented in the Workbooks.

For example, in my Workbook 8, I noted that I should "revisit" the "dead end" of grass embellishments on the suspended geometric forms, and this resulted in a new way of using grasses to reflect their interconnectedness with birds. These grasses I later incorporated in other works taking that theme further. These revivals of dead ends signify the performative processes that lead to emergent knowledge is integral to PLR. The "praxical knowledge" (Bolt, 2006, p. 14) evolving from handling the materials and tools is implicit in unpredictable and sometimes chaotic ways of working. The results instigate deeper reflexive thinking, sometimes yielding tangential paths to further experimentation. An example of this is the process I developed to speed up the pressing of plant matter by using my motor car to press plant matter between large boards. This was an innovation prompted by the needs of my practice. Stencilling, printing and collaging of the plants have evolved through my intuitive handling of materials, responding to their unique qualities and affordances (documented in Workbooks 1 and 4, 2021-2024). Another example is the materiality of *The Cloak of Carbon and Repair* (Figure 34). The *ganpishi* 'textile,' made of bandages, feather clippings and glue, was embedded with knowledge through the provenance, history and *Chi* of these materials. The interactions of the materials above describe one way in which PLR methods trigger unexpected insights.

This is the performative nature of my artmaking and entanglements with "knowledge-in-becoming," and "emergent knowledge" (Bolt, 2006, p. 12). These processes yield surprises, unruly outcomes which generate inspirations, interpretations and understandings. The knowledge-in-becoming arises from using the motor car pressing to yield impressions of plant matter. The emergent knowledge springs from the final artwork, where the different outcomes

combine together and create an overall theme, such as in Figure 7. Here the cloak offers a cross section of Estuary aspects. Østern, et al. (2021, p. 272) describe this as a cross-fertilisation of knowledge-in-becoming and emergent knowledge.

2.13 Exhibiting the Estuary

In PLR, modes of display may differ from the tradition of presenting final, 'perfect' works in a formal exhibition. This reflects the open-ended stance of creative research. The research question 3 of this expansive PLR addressed this aspect: "In what ways might I display these artworks that additionally highlight the degradation and reparation of the Estuary's environmental situation?" Experimentation with ways to show the works is thus part of the PLR methodology.

In Chapter 3, I reflect on attempts at installing works in the Estuary environment. This mode of display was considered a possibility when the project was at the proposal stage with unknown outcomes. Later I had dancers perform in the Estuary wearing artworks, and this was documented by filming and photographs. Reflections on the outcomes of these experiments were important in PLR process to address question 3.

This research led to a gallery exhibition at The KwaZulu-Natal Society for the Arts (KZNSA) Gallery, in Bulwer Road, Durban (July, 2024) and later to a final installation at the Jack Heath Gallery (JHG), Centre of Visual Arts (CVA), University of KwaZulu Natal, Pietermaritzburg (July, 2025).

The first exhibition at KZNSA involved the public. I displayed the works in a way to invite people to interact with the pieces. At the opening, many of the viewers stepped into the garments and their comments were noted by assistants. I wanted to evoke aspects to the Estuary space in these indoor settings, and installed fans to create a breeze, audio of Estuary sounds, and fragrances. I used lights inside of some of cloaks to highlight the transparency of the fabric and highlight the inclusions of Estuary artefacts and stitched details. Reflection on how these measures yielded insights that influenced the final installation one year later.

2.14 Conclusion

In this chapter, I have contextualised my research by presenting literature on the environmental challenges we face, and on climate change which motivate my rationale for the study. I also

described the influences on my personal philosophies and practices, including my art practices and meditation. The concept of *Chi* is compatible with the theory of materiality, and material agency beyond the human. The methods I employ for this research are diverse, enabling discoveries which are presented in Chapter 3. Influences of the Estuary plants, philosophies and theories on the research methods are interwoven with the data, the documentation of my practice. This enhanced the rigour of PLR methodology, vital for the excavation of my research questions and for documenting the reflections and insights here.

Chapter 3: The Artworks

Introduction

In this chapter, I discuss my own creative practice and how it addressed my research questions using PLR methodology. This integrates the relationship between theory and practice, moving back and forth to draw on the different stages and ways of recording my process. In this chapter I have frequently written in the past tense, where I look back at what I have done. I include verbatim quotes from my Workbooks and these are in the present tense. Thus, the tenses may seem to change at times. My explorations in the Estuary, described in the next paragraph, feed into my processes and I translate these into artworks. In line with PLR, these experiences, my processes and the artworks interlink.

As presented previously, my research questions are as follows:

1. How can I translate my experiences and art making materials into artworks that excavate my concerns for this Estuary?
2. How can I create artworks that transcend a literal and didactic interpretation of my concerns?
3. In what ways might I display these artworks that additionally highlight the degradation and reparation of the Estuary's environmental situation?

This discussion of my creative processes to explore the research questions and the artworks that emerged is covered through the following sections:

3.1 The Materials

3.2 Studio Production

3.3 Preliminary Artworks

3.4 Leading On

3.5 Estuary Intermediates

3.6 Emergence

3.7 Emergence of Three-dimensional Somatic Forms

3.1 The Materials

This section introduces a variety of unconventional materials derived from different fields. Early artworks incorporated materials such as paper, ink, acrylic and brushes. Thereafter I diversified through discoveries of unexpected Estuary materials such as leaf litter, oil, mud and pollutants, which were combined with textiles, thread and embroidery. These last three materials emerged in later artworks stemming from my work experiences in fashion and textiles.

The explorations of my first research question entailed learning about the true realities of the Estuary, such as the pollutants: garbage, manganese, slime, oil and carbon. I show samples of these in Workbook 1(2021-2024, pp. 14, 33, 77). Photographs of eroded dunes (Workbook 10, 2021-2024, pp. 465, 466, 468), dead fish on the riverbanks, “murky, smelly water” and alien plants, were further realities. My previous commitment to all-natural materials, was shifted by the polluted realities of the Estuary. This compelled me to include pollutants in my artmaking. Respect for unwanted and waste material was promoted by Weintraub (2019, p.11) as an aspect of Eco-Materialist material ethics, as mentioned in Chapter 1. Early experiments with sand and carbon are shown in Workbook 1 (2021-2024, pp. 33-35). My art materials

became somewhat unorthodox but in contemporary art practice anything can be used as an art material.

In addition, I chose plants as the material focus for discovering the inner realities of the Estuary. This was partly because I could not cover all life in the Estuary, and because I have had a interest in plants for decades I 'sampled' these. Creepers, grass, shrubs, trees and weeds are plants of which leaves, flowers, fruits and seeds are components. In my experience these plant materials provided "relational knowledge" (James, 2003, p.146) of the "inside-in" of the Estuary.

However, I was limited as to what artefacts and materials in the Estuary I could use. My personal ethic is to not harm nature which correlates with the Eco-Materialist "code of conduct" (Weintraub, 2014, p. xiv). This proscribed using any living thing "only as a means" (Naess, 1989, p.174). I attempted not to disturb, contaminate, or violate the Estuary in any way, so as to "tread lightly on the earth" (Cooper & James, 2005, p. 31; Naess, 1989, p. 97). Respect for all life in the Estuary is fundamental to my approach and relevant to this research. The Wildlife and Environment Society of South Africa (WESSA) prohibits the removal of any life from environmentally protected areas, such as the Estuary. This presented a challenging paradox because my main research question was to translate my experiences and art making materials into artworks that excavated my concerns for this Estuary. This meant that plants or parts thereof were materials for this project.

To overcome this restriction, I collected leaf litter, fallen blooms and seeds. Added to these artefacts are plants identified in the Estuary and then found outside the Estuary on verges, in vacant lots and parks. I needed to consider which of these materials, including the noxious substances, would be useful in interrogating the research questions.

Figure 12. Adams, I. (2022). Leaf Litter. *29 cm. x 29 cm. Personal Collection, Durban, KwaZulu-Natal, South Africa*

This Estuary community and the surrounding area form a complex structure of interconnecting species, consisting of plants, micro-organisms, invertebrates, amphibians, birds, bees, insects, soil, lichens and moulds. I found feathers, fallen bird eggs, a bird skull, tiny fish skeletons, insect wings and roadkill such as frogs, lizards, birds and snakes (See Workbook 2, pp. 87-109). I noted on p. 87 of this Workbook, that these found creature corpses were evidence of the interaction and reproduction within and beyond the Estuary. These materials and the plants I recognised and identified I viewed as "information carriers" (Wagner, 2001, cited in Lange-Berndt (2015, p. 27), as they had embodied histories and provenances. The potential carried by these materials was recognised through my "situated embodied" thinking, termed *notitia* by Biggs (2016, pp. 14, 16). Thus, in the Estuary I was able to discover and translate its realities into artworks that offered a deeper examination (to be discussed in 3.13) of the research questions listed at the end of Chapter 1.

Every found fragment of life is endowed with materiality and its personal histories of associations. Anatsui's opinion applied to each artefact: "every substance has worth heightened by the imprints of the many hands…" (n.d. cited in Black, 2021, p. 24). The artefacts have been buffeted by the wind, perhaps eaten by insects, brushed by other plants, pollinated by bees, or they have provided homes for birds and insects. They harbour micro-organisms. No artefact is

untouched by other life. They carry their secret histories, including their innate reproductive systems embodied within their material forms.

These realities have evolved through excavating the research questions, my mindful observations and thought processes. Thinking about Anatsui's opinion, I felt restricted in translating these findings of unseen and intangible realities. Attempts to translate these into artworks were an obstacle. I revisited this important aspect of the realities in 3.5. I accessed literature to expand my knowledge and this knowledge fed back into my examinations. An example is the reproductive systems of the Mangrove trees. I explored evidence of this which I had previously overlooked. I observed the hypocotyls, which floated in the water revealing their buoyancy, offering propagations in other parts of the Estuary and beyond. This was an example of where literature impacted on my findings and was a consequence of exploring my research questions. PLR encompasses this approach which expanded this research project (Sullivan, 2010, p. 111).

Expanding translations of materials

A year before the start of this research, I continued to paint in *Sumi-e* modes but concluded that I needed to expand my materials and my ways of artmaking, in order to meet my aims. The centrality of this creative practice, through PLR, facilitated discoveries of Estuary materials that led to new processes, transcending descriptive and informational translations. Carbon ink, stemming from my practice of *Sumi-e*, is a material with which I translated the unseen reality of pollution into artworks.[23] Materiality became a dominant force in these creative processes.

In order to create artworks which translated my concerns for the Estuary, experiments with bundle steaming offered a practical means of embodying knowledge (see 2.6). I used silk and mulberry paper, dampened with mordant, and wrapped these around leaf litter and a few fresh leaves. The leaves affected the ink which affected the cloth and paper, and the final unpredictable outcome of the 'print'. The print and the layering of the textiles deepens the

[23] This ink is a paradox, it is both natural (made from pine soot and animal skin glue) and non-biodegradable. Seemingly, carbon does not break down but alters if it is combined with chemicals.

sense of materiality (discussed in 2.6). Lange-Berndt acknowledged that agency (2015, p. 16) is inherent in materials. This was indicated by their capacities or tendencies which allowed partial control. I was able to assist in bringing these material agencies together in the way I positioned the leaf litter, how tightly I rolled the cloth and how much mordant I used.

The inherent spirit, *Chi*, or life of the leaves is embodied within the print. The meditative process of making carbon ink also imparts *Chi*. The somatic, spiritual and spontaneous ways of creating *Sumi-e* art remained inherent in my processes and through handling my materials and my 'self', a vital aspect of translating these Estuary realities. The somatic awareness of my bodily engagement in artmaking has been an important insight[24]. It afforded the potential to translate the realities of the Estuary in deeper ways, explained further in section 3.5., below where I describe the growth of my somatic awareness of the Estuary.

These explorative processes led me to absorb more deeply the relationships between my methods, the materials and the embodied knowledge. The inputs and influences of the materials (leaf litter, noxious chemicals and textiles) on my processes resulted in translations of the Estuary realities, beyond literal representation. Workbook 1 (2021-2024, pp. 56-59) shows my experiments with various papers and the materiality of these.

Through "following" the materials (Ingold, 2012, p. 435), Lange-Berndt suggests that one is not only engaging with expressiveness and aesthetic outcomes, but with issues of concern (2015, p. 16), such as my concerns for the impacts of climate change. Lange-Berndt (2015, p. 15) mentions "truth to materials" – namely, allowing materials to have a say – which underscores a political agenda. Lange-Berndt (2015, p.15) terms this "material complicity". Considered in the context of this research, the materiality of my artworks became the nexus of my ability to translate of the Estuary realities.

I considered botanical art as a genre and how it might be reconfigured in new ways. Arnold's (1996, p. 66) opinion supported my choice of plants and my intent: "All images of nature carry

[24] In *Sumi-e* the practitioner stands and uses the arms and torso to grind the ink in a circular motion. The conductivity of electrons is activated by grinding the inkstick (which is made of carbon, a good conductor) with water on the slate bath. This passes the energy through the all-natural brush onto the cloth or paper. I embrace the spontaneity and unexpected outcomes that arise from painting with this ink on absorbent mulberry paper. Arguably the very physicality pertaining to this process involves the body somatically.

new moral imperatives and ask for a heightened consciousness of the threatened environment". For my work, this suggested a turn away from the verisimilitude and truth to notions of beauty in classical botanical art, circumscribed as 'informative, descriptive, accurate and mimetic' even while noting a turn towards the threats facing our environment (Arnold et al., 2001, pp. 143-175). In my experience, beauty may be found in overlooked, discarded and unappreciated items such as leaf litter, dying blooms and fallen seed pods. The thorny stems of De Vries's *rosa canina,* (Figure 3) is one example where beauty is evident in overlooked artefacts.

Albrecht Dürer (1471-1528) is reported to have said: "beauty lies even in humble, perhaps ugly things, and the ideal, which bypasses or improves on nature, may not be truly beautiful in the end." (Good Reads, n.d.) Embellishing a bloom through heightening the colour and removing blemishes, could create a cliched form of a beautiful flower and deprive a bloom of beauty in its natural form. The appreciation of 'ordinary' plants such as weeds are also found in classical and contemporary botanical art. I documented these botanicals in Workbook 5 (2021-2024, p. 317).

The Estuary is composed of wild (indigenous) and ordinary plants (weeds), many of which I consider to be beautiful. My personal perception of the beauty of these plants expanded through the discoveries unfolded during the research. Here is an example of how my creative processes translated the inherent beauty of wild plants into another form. When I pressed the fallen blooms of the Lagoon hibiscus (*Hibiscus tiliaceus*, *uLola)* the colour changed from brown to a purple tinge, the form became translucent, fragile and papery, a transformation into an altered type of delicate beauty. Initially in this research, I did not expect beauty, or what I considered to be aesthetically pleasing, because I was preoccupied with the degradation of the Estuary. The discovery of a deeper beauty in the Estuary arises from my artmaking explorations and investigations of the literature. The beauty intrinsic to the reparative abilities and adaptations of the Estuary plants is further discussed in conjunction with the Mangrove trees.

Two recent publications (Clarke, 2020; Jeanson & Mansvelt, 2022) present contemporary and classical botanical art, most of which are two-dimensional paintings. An exception is Jeff Koons' massive installation *Puppy* (1992), measuring 12.4 metres by 8.3 metres by 9.1 metres. This installation contained 60 000 live flowering plants; 38 000 of these needed to be changed twice a year (Clarke, 2020, p. 89). *Puppy* offers a broader three-dimensional view of what might be considered as botanical art. The installation may have been a symbol of love and happiness to Koons (Clarke, 2020, p. 89), but the immense number of plants and the cost of maintaining

this installation, was in my view, excessively costly. I found it to be the antithesis of reparative environmental measures. Nevertheless, Koons has created an installation of beauty and manipulated the plants in unusual ways by placing them in an unexpected context. I kept reverting to my aims of displaying three-dimensional installations which I recorded in Workbook 5 (2021-2024, pp. 241, 269). This has been an important intention.

My translations of materials drew on influences from my working life, my career in fashion design and textiles. Increasingly I incorporated textiles into the context of my estuarine research and the eventual evolvement of these into the cloak form. This novel use of textiles furthered my renderings of the Estuary's realities in different ways, contributing to my aims of Question 2: How can I create artworks that transcend a realistic and moral interpretation of my concerns? These explorations precluded insistence on providing the viewer with a particular view or any premature conclusions.

3.2 Studio Production

My studio extended to the Estuary and surrounding area where materials and my expanding and performative processes converged. Here, the exploration of my research questions was aided by my array of tools described in 2.12 and 2.13.

From the onset of the study, I recorded my experiences in Workbooks, 1-10 (2021-2024) where I documented my activities, including samples of my creative processes and materials such as textiles and pressed plants. In line with PLR, these Workbooks have provided a vital link in documenting between my making processes, reflections, addressing my research questions and thesis writing. The materiality inherent in these collected diverse materials and documented experiments assisted in transforming my processes. For example, An example is when I pressed the leaves of the succulent dune vegetation, the remaining part of the leaf (after the juices were pressed out), became a delicate fragile form, prone to disintegrating and which I had to handle with sensitivity. I used a fine bamboo and squirrel-hair brush to apply the glue to secure this.

These processes prompted recollections and the Workbooks have been integral tools for excavating my research questions.

Figure 13 and Figure 14. Adams, I. 2024. My Studio *[Photograph]. Personal Collection. Durban, KwaZulu-Natal, South Africa.*

The creation of artworks initially took place in my studio. This studio is a chaotic assemblage of remnants and reject textiles, curtain samples, an assortment of Japanese papers, as well as *Fabriano* paper, publications, vintage books, threads, old artworks, sewing machines, Japanese brushes, wallpaper glue, glaze-coat, collected artefacts, roadkill, skeletons, feathers, pressed plants, leaves and flowers, water colours, charcoal, bottles of vegetable and plant dyes, ink sticks and ink made from carbon scraped from the exhaust pipe of my motorcar. These diverse materials lent themselves to the exploratory nature of PLR and to the idiosyncrasy of my investigative tools.

My studio extended beyond the studio walls into my garden where several of my performative processes required extra space, the use of water, messy vegetable dyes or glue. I also used the compost heap to develop bundle dyeing. Here I buried the bundles for around two weeks. The Estuary and surrounding area where I walked, also operated as part of my studio where I meditated, photographed, identified, took notes, sketched and collected artefacts. These idiosyncratic extensions of studio space facilitated my creative research in a way which broke new ground for me.

Conclusion

The materials launched my creative processes for this research. In line with PLR, my research questions formed the heart of this study; they focused my concerns for global climate change on the Estuary.

Later, when insights emerged which contradicted my prior assumptions about the state of the Estuary, I was able to repeatedly refer back to my creative explorations that were recorded in my Workbooks 1-10 (2021-2024). Sullivan (2010, p. 192) suggests that looking backwards is a useful action in building PLR. A sturdy PLR uses different sources to generate the interconnection of emergent knowledge between practice and text. Thinking beyond my initial expectations of the overwhelming degradation in the Estuary, so to expand my objectivity, provided a further way of excavating the research questions.

In summary of the above sections, the following insights became apparent. My purist approach of incorporating the all-natural-materials ethos of *Sumi-e* practice was overturned, my processes expanded to include toxic and chemical materials. Translations of materials extended into new processes such as bundle steaming. Insights emerged through the embodied knowledge of the past histories of these materials and these were inherent in their translations. The subtle impressions of leaves pointed to their functions as converters of carbon dioxide into oxygen, thus benefitting all life.

My deep-rooted understanding of textiles from four decades of working in the fashion and textile industry emerged as a prominent factor in this study. In retrospect, this should not have been surprising to me having developed a refined material understanding of textiles and their suitability as clothing for particular body shapes and structures. However, my formative training (from 1968 to 1970, at Natal Technical College, Durban), was modernist in the sense that fashion design was treated as a separate and inferior discipline to those traditionally taught in the Fine Art field. I recognised that I had been suppressing this influence of my working life on my artmaking (this is explained in Chapter 1). This has been a key insight in this research. Recalling fashion design modes of working with textiles enabled me to conceptualise a sketch into three-dimensions, which eventually resulted in the cloak forms, such as Figure 32. These artworks evidenced the intersection of the two fields and allowed for a non-cerebral understanding of the core research concerns.

Finally, I considered that these translations of experiences and art materials into artworks were a part of excavating my concerns for this Estuary. *Sumi-e* processes and *Chi* continued to impact on these translations. The value of indigenous (wild) *and* ordinary plants (weeds) was recognised. I considered botanical art and the concept of beauty and how these genres might have influenced my translations of materials. The impact of artists' three-dimensional artworks (Devlin, Laurence and De Koons), the translations of botanical

materials through a greater variety of unusual processes involving textiles (see 3.5), led to the formation of three-dimensional forms.

3.3 Preliminary Artworks

These early artworks were guided by my opinion on what I believed to be the dire state of this Estuary, and what hope human reparations might offer. The following artworks were selected for the specific shifts they signalled, through experiments with new materials. Insights engendered by unsuccessful translations are explained. I referred to selected artists to contextualise these explorations.

Many of the early artworks felt like dead ends in that they did not seem to yield anything that led me closer to addressing the research questions effectively. An example is combining wax and carbon ink on paper, shown in Workbook 1 (2021-2024, pp. 2-7), where I noted *"another dead end".* In the same workbook I showed collaged feathers, earth and litter fragments on paper (pp. 31- 35) as well as 'draping' with wetted *ganpishi* to create forms on paper (pp. 37-41). These were additional samples of attempts which seemed at the time to be 'unsuccessful'. Varied experiments are shown throughout Workbook 1 (pp. 31- 82). I abandoned early attempts involving the incorporation of garbage, and noted *"dead end",* further noting because the collaging on a sack *"will keep me on a two-dimensional format"* (see Workbook 3, 2021-2024, p. 154). I was conscious of the several artists also using garbage as mentioned in Chapter 2, and felt unsatisfied with my efforts. Hammered leaf litter and fresh leaves yielded sawdust and a disappointing mush respectively. I documented these disappointing outcomes in Workbook 4 (2021-2024, p. 207). This 'zigzagging' back and forth between experimental processes would become a key element of my practice led research methods.

It emerged that questioning the outcomes of the following four selected artworks (Figures 15, 16, 20, 21) moved the research practice onwards. These artworks formed the link between my former *Sumi-e* practice and my emerging creative processes, which eventually unfolded into new forms of artistic expression. The unifying threads that linked these and the artworks that follow were: an eventual digression from painting, layering of materials, collage, introduction of plant materials, 'drawing' with thread, textile inclusions and incorporation of pollutive substances to evidence degradation.

Figure 15. Adams, I. (2021). Estuary waters. *[Sumi-e, water colour, metal paint, hand stitching, collage on Fabriano paper]. 100 cm. x 70 cm. Personal Collection. Durban, KwaZulu-Natal, South Africa.*

Estuary waters

In this artwork I aimed to convey the alternating purity of fresh sea water on the incoming tide (here I used water colour) and the polluted water (where I used carbon ink and shiny black metal paint). In reality, the incoming seawater is rarely fresh and transparent and the surrounding sea is mostly muddy. The carbon ink is clear and not sufficiently murky to show this reality. The shiny blobs of metal paint are not an effective analogy for the largely unseen levels of contamination such as the nitrogen, phosphorus, E. coli, hormones and pesticides (Singh, 2017; Naidoo, 2016).

This artwork was conceived as being specific to the Estuary site, but it could refer to water anywhere and does not reflect an "honest inquiry" (Celaya, 2015, p. 53) of the present situation. This painting rather prompted a story where the view of sea green water, numerous gulls,

pelicans and cormorants in recollections of childhood journeys across the Estuary's previous metal bridge. How different the Estuary appears today, and this is what I needed to uncover and translate into artworks.

The insights gleaned from this artwork are the tentative beginnings of stitching as an analogy for mechanical restraints, such as dams and boundaries, which I noted in Workbook 1 (2021-2024, p. 78) as follows. "This might offer a means of 'drawing' with thread. The two-dimensional format is what I need to break away from. In addition, I need to dig deeper and extend my explorations into alternative materials to be found in the Estuary."

Figure 16. Adams, I. (2021). Toxic slices. [sulphur, manganese, oil, petroleum, Japanese ar Chival and vintage papers, hand stitching, mud, Water hyacinth (Eichhornia crassipes, eseshimi)]. 180 cm. x 180 cm. Personal Collection. Durban, KwaZulu-Natal, South Africa

Toxic slices

The materials I used in the artwork are as follows: Manganese was an attempt to delve further into pollutive substances (see *Manganese*, Figure 17). Oil and manganese, are visibly detected in the Estuary water and mud. The carbon ink together with carbon scrapings off the exhaust

pipe of my car, represented the air pollution. The carbon sinks mentioned in Chapter 2 (Andreyev, 2021, p. 155; Naidoo, 2016, p. 101; Zhu & Yan, 2022, para. 3) could also represent a form of natural reparation, but this is not to be known by viewers. Water hyacinth (*Eichhornia crassipes, eseshimi*) is an example of another kind of contaminant, an alien invader plant, clearly visible in the Estuary after rainfalls.

Figure 17. Adams, I. (2024). Manganese. *[Manganese residue in the beach sand, uMngeni Beachwood Mangroves Estuary]. 29 cm. x 21 cm. Personal Collection. Durban, KwaZulu-Natal, South Africa*

The layers of ganpishi simulated the momigami technique of layering, where the pigments collected in the creases, but I used carbon ink instead of pigments. I pulverized the morogo (wild spinach) leaves and grasses to incorporate fresh green colours, shown in Workbook 1 (2021-2024, p. 77), but these faded and were overwhelmed by the pollutants, so I added some acrylic to heighten the green.

My materials interacted and metamorphosized into unexpected assemblages of meanings with new identities (Cambre, 2013, p. 74; Ingold, 2020, p. 18). Opening the meanings of these combined materials revealed murky layers of filth. The materiality of the completed artwork is evidenced in the textured and haptic effects of the layered chemicals, the juxtaposition of the natural mulberry paper, *ganpishi*, sulphur powder and shiny oil. Materiality was a driving force in the translation of these realities and implicated in the described performative processes.

The final assemblage involved the cutting up of 25cm-by-25cm pieces of paper, a “dive- in” to see what outcomes would emerge (Haseman, 2006, p. 4). I then separated the stitched squares with bands of inked mulberry paper. A sample of this is attached in Workbook 1 (2021-2024, pp. 66-67). This description of spontaneous experimentation describes Performative research as part of PLR.

The insights that arose from the artwork *Toxic slices* (Figure 16) are as follows: Excessive elements of pollution predominate, apart from a tiny glimmer of hope in the sparse overlay of green, which suggested fresh growth. This was an indication of my negative impressions of the Estuary at that time. The incorporation of stitching between the squares was disappointing and merely a repeat of the preceding artwork, where I did not follow on my suggestion of using thread as a form of drawing. I consider this artwork in relation to Kiefer’s *The Orders of the Night* (Figure 18).

Figure 18. Kiefer, A, 1996. The Orders of the Night*. [Acrylic, emulsion and shellac on canvas]. 356 cm. x 463 cm. Seattle Art Museum, Seattle, Washington. United States of America.*

Here, the harsh, jagged cracks of *The Orders of the Night* (viewed 22 April, 2023, in Seattle) indicate the crusty and filthy layering of materials, brimming with materiality. I questioned in Workbook 5 (2021-2024), p. 259) whether these materials reveal "emergent knowledge" (Bolt, 2006, p. 12). I wrote, "These two artworks are haptically repellent and do indeed illustrate this term. Although Anselm Kiefer (2019, cited in Black, 2021, p. 62) sees "vitality and resurrection" in wastelands and destruction, I find it hard to associate "resurrection" with *The Orders of the Night*. The wizened sunflowers look brutalised, "in a state of rigor mortis" (Kiefer et al., 2025, p. 52). The terrain appears hostile and burnt, devoid of colour and hope. The overall mood is of death and morbidity exacerbated by the corpse of a man. The sunflowers have seeds at this stage of their development, and it is possible that Kiefer is conveying hope with seeds as propagators of new life."

Making *Toxic Slices* (Figure 16) entailed scraping carbon from my exhaust pipe, digging up mud and slime on the riverbank, handling repellent materials and working on a large format piecing the squares together. I later realise how my feelings for these process are affected by my somatic involvement.

The concept of somatic involvement offered a deeper insight into my artmaking. I consider other artists whose artworks may also be affected by somatic engagement. De Vries's *the return of beauty* (Figure 69) I assume would have physically engaged him through the wandering, collecting of artefacts and subsequent placing of these in the artwork. Kiefer's physical handling of materials on such a large format would heighten his somatic involvement.

I did not address the positive side of the realities of the Estuary in the first two of the four formative artworks is important to this research. The one exception is the token inclusion of green in *Toxic Slices*. My initial understanding of this research topic was a focus on the environmental threats to the Estuary in the context of global warming and climate change. A key shift in my attitude occurs with this group of four artworks.

I introduced three trees that are companion trees in the Estuary and the surrounding area. These in part provided evidence of the Estuary realities in relation to Question 1. My personal interest in trees (dendrology) dates back decades. I have developed personal connections with

'common trees', such as the Pigeon wood, Tree fuschia, and Flatcrown[25]. Since we planted these common indigenous trees in our garden thirty-four years ago, I have witnessed abundant bird life, the building of nests, the birth of fledglings and the cycles of leaves, flowers and fruit. The leaves of all three were incorporated in *Triptych of trees* (2021, Figure 20). I tried to find ways to represent these trees, without resorting to the literal. I noted in Workbook 3 (2021-2024, p. 162) that the "different textures of these leaves are important to express". Workbook 3 (2021-2024, pp. 141-146) shows samples of these artmaking processes, using motor car printing, colour, embroidery, drawing and lichens.

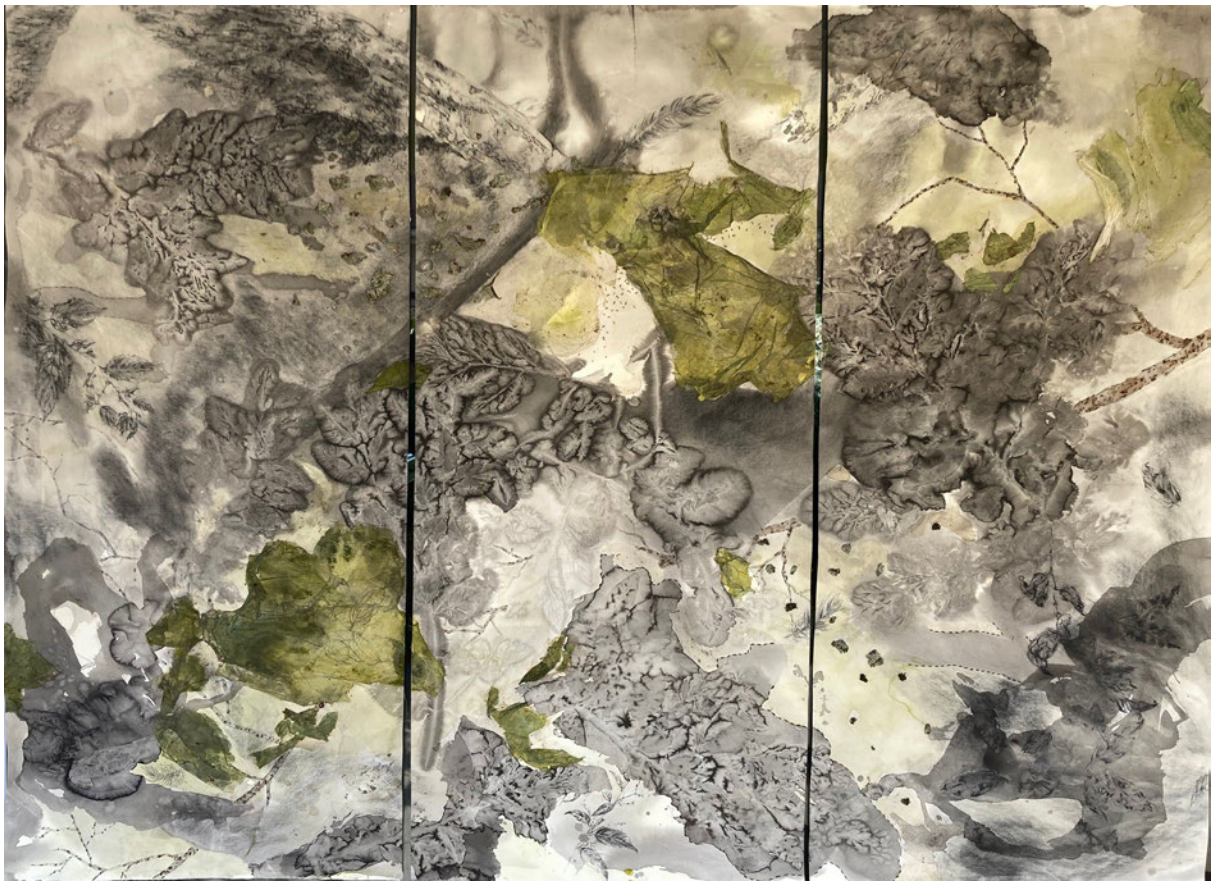

Figure 19. Adams, I. (2021). Triptych of trees*. [Sumi-e, embroidery, collage, ganpishi, acrylic green, lichens, on Fabriano paper]. 140 cm. x 300 cm. Personal Collection. Durban, KwaZulu-Natal, South Africa.*

[25] Respectively in Latin and IsiZulu: Pigeon wood*, Trema orientalis, izinkuni zejuba, umdindwa;* Tree fuschia, *Halleria lucida, umBinza;* Flatcrown, *Albiziz adianthafolia,uSolu.*

Triptych of Trees

The following section explains in detail my discovery of printing, as opposed to drawing or painting. The methods I experimented with, are referred to in subsequent artworks. One disturbing reality was the protrusion[26] on one of the Flatcrowns *(Albizia adianthafolia, uSolu)* which had been infested with the polyphagous shot-hole borer (PSHB). An attempt at translating this is shown in Workbook 4 (2021-2024, p. 209). This alien threatens trees, including its "fungal symbionts." (De Wit, 2022; Roberts 2023, pp. 4-5; Van Rooyen, et al., 2021, pp. 1-10).[27] Considering the present and predicted future state of pollution (Raven, et al., cited in Marques, 2020, p. 251; Naidoo, et al., 2020, p.1), and the presence of aliens as mentioned above, this Estuary cannot be considered a pristine ecology. Aliens signify potential harm to this eco-system which I was not aware of at the start of this research project.

The first attempts for *Estuary Waters* (Figure 15) and *Toxic Slices* (Figure 16) I had felt were 'failures'. I needed to expand my processes to translate the unseen realities, such as the carbon in the air an'd on leaves of plants. In *Sumi-e* mode I splashed ink (*Hatsuboku* method)[28] on the *Fabriano* paper and lay leaves on top of the ink, aiming for surprises. Disappointment at the resulting blobs and sharp outlines led me to lay another sheet of paper over the ink and leaves. When I lifted these leaves, no impressions were left behind on either layer of paper.

I described these processes in Workbook 3, 2021-2024, pp. 162-165).

[26] Infestations of the polyphagous shot hole borer beetle are increasing. "PSHB is widespread and has a continuous distribution between Richards Bay and Durban" (Van Rooyen, et al., 2021, p. 3). See Workbook 10 (2021-2024, p. 477) for a recent report.

[27] The distribution of PHSB is indicated in South Africa. The first evidence was found in KwaZulu-Natal National Botanical Gardens, Pietermaritzburg (Bryant, 2021, p. 232; Paap, et al.,2018, pp.231-232). See Workbook 10 (2021-2024, *Estuary Realities* p. 477).

[28] *Hatsuboku* translated literally means splashed ink, which is a style of *Sumi-e*.

Figure 20: Adams, I. 2024. Workbook 3, 2021-2024, p. 163 [Photograph]. Personal Collection. Durban, KwaZulu-Natal, South Africa.

I took the process further. By increasing the surface area of the work, there was more space to press the materials. In between two boards (150 x 45cm) I layered paper with carbon ink randomly splashed onto it, leaf sprays from the Tree fuschia (*Halleria lucida, umbinza*), and then another layer of paper on top. I ensured that the boards aligned with the direction of the moving tyres of my motor car. I drove over these boards, which I photographed (See Workbook 3, 2021-2024, pp. 163-165). After the car pressing, it took two weeks for the ink and the leaves to dry completely. The outcomes were again unpredictable. The pressure exerted by the weight of my motorcar provided a few bold and unique prints. Materiality was exuded by the impressions of the leaves which emerged subtly in places and blurred in other areas. The carbon ink suggested the negative aspects of pollution. These impressions arose from using leaves to "act" with my interventions (Lange-Berndt, 2015, p. 13). These non-human materials, demonstrated Lange-Berndt's "complicity" of materials (2015, p. 17). I recorded in Workbook 3 (2021-2024, p. 140) and Workbook 4 (2021-2024, p. 205) that I should further develop this method of printing to attain non-representational images.

Some touches of green were collaged, where I pulverized *morogo* and alum, as well as a vegetable dye to stain the *ganpishi* green, but in both attempts the colour altered to subdued shades of brown. I resorted to acrylic paint to 'enhance' the green, and then I collaged over these areas with the *ganpishi* shown in Workbook 3 (2021-2024, p. 151). The ink (carbon and

water) in conjunction with the textile and unsized paper, expressed their combined tendency to bleed and blotch[29]. These processes have been explained in depth and I subsequently referred to these processes in the *Polluted hangings* (Figures 22, 23, 24) and *Estuary Hangings* (Figures 25, 26, 27, 28), without detailing.

'Drawing' with thread seemed another possibility to explore. I introduced thread in *Estuary Waters* (Figure 15). This developed further into embroidery where stitching in colour-mixed threads created textured bark effects, that linked to the foliage. White and grey saddle stitching outlined the forms and revealed a few identifiable elements of the trees, such as the textured trunk of the Tree fuschia (*Haleria lucida*, *umbinza*). The thread added dimension and enhanced the complexity of the materiality.

The value of *Triptych of Trees* lay in its non-specific and non-prescriptive translation of the leaves and bark of the three trees. The result was not what I had planned, in that I did not succeed in conveying the different textures of the leaves as intended. However, this prompted questions and insights: a portion of a leaf was revealed by the hand stitching, which acts as a form of drawing. The layering and textural effects were partly obscured by the collage in places. These and the haptic surface contributed to the overall materiality of the piece. Standing engaged my entire body in the execution of this large artwork (140 centimetres by 300 centimetres) and rendered the process performative and somatically engaging. This is how I conduct *Sumi-e* painting, which affords greater freedom and somatic sensations through body movement whilst standing [30].

Viewed as a whole, the 'pollution' in the work was not convincingly repellent. The carbon ink was freshly handled showing transparencies and subtle leaf formations; however, it was not murky in a way that suggested pollution. The overall presence and ambience of the artwork had

[29] 'Bleeding' in the textile industry occurs in sloppy printing, or when the textile/paper has not been properly sized, rendering it to be absorbent. It is a technical term for poor printing where registration of a design results in blurred edges.

[30] In *Sumi-e* the practitioner stands and uses the arms and torso to grind the ink in a circular motion, with knees slightly bent. The conduction of electrons is activated by grinding the inkstick (made of carbon which is a good conductor), on the slate bath with water. This passes the energy through the all-natural brush onto the cloth or paper. I embrace the spontaneity and unexpected outcomes that arise from painting on absorbent mulberry paper. Arguably the very physicality pertaining to this process involves the body somatically.

decorative appeal, but it assisted in refining my creative art processes. The discovery of 'car-printing' was an idiosyncratic process which held potential for future experiments. This was a key insight. The employment of hand stitching as a means of 'drawing' was another process I had not fully exploited before. This and the development of embroidery were further steps towards extending the diversity of my materials and processes offering potential for new insights. These insights indicated the generative nature of PLR.

The two-dimensional format of *Triptych of Trees* was suitable for wall hanging and, in my view, did not constitute an effective means of display for this project. I realised that my formats needed further development. This was realised in the cloak and chair bodies presented in section 3.4. This insight linked with my investigation for research Question 3.

In *Triptych of Trees,* I engaged with the positive values of these trees and excluded focusing on degradative aspects of the Estuary as I did in *Toxic Slices* (Figure 16). I recognised the need to balance translations of pollutive and reparative aspects of the Estuary so as to address the main question of this research. I dealt with this more effectively in the following artwork which kickstarted my artmaking for this PLR.

Frog Kaross (Figure 21)

Ingold and Kurttila (2000, Abstract) speak of working from within an "environmentally situated practice". This opinion applied to my creative processes, whereby my studio extended into the Estuary and included my meanders 'within' it. I now realise that at the start of this project, I believed that I was working 'upon' the Estuary. *Frog Kaross* signified a jump forward for this PLR. Evolving from the above artworks, and in line with "every substance has worth" (Anatsui, n.d. cited in Black, 2021, p. 24), I amplified material elements of the Estuary. In this instance, the value of found materials and artefacts evidencing pollution and reparation, contributed towards my translations. *Chi* was conveyed through my materials and the somatic processes of using my body.

Figure 21. Adams, I. (2021). Frog Kaross. *[Carbon ink, acrylic, vegetable colour, metal paint, sulphur, magnesium oxide, acrylic, mud, stitching, cotton organdy and green suedette].180 cm. x 130 cm. Personal Collection. Durban, KwaZulu-Natal, South Africa.*

This final artwork developed out of an almost realistic riverscape painting of the Estuary. *Rana Angolensis*, the Common river frog, slivers of blue sky and mud from the river edges were combined with carbon ink, oil manganese and sulphur. I show a photograph of this in Workbook 1, (2021-2024, p. 79). I realised that this artwork did not fully explore Question 2. I needed to do something radical or abandon this two-dimensional painting as a dead end.

I took a chance and cut up this painting into twelve-centimetre squares shown in Workbook 1, (2021-2024, pp. 78, 79), recalling the grid structure of *Toxic slices* (Figure 16). Scissors, a steel ruler and tape measure are the most vital tools in a fashion designer's life. These tools lie around my studio. Retrospectively this cutting up seems to have been a subconscious impulse, a "dive-in" to see what outcomes emerged (Haseman, 2006, p. 4). I jumbled up these squares and emphasised the grid structure with rows of horizontal and vertical stitching, on a discarded

piece of cotton voile curtaining, stained with pulverized *morogo,* oil, carbon ink and mud. The difference between *Toxic slices* and *Frog Kaross* was the incorporation of a sheer stained backing for the smaller squares, which flowed softly, as opposed to the stiff appearance of *Toxic slices*

The incorporation of textiles was another influence from my working life. Further somatic involvement in this artwork unfolded through physically handling the materials. The random placements could be said to echo the scattering of creatures scattered over Devlin's dome in *Come Home Again* (Figure 9). The difference between *Come Home Again* and *Frog Kaross* is that the spontaneous jumbling of the squares is contained within the grid structure, reminiscent of De Vries' *The return of beauty* (Figure 69).

The dome of *Come Home Again* was a constructed frame creating a tension between the opaque creatures and the transparent covering of the frame. The embellishments on the opaque squares backed with sheer cotton voile of *Frog Kaross,* similarly created a tension, an onward development from the singular base of *Toxic slices.* This further enhanced the materiality. Devlin's three-dimensional dome shape radically differs from the two-dimensional layered hanging of *Frog Kaross.*

The unstable assemblage was strengthened with another discarded curtain sample of grass-green coloured suedette and a wooden dowel on the top edge. This layered format was a transitional step towards free hanging as opposed to rigid framed pieces. Hand stitching the cumbersome layering together with the dowel was another form of somatic engagement. The manufacture of the one hundred percent synthetic Chinese suedette involved several chemical processes that eject waste products into rivers.[31] In KwaZulu-Natal, industry is largely the cause of our polluted rivers (Birungi et al., 2018, p. 232). I intentionally included this suedette as an analogy for the pollution in the Estuary. The combined materials evidence degradation (oil, mud, carbon and synthetic suedette) plus a few inclusions of positive elements (*morogo,* slivers of blue sky devoid of pollutive haze, and the Common River frog

[31] In China, the textile industry is one of the main contributors to pollution. Manufacturing a pair of jeans can consume over 3,700 litres of water and produce over thirty-three kilograms of carbon (Asmi, et al., 2022, Abstract).

Conclusion

Through my creative processes, the discovery of positive and redeeming aspects in this Estuary ecosystem prompted a shift in my understanding of the site, and how I might proceed. At the onset of this research project, I was determined to develop artworks translating the Estuary realities in ways beyond two-dimensional 'gallery' works. This correlates with Weintraub's (2019, p. 17) appeal to Eco-Materialist artists to diverge from "original objects intended for display and commerce".

Retrospectively, in these four artworks I realise that I oscillated between:

1. superficial expression, devoid of translations but the introduction of stitching (as in *Estuary Waters*);
2. showing degradation with meaningless inclusions of reparation and incorporations of translated pollutants (as in *Toxic Slices*);
3. reparation with minimal signs of degradation in a 'decorative' artwork and the introduction of stitching as drawing and embroidery as a form of painting (as in *Triptych of Trees*);
4. Degradation and small positive aspects were expressed through translations and combinations of a diversity of materials in *Frog Kaross*.

These contributed to the non-representational, less moralistic approach I explored in response to question two. Alien invasives, which I had not previously considered, were a present and future threat to the Estuary. This was a key insight.

Frog Kaross was a synthesis of my initial perceptions of the degradation and possible reparation of the Estuary. The artwork seemed to suggest a more thorough investigation and translation of the ecology of the Estuary. This artwork was therefore seminal in indicating the direction of this research. Pursuing this further was neither straightforward nor easy to accomplish.

3.4 Leading on

This section linked aspects of the previous four artworks with the artworks to follow. After completing the four preliminary artworks, I realised that my limited knowledge of the Estuary needed to expand. My tertiary education did not include Natural Science or Botany. Celaya

(2015, p. 25) suggested that the areas in which you are fragile and vulnerable are good sources for your work. This confirmed that these fields could fuel my investigations. In my quest to expand my knowledge of the plant life in the Estuary, I identified more plants. This development constituted a further examination of my concerns for the Estuary realities framed by Question 1.

In order to think in reflective ways, I turned to my Workbooks (2021-2024) for ideas. Here I observed the sketches, photographs and notes of indigenous and alien plants (see Workbook 3, 2021-2024, pp. 113b, 119-127, 133-135, 160, 161,181,185). I was reminded of the "materials ethic" of Weintraub listed in *Eco material guide to Art Production* (2019, pp. 20-22), and of my concerns for the preservation of nature. These opinions aligned with my intentions of not taking whole plants and this limitation turned out to be an advantage. I expanded my identification of plants through extending my searches further in the surrounding area of Durban North (see Workbook 6, 2021-2024. pp. 322-357). This illustrated how limitations could trigger positive effects through the expansiveness offered by PLR.

Outside the boundary of the Estuary I collected the leaves, seeds and blooms of the plants that I identified in the Estuary. I recorded, drew, photographed and pressed these in Workbook 6 (2021-2024, pp. 322-351). A few of these were pioneering plants that reclaimed degraded land and established new areas of vegetation. I had no compunction in taking leaves from trees outside the Estuary, or from alien plants as evidence of degradation.

A reassessment of fashion design materials also proved to be a promising idea. Textiles, thread and texture were strong components of my professional background. I aimed to explore ways of incorporating these to further expand my processes.

Irigaray said that using the name of the tree removes it from its living presence and that we deprive ourselves of our sensory perceptions when entering into the presence of the tree (Irigaray & Marder, 2016, p. 49). I disagreed, because knowledge of the plant might enter my mind first as recognition, or I might have questioned the identity of a plant, referring to Boon (2010), Grant and Thomas (1998), Moll (1981) and Pooley (1998). As I lingered and allowed sensory information to unfold, I sensed its presence within the assemblage of plants. This was a form of contemplation accessed through meditation and prompted by literature as mentioned in section 2.1. The role of my senses allowed me to access smaller realities. This was a new

direction that further connected me with the Estuary which I recorded in Workbook 4 (2021-2024, pp. 202, 212, 234), noting these experiences.

Knowledge of the Estuary plants was integral to building a broader base from which to work, compared with that of the earlier works discussed above (in section 3.3). This demonstrated how I examined and used identification of the plants and my understandings of them to translate and embody in the artworks.

Expanding Research Methods

Watson (1992, cited in Gray & Malins, 1993, p. 6) suggested that the nature of Fine Art is "anti-method" and is a "methodology in itself". My performative processes, may have seemed "anti-method" in that there is no outcome planned or envisaged. I took many risks and sometimes relinquished control of materials. Frequently the outcomes, both positive and negative, were surprising. This "anti-method" became central to my artmaking which equipped me to excavate my research questions in unpredictable ways, leading to insights and further investigations.

Drawing on materials stored in my studio led to amalgamations of scattered 'stuff'. I seized and layered, felt and squashed, tore and inked, relying on my iterative actions to lead the creative processes. This ongoing evolution of artmaking as research was not straightforward as many of these processes led to dead ends. These have been recorded, such as a tiered 'cake' made of resin and seeds. My disappointment is noted in Workbook 3 (2021-2024, p. 179). Such 'dead ends' showed me where I do not want to go and required me to reassess my materials and textiles, and became clues to the way forward.

The incorporation of textiles in *Frog Kaross* (Figure 21), offered a possible means of expanding my creative processes. For example, a chemical-based linen-look textile (a recycled curtain sample) might be used as an analogy for the presence of pollution such as the non-bio-degradable garbage in the Estuary. The all-natural textiles, in 'unfinished' states, such as pure silk, linen and cotton, could be considered 'sustainable', through their biodegradability. Additionally, these textiles were recycled from my archives, further contributing to sustainability (Bukula, 2022; De Landa, 2006; Johnston, 2017; Workbook 10, 2021-2024, p. 491) and formed a part of Eco-Materialist materials ethics (Weintraub, 2019, pp. 20-22). These textiles were obviously not Estuary materials, but they could be used to provide

bases for embellishments of Estuary artefacts. I developed this idea as a way in which I could build the content of degradative and reparative themes.

Conclusion

The Estuary impacted on my heuristic, my realities and my perspective which in turn assisted me in excavating the research questions that are situated at the core of this PLR. Previously I discussed performative research (see 2.17) as aligning with the "multi-method" (referred to by Haseman (2006, p. 103)) evident in my spontaneous, iterative processes and unexpected outcomes. As a result of the four formative artworks, the data extended beyond the words; the data inhabited the materials, my discoveries and the artworks.

3.5 Estuary intermediates

The artworks in this section formed the bridge between the first four artworks and the evolution of three-dimensional somatic forms. My interest in the textures of papers, textiles and Estuary materials, especially plants, came to the fore in these artworks. My processes were led by cues from the materials and my spontaneous artmaking methods. My formats were extended and shaped by collaging, bundle dying, embroidery, inclusions of alien vegetation, charcoal, ink and stencilling. Spurts of uncertainty and confusion triggered both questioning and insights. These did not always provide answers but were the ways through which I explored the research questions.

Polluted hangings (Figures 22, 23, 24)

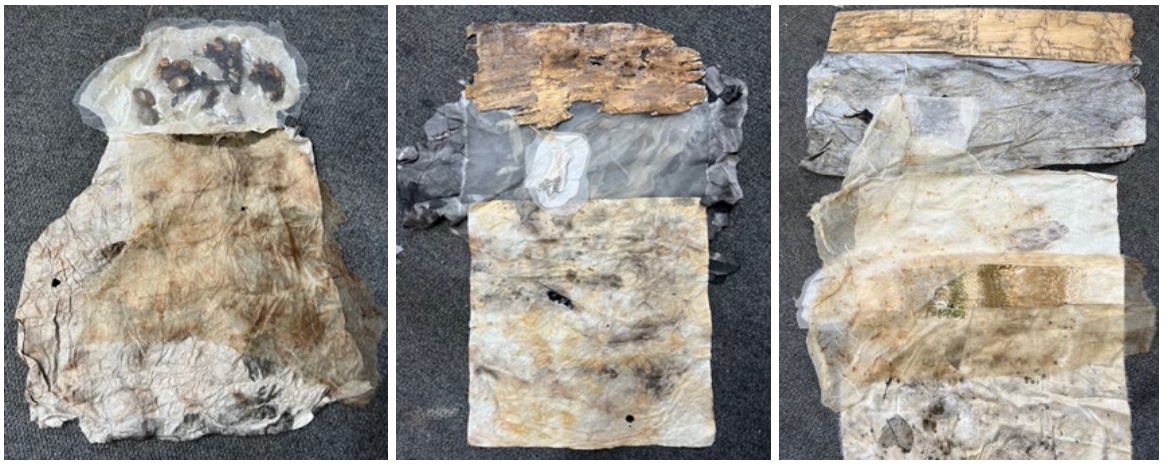

Figure 22, Figure 23, Figure 24. Adams, I. (2021-2022). Polluted hangings. *[Wood, silk organdy, paper, stitching, skeleton, Water hyacinth (Eichhornia crassipes, eseshimi),*

resin, carbon ink]. Variable dimensions. Personal collection. Durban, KwaZulu-Natal, South Africa.

The trio of *Polluted hangings* translated alien plants and degradation using the materiality of these components, rather than representational stimuli, to further explore the research questions. (In *Triptych of Trees*), leaves are incorporated to convey the growth of plants which I personally considered to be a reparative force in the Estuary). A further translation of degradation was indicated by the fish skeletons which might be either a possible aftermath of toxicity in the river, or an indicator that the river was not totally toxic. The murky, carbon-inked and stained cloth and paper were analogies for the polluted water. These haptic outcomes were a direct result of my tactile engagement with materials. Deeper layers of materiality were interwoven through the layering of textiles and images. These "speak" (Heidegger, n.d. cited in Figal, 2010, p. 103) of negativity and pollution.

A few translations of materials are described below: Bundle dyeing (Cave, 2010; C. Paxton, "personal communication," February 12, 2023) suggested ways of translating the vegetal realities of the Estuary (a photograph is shown in Workbook 4 (2021-2024, pp.197, 225). The leaves of Blue gum[32] and Black Mangrove trees[33] hold tannin (Hernes, et al., 2001, p. 2), which resulted in rust coloured prints. I used charcoal to render partial impressions of leaves (Figure 18). Partially supplementing imagery that is unrecognisable was a means which I developed further in artworks (see *Estuary hangings,* Figures 25, 26, 27, 28). My somatic involvement, in the form of physical movement and the sensations of handling these materials, continued through my performative processes. I felt repulsed when I handled the highly invasive Water hyacinth (*Eichornia crassipipes, eseshimi*, shown in Workbook 1, 2021-2024, p. 68). I embedded it in resin, which is a toxic, non-biodegradable chemical. This forms the upper section of *Polluted hanging* (2021-2022, Figure 22).

The combinations of these noxious elements may offer viewers interpretations beyond immediate recognition. I used carbon to highlight the borer channels in a piece of infected

[32] *Eucalyptus*. This tree is classified an invasive 2. (Ivey, 2018; South African Biodiversity Institute, 2018; Witt, 2020. See further references in Section 3.1.5.

[33] *(Bruguiera gymnorrhiza, isiKhangazi).*

wood (see Figures 23, 24)[34]. Blue gum leaves are enclosed in a small silk bag attached to artwork in Figure 20. These alien leaves foreshadowed future alien elements to be included in my artworks. My translated materials showed how my processes helped me to develop my non-representational approach in artmaking, in line with Question 2.

The insights gained from the *Polluted hangings* (Figures 22, 23, 24)**,** are through the layerings of degradative materials. However, I failed to sufficiently address any reparative elements of the Estuary that I achieved in *Frog Kaross* (Figure 21). I grappled with what seemed to be the overall depressing outcomes for the Estuary. The more literature I accessed, the more alarming I found the issues which continued to threaten this Estuary. Although the overwhelming aspects of long-term degradation needed to be addressed, the reparative aspects started to become a part of the Estuary realities. This became more apparent as this research developed.

The described processes are the means of achieving the non-representational non-instructive aims of Question 2. Examples were the vague impressions of leaves achieved through bundle dyeing and the 'treasure bag' (Figure 23) that partly obscured a tiny fish skeleton shown in Workbook 4 (2021-2024, p. 231). The latter added another dimension to the two-dimensional hanging. These irregular formats were a departure from the rectangular formats of *Estuary Waters* (Figure 15), *Toxic Slices* (Figure 16), *Triptych of Trees* (Figure 20) and *Polluted hangings* (Figures 22, 23, 24) and further developed the layering taken from *Frog Kaross* (Figure 21).

When I looked back on these artworks, including *Toxic Slices* and *Frog Kaross,* I realised that my drawing and painting skills started receding to make way for the Estuary materials. This evidenced the effect of the Estuary on myself, the artist. This partly aligned with Weintraub's (2019, p.18) opinion that in Eco-art the "artist's skill" is to be downplayed to make way for "matter and energy". However, Weintraub's promotion of "matter" over "form" did not fully align with my intentions (2019, p.18). Although I have focused on Estuary material/matter my

[34] Borer and bark beetles are alien pests attacking woodwork and trees, respectively. An example is the Flatcrown (*Adianthafolia*) and the Fig tree (*Ficus sur*, *umkhiwane)* on the north side of the Estuary. This is discussed further in

aim was to develop a three-dimensional form, which would provide an innovative base for both the translations of the realities of the Estuary and the display of these.

In these three artworks I allowed the negative literature on degradation and pollution of this Estuary to dominate my frame of mind. The next artworks illustrated my determination to include more reparative elements of the Estuary.

Figure 25, Figure 26. Adams I. (2021, 2022). Estuary Hangings*. [Silk, unfinished linen, silk organdy, embroidery, ink, bundle dyeing, collage, paper]. Variable dimensions. Personal collection. Durban, KwaZulu-Natal, South Africa*

Figure 27, Figure 28. Adams I. (2021, 2022). Estuary Hangings. *[Silk, unfinished linen, silk organdy, embroidery, ink, printing, collage, paper, handknitting, fish skeleton]. Variable dimensions. Personal collection. Durban, KwaZulu-Natal, South Africa.*

Estuary Hangings (Figures 25, 26, 27, 28)

The *Estuary hangings,* extended the layering, bundle dyeing, embroidery, frottage and the various textiles of *Polluted hangings* (Figures 22, 23, 24). These processes played an explorative role in the unfolding of these artworks. The formats of these are not precise rectangles, because they are made of soft textiles, they swing and flutter in the breeze. These properties suggest that the final display of these artworks, in line with Question 3, ought to include a breeze or draught

In these four artworks, I furthered my experiments with frottage[35] by covering a leaf in charcoal and then rubbed with pressure to extract an impression. I embellished a few of these prints with stencilling, ink and hand stitching which I showed in photographs attached in Workbook 4, (2021-2024, pp. 221-223). Pulverised dead leaves was not an option (mentioned on page 72). I cut leaf shapes from inked paper which I showed in Workbook 4 (2021-2024, p. 215) and snipped the edges in parts to suggest the zig-zag edge of the leaves of the Tree fuschia (*Halleria lucida, iminza*)

These were further exploratory and performative ways of working in somatic ways reminiscent of *Sumi-e* processes.[36] Unexpected surprises emerged through these, such as the crisp detailing of Eucalyptus leaves in *Estuary hangings* (Figure 28) and the blurred outcome of the bundle dyed Lagoon hibiscus leaves (*Hibiscus tiliaceus*, *uLola.)* The latter contained no tannin and hence the indistinct image. In Workbook 4 (2021-2024, p. 221-223) I make notes to "*revisit*" these "*performative processes.*"

I recalled how during my work experience hand stitching was a direct rejection of mass manufacturing and cost cutting processes, where machine sewing and digital embroidery was paramount to speedy production. Stitching became another means of translating the realities of the Estuary in non-representational ways, shown in Figure 27. Here the embroidered litter boom with a sliver of blue[37] (shown in Workbook 4 (2021-2024, p. 219) could be seen as wax honeycomb implying reparation through bees, the mechanical restraint of wire netting, or as a form of degradation through damming and altering river courses for urban development.

[35] This method dates back to Medieval times and is documented in a publication titled *Impressions of Nature* (Cave, 2010).

[36] *Qigong*, yoga, meditation or martial arts customarily precede *Sumi-e* contributing to a tranquil state of mind. *Sumi-e* is executed whilst standing as an ongoing meditation, somatically involving the entire body, as opposed to painting when sitting, or using one hand to dab paint on a vertical canvas. This freedom of movement involves *Chi*, which is transferred from my 'self' and my brush onto my paper.

[37] Litter booms are installed by *Adopt A River* to catch garbage floating downstream (See photograph in Workbook 10, 2021-2024, p. 471).

Stitching eventually expanded into experiments with embroidery and applique in the *Cloak of Three Mangrove trees* (Figure 46). In *Estuary hangings* (Figure 27), I had to make "*tiny stitches to show the small leaves*" and this was a "*calming and relaxing meditative procedure*" (See Workbook 7, 2021-2024, pp. 398 and 401). My growing focus on mindfulness in daily life supported this development.

The few reparative elements are indicated by the embroidered indigenous tree names and the green leaves of the Tree fuschia (*Halleria lucida, iminza*) (see Figure 27). These inclusions and a panel of green overlay may be said to signify new growth, contributing to "emergent knowledge" (Bolt, 2006, p.12). It seemed likely that viewers would intuitively associate green with new life. The knitting inserted into Figure 28 incorporated strips of silk, cotton, grass and raffia (see Workbook 4, 2021-2024, p. 213) which I recorded as being "*a metaphor for repair*". Materiality emanates from these materials, the varied textures and layers of cloth (sheer organdy, rumpled silk, silk *dupion*, pure linen), bundle dyeing, frottage, embroidery and stitching).

The Estuary is a complex layering of life and the plants themselves are a physically entwined assemblage that includes creepers, shrubs growing under trees, and weeds below these. The entangled layers of materials, shown in Workbook 4 (2021-2024, p. 229), and the translated images were analogous to the complexity of Estuary life. The non-literal and non-didactic interpretations of the realities of the Estuary contributed to Question 1, aspects of degradation and reparation contributed to Question 2. Final display (Question 3) will be discussed in Chapter 4.

The Format

At the onset of this PLR, I aimed to create artworks beyond two-dimensional wall hangings. I could not relinquish this aim. In Workbook 4 (2021-2024, p. 221-223), I questioned how to "*move beyond these two-dimensional hangings*". I was determined to create a dynamic three-dimensional form, contrary to Weintraub's idea that form is constituted by static measurements of shape (2019, p.17). To move beyond these formats, I needed to stand outside myself and to think reflexively of the ways in which I might achieve this. At this point, it was also useful to reconsider the artworks of other artists.

Artworks of climate change artists working with three-dimensional installations covered

anything from garbage art (*Corona Save the Beach Garbage Hotel,* Figure 4), to installations of ice, such as *Ice Watch* (Eliasson & Rosing, 2018)[38]. Neither of these installations resonated with my aims of translating my concerns in non-realistic, non-educational ways (Question 2). I reviewed again the three selected artists who contextualised my own creative research.

De Vries' *rosa canina* (Figure 3) and *the return of beauty* (Figure 69) are two-dimensional framed gallery artworks, which is what I was attempting to move away from. In Devlin's dome, *Come Home Again* (Figure 9), I found the layers of cut-out and hand-drawn creatures an evocative and a unique display using a three-dimensional format (see Workbook 5 (2021-2024), p. 241). Laurence's installation, *Deep Breathing: Resuscitation for the Reef* (Figure 29), incorporated a space where the artefacts linked together on different planes by means of tubing and wiring. These installations of Devlin and Laurence were dynamic and reinforced my determination to explore three-dimensional formats as stated above.

Estuary Entanglements and Complexities

Although this research focused on plants, the interdependencies of all life in this Mangrove forest (Berjak, et al., 1977, p.71) form an interconnected community, internally and beyond its borders (see *The Food Web, Interdependencies and the Interconnectedness of the uMngeni Beachwood Mangrove Estuary*, 2024, Figure 45). I detailed this complexity in my jottings, where I said that "*birds, bees and insects... link life*" (See Workbook 7, 2021-2024, p. 387) and "*Birds are the link*" (see Workbook 9, 2021-2024, p. 452), between the Estuary and the outside world.

Here are two examples of interconnectedness:

> *I hear birds twittering. In finding nectar they perform as pollinators and seed dispersers, carrying seeds of alien and indigenous plants into and out of the Estuary. I consider birds to be interconnectors. The relevance of the Estuary's interconnectedness lies in its survival being dependent on the interconnectedness of all Estuary life – including the microscopic aspects – with life beyond its boundaries. Conversely, unseen*

[38] Eliasson, O & Rosing, M: *Ice Watch*. [Exhibition]. 24 blocks of ice, each weighing 1.5 to 5 ton. (11-20 December, 2018, Tate Gallery, London, United Kingdom. https://www.tate.org.uk/whats-on/tate-modern/olafur-eliasson-and-minik-rosing-ice-watch

hazardous waste in river water affects all Estuary life.[39] *This is a negative form of interconnectedness.*

The unseen sharing of invisible microbes indicated the connectedness and complexity of all life, human and non-human.[40] This form of "inter-enmeshing" (Alaimo, 2010, p. 2) was beginning to resonate with me. My connections with the Estuary were slowly becoming an 'interdependence'. I was no longer independent of this Estuary when I was within the Estuary. This was an important point which I will refer to in the Conclusion, Chapter 4.

The unseen communication between plants was explained in 2.3. Mycorrhizal networks[41] was another possible and unexpected invisible activity (mentioned in 2.4) within the Estuary, indicating the communicative links between the vegetation. I needed to explore ways in which to translate these unseen activities.

My status as artist?

This artmaking research was no longer about myself, the artist. This project centred on the Estuary; I was creating 'Estuary art' as research, as opposed to making art solely for my own ends. This process was no longer purely subjective, as I initially envisaged (see 2.15 and Chapter 3). As part of the Eco-Materialist approach to art making, Weintraub (2019, p. 22) promotes diminishing the artist's "self-expression". This applied to this research where I allowed the Estuary materials to lead me. Fox (2015, p. 2) suggests that creativity should not be considered a human capacity, but as emergent through relations between human and non-human, issuing from "ideas and social formations" (2015, p. 2). My ideas have been influenced by my experiences, such as the discovery of the value of weeds and this idea warranted the creation of *Cloak of weeds* (Figure 43). "Social formations" were also relevant

[39] The life of plants, animals, birds, fish, non-vertebrae are all affected (Naidoo, et al., 2020; Singh, 2017).

[40] Unseen microbes in the plants, soil water, and air, are also present in our bodies (Davenport, et al., 2017, p.1; Fowkes & Fowkes, 2022, p. 215), vital to human and non-human health.

[41]. Theft of nutrients through mycorrzhial networks, is assessed by Perez-Lemarque, et al. (2020, p. 1822; Selosse, et al., 2006, p. 62). They speak of uncooperative "cheaters". I have not found further literature to support this claim.

to this research project in that my creativity emerged from my growing interdependence with the Estuary.

Mindful shift

In reassessing my direction in this research, a significant shift occurred at this point. My personal practices of walking, yoga and *Qigong* offered new ways of deepening my awareness of the Estuary's realities. The physical sensations experienced somatically by my body in these practices heightened my awareness of my surroundings and of my senses. Haas (1996, p. 16) speaks of the relationship between creative processes and somatic awareness. Dean (2020, p. 230) defines the somatic body as sentient and perceiving. The potential role that my senses could play in excavating the Estuary's realities would effectively contribute to my creative processes. During meditative states of forest bathing (Wohlleben, 2022, p. 124), I focused more on my senses, whilst breathing deeply, smelling the vegetation and water, listening to the forest chorus and rustling leaves, rather than relying purely on vision.

At the start of this artmaking research project, I did not envision that my daily practice of meditation could contribute in deeper ways, being non-rational impulses, to examining the realities within the Estuary. The recent discoveries of plant and somatic philosophy, my background in Zen Buddhism and the philosophies of Naess, Nhat Hanh, Irigaray and Marder, meditation and deep breathing practices were ways in which I could enhance my connections with nature. Stemming from *Sumi-e* processes, meditation and mindfulness are integral to my creative processes. I considered how the opinions and practices above might assist in my conceptualisation of a three-dimensional form. The next section examines how I incorporated these practices as tools for examining the realities of the Estuary.

Sullivan (2010, p. 99) reminded me that a PLR is constantly in flux. Understandings changed, methods became flexible, and outcomes were frequently unanticipated. All these aspects of PLR compounded together with my personal perspectives of the Estuary and afforded the examination and translation of deeper realities of the plants into artworks. These ways of working aligned with the cyclical nature of this PLR.

3.6 Emergence

As explained above meditation played a significant role in this project as a form of controlling my mind and focusing my awareness. Rufo (2022, p. 10) speaks of the awakening of the body's somatic intelligence through absorbing sensory impulses which I describe below. Wohlleben (2022, p. 42) suggests that humans have outstanding sensory organs and that one should take the time to explore as many senses as possible (2022, p. 235). Through opening my senses during forest bathing, I bridged the gap between myself and the natural surrounds. Subtle sensory impulses are an element of my somatic intelligence and expanded this research project in deeper ways. PLR enabled this expansion through uncovering deeper layers of understanding. Notes taken of time spent in the Estuary (Workbooks 3 and 8, 2021-2024) are for clarity organised according to each sense. These findings led on to the emergence of somatic forms.

Awakenings

> *My sight is enhanced through meditation. The surface of the water glitters as it is rippled by the wind and lit up by the glare of the sun. A single feather and a fish skeleton lie on the bank. The frothy beige scum on the water, slimy green pools, smooth grey shells of whelks climbing the Mangrove trunks and tiny silvery fish darting back and forth, are in view at the edge of the water. Shiny orange carapaces of foraging crabs seize the fallen ochre, red and black speckled* Mangrove leaves (*Rhizophora mucronata, umhlume*)".

These connections in the Estuary I illustrated in the sketch: *The Food Web, Interdependencies and the Interconnectedness of the uMngeni Beachwood Mangrove Estuary* (Figure 45).

> "*The Estuary is hot, humid and windy. My sense of smell is assailed by the salty breeze and the mulchy, stinky, sulphurous odours of the lagoon. These contrast with the fragrant, sweet smells of* Lagoon hibiscus blooms (*Hibiscus tiliaceus*, *uLola)*, *the tasselled flowers of the* Powder puff tree (*Barringtonia racemosa, iboqo) and the aroma of the verdant vegetation. My gustatory senses are vaguely aroused through miniscule taste sensations arising from these smells, both pleasant and irksome"*

> *"I discover the tastiness of the Lagoon hibiscus blooms. Through experiencing the seasonal cycles, I uncover previously hidden aspects such as the changes in the smells,*

textures and colours of these blooms."

In spring, freshly opened lemon-coloured blooms evolved into a peach colour in autumn, becoming "*withered purple corpses*" in winter, noted in Workbook 3 (2021-2024, p.185). I doubt that I would have become aware of the fragility of the bloom litter had I not used these in pressing processes. This pressing resulted in paper thin, translucent forms. These blooms became a feature in *Embraced by blooms* (Figure 44) and *Ceremonial Chair 1* (Figure 66).

> "*My feet sink in the sludgy, oozy, wet, muddy earth whilst treading gingerly between the crab holes. On the northwest end of the Estuary, while dodging the mounds of the tufted grass, sand and knobbly gravel seep into my shoes, irritating my skin. Somatic feelings of these textures are heightened by the brushing of overhanging branches and falling leaves, being poked by twigs and pricked by the thorns of the Num-num tree"* (*Carissa bispinosa, umvusankusi*).

These somatic experiences in the Estuary signalled the reality of the materiality of this Estuary. Self-evidently, these experiences were unavailable in my concrete, carpeted, wooden studio. I combined some of these materials in my Workbooks and on small pieces of paper which I eventually mount and bind in a book titled *One Hundred Traces* (Figures 68, 70, 71, 72)**.**

> *"The breeze is soothing, but I am nipped by the mosquitos, tickled by spider webs and tiny insects. I feel the shiny new leaves of the Tree fuschia* (*Halleria lucida, umBinza), the smooth fleshy leaves of the Black Mangrove tree (Bruguiera gymnorrhiza, isiKhangazi), the creeping, luscious dune vegetation and the rough, crusty bark of the* Forest mahogany (*Trichillia dregeana, umkhuhlu*)."

I was reminded that there are over six hundred million touch receptors in our skin alone (Wohlleben, 2022, p. 29). I photographed, pressed and drew my impressions of these leaves in Workbook 6 (2021-2024, pp. 322-367) together with identifications and notes. I selected a few of these for *One Hundred Traces* (Figures 70, 71, 72)**.**

> *My hearing conveys sounds of the forest inhabitants: rustling, bubbling, babbling, chirping, buzzing, flapping, punctuated by the creaking of branches, swishing leaves, the roar of crashing waves and the soothing lapping of water. Some of the multiple sounds are: chirping of Bronze mannikins (spermestes cucullate), twittering of Malachite sunbirds* (*Nectarinia famosa*). *Crying Hadedas (Bostrychia hagedash),*

croaking frogs (Rana Angolensis), creaking tree trunks, rustling leaves and buzzing African bees (Apis mellifera scutellate).

As I listened to the sounds of the Estuary, I considered the interconnectedness of its life and the ways in which bees, insects and birds propagate new life through pollinations. The interconnectedness of bird life eventually lead to *Ceremonial Chair 2* (2023, Figure 67). Recently, wandering through the Estuary, I found many feathers which I glued into Workbook 9 (2021-2024, pp. 441, 440)) and then created a few compositions on Fabriano which I added to *One Hundred Traces, Fish skeletons* (Figure 71).

Although I have recorded my sensorial experiences without a chronology, as seen above, this did not capture the simultaneity of my sensory experiences. This multi-sensorial aspect of somatic awareness was described by Dean (2022, p. 231), who considers that all the senses are connected. For instance, sight stimulates one's hearing (Wohlleben, 2022, p. 17; Wohlleben, 2022, pp. 29-30). The realisation of sensory experiences within the Estuary are an aspect of reflexive thinking.

Had I developed an "eco-somatic bond" or an "eco-somatic relationship?" (Eddy, 2017, p.1; Kuppers, 2022, cited in Karahan, 2022, pp. 62, 63). I wondered, could the boundary between myself and the Estuary dissolve? This seemed far-fetched. My 'self' and the Estuary intersected in the Estuary. Beyond the Estuary, I became an independent being, living in and connected to an urban space. Only if I were living in the Estuary, I could consider myself in an eco-somatic relationship.

I recalled Alaimo's opinion that "bodies extend into places and places affect bodies" (Alaimo & Kuznetski, 2020, p.140). The somatic engagement of my material physical body with the Estuary had developed over time. Doing PLR unearthed how deeply my 'self', my body and my creative processes had been influenced by this Estuary and its artefacts. I questioned whether this bodily interaction with the materiality of the Estuary was shaping my mind, or were my senses re-attuning to my body? This question provoked thoughts on how to convey in artworks the corporeal effects, the immaterial and the somatic sensations. Meditating in the Estuary about these concepts generated the following insights.

Insights

The practice and action in nature promoted by Naess (1989, p.15) enabled me to experience the smaller aspects of the Estuary. Prior to this realisation I questioned this: whether meditation could become a tool to excavate the research questions in deeper ways, noted in Workbook 4 (2021-2024, p.212).

Indeed auditory, haptic, olfactory and gustatory senses extended to my awareness of somatic being which I described in Workbook 7 (2021-2024, p. 355). I thought reflexively about these mindful sensory experiences which led to recognising the somatic feelings that emerged from them. Reflexive thinking indeed assisted in revealing the 'inside' of the Estuary, the deeper realities and the *minutiae* of the life of the Estuary plants. The unanticipated integration of my somatic register and personal practices led to the evolvement of experiential knowledge and this was a key insight.

My senses allowed me to access the Estuary's miniscule and subtle underlayers, widening my understanding of the multi-dimensional realities of this Estuary I speculated whether I might "*sense more with my eyes closed*" (Workbook 6, 2021-2024, p. 327). According to Csikszentmihalyi (1991, cited in Haas, 1996, p. 21), becoming totally absorbed in a transcendent state from which subtle forms of sensory knowledge emerge is a state of "flow". I became so absorbed in my moving, feeling processes that I cannot always recall how I arrived at a creative outcome. The somatic understandings that emerge nevertheless may be said to correlate with flow. These were key insights.

My heuristic evolved through my ongoing experiences in the Estuary. My understandings expanded through my senses. Deeper reflections offered a turning point and an exciting path of creatively exploring the realities in the Estuary.

The above sensory experiences were largely inspiring and positive. However, negativity slipped into my awareness when investigating the literature. This reminded me of my initial concerns for the degradation of the environment globally and for this specific locality. My negative frame of mind alternated with uplifting discoveries, both of which were expressed in the artworks to follow.

My working life re-emerged

I have been a maker of 'things' throughout my childhood [42] and my working life. Decades of technical experience conceptualising two-dimensional sketches as three-dimensional garments enabled me to expand my artmaking formats. When confronted with interesting textiles, my automatic response is to visualise garments and interior design products. As mentioned, (see Chapter 1) forcefully suppressed my manufacturing and design skills. These slowly re-emerged and influenced my conceptualisations which finally appeared as three-dimensional forms (see Figures 32, 37, 38, 39, 40, 41, 43, 44, 66, 67). *Sumi-e* artworks[43] are the antithesis of fashion pieces.[44] The constant search for novelty in fashion manufacturing is inherent to my being, and this equipped my ongoing explorations.

Conclusion

The above section 3.6 signifies changes in the direction of my creative processes, through insights which deepened my connections with the Estuary. I was no longer the only protagonist in this PLR. The plants and my research tools (described in the methodology chapter) also became protaganists. Alaimo's (2010, p. 237) opinion that humans, matter and the environment cannot be considered as separate categories indeed described how my involvement with all of these estuarine influences shaped my artworks.

Eposito and Evans-Winters (2022, p. 34) explain that in PLR, the connection between the research topic and research questions emerge alongside the methodology. My research methods continued to expand. My understanding of materiality was reconfigured by the Estuary's natural resources which are a "wondrous storehouse of materiality" (Weintraub, 2014, p. 3). I viewed the works as extensions of the Estuary and as a significant departure from my previous two-dimensional hanging artworks.

[42] dolls houses, hideouts, tents, dolls clothes, fancy dress costumes, costumes for concerts. As an adult I have made handbags, light fittings, cushions, furniture and upholstered these items.

[43] My summing up of a noteable *Sumi-e* artwork is as follows: capture of the essence of a natural form, economy of brush marks, incorporation of *Chi,* multiple tonalities between black and pale grey.

[44] Fashion artworks need to be impactful, stylised and glossy in order to sell garments to retail buyers.

3.7 Emergence of three-dimensional somatic forms

The experiences introduced above developed into the three-dimensional artworks to follow. Led by my research questions, a greater variety of translations and embellishments of the three-dimensional forms developed.

The following sections describe how explorations, iterative processes and adaptations using textile remnants unfold into *Embracing: First Cloak of the Estuary* (Figure 32). Its convoluted processes unfolded over twelve months. This form was "led into being" (Whitehead, 2003, p. Abstract). It was thus entirely unexpected and innovative, and pioneered the way for the artworks to follow. This demonstrated the significance of allowing risk (inherent to *Sumi-e* processes) to play a role in my handling of materials.

Embracing discards

A bold shift, initiated by the awkward sizes of reject linen panels provided an opportunity to experiment with a new base material. The unfinished or PFP [45] state appealed to me because of the natural fibres of this textile. My attempts to recycle waste also aligned with Weintraub's (2019, p. 21) recommendations for Eco-Materialist artists. Initially, the dimensions of the linen offcuts presented a problem. I did not know how to create an artwork out of these. Here I found that the challenge led directly to a previously unimagined artwork. I pondered the materials that the Estuary has to offer.

In the Estuary, I considered combining fallen leaves and remnants from the forest floor, with carbon ink to offer a new form of Estuary expression. I chose carbon ink because painting on unfinished textile requires chemical paints, to which I am opposed. My experience in textiles tells me that, apart from acrylic, colour on unfinished textile will not hold an intended form, the ink will bleed (I explained the term 'bleed' in section 3.3, *Triptych of trees* (Figure 20). The convergence of carbon ink, standing back from *a priori*

[45] PFP denotes 'prepare for printing'; namely, no chemicals have been used to finish the textile, it is in a natural state.

assumptions of my technical experience in textiles, and my pleasure in risk-taking, suggested a shift away from technical knowledge to creative insight.[46]

Weintraub (2019. p.15) acknowledged the essentiality of non-human relationships for maintaining all life. This served as a reminder of my opposition to hegemonic thinking, and the importance of dismantling binaries. My acceptance of the interconnectedness and complexity of all life was a recent and important discovery which emerged through this research project. I acknowledge that I am not a superior human. This is described in section 3.9 under the heading "Found in translation," where I allowed the Estuary plants to take the lead, sublimating my drawing and painting skills. Sullivan (2010, p.197) stated that in PLR, new knowledge is shaped by questioning what one knows "...and what might be". While I knew that I was intent on connecting with all Estuary life, I did not know yet how to translate this interconnectedness into a three-dimensional form.

I thought back to the formative artworks discussed in section 3.3. I had striven to progress beyond the literal elements shown in *Estuary waters* (Figure 15) through expanding my processes and diversifying my materials. Sullivan (2010, p. 110) describes how PLR evolves, suggesting that new experiences emerge through the creative processes as the research progresses. For example, the ways in which I used thread had changed as mentioned on the previous page. In my experience, PLR does not unfold in a continuous smoothly flowing progression; new experiences did not always lead to expansion of the practice. An example is my experiments of wrapping inked paper onto the fungal protrusion referred to in Workbook 4 (2021-2024, p. 209), which did not evoke any further explorations even after further reading on the nature of the infection.

Nhat Hanh promoted the breath as a means of increasing mindfulness leading to observations of smaller realities, such as a single leaf. (2008, p. 16. Nhat Hanh's view could also apply to my experience with the microscopic flowers of the White mangrove tree (*Avicennnia marina, isiKhungathi*). It was during a period of meditation that I happened to take in the perfumed

[46] My experience in *Sumi-e* painting is confined to unsized paper and sized silk. Sized, in the textile industry, is the technical term for a sealant on textile, which is mostly chemical, but alum can also be used on natural fibres like silk, to seal the surface.

fragrance of the White mangrove tree (see Workbook 3, 2021-2024, p.115). This led to closer observation of these trees and of the relevant literature to verify my olfactory experience. This process in turn led to learning about the reproductive system of the White mangrove tree.

I then viewed propagations as an innate form of reparation. This was a key insight. As this text unfolded, the significant influence this had on my attitude towards the Estuary and my resulting creative processes became evident. *Cloak of three Mangrove trees* (Figure 46) is an example of how this insight resulted s in innovative embroidery.

The activities above arose from excavating my research questions, the ensuing discoveries and experiments, the relevant literature and my creative processes. These compounded together to generate the data for this PLR.

Contextualising creative influences

At this point I reconsidered the influences of other artists on this creative research. De Vries, Laurence and Devlin are amongst the few artists where I have found elements of degradation and reparation. For his photography, DeVries selected artefacts from his meadow, which he personally 'wilded'.[47] This noteworthy venture endorses the value of wild plants for individual reparative efforts. This resonated with my aim to reflect reparation within the Estuary, linked to my residential area. 'Common' plants, or weeds, become valued when incorporated into artworks, such as my *Cloak of weeds* (Figure 43).

Up to the start of this project, my outputs have been two-dimensional gallery hangings. I considered that in the installation, *Deep Breathing: Resuscitation for the Reef* (Figure 29), Laurence tackled ongoing ecological disaster in her own country, Australia. At the time of this installation, the coral had already been bleached, and the damage continues. This work addresses the 'fourth event since 2016" (Pratt, 2022, p. 1). Bleaching is caused by a rise in the temperature of the sea water and ultra-violet radiation (Pratt, 2022, p.1). Laurence did not physically altered the corals, but she repositioned them in an altered context. She also exposed a seascape mounted on a mirrored floor (Gibson, 2016, para.1). The mirror and glass created a shimmering sea-like atmosphere and linked the natural specimens and scientific materials. The

[47] De Vries re-established his garden, comprised of wild plants.

material appropriated by Laurence was compelling because she displayed them in an altered context. The laboratory equipment used pointed to the chemical industry. The preserved creatures and corals suggested both poaching and preservation. Her juxtaposition of materials was effective at expressing environmental concerns.

The bottles of corals and the fish in specimen jars were displays of life in jeopardy. Could samples of Estuary plants and elements be installed, or attached in altered contexts to amplify my translations of the degradation and reparation of the Estuary? The treasure bags incorporated in *Embracing: First Cloak of the Estuary* (Figure 32) contained seeds, fish skeletons and feathers, and these may have been unconsciously prompted by Laurence's installation shown below (Figure 29).

Figure 29. Laurence, J. (2016). Deep Breathing: Resuscitation for the Reef. *[coral, fish, tubing, specimen jars, mirrors, shells]. No dimensions. Museum of Natural History, Sydney, Australia.*

Devlin's installation, *Come Home Again* (Figure 9), includes her drawings of threatened species which indicated her concerns. This aligned with my concerns for the effects of pollution on Estuary life. Her layering and overlapping of these different species might, in my view, have indicated the interconnectedness of wildlife. I also assumed that interconnectedness indicated a form of reparation. All three artists evidenced the role of art in expressing environmental concerns.

The above references led me to consider using a variety of surface treatments which could add visual impact to the expression of my environmental concerns. I gathered together linen remnants and rejects of cotton, organdy and slubbed ramie[48], I treated these with applique, stitching, printing and collage. The varied bases formed a community of textures which added to the haptic effects and materiality of the whole. Using botanical script, I hand stitched a sprinkling of tree names in English, IsiZulu and Latin in randomly selected places. These might trigger recollections for viewers. The hand stitching and the above processes pointed to the need for further investigations of artists who employed similar modes of expression.

None of the three artists I have focused on for contextual reference, DeVries, Laurence and Devlin, have incorporated thread or textiles in their artworks. As mentioned in the Introduction, Chapter 1, I aimed to address a gap through this research. I searched for artworks of artists which were specifically connected to their homes, expressed environmental degradation and, or reparation in non-literal, non-didactic ways.

I found that the artworks of Amanda Cobbett (n.d.) partly correlated with my aims. To me, the value of these artworks lay in their beauty (*Four pieces of Bark,* Figure 30). Cobbett observed these mosses, lichens and fungi while walking in the area around her home and re-created them in thread. Such 'treasures' resonate with my appreciation of the small and overlooked aspects of nature, such as seeds, fallen blooms, leaf litter and feathers. However, Cobbett's artworks did not address the main criteria for this PLR, namely, to express the degradation and reparation in non-representational ways. These artworks were realistic renderings, they replicated living matter in a life-like way and they were a step away from becoming instructional. If Cobbett allied each piece with relevant data, these could be seen as didactic.

I imagine that Cobbett expended many hours in machine stitching and painstaking concentration (see *Four pieces of Bark* Figure 30). Sullivan (2010, p. 110) speaks about

[48] This is cloth made from ramie, a type of grass, with a 'slub' (little knots in the yarn) which creates a texture. This fabric is largely used as a linen substitute because it is cheaper in price.

the "possibility of seeing phenomena in new ways". I considered the variety of plants in the Estuary and the new ways in which these could be translated.

Resorting to hand stitching in *Embracing: First Cloak of the Estuary* (Figure 32) arose out of the need to have enhanced certain impressions. Hand stitching was an antidote to my experiences of mass manufacturing over decades. Reference to craft and needlework as "women's work" (Shonibare, 2018 cited in Black, 2021, p. 104) was a form of discrimination. As the current "creative hierarchy of this decade" (Shonibare, 2018, cited in Black, 2021, p. 104) appears to be masculine, this seemed to me a good reason to assert my femininity.

Figure 30. Cobbett, A. (2021). Four pieces of Bark, *20-83. [Thread]. 40 cm. x 18 cm. x 7 cm. Guildford, Surrey, United Kingdom. Private Collection. Courtesy of Amanda Cobbett.*

In New York, I viewed Judy Chicago's (1939-) compelling installation *The Dinner Party* (Figure 31).[49] In this installation, a variety of embroidery and stitching styles offered ideas for further hand stitching modes.

[49] Hand stitching in the 1970's was said to be reclaimed as a feminist craft in this installation commemorating 1037 women, at the Brooklyn Museum of Art, New York.

Figure 31. Chicago, J. (1974-1979). The Dinner Party. *[Ceramic, porcelain, embroidery, appliquè, textiles, installation]. 1463 cm. x 1463 cm. x 1463 cm. Personal photograph. Brooklyn Museum, New York, New York. United States of America.*

The saddle stitching, whipstitch, satin stitch, blanket stitch and embroidery of *The Dinner Party,* prompted me to discover other types of stitching.[50] These different ways of stitching embellished the mixed textile panels of *Embracing: First Cloak of the Estuary* (Figure 32).

[50] I create knots, I layer the stitches, creating thickness in areas, I incorporate fledging feathers (see section 3.7).

These panels I worked on singularly in a somewhat haphazard manner. I did not anticipate a final finished artwork.

Figure 32. Adams, I. (2021, 2023). Embracing; First cloak of the Estuary. *[Cloak comprised of cotton, linen, silk, mixed media, fish skeletons, bark and leaves]. 300 cm. x 2000 cm. circumference. Personal Collection. Durban, KwaZulu-Natal, South Africa*

3.8 Embracing: First Cloak of the Estuary

The cloak departs from my previous art making formats and was something I had never made before as a fashion designer. The evolvement of the cloak form was the upshot of investigating somatic knowing (as introduced in 2.7, page 43) and this propelled my creative processes (Workbook 7, 2021-2024, p. 377). This cloak could become a vehicle through which to translate and embellish the discovered realities of the Estuary, an interface that extends the experience of this research to the viewer. I discuss below how my performative and iterative processes led onto this cloak body.

Found in translation

I splashed ink randomly over the linen and leaves in *Hatsuboku*[51] mode recollecting the processes of *Triptych of trees* (Figure 20). I explained the process of using my motorcar for printing. The bleeding conveyed the seeping of carbon pollution and embodied my interpretation of violence inflicted on the Estuary. Reflecting on the varied outcomes I questioned the agency of the materials, how each leaf, stem and fragment of leaf litter influenced the outcomes. The fresh green leaves of the Pigeonwood (*Trema orientalis, umdindwa*), left softer marks, whereas the shrivelled leaf litter proffered sharper edges. Both artefacts caused bleeding in some areas where excess ink pooled. This evidenced the manipulations of the materials and demonstrated the generative potential inherent in these leaves. Materials have a "life of their own" (Lange-Berndt, 2015, p.16), which I viewed as synonymous with *Chi*. The explorations with these artefacts in performative research processes were the result from the interrogation of the research questions. I questioned whether I could translate these impressions further by adding layers of meaning to embody my expanded understandings of the Estuary.

My personal form of *frottage*[52] yielded further abstract impressions superimposed on the print. *Chi* permeates the organdy and mosquito netting of the 'treasure pockets' which contained seeds and tiny fish skeletons, as well as fledgling feathers. These feathers, which

[51] *Hatsuboku* is one of the traditional modes of *Sumi-e* painting and literally means 'splashed ink'.

[52] Frottage is documented in Workbook 5 (2021-2024, p. 307).

I found on the Estuary path, indicated a recent hatching or perhaps evidence of a kill. The treasure pockets placed the contents in altered contexts. Sullivan (2010, p. 192) suggests looking "backwards" which prompted me to return to previous techniques recorded. I noted previously to "*revisit this stitching as drawing*" (see Workbook 3, 2021-2024, p. 145) which I used in *Triptych of Trees* (Figure 20). I stitched differently here in meandering lines, where I incorporated tiny feathers. The plants, feathers, ink, textiles and my motorcar were leading participants in these creative processes. The visible and invisible pollution was the most obvious reality of the Estuary, conveyed in large areas of carbon ink. Aspects of reparation were shown through the feathers, the seeds and the fresh leaves of the Tree fuschia (*Halleria lucida, umbinza*).

Assemblage

Not knowing what to do with these panels I decided to see how the embellished feathers, treasure bags and carbon inking of panels could hold together as an artwork (see Workbook 7, 2021-2024, p. 381, where I showed photographs of my attempts to link the panels). How could I use these panels to effectively convey my concerns and display the translated realities of the Estuary? This query arose in response to my first and third research questions.

Could these panels be made into a dome? I did not want to copy Devlin's idea of a dome. The dimensions and soft handle of the cloth would not in my experience accommodate a dome shape. My working life equipped me with pattern-cutting skills which re-emerged in this flow of my creative processes.

Uncertain of what to do next, I held the panels vertically in front of my body. Whilst gazing at the mirror, I wrapped the panels around my body. The somatic sensations within my body and my skin were comforting. I felt protected. Somatic knowing was a key element that I introduced in 2.7, page 43. This drove the examination of my research questions and afforded more subtle ways of knowing. I decided to stitch the panels together. This resulted in an enormous, billowing tent-like form. How could this enormous enveloping form be transformed into an effective translation of the Estuary's current status - a simultaneous analogy for the enveloping protection of the Estuary and globally?

Thinking back to my training in fashion, I recalled learning about the history of costume, and how various cloaks conveyed the status of witch, wizard, deity, royalty, or religious leader. A cloak might be interpreted as protective, sheltering, magical, evil, veiling, concealing or celebratory, depending on the context. In the context of the Estuary, connotations of 'protective' could be positive and 'concealment' could indicate both the unseen toxic status of the Estuary water and the air-born pollution. The words 'celebratory' and 'status' suggest the value of the Estuary as an eco-system. The cloak form became a possible shape with which to experiment and this arose out of my indecisiveness.

Conclusion

Sullivan (2010, p. 133) posits that it is unclear how envisaged images become created forms. *Embracing: First Cloak of the Estuary*'s (Figure 32) process has not been a linear one. In the previous section, I presented possible explanations as to how I arrived at the cloak form. The risks I took in embellishing panels of odd dimensions, with no envisaged form in mind, is rooted in chance and risk taking (see Footnote 4), synonymous with *Sumi-e* processes.

The panels needed manipulating to become a cloak. This entailed narrowing the top portions of the panels to fit around the neck and the widening of .other sections for the shoulders. My technical skills equipped me to carry out this intricate splicing and to make the hood. This cloak was built out of translated elements and artefacts in non-literal renderings. The carbon ink splatters and fragments of oil-encrusted feathers (two visible aspects of the reality of degradation in the Estuary) conveyed pollution and toxicity. When the cloak seemed to be complete, I looked back and tried to recall what I did.

The translations where I used hatchling feathers and saddle-stitched leaves[53] could be a metaphor for reparation (the recent birth of birds enlarges Estuary life; stitching is used

[53] 'Saddle stitching' is a term derived from the type of stitching on leather saddles. This is a strong form of stitching using regular stitches approximately one centimetre long. I learnt this when I was studying fashion design at Natal Technical College, Durban (1968-1970).

for ‘repair’). Lange-Berndt (2015, p.16) suggested that opening the meaning of materials may reveal associations beyond art. This applied to the remnants of Estuary life, which are unusual art materials in themselves – in the example above. The materiality of these and the treasure bags were reconfigured by the translations and embellishments above and by the presence of the haptic surfaces of the textured textiles. This artwork revealed the deeper realities of the Estuary, the inherent beauty and value of this inter-related community. This was a new insight which I uncovered because PLR facilitated the unravelling of my creative processes.

The theme of interconnectedness led me to searching for evidence in other artists’ works. Laurence’s *Deep Breathing: Resuscitation for the Reef* (Figure 29) incorporates an inter-related community of marine life and offered a portal into the Great Barrier Reef. My cloak similarly offered a portal into the Estuary. This offered a different kind of “emergent” knowledge (Bolt, 2006, p. 12), in that it arose from my explorations. When I drew up the theoretical framework (see 2.10), I envisaged my research as a qualitative and objective inquiry where the “what” and the “how” (Silverman, 2017, p.18) would be straightforward. Neither my processes nor my unpredictable outcomes have been straightforward.

In PLR, Sullivan (2010, p. xii) acknowledges that meanings are generated by artmaking and subjective experiences. My mode of being ‘with’ the Estuary, rather than being ‘in’ the Estuary, as suggested by Marder (Irigaray & Marder, 2016, p. 161), meant that this PLR was heuristically driven. Fox (2015, p. 19) suggests that being ‘with’ (the Estuary) entails “non-human involvement”. Indeed, my experiences, materials and creative practice for this study were inextricably entwined with the non-human Estuary community. Sullivan (2010, p. 119) highlights that interactions and dialogue intersect with the context and with artist and artwork. Each element served to trigger understandings.

This cloak was an offshoot of my experiences in, and my responses to the Estuary. Had I merely walked around without stopping, I would have looked rather superficially at the vegetation. Deeper understandings of the degradation and reparation would not have been uncovered. I addressed this in Awakenings, 3.5., where the awakening of my senses resulted in deeper realisations of the Estuary.

Thinking beyond this first cloak did not occur to me until a colleague wore it and meandered through the Estuary. Its movements and shadows reflected the immersive space

of the rich and troubled ecology. The wearer commented on the comforting feeling of the cloak, the weight and soft handle of the pure linen felt "soothing" and "protective" (C. Kinnear, "personal communication," August 23, 2022). The value of this cloak revealed itself in the behaviour of the materials, the unfolding of the three-dimensional form and the stitching, appliqué and collage embellishments. The treasure pockets and the inherent somatics of this enveloping form ensued from artmaking insights.

The wearer's somatic connection with the cloak may be seen as a parallel to plants connecting with other life forms in the Estuary. From this point, cloaks formed the bulk of the artworks and offered a significant shift in my artmaking as I subconsciously drew upon my previous work-related experience. I paged through my notes (Workbooks 1-11, 2021-2024) to see whether there were any other clues to the emergence of this cloak form. I found photos of draping and pulling *ganpishi* paper into feminine body shapes. In Workbook 1 (2021-2024, pp. 37-41), I noted that I am perplexed as to what led me to make these dress forms when I neither made them for my work, nor wore them myself? I believe that that deep influence of the degradation and reparation in the Estuary provoked in me an unconscious response to create a startling vehicle of display and/or a protective shield. This evidences the Estuary's "active shaping force" (Steinberg, n.d. cited in Alaimo, 2010, p. 8) on myself, the artist researcher.

My conceptualisation of the three-dimensional cloak form demonstrated how this creative practice was rooted in PLR. As a methodology, PLR had the capacity to draw in and reconfigure my work experience. Integral skills for a fashion designer extended from visualisations and conceptualisations, to sketches and the final emergence of three-dimensional garments. Retrospectively, I realised the value of somatic understanding in these conceptualisations. The cloaks could provide a means of focusing on and incorporating a particular category of plants.

Insights

Addressing the research questions led to a radical shift from my previous artmaking genres. I believed that my concerns for environmental degradation and this Estuary influenced my artmaking to such an extent that I drew on my suppressed working life skills (see Chapter 1), which led to this new form of expression, the cloak. This cloak's processes revealed the performative nature of this creative research, and the influence of materiality on this artwork.

As the three-dimensional cloak form was intended for the human body, it proffered somatic engagement. Inklings of Estuary interconnectedness emerged in this cloak. This and deeper aspects of reparation were realised in the final artworks of this project.

Conclusion

I considered the above developments in my creative processes in relation to the research questions. The stitched embellishments translated Estuary realities. For example, the meandering line of delicate fledgling feathers were haptic and contributed to the exploration of Question 1. The stitching was a significant departure from two-dimensional painting and a recollection of my training in fashion design. Question 2 was addressed by the non-realistic renderings of leaves. The few Estuary plant names embroidered in English, IsiZulu and Latin were not connected to any impressions of leaves. These inclusions thus cannot be considered educational but, might offer possible links for viewers to contemplate. Question 3 considers how I would effectively display the artworks. The cloak offered a surprising format for the eventual display. This led me to consider alternative ways of display.

The realisation that I had discovered the cloak form, through reflecting on the current situation of the Estuary, prompted exploration of further cloaks forms. Visualisations provide ideas and prompt action (Sullivan, 2010, p. 194). This comment by Sullivan emanated from his publication on PLR (2010). I discovered cloaks exhibited by Duane Linklater (1976-) in the exhibition *Can the circle be unbroken* (Linklater. San Francisco Museum of Modern Art, October 26, 2019 - February 17, 2020. San Francisco, California, United States of America). Workbook 5 (2021-2024, p. 294-295), showed photographs of this display of cloaks. Linklater's cloaks displayed digital printing over vegetable dyed areas. He overlapped the images of leaves and flowers, using natural fibres such as linen, cotton and hemp. Linklater's cloaks jolted my memory of layering collage and printing, something I could explore further. Additionally, the cloaks were displayed unusually; they lay half on the floor and halfway up a wall. This display might influence my final display in line with Question 3.

Figure 33. Linklater, D. (2019). Can the circle be unbroken, 2. *[Digital prints on linen]. Dimensions variable. Exhibited at San Francisco Museum of Modern Art, October 26, 2019 - February 17, 2020. San Francisco, California, United States of America*

Janet Laurence's *Deep Breathing; Resuscitation for the Reef* (Figure 29) offered an unusual installation with a variety of materials. Her aims differed somewhat from mine. Although this installation was specific to her country, Australia, it was not specifically connected to her own home. Laurence was addressing environmental degradation on a large scale whereas my aims were specifically connected to a small area and my own home. Additionally, I aimed to translate current reparations into artworks that were neither realistic nor instructional. The value of Laurence's influence lay in her amalgamation of unusual materials. The following section addressed the formation of alternative textiles as analogies for healing and repair in *Cloak of Carbon and Repair* (Figure 34) and *Wrap of Carbon and Despair* (Figure 36).

3.9 The Carbon Cloaks

The main research question of this PLR was how to translate my experiences and artmaking materials into artworks that excavated my concerns for this Estuary. Here I introduced the artefacts as the leaders of these creative processes. This required me to sublimate my painting and drawing skills.

I preserved the Estuary artefacts in their ‘litter’ state and incorporated these using bandages, glue, feathers, metal thread, mosquito netting, lichens and *ganpishi,* as opposed to my usual materials of paintbrushes, paper and ink. These alternative materials I combined to form a cloak, which is traditionally made of textiles or furs.

Figure 34. Adams, I. (2021). Cloak of Carbon and Repair. *[Lint bandages, ganpishi, metal thread, leaf litter]. 200 cm. x 600 cm. circumference. Personal Collection. Durban, KwaZulu-Natal, South Africa*

Cloak of Carbon and Repair

To emphasise the fragility of the current state of the Estuary, I intuitively thought of cotton lint bandages (for healing) and *ganpishi* (another fragile material), both flimsy materials that tear easily. Feathers are a significant inclusion, because birds are active pollinators and seed dispersers, they link the Estuary with the surrounding area. On my walks in the Estuary, the nearby forests (Virginia Bush and Danville Forest), and the surrounding roads, I collected feathers. I snipped these into fragments and used metal thread to sew these onto the bandages, as analogies for repair. For me, this called to mind the grafting of bones and plants, which were methods of healing and regeneration, respectively. This 'repair' of the Estuary's 'wounds' was subverted by the carbon ink and glue which were analogous to the pollution.

I considered Doris Salcedo's (1958-) exhibition held at Worcester Art Museum. (La Casa Viuda. 1992-1994. Worcester, Massachusetts, United States of America), (see Workbook 5 (2021-2024), p. 270). Salcedo's artworks were not literal representations of the violence. She expressed materiality by sewing surgical thread and hairs (Schneider, 2014, p. 122) into the wooden furniture of the victims, see *La casa Viuda* (Figure 65). The layers of unusual materials (Schneider, 2014, p. 128) became implicated with the tragedy of the murdered victims. Salcedo focused on the scarred and fragile "skin" of her surface, which concealed a history. Thus, it was her materials, "not words" (Schneider, 2014, p. 128) that conveyed their unseen deaths. The materiality of Salcedo's artworks embodied meanings that resonated with my attempts to convey the violence and healing of the Estuary. She focused on "charging the materials" with the weight of the tragedy (Schneider, 2014, p. 5). This cloak echoed a different form of violence to that of Salcedo's artworks. A visible aspect of the human violence inflicted on the Estuary was apparent in the carbon, as a form of pollution. Another aspect of this was the human attempts at reparative measures (collecting the garbage).

These new materials conveying healing and violence were recontextualised in the form of a cloak. The lower section was covered with leaf litter. The upper section of the cloak had a hood created out of a discarded mosquito net. This net protected against mosquitos which are prevalent in KwaZulu-Natal estuaries. (I was frequently bitten in the Estuary). The net was edged with lichens found growing on the tarred pavement edges and rotting tree trunks

in the area. Lichens are both a fungi and an algae. They are “biomonitors”(Kousehlar & Widom, 2020; Frati & Brunialti, 2023; Van der Wat & Forbes, 2015), that is, indicators of ecological health. They are thus useful to scientists and botanists monitoring the ecological state of an area such as the Estuary. The lichens introduce another discovered reality of the Estuary.

My knowledge of science was limited, and I was not able to interpret recent scientific reports on the cellular and genetic predispositions of plants for self-healing and off-setting the effects of pollution (Hrkić Ilić, et al., 2021; Kwiakowska & Burian, 2022; Okansen & Kontuen-Soppela, 2021; Singh, et al., 2023). These citations dealt with the microscopic and complex defence mechanisms of the plants which were: “structural, physiological, metabolic and biochemical defence mechanisms, including anti-oxidative machinery” (Okansen, & Kontuen-Soppela, 2021 [Abstract]). This presented a limitation on the knowledge that was accessible to myself as a researcher.

This concern for damage to the environment was topical within the broad frame of climate change, where the ongoing degradation of the earth and this Estuary continues. This cloak expanded the shift where my creative research grew beyond my drawing and painting skills. In trying to understand my sublimation of these, I concluded that when I collected the rich array of Estuary artefacts, I felt compelled to preserve them in ways that abandoned *a priori* assumptions of drawing and painting, as the prime means of creative expression. Through drawing and painting I displayed technical virtuosity whereas here the artefacts to a certain extent dictated their own placements (see 2.4 where I discussed the agency of plants. The disruption of drawing and painting skills gave way to alternative means of expression which gained momentum in forthcoming artworks.

When this cloak was worn, the leaf litter, bandages and papers deteriorated through the crumbling and tearing of the fragile material. This was inevitable with time and the cycle of life and was analogous to the ongoing degradation in the Estuary. The effects of time may have been seen as a source of transient beauty and impermanence, a concept of *wabi sabi.* Professor Tanehisa Otabe (Tokyo University’s Institute of Aesthetics, cited in Crossley-Baxter, 2018, p.2) states that “*wabi-sabi* leaves something unfinished or incomplete for the play of the imagination”. This concept resonated with the open-ended outcomes of my exploratory and risky creative processes, and the inherent fragility of the Estuary artefacts. I did not strive to attain technical virtuosity, or professional finish, as I would do in garment manufacture.

I contextualised the opinions of Lange-Berndt, Yoshihara and Anatsui. Lange-Berndt (2015, p. 14) considered that the agency inherent in the materials made them complicit in artmaking. For example, on the cloak's surface, I followed the cues of the pressed plants, allowing them to lie where they fell without forcing them into position, giving them a 'say' to reveal their agency. The preservation of *Chi* in the artefacts did not fit the ideals listed in the Gutai Manifesto (1956). Yoshihara (1956, cited in Lange-Berndt, 2015, p 33) says that Gutai art "brings the material to life" but does "not change the material".

The materiality changed through my translations which also altered the materials. Through the decay and crumbling of the cloak, Yoshihara would say the material is "freed" and brought "to life" (Yoshihara, 1956, in Lange-Berndt, 2015, p. 34). Materials thus revealing their original characteristics might be the beauty that Yoshihara referred to. Freeing leaf litter from the ground where it turned to compost and recontextualising it in an artwork offered these artefacts another life. Yoshihara (1956, cited in Lange-Berndt, 2015, p. 33) comments that material which is freed could be a "sign of the material taking revenge". He said this in reference to architectural beauty, but to me, this statement seemed overly imaginative in the context of this artwork.

Yoshihara criticizes changing materials through which he says "can no longer speak to us" (1956, in Lange-Berndt, 2015, p. 33). My purpose in translating the Estuary materials conflicted with this opinion of Yoshihara. *Chi* and agency align with the 'soul' of the materials that Anatsui (n.d. cited in Black, 2021. p. 24) refers to, though expressed in subtle differences of vocabulary. Soul, agency and *Chi* are inherent to the materiality of materials. Materiality continued to reconfigure in the translations and transformations of my artmaking processes.

The exploratory process of using alternative and unfamiliar materials represented another building block in this creative research, such as the creation of my own base textile as opposed to using ready-made papers or textiles. This revealed the performative nature of my processes. When I contemplated this attempt to create my own textile base out of bandages, glue and feather clippings, I realised that I also thought of bandages as an embalming material. However, the instability of the loose weave led to the incorporation of feathers and glue to strengthen the bandage base. This in turn evolved into a 'textile'.

Investigating the Estuary's realities and my determination to have translated these into artworks, were a direct outcome of examining Question 1. The artwork may be summed up as an artwork of wounds and it became a "bridge to knowing" (Dean, 2020, p. 230) about decay and degeneration. To me, this cloak was overtly depressin. This could mean that it bordered on didacticism. One cannot say that the degeneration indicated by its materials was literal because the translations described above worked through analogy. The intention to make non-literal and non-didactic artworks suggested that this artwork might not quite fulfil the criteria for Question 2.

Both at my home and my exhibition (*Uncloaking the uMngeni Estuary*, 16-23 July, 2024) the cloaks were displayed on stands that allowed viewers to step inside them. I considered comments made by wearers of this cloak which a colleague recorded and I transferred these to Workbook 7 (2021-2024). Another wearer indicated that this cloak was "depressing, sludgy, drowning in the bottom of the river. It is horrible and ugly" (Anonymous, "personal communication," July 16, 2024; p. 382). One wearer "felt like another tree, melded into the Estuary forest" (Anonymous, "personal communication," July 16, 2024; p. 382). This suggests that the wearer was considering the outward appearance of the cloak and aligning herself with the plant life. Another wearer said: "wearing the cloak was not an enjoyable experience" (Anonymous, "personal communication," July 16, 2024; p. 354). "The cloak is prickly, scratching me" (Anonymous, "personal communication," July 16, 2024;, p. 355). "It looks impractical, like it will fall apart. It does not look nice to wear. It has a dark and serious message" (Anonymous, "personal communication," July 16, 2024; p. 362). The response of these wearers indicated discomfort and some distress, which might have been interpreted as somatic responsiveness to the crumbling and brittle plant life, feather clippings and scratchy bandages . My focus on body awareness while interacting with the Estuary endorsed the value of somatic awareness as a tool for excavating my research questions. This cloak did not comfort my body, it was disturbing. The scratchiness made me think of the crusty, withered landscape of Kiefer's *The Orders of the Night* (Figure 18) that I associated with death. When I considered research Question 3, the lack of reference by these wearers to the degradation and the reparation in the Estuary, confirmed that this cloak was not an educational artwork.

These responses arose out of somatically accessing a deeper reality. The negative connotations experienced by these persons were understandable when I consider that the carbon I used to create this cloak occupied more than seventy percent of the cloak's total area. The glue

compounded the scratchiness of the bandages, stitching and feathers. The somatic effects on a wearer might be attributable to the combination of materials, processes and my personal negativity. Dean (2020, p. 230) considered that the somatic body was created by relationships. The relationship here was between the Estuary, its current state, its artefacts, the garment, the wearer and myself. In my view, this artwork sat somewhere between garment, art and artefact.

The *Cloak of Carbon and Repair*'s (Figure 34) narrow shoulders and the flared skirt suggested a garment for a female. I envisaged an androgenous body shape such as an asymmetrical 'wrap', using the same materials and treatments as the above. The reason for this was based on an experience within the Estuary on the 23rd of August, 2022. A friend attempted to move around in the *Cloak of Carbon and Repair,* which elicited similar responses that I described in the above paragraph. I considered a final performance where a street dancer might perform with more freedom of movement in a wrap body, which could be juxtaposed with the swirling cloak *Embracing: First Cloak of the Estuary* (Figure 32). This constituted an exploration of Question 3 where I aimed to inventively display the artworks in a final exhibition.

I ventured again into the Estuary with two dancers and a colleague who were wearing the *Cloak of Carbon and Repair* (Figure 34, November 19, 2022). One dancer wore the *Wrap of Carbon and Despair* (Figure 36), the other dancer wore a 'mock-up'.[54] They gyrated back and forth over the dishevelled litter boom and along the boardwalk. Two three-dimensional hanging artworks swung with the movements of the dancers. These forms, a twisted sphere and a rectangular 'umbrella', I had embellished with grasses, weeds, seeds and leaf litter from the Estuary[55]. The assumption that these forms could complement the figures in action was short-sighted. Instead, the swinging and fluttering of these forms was distracting.

[54] A 'mock-up' is a term used in garment manufacture, where one tries out a new body shape to assess fit.

[55] The grass and weeds cover the western perimeter of the Estuary, which is used for parking. This area is regularly mown. Consequently, I felt no compunction in taking grasses and weeds from this area.

Figure 35. Adams, I. (2021). Street dancers moving with three-dimensional forms. *[ganpishi, grasses and seeds on wire frames] and moving figure in Cloak of Carbon and Repair [ganpishi, cotton lint bandages, stitching, glue, feathers]. Variable dimensions. Personal Collection. Durban, KwaZulu-Natal, South Africa*

Figure 36. Adams, I. (2021). Wrap of Carbon and Despair. *[ganpishi, lint bandages, feather clippings, stitching, glue]. 200 cm x 200 cm. Personal Collection. Durban, KwaZulu-Natal, South Africa.*

The rustling and scratching of the *Wrap of Carbon and Despair* by the paper, bandages, feather clippings and the brittle leaf litter, agitated the dancers and jarred their performance. Their somatic discomfort interfaced between them and the gentle ambiance of the forest. Another person wore *Embracing: First Cloak of the Estuary* (Figure 32). The

flowing movements of this swirling cloak and by comparison, the swinging three-dimensional forms, seemed to distract from the *Cloak of Carbon and Repair* and the *Wrap of Carbon and Despair* (Figures 34, 36).

I felt dissatisfied with the time and effort involved in creating the sphere- and umbrella-like wire structures and the covering of these with *ganpishi* and embellishments. The boring forms of the twisted sphere and rectangular 'umbrella' offered few cues as to the current realities of the Estuary. I concluded that this particular examination of my research questions led to a dead end. The disappointment I felt in abandoning the use of dancers in a final display, and in the artworks, was not a singular event. Creative bursts, back pedalling, "*discoveries*" floundering and "*dead ends*" recorded in Workbook 3, (2021-2024, pp. 154, 157), typified my creative processes. Such erratic progress continuously pushed me to re-examine and sometimes abandon a particular direction. The expansiveness of PLR accommodated the iterations of these creative explorations.

Further, regarding Question 3, it appeared that the Estuary space would not provide an effective display for the artworks. The artworks are an extension of the Estuary and they seemedto visually merge into it. Perhaps the solidity of building materials such as glass and concrete, would offer the tension of contrast between them and the artworks and garments.

The above variation (Figure 36) of the cloak body shape was an experiment conceived to accommodate a dancer as a direct result of the experiences of the dancers in the Estuary. Combining *ganpishi* with bandages and pressing the leaf litter before applying it to the

base (this technique made the leaves less rumpled and brittle) were insights that emerged from this 'dead end' wrap body. Additionally, this wrap was not easily displayed; a human

body was needed to fill the sack-like shape. This opinion shows an influence of my work experience and my conditioned attitude towards 'hanger appeal'[56]

[56] In the clothing industry, such a body shape would have no 'hanger appeal' and would be deemed 'unsaleable'.

Conclusion

I reflected on this PLR methodology, my explorations of the realities in the Estuary and the translations of these into these two artworks. Considering my research questions, using the decaying leaf litter covered with carbon and glue as an analogy for pollution and degradation ensued from my investigation of Question 1. The embellishments of the cloak and wrap body forms were not lifelike through their translations and re-contextualisations, which arose out of my exploration of Question 2. This section constituted an in-depth engagement with Question 3. This exploration culminated in the hanging of my exhibition for this PhD submission. In conclusion, my depressed state triggered by the literature pointing to future gloomy prospects for the environment (see Chapter 2) have dominated my translations of these realities. However, my creative processes offered strong possibilities for translating reparative realities which I combined with elements of degradation in the seminal artwork *Frog Kaross* (Figure 21).

3.10 Intermission

In response to Question 1, I decided to return to the voluminous cloak form of *Embracing*: *First Cloak of the Estuary* (Figure 32) which provided an ample base for displaying my translations of Estuary realities. I recalled the process of making samples or try-outs for garment manufacture to assess suitability of style, fit and economy. Try-outs became an idea to revisit.

Through creating a series of miniature cloaks, I explored translations of materials and artefacts expressing my concerns for the Estuary, for Question 1 of this PLR. The aim to create artworks transcending realistic and educational interpretations of my concerns was another issue to explore (Question 2). Below, *Exploratory thumbnails,* (Figures 37, 38, 39, 40) show combinations of embellishments, processes, textiles, papers and varying cloak body shapes, to consider for further developments of the cloak form.

Figure 37, Figure 38, Figure 39. Adams, I. (2021, 2022). Exploratory thumbnails. *[Mixed media, bandages, seeds, feathers and textiles]. 28 cm. x 65 cm. circumference. Personal Collection. Durban, Kwa-Zulu, Natal, South Africa.*

Exploratory Thumbnails (Figures 37, 38, 39, 40)

New leads arose from the experiments above and below which I recorded in Workbook 7, (2021-2024, pp. 370-371). I noted the following: the circular form in Figure 40 offered "*a potential body shape*" on which to spontaneously scatter artefacts in swathes. Figure 37 presented an "*A-line silhouette"* which could similarly offer an effective body shape for translating artefacts, such as the randomly fallen leaves and blooms in the Estuary. Figure 41 was encrusted with lichens but the excessive amount of lichens required for this ruled out this option. The seeds in *Exploratory thumbnail* (Figure 37) and the tiny, pressed weeds of *Exploratory thumbnail* (Figure 39), became translucent, fragile, relics, which showed promise. The stiff appearance of *Exploratory thumbnail* (Figure 38), composed entirely of bandages and wallpaper glue, was not appealing. It might present the same scratchy, uncomfortable experience as the *Cloak of Carbon and Repair* (Figure 34). Similarly, Figure 39 was "too stiff and uncomfortable" to accommodate movement. This actual cloak was shown with notes in Workbook 7 (2021-2024, p. 369).

Figure 40, Adams, I. (2021, 2022). Exploratory thumbnails. *[Mixed media, carbon ink, bandages, seeds, feathers, and vintage silk]. 28 cm. x 95 cm. circumference. Personal Collection. Durban, KwaZulu-Natal, South Africa.*

Figure 41, Adams, I. (2021, 2022). Exploratory thumbnail*s. [Mixed media, carbon ink, lichens and ganpishi]. 28 cm. x 95 cm. circumference. Personal Collection. Durban, KwaZulu-Natal, South Africa.*

Dean (2020, p. 231) described how a "tactile kinaesthetic experience" was evoked by the act of wearing. A wearer's senses could become the interface between her/himself and the Estuary by means of the embellished cloaks. Dean (2022, p. 230) considered the sensations evoked as a "gateway" to meaning. As discussed previously, the wearers of the *Cloak of Carbon and Repair* (Figure 34), engaged somatically and were able to express what the cloaks meant to them. However, only a minority of wearers considered the context of the Estuary.

Somatic feelings of discomfort and scratchiness were analogous to the disturbing realities of the Estuary. This suggested that *Cloak of Carbon and Repair* and *Wrap of Carbon and Despair* (Figures 34, 36), demonstrated my investigation of the research questions and communicated the ensuing insights with somatic rather than verbal means. Prior to having made these thumbnails, I considered these two artworks to be overwhelmingly negative. They may have provided a tension when displayed, if juxtaposed with *Embracing: First*

Cloak of the Estuary (Figure 32). The dark, brittle, angular body of *Wrap of Carbon and Despair* could contrast with the softly flowing cloak. In the final display I would consider this idea, which contributed to explorations of Question 3. This example of how backtracking and relooking through my Workbooks, 1-10 (2021-2024) offered new, previously overlooked insights, pertinent to addressing the research questions.

Conclusion

In reconsidering all the artworks shown in this text (and those not mentioned), I concluded that my research journey has been challenging. The artworks that I have discussed pulled this creative research in different directions. This tension has been compounded by the following: At the onset of this research I decided that I could no longer make abstracted organic impressions of nature on two-dimensional hanging formats, but I was unsure how to extend my creative practice, to further facilitate examining the realities of the Estuary. I did not foresee the re-emergence of my working life skills. Prior to this research I was unaware of New Materialism and Eco-Materialism, nor their aims of dismantling binaries. I was unaware of plant philosophy. I did not anticipate that my personal practices of meditation, deep breathing routines, Qigong and Zen Buddhist influences would impact on this creative practice[57]. I did not consider that either myself or my attitudes needed to be open to change.

PLR has sturdiness and flexibility to allow the tension of these unusual directives to become generative. The artworks to follow, enabled by the PLR methodology, culminated in somatic forms that resulted from these pushes and pulls.

In the following sections, the insights gleaned from *Exploratory thumbnails* led to creative explorations of the circular cloak, an A-shaped panelled cloak and further pressing and drying experiments of plant matter. These leads might have assisted in alternative approaches to the research questions as mentioned above. I reconsidered the literature on botanical art, for example, *Flower: Exploring the World in Bloom* (Clarke, 2020, p. 188). I found photographs of plants pressed by writer Emily Dickinson (1830-1886, Amherst,

[57] I was not planning to use Sumi-e for this research where I engage with meditation, deep breathing routines, Qigong and Zen Buddhist influences.

Massachusetts). Dickinson pressed 424 plants, many of which she identified and referred to in her poems and letters shown in Workbook 5 (2021-2024, p. 263). Albrecht Dürer's paintings of wild plants such as *Great piece of Turf* (1503) and *Tuft of Cowslips* (1526)[58] elevated ordinary weeds into works of art. The next section, titled Weediness, explores another reality of the Estuary discovered during the excavation of my research questions. A "Weed walk" held in the Estuary, led by Nicky Brighton (November 12, 2022), was my first experience of weed identification and appreciation. This influenced my decision to investigate literature on weeds and the incorporation of these to show further aspects of the Estuary realities.

3.11 Weediness

My approach to the research questions needed to continually expand to engage deeper aspects of this artmaking research. The discovery of weeds is one instance where I acknowledge that my previous dismissal of weeds has grown into an appreciation. I recognise their value as a form of life, not as inferior to human beings. "Becoming" appears to be a key word in contemporary thought, mentioned by philosophers such as Braidotti (2202). She titled Chapter 3 of her publication *Metamorphoses.* "Met(r)amorphoses: becoming Woman/Animal/Insect" (2002), where she spoke of our hybrid 'becoming', rather than our 'being'. This opinion implied that change is ongoing, in oneself and in the world, and that being open to change was thus imperative.

'Weed' is a derogatory term[59] but is an element of the Estuary's realities. Art depicting wildflowers dated back to the collections housed in *Wunderkammern* in the 16th Century

[58] Albrecht Dürer. (1503). *Das große Rasenstück* [Watercolour]. 40.3 x 31.1 cm. Albertina Museum, Vienna, Austria.

Albrecht Dürer. (1526) *Tuft of cowslips*. [Gouache on vellum]. 19.3 x 16.8 cm. National Gallery of Art, Washington D.C. United States of America.

[59] "Any herbaceous plant not valued for its usefulness or beauty or regarded as a nuisance" (Oxford English Dictionary: Oxford: Oxford University Press. Accessed: 27 October 2024.
(https://www.oed.com/search/dictionary/?scope=Entries&q=weed

(Jeanson & Mansvelt, 2022, p. 11) and herbariums (Jeanson & Mansvelt, 2022, p. 14). Europeans travelling to the colonies brought back propagations of foreign plants (Goodman, 2021). Shipments of grain carried stowaway seeds (Wilson, et al., 2016, p. 49). The incoming plants that were alien to any specific region were called weeds.

Savage viewed conservationists as ruthless eradicators of invader species to allow indigenous plants to re-establish control (Aloi & Savage, 2020, p. 195). This has not applied to SANBI (South African National Biodiversity Institute, 2018). A large number of weeds and indigenous plants have been considered critical for pollination (Brossi & Briggs, 2013, cited in Marques, 2020, p 267; Carvalheiro, et al., 2008, p. 1419), and needed for maintaining bee populations (Invasives South Africa, 2020).[60] The phytoremediation potential of weeds for regenerating soil, through the presence of nutrients (Lum & Chikoye, 2017, p. para. 1), offers additional reparation for the Estuary. This suggested that weeds had reparative potential in an eco-system, such as the Estuary. They presented another reality to explore and translate as per Question 1. At the onset of this PLR, I did not anticipate that weeds would partly shape this creative research.

Weedy value

Identification enlarged my knowledge of the plants and forged links with those yet to be discovered. Workbook 6 (2021-2024, pp. 322-367) listed photographs and identifications of weeds, their functions and attributes.

Weedy artists

An artwork incorporating weeds as a form of green remediation was the artistic outcome of abandoned gardens by Franziska Weinberger. One of Weinberger's creative processes was the generation of weed growth using waste materials such as newspaper and a plastic container (Weinberger archives, 1994, cited in Aloi, 2021, pp.18, 23), as a possible sustainable practice (see *No title*, Figure 42).

[60] Removal of aliens may affect the pollination of indigenous plants, notably when ants are the pollinators (Carvalheiro, et al., 2008, p. 1419).

Figure 42. Weinberger, L. (1997). No title. *[Newspaper, plant, plastic container]. 53 cm. x 38 cm. x12 cm. Archive Lois Weinberger. Courtesy of Lois Weinberger.*

A Weedy artwork

My confirmation of the value of weeds (explained above) as contributing agents to the reparation of the Estuary eco-system, resulted in *Cloak of weeds (*Figure 43). For Karin Petroskat (2017 cited in Aloi, 2021, p. 25), each experience of collecting plants unfolded through "visual and olfactory factors". My collections of weeds involved more than these two senses. I recalled feeling the prickly seeds of the Blackjack *(Bidens pilosa, Uquadolo)* and the delicate fluff of the Dandelion (*Taraxacum officinale, ihlabe lekati*). Smell and taste also steered my selection – the bitter leaves of the Dandelion (*Taraxacum officinale, ihlabe lekati*), the sweet smelling, tasty buds of Creeping foxglove (*Asystasia gangetica , isihobo*) and the lemony flavour of Wood sorrel blooms (*Oxalis, isimuncwane*). A collection of different weeds on a cloak could be an analogy for the community of weeds and the communication between them.

In my studio archives I found reject pieces of textiles. Some of these were one hundred percent chemical (polyester and 'look alike linen') which could become an analogy for invisible poisons in the water.[61] I included additional oddments of vintage raw silk, silk dupion and cotton organdy, recycled from my wardrobe and archives. These may be considered as analogies for the wealth and value of the weeds in the Estuary and surrounds.

This artwork, *Cloak of weeds* (Figure 43), became a shared creative production, between the weeds and myself. Artist Kazunori Hamana (1969-) espouses the *wabi-sabi* concept of a mutual creation between human and nature (Crossley-Baxter, 2018, p. 4). This indeed applied to my approach where I selected a weed, held it gingerly and allowed the plant to dictate it's position on the textile. The resistance of some weeds to being positioned suggested that these exerted their own will, or agency. Respecting each weed meant embracing their *Chi* and agency, enabling the community of selected weeds to speak in this cloak body. My engagement with the weeds echoed the opinion of Sullivan (2010, p. xii) who stated that human engagement was the nexus of art and research.

The pressed and dried weeds were translated into two dimensions, which altered their identity visually. The weeds became delicate and fragile suggesting that their materiality was reconfigured. For example, the Beach morning glory (*Ipomea pes caprae),* was a robust creeper with succulent, fleshy leaves which became fragile, thin and tore easily after pressing. The weeds largely became dark olive green or brown in colour, partly preserved but not dead, their *Chi* was innate, compounded with my *Chi* that I transferred through my processes (as explained this in 2.5). Carbon and heavy metal pollution was expressed with a few carbon ink-blackened plants, suggesting their innate ability to act as hyperaccumulators (introduced two pages back from here) The two nets which I included, stemmed from sketches in Workbook 4 (2021-2024, pp. 215, 219c, 391) and I made these out of thread. They were intended to suggest the controls imposed on weeds, such as the regular mowing and the poisoning.

[61] In South Africa manufacturers are compelled to print the textile composition on a sew-in label. This can be intentionally misleading. The printing can be done as small as font size 5, which makes the composition difficult to decipher. The purchaser can be misled

Figure 43. Adams, I. (2022). Cloak of weeds *[Raw silk, silk dupion,* ganpishi*, cotton organdy, pressed weeds, hand knotted 'net', embroidery]. 300 cm. x 2000 cm. Personal Collection. Durban, KwaZulu-Natal, South Africa.*

Cloak of weeds

This artwork presented another layer in conveying the various realities of the Estuary community. This cloak was a celebration of weeds' unexpected value and it freed weeds from their 'alien invader status.'[62] I largely discovered the embodied knowledge of the weeds through accessing literature. This cloak 'spoke' through its unusual format which brimmed with plant life and the materiality of these plants. The title may have caused viewers to ponder the elevation of weeds into an artwork and to consider what meanings lay beyond the immediately "visible" (Leddy, 2019, p. 46) resituated community of pressed plants.

When I began, I was unsure how I would construct this cloak out of diagonal, square and oblong panels. The finished cloak did not have a professional finished appearance, as required in garment manufacturing. The hem undulated and it did not hang in a fluid way. Penny wort (*Gotu kola, Centenella asiatica, icudwane*) became stiff with pressing and caused the back skirt to poke outwards. I allowed these imperfections to arise. Plant life grows spontaneously in a community, so it made sense to me that this cloak should not be symmetrical or tailored. I allowed it to reflect the natural cohesion of 'weedy' life.

The unplanned positioning of the plants and the panels set up an interaction between the various specimens on the cloak. The names of weeds were embroidered down the front cuffs of the cloak, in English, IsiZulu and Latin. These names were not aligned with a specific plant. This cloak maintained a distance from the conventions governing classical botanical Art, such as"verisimilitude and truth to beauty" (Arnold, et al., 2001, pp. 143-145). These outcomes showed that I considered Question 2 in the way that I translated these weeds.

Dean (2020, p. 241) considered that wearing constitutes "research" by the "aware-wearer". At my exhibition (*Uncloaking the uMngeni Estuary*, 16-23 July, 2024) wearers of this cloak described their somatic awareness: "It feels fragile and I am worried about damaging the cloak" (Hannah, "personal communication," July 16, 2024; Workbook 7, p. 390); "I feel

[62] SANBI categorises alien plants in terms of danger to the ecology. Section 11 of the *Alien and Invasive* Species Regulations, promulgated under the National Environmental Biodiversity Act (NEM:BA).

enveloped and safe" (Anonymous, "personal communication," July 16, 2024; Workbook 7, p. 390) and "cozy, ethereal, privileged" (R. Kernoff, "personal communication," July 16, 2024).

The somatic sensations of these wearers interfaced with the materiality of this cloak. From these and several other comments listed in Workbook 7, I understood that viewers and wearers appeared unaware of the weeds or of the title, *Cloak of weeds.* In the context of my research questions, the comments above implied that the cloak displayed unrecognisable plants because none of the wearers expressed recognition of the plants. My view of the weeds as being reparative was not something of which the wearers appeared to be aware. I incorporated weeds in this cloak because I discovered their deeper reparative reality.

Conclusion

My unexpected interest in weeds disrupted my expectations of what the realities of the Estuary would be, broadening my research opportunities. Weeds represented a further layer of realities uncovered, demonstrating the deep investigation of my concerns for the Estuary. The materiality of the weeds in their natural state had become a deeper form of materiality and reality in their translated states, presenting a complex ensemble. The result is this unexpected *Cloak of weeds*.

My drawing and painting skills were disrupted when the Estuary weed community was centre stage. These plants reconfigured my artist self during my gathering and pressing when I realised that they deserved to be translated as whole plants. In line with PLR, my status had thus changed through my creative explorations and the literature and theoretical investigation, which in turn fed this text and my artmaking. This aligned with Weintraub's (2019, p. 22) comment that the "importance of self-expression" should give way in the practice of Eco-materialist art, keeping in mind the need for multispecies inclusiveness (Weintraub, 2019, p. 11). I have explained my respect for plant life and the value of plants in sections 3.4 and 3.10.

The introduction of weeds suggests that the influences of New Materialism and Eco-Materialism infiltrated my behaviour and heuristic. The dismantling of binaries was no longer a lofty aspiration, but happening through my practice.

3.12 Blooming Life

The next artwork led on from the *Cloak of weeds* (Figure 43) where pressing and drying emerged as a process of effectively translating the realities of the Estuary plants. I incorporated the circular form as a base for this artwork, stemming from *Exploratory thumbnail* (Figure 40). I referred again to Workbook 3 (2021-2024, p.185) where I re-examined my photographs and notes of the aromas of the Lagoon hibiscus blooms (*Hibiscus tilaceous, uLola)*, and the Powder puff tree (*Barringtonia racemosa, iboqo)* (mentioned in section 3.5). These experiences suggested a further cloak to be made, incorporating blooms.

Figure 44. Adams, I. (2022). Embraced by blooms *[‘Look-alike linen’ with embodied blooms. carbon ink and vegetable dye, embroidery]. 200 cm. x 600 cm circumference. Personal Collection. Durban, KwaZulu-Natal, South Africa.*

Embraced by blooms

I resonated with the opinion of Irigaray (Irigaray & Marder, 2016, p. 92) who speaks of the "blossoming of all beings in mind". This applied to my cultivation of sensory perceptions such as seeing and 'smelling' within the Estuary during my mindful times when meandering and forest bathing. I encountered the spectacle and fragrance of The Lagoon hibiscus (*Hibiscus tilaceous, uLola)* which had a commanding presence alongside the entry to the estaury, bordering the river edge. In spring and summer, I basked in its fragrant, sweet smell and that of the tasselled blooms of the Powder puff tree (*Barringtonia racemosa, iboqo*, recorded in Workbook 3 (2021-2024, p.185). Irigaray spoke of the qualities of the flower "…gathering her … and, imperceptibly, I am brought from concentration to contemplation" (Irigaray & Marder, 2016, p. 47). Indeed, my perceptions of the Estuary realities were more deeply understood when exposed to the sounds and smells of the Estuary. These immersive sensory insights enhanced my connections with the Estuary and revealed the complexity and beauty within the plant community.

Blooming perceptions

.Up to this point I had seen the Lagoon hibiscus blooms, but never noted the way the colour changed over time. I was unaware of the beauty, fragrance, feel and the tastiness of these blooms. I was reminded of the image of a lotus, a concept in Buddhism which then made more sense. The image of a lotus flower unfolding one petal at a time is referred to in Buddhism as an analogy for human life, and the potential of unfolding enlightenment and spirituality. Although the lotus is rooted in mud and murky water, an analogy for human suffering, the plant produces a bloom of untarnished beauty. The Lagoon hibiscus was also

situated in polluted mud and soil; its blooms, like the lotus, offered potential expansion for the Estuary and my connection with it.

In the next section I focus on one particular excursion, and the way in which it led to the *Embraced by blooms* (Figure 44).

Blooming realities

The fragrance and changing hues of the Lagoon hibiscus (*Hibiscus tilaceous, uLola)* blossoms were captivating. The lemon colour of the fresh petals contrasted with the deep

rich red of its central bowl which was spiked with chocolate brown stamens. When newly opened these blooms had a delicious sweet and nutty taste. In turn the blooms became peachy orange and then a dark purple brown when fallen. Their wrinkled papery petals exuded an earthier fragrance from the forest floor. Ling (2022, pp. 1-2) promoted the five senses as a means of creating greater awareness during forest bathing. This I came to understand through my meditations, surrounded by the plants.

I gathered the fallen blooms and in my home studio I separated the petals to press them between boards, using my motorcar (this process was described in 2.17) After pressing, the petal was almost unrecognisable; it was smooth and silky, translucent, extremely fragile and the colour became a deep midnight blue with some purple tingeing. This evolvement of colour and texture through pressing and drying created new two-dimensional identities, demonstrating that this was another means of translating the Estuary's realities.

The collection of different kinds of blossoms continued over a year and these were dispersed in a random spread on the circular cloak body. The smaller flowers were scattered in sprays. Creeping foxglove (*Asystasia gangetia, isihobo)* and Dandelion (*Taraxacum officinale, idandelion*) became translated in different ways, the former became flat and tinged with brown. This rendered it impossible to visualise the original three-dimensional trumpet-like form. The tiny petals of the latter were shrivelled and curled, which enabled me to contribute these smaller realities and their materialities, through these translations.

The altered context and state of the petals presented new meanings: the petals were no longer tasty, fragrant morsels; they rather embodied a different kind of beauty through their flattened shapes, textures, colours and silky appearances. The varied textures and visceral language of the assortment of blooms embodied the *Chi* and history of each petal. I recognised this embodiment of knowledge and I wondered whether this cloak could offer a similar interpretation for the viewers. The visual beauty of the blooms might be unexpected, alerting viewers to the presence of these plants and the wealth they provided in the Estuary. The embroidered names on the hood partly repeated the colours of the blooms, which might draw the viewers' attention and spark recognition. I did not physically link the names with the plants, intentionally keeping the embellishments of this artwork non-instructional.

The influence of De Vries' 'collecting' plants to photograph, paralleled my collecting of artefacts. The difference lay in his use of photography to reflect overlooked aspects of plants,

such as *rosa canina* (Figure 3) and thus preserved a moment in time. Unlike De Vries, it was not photography but the fallen blooms themselves that preserved a moment in time in their altered identities and materialities. The overall materiality of the cloak spoke through the different textures of the scattered blooms, contrasting with the weave of the textile base.

The negative and degradative aspects of the realities of the Estuary were conveyed through the textile. This 'linen' was not biodegradable and was used as an analogy for the accumulative toxins in the water. The lower portion of the cloak was inked with my natural brown dye which I made from Estuary mud, Natal cycad leaves (*Cycad natalensi, isiGqiki-somkhov*) and onion skins, photographed and shown in Workbook 3 (2021-2024, p. 177).[63] This juxtaposed an undulating murky border as a reference to pollution, against the fragile blooms. These blooms presented another aspect of the Estuary. The colours and fragrances of the blooms attract birds and insects, dispersing pollen and seeds, contributing to future propagations. This revealed the innate reparative potential of the blooms and their role in connecting the Estuary with the surrounding areas.

Arising from my exhibition (*Uncloaking the uMngeni Estuary*, 16-23 July, 2024), there were further anonymous comments made by the viewers of this cloak in Workbook 7 (2021-2024): "I want to dance and fling this skirt around me" (C. Tozer, "personal communication,"16 July, 2024; p. 387). Hannah liked the "pretty flowers" ("personal communication,"16 July, 2024; p. 387). "I feel like a queen" (Pat, "personal communication," 16 July, 2024; p. 387).

These somatic responses differed to mine, which were embedded in my somatic response to the current state of the Estuary, revealing translations of the blooms. Somatic awareness was a deeper reality of this cloak. This resonated with Haas'opinion. She said that wearers aware of their physical sensations could "discern their own truths" (Haas, 1996, p. 16). This applied to the four subjective comments above, where the wearers appeared to be contemplating their feelings inside the cloak. In my view, there was no recognition of flower types or questioning of the possible meaning behind the artwork. The viewers may

[63] Onion skins are used to extract a reddish-brown hue, in preference to resorting to a chemical dye.

not be knowledgeable about the blooms, or perhaps the translations were successful in conveying non-lifelike specimens in non-informative ways.

Question 2 investigates how aspects of degradation and reparation might be translated into the artwork. At my exhibition (*Uncloaking the Umngeni Estuary*, 16-23 July, 2024), one viewer commented: "I like the ombre effect of the brown becoming lighter and lighter to the top of the cloak" (Anonymous, "personal communication,"16 July, 2024). My intention here was to convey the pollution seeping through the Estuary with the upwards sweep of my natural brown dye. In the context of the research questions, the commentary dealt only with the outwardly pleasing appearance of the cloak.

Sublimation of my artist status was overturned in both the *Cloak of weeds* (Figure 43*)* and *Embraced by blooms* (Figure 44). The assertion of my artist self re-emerged in 3.12, where I discussed the use of embroidery and applique to translate the reproductive and other adaptations of the Mangrove trees. My design background then came to the fore in the planning and symmetry of *Ceremonial Chair 1* (Figure 66) and *Ceremonial Chair 2* (Figure 67).

The effects of the Estuary on myself as artist came about through excavating the research questions, my somatic experiences, meditation, mindful walking experiences and finding artefacts. My subsequent appreciation and respect for the plants in particular and Estuary life in general, grew with each artwork. I believed that the plants' value as non-humans lies in their enormous service to life on this planet. This recognition of the value of plants echoes New Materialist opposition to binary thinking (Barad, 2011, p. 123; Braidotti, 2019, p. 33). At the start of this investigation, I thought moving beyond binary thinking was aspirational. However, making the cloaks as an investigative process has shifted my understanding in this regard.

Conclusion

What has emerged from the *Cloak of weeds* (Figure 43) and *Embraced by blooms* (Figure 44) was a change in how I engaged PLR. The odd-shaped sections of the former were embellished with plants after being joined up to create the cloak. From the start, the latter had a circular body shape. In this artwork, my creative practice started with finding plants in the Estuary, followed by identifications, sketching and note taking in my Workbooks (3-7, 2021-2024). Thereafter, as described above, the creation of the cloaks unfolded. I compared these processes with the preceding artworks where I started by building my

knowledge of the Estuary, through my explorations therein and the relevant literature (see Chapters 1 and 2).

The above sections presented further unexpected realities linking with my concerns and addressing the gap in artmaking research as defined by my research questions. The *process* of translating the blooms relates to Question 1. The non-realistic and non-didactic *translations* of these realities as the means of expressing my findings in the Estuary constituted an examination of Question 2. Question 3 encompassed a means of display that incorporated the pollution and aspects of positivity apparent in the Estuary. I consider that *Embraced by blooms* (Figure 44) could be effectively suspended flat on a black wall to show up the blooms and its circular form.

As a consequence of my findings expressed and translated in the above artworks, I surmised that there were further Estuary realities awaiting discovery. I considered creating a cloak dedicated to the three species of Mangrove trees which may be considered as the foundation of the Estuary (see *The Food Web, Interdependencies and the Interconnectedness of the uMngeni Beachwood Mangrove Estuary*, Figure 45).

3.13 Three Mangrove trees

In this section, I investigated the reparative abilities and the adaptations of the three Mangrove trees, including the value of interconnectedness of the Estuary community.

The ways I used PLR in these artworks differed from the previous artworks. *Embracing: The First Cloak of the Estuary* (Figure 7) revealed a first overall impression of the Estuary. This cloak was created prior to focusing my research on the plant community. The large areas covered with carbon ink, aligned with my negative view of the state of the Estuary at that time. Translating the Estuary realities through the plants resulted in a more positive outlook, shown in *Embraced by blooms* (Figure 44) and *Cloak of weeds* (Figure 43).

The *Cloak of three Mangrove trees* (Figure 46) was one of the final outcomes of my somatic and sensory perceptions in the Estuary. In the context of this artwork, my observations and meditative experiences preceded the translations into artworks. These embodied my sensory perceptions in new ways in what I understood to be poiesis. Robinson (2019, p.6) described “soma poeisis” as the effect of sensory experience on creating a garment. When I considered this opinion, I realised the significance of my working

experiences in fashion and the possible influences on the cloak form. Robinson (2019) and Whitehead (2003) focus on 'poiesis' in performance and art respectively.[64] My definition of poiesis is the emergence of an artwork through sensory experiences. These texts were a recent discovery (May and July 2024 respectively).

Exploring literature on the relationship between creativity and somatic awareness (Haas, 1996, pp.14-21), and the engagement between sensory experiences and ecology (Rufo, 2022, p. 6) opened my mind to different aspects of somatic experiences of which I was not aware before embarking on this research project. Retrospectively, I wondered whether the cloak evolved out of work and Estuary influences only - or also arose from my subconscious links with somatic experiences of wearing. I discuss this in the conclusion of this section. My immersive experiences in the Estuary led to the somatic developments of the described cloak forms as a vehicle for translating the Estuary realities. This development was a direct response to my concerns for environmental degradation and reparation, to feeling these realities close to my body.

The accessed literature, together with my observations, photographs and sketches, preceded my new experiments with thread and appliques. This cloak became a voluminous form, embellished with the characterising motifs of each Mangrove tree. Embroidery thread was incorporated as the means of reflecting translations which emphasised the differences of these trees. The sum of the numerous embroideries is an analogy for the indispensable role of these founders, interconnecting the Estuary community (Berjak, et al., 2011, p. 8; T, Govender, "personal communication," October 4, 2024). Within the context of this PLR investigation, the material beauty of the reparative abilities and adaptations of these Mangrove trees was discussed in the text to follow.

A vital aspect of this Estuary is the interconnectedness between these trees and Estuary life Investigating Question 1 – deeply observing the realities of the Estuary to translate these

[64] Robinson, T. (2018). Soma poiesis: An exploration of the re-directive potential of somatic experiences in fashion. Retrieved from https://opus.lib.uts.edu.au/bitstream/10453/133189/2/02whole.pdf.

Whitehead, D. H. (2003). Contemporary Aesthetics. Retrieved from https://quod.lib.umich.edu/c/ca/7523862.0001.005/--poiesis-and-art-making-a-way-of-letting-be?rgn=main;view=fulltext.

into artworks – informed the exploration of Question 2 and finding non-realistic ways of doing this.

Artists and trees

I found links with the artists discussed in Chapter 2. Both Laurence and De Vries incorporated aspects of trees in their artworks. In Figure 8, Laurence did not name the tree, nor was it easily identifiable. Laurence was addressing general degradation as a result of climate change. One could further have said that this artwork implied degradation but was non-instructional in the non-realistic forms, aligned with my aims. The difference between the artworks of Laurence and my own lie in the localised focus of this PLR, which is located near to my home.

As source material for his photographs, De Vries used many of his own plants. These he mounted in grids (see *the return of beauty,* Figure 69). These works of De Vries were located close to his home. My creative practice is similar to De Vries's in that: his location correlated to the proximity of the Estuary with my home; his use of frames and grids may have been an influence of *Frog Kaross* (Figure 21); he used found and plant artefacts. However, his art differed from mine in his literal renderings and his use of photography.

The agency of trees was demonstrated in the installation *Revolutions* (2015) by Céleste Boursier-Mougenot (see 2.4). She altered the context of three pine trees presenting them in an exhibition space, yet she was careful to retain their original identity (the plants were entire, complete with their roots). This installation was didactic in that it demonstrated the trees' capacity to respond to external stimuli. The installation was not specifically located near to the artist's home.

Joseph Beuys (1921-1986) did not create an installation close to his home, but within his birth country, Germany. Beuys seemingly intended to spark urban renewal and environmental awareness. He initiated the world-wide planting of trees through his

installation[65] of 7000 basalt columns to represent the intended planting of 7000 trees. The installation indicated his concern for the destruction of forests.

I viewed an installation titled the *Gray-Green Divide* (2022) outside The Brooklyn Museum of Art, in May 2023. Mona Chalabi (1987-) created this installation subtitled *Why trees matter,* which was linked to her home in New York (I have documented this with photographs in Workbook 5 (2021-22-24, p. 247). Using ink and coloured pencils on paper Chalabi drew the hundred most common trees of New York.[66] She drew these onto a converted food truck which she parked on Brooklyn Museum Plaza. Chalabi showed how tree density correlates with human health and neighbourhood wealth. She demonstrated the links between income, trees and heat. Chalabi seeked to convey the disadvantages of living in high density areas without trees. She appeared to concern herself with the reparation of the human environment, not with that of trees. I included this because Chalabi's installation acknowledged the value of trees. Marder (Irigaray & Marder, 2016, p.131) and McDonald (McDonald, et al., 2020, p.1) corroborated the impact that trees have on human welfare.

I concluded that there are artists who have used plants and trees in a variety of ways under the broad umbrella of creating environmental awareness. At this stage I was unsure how I might incorporate tree elements in a cloak. The responsive capacity of trees demonstrated in *Revolutions* (see 2.4*),* simmered in my mind. Joseph Beuys' far-reaching influence I felt was beyond the scope of my research. Chalabi's installation in my view, was an informative demonstration of the value of plants for human welfare, with a text provided by the museum. The value of the Estuary for Durban residents, and in particular my concerns for the future of this Estuary might not be understood by viewers. My artist statement at the exhibition, would introduce my concerns for the Estuary, and help to anchor their understanding of my intentionality.

[65] Joseph Beuys *7000 Oaks on the lawn of the Fridericianum* (Kassel, 1982, Offill, 2020, n.p.).

[66] Chalabi lists the benefits of trees: they provide "shelter and shade… they remove air pollution…they affect the physical and mental health of humans." An adjacent wall shows a Brooklyn map and a chart indicating average temperatures and tree locations, titled *The Gray-Green Divide*.

In celebration of trees

Globally, trees, have continued to be destroyed through anthropogenic activities (Leach & Mearns, 2013; Naidoo, 2016, pp. 102, 109).[67] Thanks to the late Nolly Zaloumis (1932-2003), (Berjak, et al., 2011, p. 6),[68] this Estuary forest has largely been preserved since 1977. I considered that an artwork focusing on these trees to be a way of confronting of environmental issues confronting estuaries, positioning this research as relevant locally nationally and globally. Artists who tackled environmental issues offered leads for this section of the thesis and my entwined creative production.

A forest community was described as a "co-operative working unit" (Andreyev, 2021 p. 132) and a "forest distribution system" (Wohlleben, 2022, p. 147). When trees die and rot, the nutrient rich humus nourishes the surrounding trees creating an ongoing cycle of life. This demonstrated symbiosis, which I discussed in 2.2, would apply to a forest that has not been mutilated by global deforestation.[69] (Bennet, 2021; Jaisankar, et al., 2018; McDonald, et al., 2020; Ritchie et al., 2021). Losses of Mangrove trees, vegetation and soil occurred in this Estuary in 1987 due to floods (Badenhorst, et al., 1989). The Estuary has since re-established itself and conservation measures are aimed at re-creating a bio-diverse community (M. Burger, Chair WESSA, KZN, member of uMngeni Estuary Conservancy, "personal communication," November 22, 2021).

I believe plants and trees are more than mere objects in nature, therefore I have been "non objectifying" plants in the *Cloak of weeds* (Figure 43) and *Embraced by blooms* (Figure 44) as Marder said (Irigaray & Marder, 2016, p. 158). Thich Nhat Hanh (2008, p. 58) spoke of the artist seeing trees in a deeper way, having a more open heart and capacity for natural

[67] The "global number of trees has fallen by approximately 45% since the start of human civilisation" (*State of the World's Forests*, (SOFO), 2018, cited in Marques, 2020, p. 41).

[68] In 1979, Mangrove trees on the Durban harbour side of the Estuary were destroyed to extend the harbour for economic growth in 1979 (Ward & Steinke, 1982, cited in Rajkaran &Adams, n.d., p. 7). In 1892 the Mangrove forest covered approximately 420 hectares, in 2010 the Mangrove trees covered approximately 15 hectares (Berjak, et al., 2011, pp. 126-127).

[69] 'The Global Forest Watch project, using satellite imagery, estimates that global tree loss in 2019 was twenty-four million hectares' (Ritchie, Spooner &. Roser, 2021, p. n.p)

communion with trees. I believe that *Chi* is the spirit or life force within each tree, branch, stem and leaf. The opinion of Nhat Hanh applies to myself and possibly other environmental artists, but this comment cannot be said to apply to every artist. 17th Century Japanese Haiku poet Basho said:

> "To learn about the pine tree, go to the pine tree" (Bashõ, 1967).

Indeed, time spent with trees, observing, identifying and reading the relevant literature expanded my knowledge and appreciation of their physical distinctiveness.

The support that the Mangrove trees provide within the forest eco-system is reparative. To sum up: Mangrove trees act as shields against rising sea levels (detailed in 2.1); photosynthesis and the respiration of the Mangrove tree roots create carbon sinks below the soil (I discussed this in 2:3). Mangrove forests are said to occupy only 0.05 percent of coastal areas globally and contribute "10–15 % (24 Tg C y^{-1}) to coastal sediment carbon storage" (Alongi, 2014, p. 195).[70] Carbon sequestration is a natural reparation that combats greenhouse emissions (Alongi, 2014, p.195; Alongi, 2020; Donato, et al., 2011, cited in Naidoo, 2016, p. 106).

The stability of the area is enhanced by these Mangroves communities which have "notable physical and physiological" adaptive abilities (Berjak, 2011, p. 14). Variable salinity levels, floods and tidal surges (up to a certain level)[71] are accommodated by the Mangrove forest (Naidoo, 2016, p. 102; McCleod, 2006, cited in Duke, et al., 2007, p. 41). Mangrove trees harbour fish and crustacean nurseries (Gilman, et al., 2008, p. 238; Marques, 2020, p. 42) which are intrinsic to homeostasis and the "food web" (Berjak, et al.,1977, p. 71). Mangrove trees therefore form the major part of a highly productive interconnected Estuary ecosystem (I Alongi, 2020 p.1)

[70] "Mangrove forests export ten to eleven percent of the particulate terrestrial carbon to the ocean" (Alongi, 2014, p.195; 2020, p. 2).

[71] Rising sea level "(more than 10mm per year) will "drown the Estuary" and expose the mangroves to direct wave action and the rapid death of mangroves (Berjak, et al., 2011, p. 94)

I describe below two of my walks in the Estuary, when I decided to examine the mangrove trees.

"I wandered in the Estuary and mindfully observed the three Mangrove trees. Dappled sunlight revealed rich shades of green and the satiny textures. These new leaves reminded me of Wohlleben's (2022, p. 8) description of European shades of green and how our lush sub-tropical vegetation differed. Wohlleben's eloquence inspired me to observe more closely. I sat down and mindfully absorbed the ambience of the verdant forest and the wider view of the Estuary.

> *I breath mindfully whilst meditating. Accessing small realities unfolds through my senses. I observe the small buds of the Red mangrove tree (Rhizophora mucronata, umhlume), the smooth grey shells of whelks climbing their trunks, the Sersamid crabs (Calillinectes sapidus, Udoti[72]) foraging for the fallen colour-speckled leaves and the tiny silver fish darting back and forth in the shallows. I embrace the sounds of the Estuary, the movements of fluttering leaves and creaking trunks; I perceive an array of life through these sounds."*

The interconnectedness of community life within this Estuary together with the knowledge that Mangrove trees provide support for these smaller lives led me to create a chart.

I compiled *The Food Web, Interdependencies and the Interconnectedness of the uMngeni Beachwood Mangrove Estuary* (Figure 45). The idea came from a sketch observed in (Berjak, et al., 1986, p.70). I enlarged this and added more information from relevant literature (Berjak, et al., 1986, p.70; 2011, pp. 51-90; Boon, 2010, pp. 394,398, 512; Duke, et al., 2007, p. 41), my experiences in the Estuary and the sketches and notetaking from Workbooks 3, 6, 8 and 10 (2021-2024).

The three Mangrove trees sketched at the top of this diagram were positioned thus to proclaim their value as supporters of all Estuary life. This chart was a direct result of excavating my research questions and discovering the connected layers of Estuary life, including the small creatures dependent on the Estuary community. Interconnectedness of the Estuary's layers

[72] There is no IsiZulu name for Sersamid crab, only crab.

was a key insight which expanded my understanding of the realities of the Estuary in deeper ways. This was attributable to my reflexive thinking where I linked the attributes and adaptations of the plants to the ways in which these supported the community of life in the Estuary. The interdependencies and interconnectedness of the Estuary inhabitants are a deep and powerful reality shown in Figure 45.

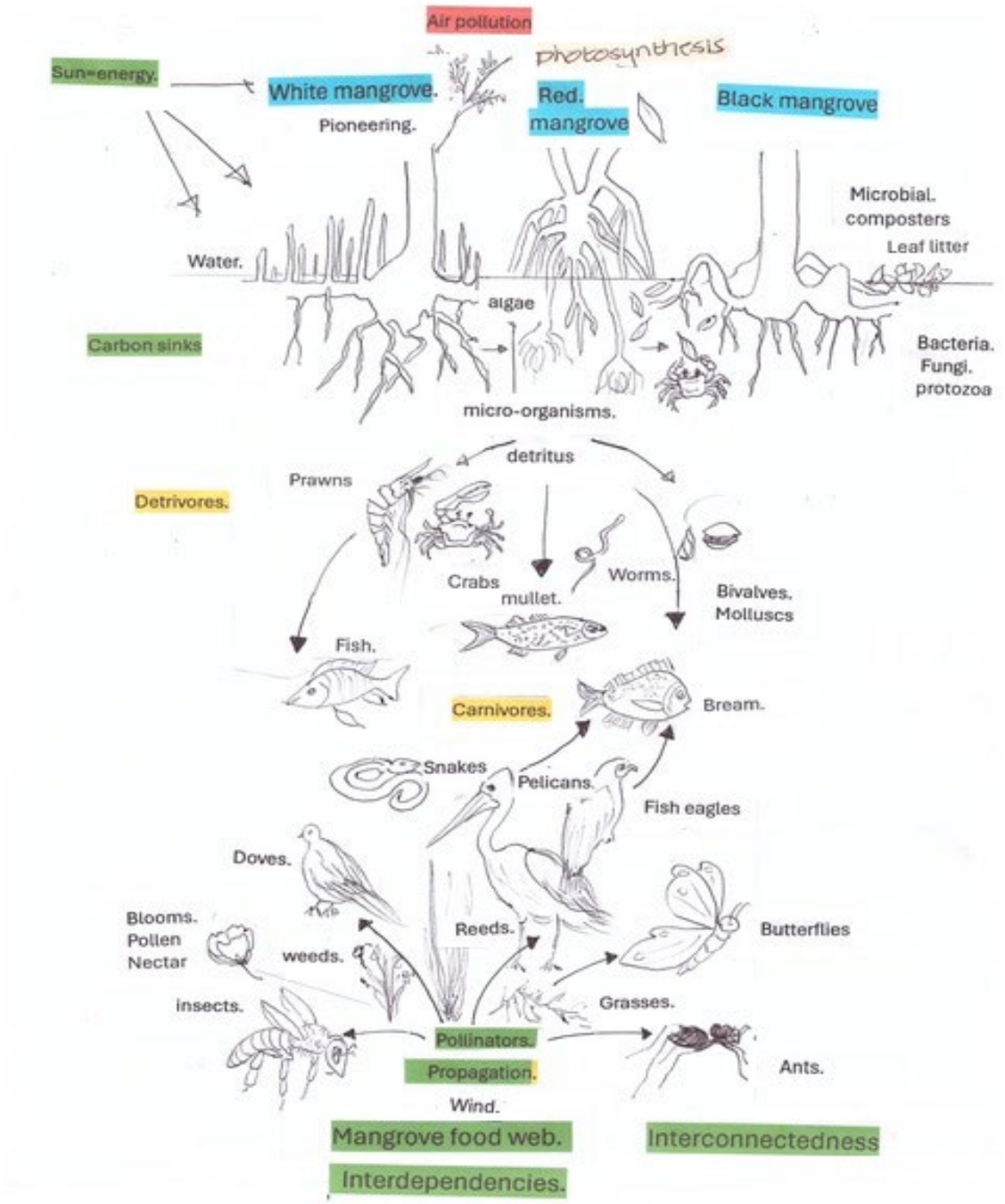

Figure 45. Adams, I. 2024. The Food Web, Interdependencies and the Interconnectedness of the uMngeni Beachwood Mangrove Estuary. *29 cm. x 20 cm. Personal Collection. Durban, KwaZulu-Natal, South Africa.*

In Celebration of Three Mangrove Trees

In mulling over ways to create an artwork exhibiting these trees, I referred to my notes and sketches in Workbooks 3, 6, 8 and 10 (2021-2024), compiled during my explorations of the Estuary. I aimed to highlight the value of the Mangrove trees within this eco-system.

Figure 46. (2023). Adams, I. Cloak of three Mangrove trees. *[Embroidery silk, cotton thread, acrylic paint, applique, spider weave, organdy, cotton, linen. Each panel measures 10 cm. x 300 cm. x40 cm.] Personal Collection, Durban, KwaZulu-Natal, South Africa.*

The sensory experiences described in sub-section Awakenings in 3.5 contributed to my translations of the distinctive characteristics and reproductive parts of these trees. I consulted the literature and noted how these trees have physically adapted to the muddy environment and how these adaptations and the reproductive capacities of each tree differed. In line with PLR, this is another example of the ways in which the literature sparked my creative

investigations. Below in this chapter it will be seen how my translations of the Estuary realities shifted significantly into new forms of expression. These insights into the distinctive aspects of the trees, led to further experimentation shown in Workbook 7 (2021-2024, pp. 396, 397, 397B) in order to find different ways in which to translate these realities into artworks.

Mangrove trees and translations

Although Mangrove trees share Estuary habitats, they do not share a "systematic or taxonomic relationship" (Berjak, et al., 2011, p.16). The uniqueness of each Mangrove tree contributes to "highly individualistic relationships with the mangrove environment" (Berjak, et al., 1986, p. 29). Each tree characteristic pertinent to my translations is indicated below in a selection of photographs. The publications by Berjak, et al., (1977; 2011) and Naidoo (2016); Naidoo, et al., (2020) offered the most comprehensive information on this specific Estuary and these three Mangrove trees.

The idea that innate plant reparations were a reality of the Estuary was a key insight. This powerful plant capacity steered my creative processes. From this point, I intentionally downplayed degradative aspects in the artworks, which I expressed in the earlier artworks. These artworks were intended to instigate deeper understandings of the innate reparative mechanisms and adaptations of these plants. Whether reparations will continue to protect this Estuary in the long-term will be discussed in Chapter 4.

My impulse to incorporate white textiles and embellishments was an intuitive rather than a rational decision. I surveyed my archive of offcuts, rejects and curtain samples where I found interesting textured textiles. White predominated; a reality of the White mangrove blooms of the Estuary.

I thought about the symbolic connotations of white. White, according to various cultures, occupations and belief systems, has different values and meanings. White cloth can be used for funerals, burial shrouds, religious robes, christening robes, saris for Hindu widows, robes for priests, wedding gowns and can denote purity and virginity (Workbook 7, 2021-2024, p.397). White light may be seen by practitioners of yoga and followers of Buddhism as healing and protective. The sensation of white light may be considered the ultimate

achievement in meditation by yogis. These positive associations may be seen as strengthening the analogies for the reparation of the Estuary.

I decided to do a number of experiments on the textile pieces. I used charcoal to sketch branches and the small leaves of the White mangrove tree (*Avicennia marina, isiKhungathi*), on white cotton organdy. To me, these appeared literal and descriptive. I applied dabs of white acrylic paint to partly obscure the charcoal. However, I did not want to use chemically based paints, which was a contradiction in my view for "for positive reparative effects." I noted this in Workbook 7 (2021-2024, p. 397b). I thought back to *Cloak of Carbon and Repair* (Figure 34) where I used thread in places and 'drawing' with thread. This was not easy to control as with a drawing tool, so one could not achieve a perfectly intended image, which fitted my iterative and spontaneous ways of working. This offered potential new ways of translating elements of these Mangrove trees. I recorded notes and photographs of these "drawings with thread" in Workbook 7 (2021-2024, p. 398), which provided leads. Keeping in mind the gap I aimed to address (mentioned in Chapter 1), I needed to translate these elements in non-realistic, non-educational ways. In the following pages I have described the processes of embroidery that I used for the Red Mangrove tree. Where I have discussed The Black and White mangrove tree, I refer to these processes without explanations.

Although thread lends itself to embellishment, it can also become decorative, so I tried to stitch in the way I draw, that is, I do not draw only outlines. This was more challenging. I experimented using various thicknesses of thread, which resulted in different textures. The fine threads created a fragile appearance synonymous with the fragility of this Estuary and the inevitable decay of the leaves.

The Red mangrove tree (Rhizophora mucronate, umHlume)

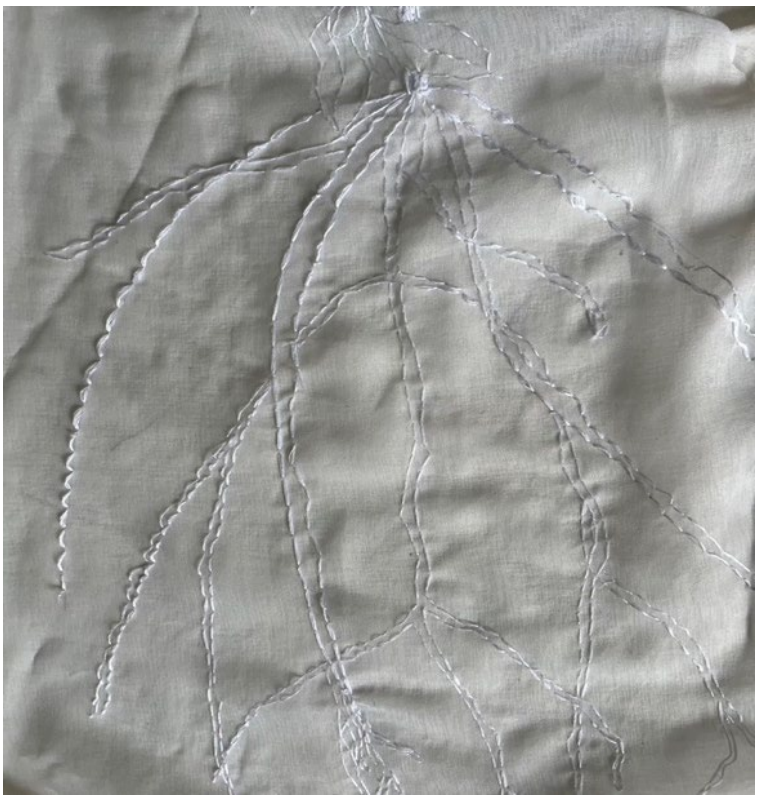

Figure 47. Adams, D. I. (2023). Prop roots, Red mangrove *(Rhizophora mucronate, umHlume). [Embroidery silk, 4 strands, on linen]. Approximately 30 cm. x 70 cm. Personal Collection. Durban, KwaZulu-Natal, South Africa.*

These Red mangrove trees were said to have adapted anatomically to cope with water-logged situations (Naidoo, 2016, p 103). The prop, or stilt roots, were a striking characteristic, supporting the tree. These aerial roots have lenticels which take in carbon dioxide and expel oxygen (Berjak, et al., (2011) p. 37; Naidoo, 2016, p. 102) resulting in the carbon storage in the roots (Duke et al., 2007, p. 41; Naidoo, 2016, pp. 102, 106). For the embroidery of the prop roots (Figure 47), I combined four strands of silk thread to evoke the strength of the prop roots, see above.

Red mangrove trees are considered as secondary colonizers, which is a form of strengthening the Estuary community. They spread by means of their buoyant seeds (propagules) which have long hypocotyls, as long as thirty centimeters, an anatomical adaptation (Berjak et al., 2011, p. 39; Naidoo, 2016, p. 105). On one of the panels I appliqued a hypocotyl, cotyledon and propagule, magnified to measure one hundred and twenty centimetres. These characteristics indicated the innate reparative agencies, facilitating germinations (Berjak, et al., 2011, pp. 38-

40). I found the flexibility of PLR well suited to these ways of translating realities and the fluidity of materials. In translating the parts of this tree, the tree influenced myself and my processes, resulting in thread becoming an expressive medium in this *Cloak of three Mangrove trees* (Figure 46). This is a significant development from my earlier incorporations of stitched lines (see *Estuary Waters*, Figure 15).

Embroidery details of the stiff clusters of Red mangrove leaves on panels, work in progress (Figure 48), shows the scattered marks of charcoal and white acrylic. Touches of silk and cotton thread accented elements of the leaves. These processes deviated from traditional drawing, adding to the materiality and haptic qualities of the panels. Both embroideries showed translated realities of the Red mangrove in non-realistic ways. In my view, these were not educative, because they showed portions of the plant, entwined on the panels together with portions of Black and White mangrove trees.

Figure 48. Adams, D. I. (2023). Embroidery details of the stiff clusters of Red mangrove leaves on panels, work in progress. *[Embroidery silk, cotton thread, acrylic paint, charcoal on linen]. 10 cm x 300 cm. x 40 cm. Personal Collection. Durban, KwaZulu-Natal, South Africa*

Figure 49. Adams, I. (2023). Red mangrove: prop roots and a new shoot forming a cluster of leaves (rosette). *[Embroidery silk, and 6 ply cotton for the leaves, on spider weave]. Approximately 20 cm. x 50 cm. Personal Collection. Durban, KwaZulu-Natal, South Africa*

Figure 50. Adams, I. (2023). Red mangrove: cluster formation of leaves (rosette). *[Embroidery silk, and 6 ply cotton for two leaves, on spider weave]. Approximately 20 cm. x 50 cm. Personal Collection. Durban, KwaZulu-Natal, South Africa.*

Red mangrove: prop roots and a new shoot forming a cluster of leaves (rosette) (Figure 49) and Red mangrove: cluster formation of leaves (rosette) (Figure 50) show the thick, fleshy leaves which were varied by controlling the direction of the satin stitching for each leaf. The materiality of the leaves in stiff terminal clusters, offered textures and shapes interesting to translate. The thicker crochet cotton added texture and dimension conveying the strength of these robust leaves . These leaves provide food for crabs, a refuge for insects and the flowers provide pollen for the pollinators, thus indicating interconnectedness between the trees and creatures.

My handling of these translations through and during interactions with my materials echoed the opinion of Raff (1994, cited in Lehmann, 2012, p. 12). He stated that materiality is "created through and during interaction." The materiality of the translated elements was different to the live forms of these elements. For example, I translated my haptic feelings for the thick, fleshy leaves into lumpy stitching. This was not a literal translation, and the outcome exuded texture and form. Gray and Malins (2016, p. 15) suggest that by taking things apart, some sense and understanding may emerge. The above paragraph described the creative reconfiguration of the plant's reproductive and anatomical adaptations. The outcome of these embroideries reminded me that my artist self was again attempting to take control. The embroidered images were no longer actual plants asserting themselves as they did in the making of *Cloak of weeds* (Figure 43). This is a key shift.

The Black mangrove tree (Bruguiera gymnorrhiza, isiKhangazi)

The Black mangrove tree had defining characteristics which included horizontal cable roots with "knees." (See the top right of *The Food Web, Interdependencies and the Interconnectedness of the uMngeni Beachwood Mangrove Estuary*, Figure 45). This sketch showed these roots ich had lenticels that performed the same respiratory functions as those of the Red mangrove. The photograph below (Figure 51) showed one propagule with five hypocotyls.

Figure 51. Adams, I. Black mangrove *(Bruguiera gymnorrhiza, isiKhangazi),* leaves, propagules and flower buds*. [Personal photograph]. 8 cm. x 13 cm. and 10 cm. x 15 cm. respectively. Durban, KwaZulu-Natal, South Africa.*

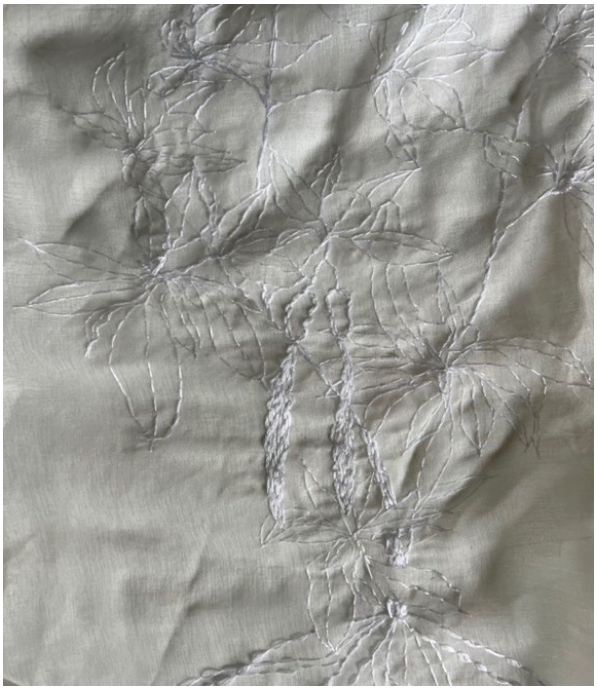

Figure 52. Adams, I. Black mangrove tree *(Bruguiera gymnorrhiza, isiKhangazi),* clusters of leaves and propagules *[Embroidery using cotton 2 ply thread, on spider weave]. 15 cm. x 20 cm. Durban, KwaZulu-Natal, South Africa.*

Below (Figure 53), is a magnified portion of a Black mangrove rosette and two propagules. Here one can see how the leaves vary, where they may have been eaten by insects, or damaged during high winds. I showed that the propagules were plumper and shorter than the Red mangrove tree by the width of these.

Figure 53. Adams, I. Portion of a Black mangrove tree *(Bruguiera gymnorrhiza, isiKhangazi),* showing propagules. *[Embroidery using cotton 2 ply thread on spiderweave (slub)]. 40 cm. x 70 cm. Durban, KwaZulu-Natal, South Africa.*

The White mangrove tree (Avicennia marina, isiKhungathi)

This tree propagates and expands the forest through seed dispersal by water. This shows the White mangrove's reparative capacity for establishing new territories, considered a pioneering coloniser by Berjak, et al (2011, p. 23) and Boon (2010, p. 512)..A distinguishing feature of this tree that I viewed, was the horizontal cable roots with pencil roots that protruded above the ground. These are said to be an adaption to the sandy soil of estuaries (Berjak, et al., 2011, p. 18). Respiration takes place through the pencil roots and their lenticels. Gaseous exchanges of carbon dioxide and oxygen occur at low tide (Berjak et al., 2011, p. 19) loading the carbon sinks (Naidoo, 2016, p. 101). Another distinctive adaptation I noted was the salty surface of the leaves–the trichromes (hairs) hold globules of salt, thereby preventing

dehydration of the actual leaf (Berjak et al., 2011, p. 20). Flowers were microscopic and fragrant, magnified in *White mangrove, leaves, stem and flowers* (Figure 54) and *Magnification of White mangrove flowers* (Figure 55). The insects and bees were pollinating, buzzing around the microscopic and fragrant flowers (see Awakenings, 3.5., and in Workbook 3 (2021-2024, p. 115). This reminded me of the value of mindfulness and meditation in finding the smaller realities of this Estuary (see Workbook 3, 2021-2024, p.181).

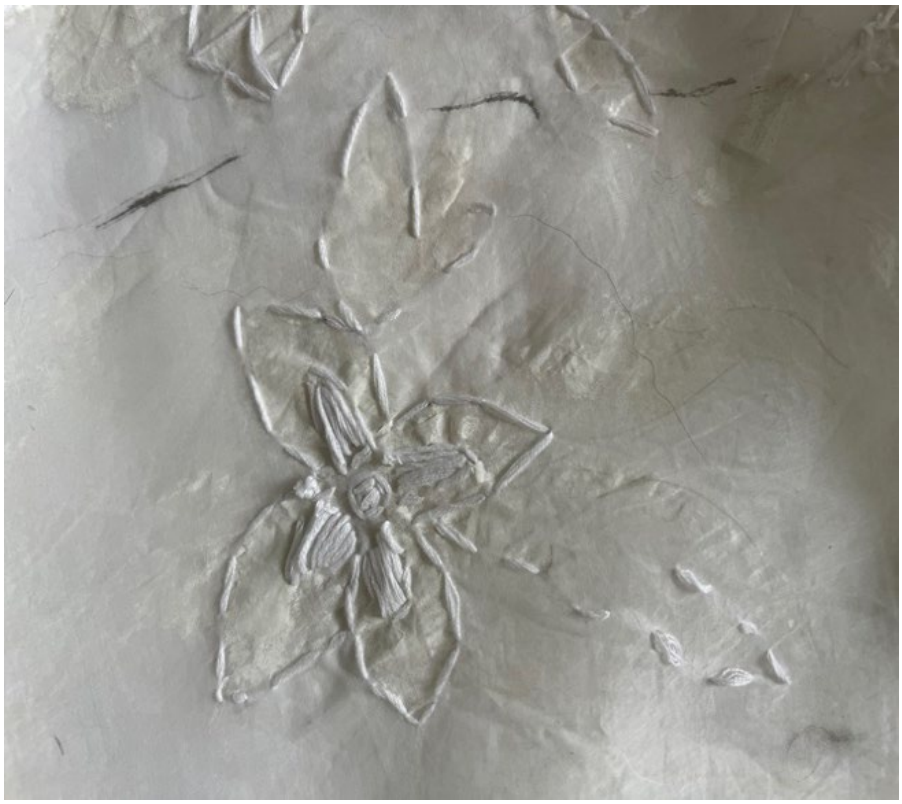

Figure 54. Adams, I. (2022). White mangrove *(Avicennia marina, isiKhungathi),* leaves, stem and flowers. *[Portion of a linen panel, with silk embroidery and charcoal]. 15 cm. x 20 cm. Durban, KwaZulu-Natal, South Africa.*

The materiality of the above components altered when I translated these through embroidery. A combination of charcoal and stitching translated the *White mangrove leaves, stem, flowers* (Figure 54) and *White mangrove flowers* (Figure 55). The space between the stitches recalled a *Sumi-e* method of capturing the essence of a subject "…where line absent, thought present," which echoed the concept of *wabi-sabi* (see footnote 70) for an explanation of this term), leaving an element unfinished to ignite the viewers imagination.

Figure 55. Adams, I. (2022). White mangrove flowers (*Avicennia marina, isiKhungathi*) *[Portion of a linen panel, with embroidery]. 15 cm. x 20 cm. Durban, KwaZulu-Natal, South Africa.*

Figure 56. Adams, I. White mangrove seed pods *(*Avicennia marina, isiKhungathi). *[Personal Photograph]. 15 cm. x 20 cm. Durban, KwaZulu-Natal, South Africa.*

Figure 57. Adams, I. (2022). White mangrove seed pod *(*Avicennia marina, isiKhungathi**).** *[Portion of a linen panel, with acrylic, charcoal and embroidery]. 15 cm. x 20 cm. Durban, KwaZulu-Natal, South Africa.*

Fruits as photographed: *White mangrove seed pods* (Figure 56) and embroidered: *White mangrove seed pod* (Figure 57), are shed in March/April when Equinox spring tides enable wide dispersal of the seed pods. This reparative potential was an important aspect of the tree to translate. My understanding of reparative and adaptations at cellular level are limited by my lack of scientific education.

The knobbly roots required a different type of embroidery for *White mangrove tree, embroidery details of the roots on a panel, work in progress* (Figure 58). I used my sewing machine and a twelve-ply thread to recreate this phenomenon which I recorded in Workbook 7 (2021-2024, p. 403). The needle and machine attachment, which I had never used before, was difficult to manoeuvre. This technique signified a further means of translation and addressed research Question 2 which aimed to find non-realistic and non-didactic ways of making art. Inclusions of carbon amongst the roots, together with the upward splashes of carbon ink from the hem in root-like forms, were an analogy for carbon storage and river pollution.

Figure 58. Adams, I. (2023). White mangrove tree *(Avicenna marina, isiKhungathi),* embroidery details of the roots on a panel*, work in progress. [Embroidery silk, cotton 2 ply thread, acrylic paint, cotton organdy].10 cm. x 300 cm. x 40 cm. Personal Collection. Durban, KwaZulu-Natal, South Africa.*

Leaf embellishments (Figure 59) below showed pressed and dried Red, White and Black mangrove leaves encased in net and voile and appliqued to the cloak body. These expressed *Chi* and represented the cycle of life of the Mangrove trees as another translation of an Estuary reality, aligned with Question 1.

Figure 59. Adams, I. Leaf embellishments. *[Pressed and dried Red, White and Black mangrove leaf litter, net and voile applique, embroidery silk]. 30 cm. x 40 cm. Personal Collection. Durban, KwaZulu-Natal, South Africa*

Figure 60. 1. Adams, I. Embroidery details on panels of Cloak of three Mangrove trees. *[Embroidery silk, cotton thread, acrylic paint, applique, spider weave, organdy, cotton, linen. Each panel measures 10 cm. x 300 cm. x40 cm.] Personal Collection, Durban, KwaZulu-Natal, South Africa*

Embroidery, applique, acrylic paint, water-colour, pencil and charcoal have together been "complicit" (Lange-Berndt, 2015, p. 16) in creating impressions and memories of these three different Mangrove trees. Lange-Berndt's notion of complicity drew in other research disciplines. In this study I was researching the effects of climate change on plants as a means of excavating the research questions through artmaking.

The processes of embroidery and applique were the culmination of earlier such attempts in *Estuary hangings* (Figures 25, 26, 27, 28). In this new cloak, I incorporated the leaf renderings of companion trees in the Estuary because these Mangrove trees are part of a broader community of plants. I imagined that these leaves might be appreciated by botanists. The companion trees represented another element of the Estuary realities that I considered worthwhile to translate, shown below: *Companion trees in the Estuary: Leaf*

cut-outs with stitching. (Figure 61 a-c.) In Figures 61a and 61c I have indicated the fine mesh of veins between the leaf ribs, whereas in Figure 61b, I have emphasised the prominent ribs.

a. b. c.

Figure 61a-c. Adams, I. Companion trees in the Estuary: Leaf cut-outs with stitching. *[linen, net, voile, applique, embroidery silk]. 30 cm. x 40 cm. Personal Collection. Durban, KwaZulu-Natal, South Africa.*

a. River or Lagoon hibiscus (Hibiscus tilaceous, uLolwa)
b. Tree fuschia (Halleria lucida, umBinza) (showing the fine web of secondary veins)
c. Pigeon wood (Trema orientalis, uBathini)

The first research question was served by the diversification of my artmaking materials: Estuary artefacts, thread, textiles, embroidery, applique and sewing. This cloak brimmed with materiality in the textures of the various textiles, the embroideries which ranged from delicate and subtle to thick and bold, the appliques of fine, sheer organdy. I reflected on the ways in which my sensory input led to these material embellishments. Using silk thread and cotton thread as analogies repectively for the vulnerability and strength of the three Mangrove trees expresses both their frailty and robustness. An example was the fine embroidery silk that demanded a thin needle which resulted in delicate stitches which evoked the magnifications of the tiny White mangrove flowers. I showed photographs of this in Workbook 7 (2021-2024, p. 398). This illustrates how my intentional integration of propagational agency and innate adaptational mechanisms, such as the small realities, contributed to the reconfigured

meanings in non-realistic, non-educational translations, in response to Question 2. Drawing with thread and creating 'allover'[73] embroideries and appliques presents another shift in this creative research As mentioned, when I first introduced the embroidery of a leaf in *Estuary Hanging,* (Figure 25), I had never practiced embroidery. I did not envisage that this embroidery would culminate in extensive embellishment. This has arisen in direct response to excavating my concerns for the Estuary, where the realities have influenced me in using alternative art materials and processes.

When I considered Question 1, the realities were translated by the selection of different elements of each of the three trees, through stitching and absence of colour. These created non-realistic, non-educational renderings, in a new context, the cloak, which correlated with Question 2. Question 3 is addressed in part by the innate reparative abilities of this tree (mentioned above) that are reconfigured by the cloak's processes and the cloak as presenting an unusual vehicle of display.

The anatomical differences in the Red, White and Black mangrove trees were highlighted because it is through these adaptations that the mangrove community is strengthened. The embellishments were attained through specifically selected materials and the processes of applique, magnifications and stitching. This demonstrates my interpretation of Barad's statement (2007, cited in Lange Berndt, 2015, pp. 213-215), that engaging with materials to create meaning constitutes a critique of language as the medium of communication. PLR accounted for the ways in which my creative research methods entangled the discoveries found in literature with my embodied Estuary observations. PLR thus enabled my artmaking research to evolve in response to all the activities and explorations related to this project

This cloak is the result of the changing somatic effects on my body through experiencing the different reparative and propagatory elements of these Mangrove trees. Dean (2020, p.230) stated, within the context of dance and performance "A somatic body is a changing body". I anticipated that somatic being experienced in these artworks would also vary with each wearer and their "aware wearing" (Dean, 2012, 2020, pp. 229-233). When I wore this cloak, the wide

[73] 'allover' is a term used in manufacturing where an embellishment is not a singular motif, but occupies larger areas of the textile, in the form of prints, applique or embroidery.

circumference of the hem enabled a swirling, twisting, rippling effect of the embellishments, which concealed and revealed these, simultaneously soothing, scratching and comforting my body. I imagined the embroideries and the innate reparative and adaptative elements of the three trees, rippling my skin. I pondered on other wearers and their responses to the encapsulation of these and their propagations. What associations would be prompted by the embellishments and the somatic sensibilities that these works consequently evoke? The cloak offered an opportunity for a wearer (to explore) the relationship between themself, the cloak, the Estuary and the current surroundings.

The following comments were made by wearers of the cloak and recorded at the exhibition (*Uncloaking the Umngeni Estuary*, 16-23 July, 2024) and thereafter in Workbook 7 (2021-2024). This cloak was described as "flowing and soft but scratchy in parts" (Anonymous, "personal communication,"16 July, 2024; p. 403). Other wearers commented that the cloak offers envelopment and safety (Anonymous, "personal communication,"16 July, 2024; p. 390, a "feeling of regal status" (Anonymous, "personal communication," 16 July, 2024; 2021-2024, p. 397a) and "the embellishments are beautiful and evoke the little life." (Anonymous, "personal communication,"16 July, 2024; pp. 397c, 397 d). The cloak appeared to have touched the subjective and somatic feelings of the first four wearers, although they did not consider the context from which the cloak emerged. That they had not recognised the reproductive parts of the Mangrove trees endorsed my claim of non-realistic and non-educational translations.

In considering these comments. It appeared that three of the five wearers commented on their somatic responses to this cloak, whereas the last-mentioned wearer appeared to be aware of smaller life forms in the Estuary.

Conclusion

The somatic form of the *Cloak of Three Mangroves* (Figure 46) suggested a possible human presence. Could the cloak have represented a ghost of the pre-possessors of the area, removed by 'bleaching'? (Rosenberg, 2019, para. 1). There was sparse documentation on the previous inhabitants of the area, prior to the arrival of Colonialists in the 19th Century. A possible question entered my mind, would I have created these cloak forms had I not thought about those persons who previously occupied the area? Could these cloaks of the Estuary embody spirits? These questions were sparked by my being 'with' the Estuary. There were no answers at this point.

This artwork did not embrace all the Estuary's realities,but focused on the reparative abilities and adaptations of these Mangrove trees. The embellishments revealed the beauty of the innate strengths of these arboreal founders, supporters of the interconnected Estuary community. A small link to the other plants is present in *Companion trees in the Estuary: Leaf cut-outs with stitching* (Figure 61a-c).

The embellishments and translations of the physical and reproductive adaptations were my interpretations of these positive effects on this Estuary. This is an important shift which arose from deeper investigations of aspects of Natural Science. This overturned my earlier overwhelming negative views evident in *Toxic Slices* (Figure 16) and *Cloak of Carbon and Repair* (Figure 34). This illustrated that PLR is what Springgay et al. (2008, cited in Sullivan, 2010, p. 58) viewed as a "living inquiry". My involvement with the Estuary may initially have been as a spectator, but this evolved into my expanded self, as a living participant.

When I lulled over the outcomes of my cloaks I deduced that my cloaks were not fully representative of all the degradation and reparation of Estuary life. I needed to reveal more about the complex interconnectedness of the Estuary which, in my opinion, is a major reparative element in this Estuary's life. As mentioned in Chapter 1, pollution was not the only cause of degradation in the Estuary. The spread of alien plants was ongoing, locally, nationally and globally (Carvalheiro, et al., 2008, p. 1419; Potgieter, et al., 2021, p. 872; Van Kleunen, et al., 2018, p. 25; Vìla, et al., 2011, p. 702). Seed dispersals by birds, bees and insects propagate aliens and indigenous plants. There are other plants and grasses that play reparative roles which hold potential for further conveying the current realities and interconnectedness of the Estuary.

3.14 Somatic alternatives

The final section of this chapter introduces alternative somatically driven formats, offering a wider translation of Estuary realities. For me, somatic understanding unfolded through *Sumi-e*, deep breathing, meditation, walking and my own heuristic as discussed in section 2.3, where I explained these practices. The next section reveals how I expanded my investigation of the inter-connectedness of Estuary life.

Interconnectedness

I recalled *The Food Web, Interdependencies and the Interconnectedness of the uMngeni Beachwood Mangrove Estuary* (Figure 45) and I thought about the Estuary water as a strong between the Estuary community. Blackmore (2022, p. 140) questioned whether one can identify a "somatic aesthetic" of ways in which "humans and water affect each other"? The water in the Estuary is the element crucial to the plants, fish, birds, insects, crustaceans and micro-organisms. The sounds of the water were a part of my sensory experiences, reminding me of the complexity of life linked to the community. Perhaps a format other than the cloak might convey the realities of the Estuary in somatic ways? The following section introduced alternative somatic formats that incorporate additional Estuary realities.

Rethinking wider realities

Since I started pressing vegetation with my car, I have been accumulating an abundance of material: leaf litter, flower litter, creepers, seeds, grasses and other Estuary artefacts. These I stored between small boards in my studio to keep the artefacts flat. Pondering what to do with this rich array of plant matter, I realised that this material could provide an extended exploration of Question 1. Many of these plants have medicinal properties. Traditional medicine plants of KwaZulu-Natal was acknowledged as a field of study in

2000.[74] Conservation of medicinal plants is therefore vital to the discipline of indigenous medicine and preservation of these plants in the Estuary is vital. How could medicinal plants link to my concerns for this Estuary, or to the broad global context of climate change? My practical research in the Estuary extended to learning about all aspects of the plants, highlighting their value in the Estuary. As this study was rooted in a local context, I felt that I should acknowledge my etic perspective in recognition of the value of indigenous knowledge as part of our South African cultural heritage.

[74] *The discipline of indigenous medicine* was introduced at the Nelson R. Mandela School of Medicine, University of KwaIsiZulu-Natal (Nelson R. Mandela School of Medicine, 2000). The University of Cape Town recently held a conference titled: *African Traditional and Spiritual Practices Indaba: The Route of Holistic Justice.* The United Nations, together with the World Health Organisation, convened the first high-level global summit on traditional medicine (Ghebreyesus, 2023; Swingler, 2023).

Incorporation of medicinal plants or parts thereof, might offer a way of acknowledging the value of these plants. Much medicine is derived from whole plants (Dugmore & van Wyk, 2008, pp.13; Von Ahlefeldt, et al., 2003, p.18-74), tree bark (Dugmore & van Wyk, 2008, p. 38; Von Ahlefeldt, et al., 2003, p. 130-171) and roots (Dugmore & van Wyk, 2008, p. 184-185; Von Ahlefeldt, et al., 2003, p. 174-243). As previously mentioned, (see 3.1., page 58) removing plants, bark or roots from the Estuary would be disrespectful and destructive to the Estuary.[75] Medicinal plants such as the leaves, flowers and seeds of Natal Mahogany (*Trichilia emetica, uMathunzi*), Flat crown (*Albizia adianthafolia, usolo*) and Bush-tick berry (*Chrysanthemoides monilifera, makhuphulane*) were found inside and outside the Estuary. I decided to use a cross-section of leaves, plants and grasses from the Estuary surrounds, including small parts of medicinal plants.

Rethinking the formats

For this artwork I considered the posters by Émile Deyrolle (1838-1917) from the publication *Leçons de Choses*. These showed heraldic designs of animals (Walsh, 2018 cited in Aloi, & Savage, 2020, pp.170-171). I played around with heraldic sketches in Workbook 5 (2021-2024, p. 309).

Design symmetry

When I observed the paintings in the recent publication: *Botanical: Observing Beauty* (Jeanson & Mansvelt, 2022), I come across symmetrical flower arrangements (Jeanson & Mansvelt, 2022, p. 254). This suggested that a symmetrical placement which, although aligning with my design experience, offered a surprising change in direction from my spontaneous approach to artmaking. I fanned out the leaves of the Black mangrove tree at the apex of a sheet of *ganpishi,* the placement emphasised the value of this tree for this creative research. At this stage I had no idea that this would become *Ceremonial Chair 1,* Figure 66 I found many blooms on the road after high winds. The Coast coral tree, (*Erythrina caffra, umsinsi)* has juicy, robust scarlet petals which became delicate and silky

[75] South African horticulturist Geoff Nichols speaks of the near extinction of the Pepper-bark tree (*Warburgia salutaris, isibhaha),* due to overharvesting its bark (Dugmore & van Wyk, 2008, p. 77).

mauve fragments after pressing (*Stages of pressing the blooms of the Coast coral tree* (Figure 62).

Figure 62. Adams, I. (2023). Stages of pressing the blooms of the Coast coral tree *(*Erythrina caffra, umsinsi*). [Personal photograph]. 25 cm. x 25 cm. Durban, KwaZulu-Natal, South Africa.*

These were added to the sheet of *ganpishi* together with Penny wort (*Gotu kola, Centella asiatica, icudwane*). This is particularly valuable as a medicine plant but is continually eradicated from lawns as a noxious weed. These were difficult to control, and I allowed the springy stems to partly dictate the creative direction. This illustrated Lange-Berndt's (2015, p. 13) opinion: "follow the material, act with the material". These additions were all placed almost symmetrically, which was oppositional to my spontaneous unpredictable ways of working. Gerhard Marx (1976-) used roots as materials in *Skull III* (Figure 63). The irregular outline of this skull suggested that perhaps the roots had a say in their placement, because the skull was not perfectly realistic. The position of the roots might be said to have embodied their agency.

Figure 63. Marx, G. (2011). Skull III *[Plant material, acrylic paint and glue on cotton paper]. 75 cm. x 56 cm. Courtesy of G. Marx. South Africa.*

The fragile appearance of the Penny wort ground cover offered a contrast to the smooth three-dimensional red and black seeds of the Natal mahogany (*Trichilia emetica, uMathunzi)* and the chunky, knobby, texture of the papery leaves of the Lagoon hibiscus (*Hibiscus tilaceus. uLola*). The assemblage of varied textures – delicate, fragile, smooth, chunky, knobby, papery – contributed to the haptic qualities of the eventual artwork's materiality (*Ceremonial chair 1*). The *Chi* or "life" in these materials (Lange-Berndt, 2015, p.19) could be said to be inherent in this collage of inter-connected Estuary plants.

Seemingly unrelated to the Estuary and my creative research, I watched the Coronation of King Charles III and Queen Camilla (May 7, 2023). This converged with my disappointment in the two dimensional heraldic composition described above. The decorative thrones sparked my imagination. I investigated the steel throne made of one thousand swords, for the *Game of Thrones* exhibition (Queens, New York City, March 30, 2019). Although this throne was rigid and menacing, the idea of using significant elements of a theme appealed.

Figure 64. Artisan not known. (n.d.) Throne of King Tutankhamun*. [Wood, gold leafing, silver, glass, semi-precious and precious gemstones] 102 cm. x 170 cm. Grand Egyptian Museum, Giza, Giza Plateau, Egypt*

The *Golden Throne of King Tutankhamun* (Figure 64) combined motifs and icons of Ancient Egypt such as ducks' heads, an eagle with outspread wings and a winged cobra. The rich colour, symmetry and embellishment of this throne prompted me to consider the potential of the Estuary plants for creating a throne.

Thinking back to artists who expressed their concerns and translated their findings into artworks, I recalled the chair embellished by Doris Salcedo, shown below. Here she has used the delicate embroidered clothing of a victim and recontextualised these items onto the chair of a destroyed family.

Figure 65. Salcedo, Doris. (1992-1994). La Casa Viuda. (The Widowed House). *[Wood and Fabric]. 257.8cm x 59.7 x 38.7. Collection: Worcester Art Museum, Worcester. Massachusetts, United States of America. (Gift of the Friends of Contemporary Art. Bridgeman Images).*

Prior to conceptualising a three-dimensional artwork, my performative, "multi-method" research methods dominated my processes (Haseman (2006, p.103), mentioned earlier (2.14) and in Workbook 9 (2021-2024, pp. 447, 447B), I sketched the heraldic design into a chair. At the onset of this research project, I certainly did not envisage cloaks, thrones, or chairs.

A fragile structure synonymous with the fragility of the Estuary and wire, was evisaged. My working experience in fashion, especially my pattern cutting skills, equipped me to conceptualise designs in practical ways. I built the wire frame and planned the layout in a symmetrical design, according to my dimensions which I sketched in Workbook 9 (2021-2024, p. 447C). This was a turnaround from the spontaneous, even haphazard, processes that had been part of my performative artmaking for over a decade. Could a digression

from my performative processes, such as pre-planning, add impetus to investigating my research questions?

The ‘dead end’ heraldic piece I incorporated for the back of the throne. The reparative aspects of the Estuary would be the conveyed by leaves of medicinal plants, vegetation, grasses, seeds and buds. Covering the throne took nine individual panels that amounted to four and a half square metres of paper. This required a substantial amount of Estuary artefacts.

I reached a stumbling block. The idea of a throne conflicted with my South African identity. Sullivan (2010, p. 245) suggested that conflicts and contradictions are useful and necessary in conducting visual arts research. I concluded that a ‘throne’ has European connotations which could be interpreted as synonymous with colonial oppression. Rather, it should self-evidently emerge from the Estuary and the KwaZulu-Natal region. Ingold (2015, p. 165) stated that objects grow through the involvement of “people and materials in an environment”. Ingold’s opinion resonated with me. My solution was to create a ceremonial chair rather than a throne. This would better align with my translations of the Estuary into artworks that express the realities of plant life in this KwaZulu-Natal Estuary.

3.15 The Ceremonial Chairs

Ceremonial Chair 1 (Figure 66)

I choose the word ‘ceremonial’ intentionally to convey the wealth and value of this Estuary eco-system. It is possible that viewers may envisage themselves seated in the chair, somatically embraced by the Estuary plants. The fragility of the structure may be

Figure 66. Adams, I. (2023). Ceremonial Chair 1. *[flowers, leaves, weeds, grasses, ganpishi, glue, wire, seeds]. 130 cm. x 80 cm. x 80 cm. Personal collection. Durban, KwaZulu-Natal, South Africa*

considered as an analogy for the fragility of the Estuary and, in the context of global climate change, for all life forms. The chair commemorates the value of these Estuary plants that support life for humans and non-humans. This embodies the "self-giving" of plants that Marder speaks of (Irigaray & Marder, 2016, pp. 208, 210), enabling us humans to live on earth, discussed in 2.1.

Pre-planning re-emerged

The Estuary material of this artwork was prominent; the material was the message and the artwork. What was significant about this artwork was the way in which executing a pre-planned chair upended the spontaneity of my artmaking. This indicated a re-emergence of my design and manufacturing background. Since embarking on a Fine Arts research

project, I never imagined that I would have incorporated design planning in my creative processes.

The "within" (Mihalache, 2019, p. 137) of the Estuary was exhibited in this chair by means of a cross-section of Estuary plants. Their *Chi,* provenance and translated identities were thus incorporated. The near symmetrical arrangement of the vegetation on the front and back panels contrasted with the random placement of weeds, medicine plants and grasses on the 'skirt.' (The spontaneous placements of the grasses reflected a continuation of my performative processes). The grasses function in the Estuary by attracting pollinators, birds, insects and small fauna. These interdependencies form a food web and interconnect the entire Estuary community. These connections are unseen acts of reparation contributing to maintaining homeostasis and preserving the Estuary's ecology.

The surrounding area is connected to this Estuary through pollination and transference of seeds of both alien and indigenous plants. Alien propagations are ongoing, locally, nationally and globally (Carvalheiro, et al., 2008, p. 1419; Potgieter, et al., 2021, p. 872; Pattison, et al., 2017, pp. 442-434; Van Kleunen, et al., 2018, p. 25; Vìla, et al., 2011, p. 702). This is a negative aspect of interconnectedness. For this chair to truthfully represent the interconnectedness and complexity of the Estuary, I attach a few crumbled pieces of the symbiont fungus (*Fusarium euwallaceae*) introduced by the Polyphagus shot-hole borer (*Euwallacea fornicates*), discussed with reference to *Triptych of trees* (Figure 20).

The material embodiments of reparation and degradation would continue to interact. Lange-Berndt (2015, p. 17) suggests that one should consider the meanings of materials, especially after exposure to time or the elements. The pressed plants, leaves and blooms would crumble, crack and change colour in Durban's humidity. The paper and glue might grow mould or start disintegrating, the delicate wire frame would rust with age. This illustrated the agency of materials, their ongoing life and *Chi*. The artwork would not attain longevity; it reflected the transience and ongoing cycles of degradation and reparation within the Estuary.

Georges Bataille's (n.d. cited in Lange-Berndt, 2015, p. 19) concept of *bas matérialité* spoke of decay corresponding with human mortality. In this instance I took *bas matérialité* to correspond with life and decay, human and non-human. The bio-degradable materials of my creative research were synonymous with life and decay as another estuarine reality. The artworks embellished with plant life would disintegrate with time, but the chemical textile of

Embraced by blooms (Figure 44) would endure together with the non-biodegradable pollutants and toxins in the Estuary water (Birungi, et al., 2018 p. 232; Marques, 2020, pp. 285, 294).

The chair's wire frame and 'slipcover'[76] was fragile and not inviting to the viewers to physically experience this and the brittle surfaces of the leaves However, I imagined sitting on these chairs to explore my somatic responses and how the plants might have impacted on my body. My somatic body changed in response with interactions and experiences in the Estuary. This chair reflected my current concerns for the Estuary by means of these somatic translations of the Estuary's realities. This conceptualisation of a ceremonial chair signified another shift in this creative research.

Conclusion

As a consequence of the interrogation of my research questions, Estuary explorations and creative responses to somatic experiences, *Ceremonial Chair I* became a reality. The tiny buds and barely visible seeds that relayed the smaller realities, discovered through sensory experiences, were translated into this artwork by means of *poiesis.*[77]

In Workbook 9 (2021-2024, p. 477B), I questioned in my notes whether this chair effectively addressed my research questions. The translations of Estuary artefacts were combined on this chair, which presented altered materialities through the pressing, drying, gluing and layering, as part of the investigation of Question 1. These re-contextualisations were non-realistic and non-educational in line with Question 2. The realities that were presented on the chair offer a cross-section of plant life in the Estuary. As explained in 3.1, I could not evidence the realities of all the life in the Estuary. Question 3 has not been fully addressed at this point.

Although there were pollutive inclusions – chemical glue and wire that were not visually apparent – nevertheless, the chair was a tribute to the strength and value of the Estuary plants. This focus on the reparative capacities and the interconnectedness of a variety of plants

[76] Slipcovers for chairs was one of the products that I created and introduced to homeware stores in South Africa. These can be removed for laundering. The covers of the ceremonial chairs need to be made as slipcovers to protect the fragile materials during transport and installation.

[77] I previously described *poiesis* as the emergence of an artwork through sensory experiences.

continued to emphasise my positive change in attitude towards the Estuary's realities. The small inclusion of the symbiont fungus was a token reminder of the threat of alien plants, fungi and insects. Recognition of the value of these Estuary artefacts was an important outcome of this artwork and a key shift is offered in the form of a chair.

The preceding artworks portrayed a range of plants. I subsequently considered the interconnective role of birds. Apart from acting as pollinators, birds also transport fungal spores, including harmful spores, which in turn host micro-organisms and communities of insects (Margulis, 1994, p. 74). The health of this eco-system is dependent on the interconnectedness of all its species and ongoing propagation. I considered then that the value of birds as interconnectors of this Estuary with its surrounds, were worthy of translating into another artwork.

Ceremonial Chair 2

The interconnectors of this Estuary are a vital component in maintaining the Estuary's health. The behaviour of birds in the Estuary thus became an important matter. I recalled sitting mindfully amongst the White mangrove trees (*Avicennia marina, isikhungathi*) when I observed the unusual sighting of a pair of Purple-crested Turacos (*Tauraco porphyrepolophus, Gwala Gwala)*. It was not easy to see these birds as they hopped from branch to branch. I wondered where they would deposit the fruit seeds that they would excrete, inside or outside the Estuary. I considered that this bird was "another connector between the Estuary and the surrounding area." The role of my senses afforded access to these small realities.

Figure 67. Adams, I. (2023). Ceremonial Chair 2. *[Feathers, ganpishi, glue, wire, seeds, buds] 130 cm. x 80 cm. x 80 cm. Personal collection. Durban, KwaZulu-Natal, South Africa.*

The role of birds in pollination and propagation is a vital part of the Estuary's interconnectedness with the outside world. However, birds are also implicated in alien seed dispersals, and as transmitters of disease to other birds, insects and humans (Levison, 2015, Summary; Reed, et al., 2003, p. 6; Tsiodras, 2007, p. 84). It was not possible to include an immaterial pathogen in this artwork. Alternatively, I included the seeds of an alien plant, the Balloon vine (*Cardiospermum halicacabum, uzipho*)

This second chair evolved out of the collection of feathers that I accumulated over many years of walking on the roads, in forests and in the Estuary. Dove feathers predominated because numerous flocks of doves are found within and beyond the Estuary. Not all the feathers I found are identifiable. Initially I sorted the feathers according to type, colour and size, shown in Workbook 9 (2021-2024, pp. 451-454). This was another instance where my design background overruled my spontaneous ways of making art. A few buds, tiny flowers and seeds were incorporated as the links connecting the birds and the Estuary with the surrounding area. These inclusions further diversified the materials, which added another layer of meaning to my translation of the far-ranging interconnectedness of this locality.

The Estuary cannot be considered as a pristine ecology due to the present and probable future state of pollution globally (Marques, 2020, p. 251), locally (Naidoo, et al., 2020, p.1) and alien invasions (mentioned in 3.3, in conjunction with *Triptych of trees* (Figure 20). Aliens signify degradation and this aspect of degradation I overlooked when I embarked on this artmaking research project. This oversight presents an insight. In view of this, I incorporated the feathers of the Indian myna, an invasive bird which has threatened the biodiversity of South African birds (Alien Invaders, n.d.; Invasives South Africa, 2021; Peacock, et al., 2007, p. 466).

Design symmetry

Another symmetrical arrangement evolved, of feathers, probably subconsciously influenced by my design background and possibly the symmetry of bird anatomy (Thomas, 1993, n.p.). This insight indicated how my suppressed fashion and manufacturing experiences (see Chapter 1) re-emerged as personal responses to concerns for global environmental degradation and for this specific Estuary. This further understanding emanated from the partial symmetry created in *Ceremonial Chair 1* (Figure 66). Feathers are paired on a bird, but my large assortment of feathers did not yield matching pairs. In Workbook 9, 2021-2024, p. 451, I show a photograph where I bent a feather the opposite way, by nicking the quill at intervals, to make a pair. This was a way of managing my materials to fit my needs for this research.

Both the feathers and the wire frame of this chair were fragile. I did not anticipate the longevity of this ceremonial chair; its disintegration would occur over time at a similar rate to *Ceremonial*

Chair 1. The fragility of both these chairs was synonymous with the vulnerability of the Estuary eco-system and of the declining bird populations (Taylor & Peacock, 2018, p. 31).

Conclusion

I revisited Question 1. Birds and feathers represented another reality of the Estuary as pollinators and connectors to the outside world. Many of the feathers retained their original shape, colour and texture, but the gull feathers seemed to be degraded by oil and bleached by salt and the sun. Bearing Question 2 in mind, one could say that the preserved feathers are a literal translation, but these were recontextualised in a surprising three-dimensional format of *Ceremonial Chair 2* (Figure 67). This work I did not consider to be didactic, and there was no explanatory text accompanying it. Degradation was conveyed through the oil and manganese encrusted feathers and the alien Indian myna feathers. I felt a theme of reparation was present in the dominance of indigenous bird feathers, highlighting the value of birdlife in the Estuary. Somehow the *Ceremonial Chair 2* did not have the visual impact and interactive potential of the cloaks, which allowed physical somatic experiences by wearers. My imagined somatic engagement with this chair created feeling of discomfort and precariousness – the chairs were not functional, but did somehow invite a more literal narrative than the cloaks, in contradiction to the study aims. My attempt to pursue the clues of the cloaks, of bodily experiencing the Estuary materials, was a self-conscious step too far and this yielded insights in itself.

Question 3 concerns the ways in which the display of the work highlights the Estuary's degradation and reparation. This will be discussed in Chapter 4.

The planned symmetry of these two chairs contrasts to the asymmetrical embellishments on the three cloaks. The communication of the value of interconnectedness for the maintenance of Estuary homeostasis, was conveyed by this analogy of symmetry. The *Ceremonial Chairs* may not have the visual impact and interactive potential of the cloaks, which allowed physical somatic experiences by wearers. My personal imagined somatic engagement with this chair again created feeling of discomfort and precariousness.

3.16 One hundred traces

Below is the raw silk dupion cover of the book which I embroidered by hand (Figure 68). This showed the names of prominent trees in the Estuary and the leaf formations of these. This is the first time I have made such a book, prompted by my explorations and experiments.

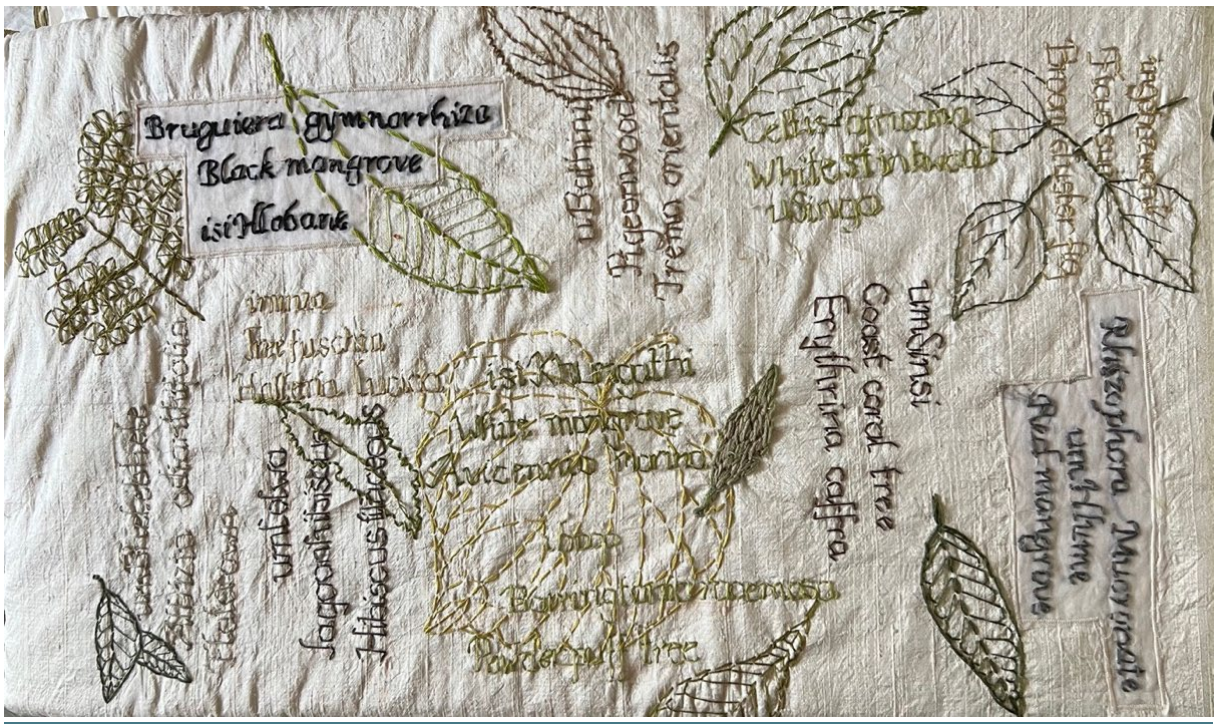

Figure 68. Adams, I. (2022-2023). One Hundred Traces*, cover. [Fabriano paper, raw silk dupion, ganpishi, embroidery silks]. 42 cm. x 32 cm. Personal collection. Durban, KwaZulu-Natal, South Africa*

In addressing the main question of this PLR, the artworks did not express and translate all the current realities of the Estuary. Although I have been recording other realities, these did not all fall under the umbrella of plant life. Through this project I have collected 'discards', artefacts in the form of roadkill, seeds, feathers, blooms, creature skeletons and interesting pieces of garbage spewed onto the beach at the river mouth. Apart from pressing, bundle dyeing flowers and leaves, I have also experimented with lino cuts, drawings, printing and ink painting.

The final artwork of this PLR offers a broad cross-section of my selected Estuary realities, incorporating paintings, collages and Estuary artefacts. These hundred artworks represent many of my processes and signify my PLR journey, assembled into the form of a book. My concerns for the degradation of the Estuary were initially the focus of this work. Several of these were

included, as well as pieces which demonstrated the dead ends and insights generated by my explorations, some of which fed into my creative processes.

An assemblage of traces

The positive aspects of interconnectedness contributed to the last two artworks *Ceremonial chair 1* (Figure 66) and *Ceremonial chair 2* (Figure 67). However, various forms of degradation continue to present an ongoing threat, which I believe would round off this project. I remind myself of De Vries's appreciation for the beauty of his found discards that he elevates into an artwork, *the return of beauty* (Figure 69).

Figure 69. De Vries, H. (2003). the return of beauty. *[Artefacts mounted on paper]. 105 cm. x 150 cm. Collection for sale; Conversazioni Parallel- Cortesi Gallery. https://www.artsy.net/artwork/herman-de-vries-the-return-of-beauty-*

A conglomeration of Estuary artefacts, processes and artworks complements my final artwork. Pollution in the form of garbage is shown in three small compositions (see one of

these below, *One Hundred Traces*. *Garbage collected at the uMngeni Beachwood Mangroves* (Figure 70).

Figure 70. Adams. I. (2023). One Hundred Traces. Garbage collected at the uMngeni Beachwood Mangroves *[Plastic, feather, polystyrene, foam rubber, rubber, artificial hair, paper, mounted on* Fabriano *paper] 16 cm. x 37 cm. Personal collection. Durban, KwaZulu-Natal, South Africa.*

Below shows tiny fish skeletons, as evidence of tidal surges and/or Estuary flooding.

Figure 71. Adams. I. (2023). One Hundred Traces. Fish skeletons, collected at the uMngeni Beachwood Mangroves. *[Fish skeletons on Fabriano paper, glue]. 16 cm. x 37 cm. Personal collection. Durban, KwaZulu-Natal, South Africa.*

Alien vegetation such as the Triffid weed,[78] was included in this book. I noted in Workbook 6 (2021-2024, p. 361) that this alien was "a serious threat to natural vegetation". Carbon ink and oil, were examples of the inclusion of pollutive elements shown in this assemblage of small artworks. Hand stitching and embroidery were included. Weedy plant materials, such as the seeds of the Blackjack (*Bidens Pilosa, Uqadolo*, are irritating (they stick to one's clothing). These signified the issue of sustainability (Black jack seeds and leaves have nutritious value) as an aspect of global reparative measures (Bukula 2022; De Landa, 2006; Johnston, 2017). *Sumi-e* leaf paintings of trees with identifications were included. The miniscule wings of an invasive alien borer (Common Furniture Beetle, *Anobium Punctatum, izinkuni*) were encased in a transparent pocket.

[78] Triffid weed (*Chromolaena odorata, eseshumi)*

Figure 72. Adams. I. (2023). One Hundred Traces. Trema orientalis, Ubathini, Pigeonwood. *[Sumi-e on vintage silk]. 16 cm. x 37 cm. Personal collection. Durban, KwaZulu-Natal, South Africa*

I remembered that visible and unseen aliens further threaten the Estuary. Red algae (*Dinoflagellate ceratium*) incursions are now a reality (Turton, 2024). The advance of toxic red algae blooms in freshwater systems was recently reported in *The Daily Maverick* (Turton, 2024). I drew an impression with accompanying identification of the toxic algae in this book.

The materiality of these Estuary portraits offers an overall view of many Estuary realities. Doris Salcedo effectively engaged contrasting materialities to voice her stance as a human rights artist. She expressed her emotional concerns for the trauma of victims, which I noted in in Workbook 5 (2021-2024, p. 270). Her juxtaposition of delicate embroidery attached to a

robust wooden chair charged her materials with the weight of the historic tragic realities of her birth country (see *La Casa Viuda* (Figure 65) Salcedo's meanings were covert, embodied in the work's materialities (Schneider, 2014, pp. 5, 122, 128). A comparison of Salcedo's chair with the varied processes and outcomes of *One Hundred Traces*, (Figures 68, 70, 71, 72) revealed that many of the materialities embodied meanings beneath the surface. For example, *One Hundred Traces. Garbage collected at the uMngeni Beachwood Mangroves* (Figure 70) carried deeper meanings; the history, provenance and implications of degradation were embodied in these non-biodegradable materials. I could not assume that viewers would identify and interpret these meanings (Leddy, 2019, p. 46). Many of the artefacts were identified in the book which suggested that some of these samples were didactic.

I appreciated the relevance of the discards, alien plants and insects, artefacts and processes in the context of my research questions. This PLR allowed me to both expand and consolidate my understandings of multiple Estuary realities. Through "opening the materials" the "non-art" associations of these materials offered an uncloaking of materiality (Lange-Berndt, 2015, p.16). The materialities of the 'Estuary portraits' in this book were led by the unusual materials themselves as well as my idiosyncratic processes and experiences. These elements were situated at the core of this PLR. This assortment of riparian artefacts and artworks echoed Celaya's (2015, p. 53) opinion of the need for an "honest inquiry". These candid portrayals were the finale where the different outcomes converged, creating a materiality that overarched this study. Altogether, the one hundred realities of the Estuary might be considered as "knowledge-in becoming" (Østern, et al., 2021, p. 272), offering multiple interpretations for viewers.

Conclusion

I consider *One Hundred Traces* (Figures 66, 68, 69, 70) in the context of Question 1. In this book, many of the Estuary realities are translated, but several of these are artefacts or replicas of artefacts. Regarding Question 2, a few examples may be considered as literal where I have sealed artefacts (such as the borer wings) onto the paper without any processes, other than their recontextualisations. Including identifications positions those artworks as didactic, such as a few identified seed samples. I consider that the book expresses the realities of pollution and degradation referred to by Question 3. This book will be positioned on a table in the final display.

The last three artworks, , *Ceremonial Chairs 1* and *2* (Figures 66, 67) and *One Hundred Traces* evidenced further realities of the Estuary. As mentioned in section. 3.2, the Estuary incorporates a broad spectrum of interconnected life, the complexity of which it is not possible to fully cover in this PLR. *One Hundred Traces* presents a wider view of this complexity and smaller realities. The intersections of emergent knowledge, creative research, sensory experience literature and writing demonstrate the value of PLR in this explorative study.

At the start of this PLR, sight was my prime means of examining the realities of the Estuary. The integration of personal practices enabled the uncovering of unexpected miniscule realities, thus triggering a new vocabulary of expression in my creative research. This signified a change in the direction of this performative methodology and a widening of my imaginative capacities in unexpected and more nuanced, somatically driven ways. A collaboration between myself as the artist, and the plants, subverted my status as the 'artist in control' and manifested as a deeper involvement with the Estuary's plant community. This generated a major shift in my research methods, leading to incorporating plant material as an artmaking method rather than sketching and painting. In the *Cloak of three Mangrove trees* (Figure 46), I abandoned using plants or parts thereof and re-established my artist self as the main protagonist.

Embroidery, as mentioned earlier, was a new skill learnt in this PLR. This came about through excavating my concerns for this Estuary and my sensory experiences that ensued . I believe this was a subconscious response to the environmental degradation that, in this study, led to alternative means of expression, new materials, somatic forms and multi-dimensional artworks.

3.17 Key Insights and Shifts

My responses to excavating my concerns for the Estuary steered my creative processes towards the conceptualisation of unanticipated forms of artworks and diverse materials. My previous ethic of using all-natural materials was subverted by the incorporation of pollutants as an artmaking material. This was a response to the polluted state of the Estuary and material ethics of Eco-Materialism. The shift away from my previous Sumi-e artmaking methods, included motorcar printing, stencilling, frottage, working with vegetable dyes, drawing with thread, stitching, embroidery and applique.

The unexpected re-emergence of my previously suppressed working life experiences impacted on my creative processes and materials. These gave rise to three-dimensional forms and the

means of translating the realities further, diversifying my methods and artmaking materials. Planning the chairs prior to making them was a reversal of my spontaneous art processes and recalled one of the stages in conceptualising a fashion design. Reflexive thinking stemming from indecisions, dead ends and forward leaps in my performative processes, steered my artmaking and research investigations in different avenues.

My performative research methods were a continuation of *Sumi-e* painting's inherently non-representational means of expression. In *Embraced by blooms* (Figure 44) and *Cloak of weeds* (Figure 43) my painting and drawing skills made way for Estuary materials where these became the protaganists, sublimating my artist status.

Integration of personal practices such as using the breath, mindfulness, forest bathing, meditation and walking, parallelled my holistic *Sumi-e* artmaking practice. The fluidity of PLR encompassed the evolution of these personal practices into a research heuristic. This was not anticipated and the result was the discovery of the Estuary's miniscule realities. This was a key insight. These personal practices enabled the awakening of my senses and expanded my somatic register, which is inherent *Sumi-e* artmaking processes. Drawing my somatic understandings back into my creative processes led to the emergence of new three-dimensional art works, that is, the cloaks and chairs. These cloaks and chairs proffered elements of my somatic experience and for possible wearers. This was a key shift. I understood poiesis as the embodiment of sensory experience in artworks, integrated by sensory awakenings. This constituted experiential knowledge.

Mangrove trees support smaller life forms through providing protective nursery space and food. The Estuary's realities exist in complex interconnected layers overturning my assumptions that its realities would be easily identifiable. The interconnectedness of all life within the Estuary extends beyond its boundaries. The Estuary plants have physically adapted in reparative response to the Estuary's current environmental challenges. This was a key insight discovered through literature and observations made in the Estuary. The value of weeds and tree communication added unexpected depth to this study, achieved through accessing literature.

The reparations expressed in the later artworks was a transformation of my initial negative frame of mind which was focused on the Estuary's degradation. This turnaround was

attributable to my artmaking and literature explorations of my research questions. This entire production may be considered an holistic research project, parallel to the holistic form *Sumi-e.*

Materiality exists in all the materials as a mode of ongoing becoming. Chi and the energy inherent in the selected materials and artefacts predisposed the materiality to a becoming. I realised that the Estuary is itself a materiality which is layered in a complex of smaller materialities. Recontextualising artefacts from the Estuary into artworks reconfigured their materiality and revealed the becoming nature of materiality. The layering of materiality created haptic effects. My translations of artefacts into artworks brimming with materiality, constituted embodied knowledge.

My Workbooks (1-10, 2021-2024) developed and contributed to this research and the consequences that arose. Initially, I continued to present my findings in impactful, neat and ordered ways (see Workbook 2, 2021-2024), in line with presentations that I produced during my working life. The jottings, reminders, deletions, and revisiting has resulted in a disordered assemblage of Workbooks, which, in line with PLR, strongly linked this text and my artmaking research. These Workbooks provided a formative base through broad searching (such as roadkill, garbage, artists' environmental artworks) and narrowed down to my final focus on the Estuary plants. The emergence of a book (*One Hundred Traces*, Figures 68, 70, 71, 72) was unexpected. This took the form of a compilation of my research journey and included my experiences, processes and findings.

The key insights gleaned through this PLR, including my performative methods, the literature, my artmaking processes and the influences of *Sumi-e*, evolved through interrogating my research questions.

Chapter 4: Conclusion

This thesis is an exegesis accompanying the artworks that arose from my creative practice, and is read together with the artworks themselves. The process was holistic and integral to the expansion of my practice, the materials and methods, unearthing deeper understandings and new insights.

4.1 Overview of this study

Global warming and climate change, and the predicted long-term dire outcomes, and my concerns over the impact of these provided the overarching context for this PLR study. Specific reference to the current and future state of the uMngeni Beachwood Mangroves Estuary uniquely positioned me to excavate and translate the realities of this Estuary through artmaking. In excavating the ecology of the area, the research objectives included conveying the data in ways that are nuanced and not chiefly instructive and moralistic. Having commenced this research with a view that the ecological degradation of the Estuary was irredeemable, the most recent artworks of this study, and this text, reveal a more positive understanding of the innate reparative and adaptative mechanisms of the Estuary plants. The close proximity of the Estuary to my residence presented an opportunity for myself as an artist/researcher to engage closely with the site perhaps more than other artists concerned with environments.

PLR triggered my discovery of the value of plants for this project, incorporations of new materials, and ways of understanding which emerge through my ways of working in the Estuary. PLR research methods and creative processes enabled my artworks to evolve into wearable garments, cloaks and chairs, with key insights arising from earlier works, such as *Frog Kaross*, a seminal moment in this research.

The somatic and sensory insights gained through my idiosyncratic creative processes and the incorporation of my working life skills, expanded this practice. The unexpected evolution of cloaks and chairs signalled a somatic, symbolic human-and-Estuary integration. My holistic, philosophical and interactive research methods extended my artmaking to increase understanding of the site, changed my research stance and shifted my original hypothesis.

4.2 Practice-Led Research methodology

PLR proved to be a fruitful methodology for this study. The intersections of philosophies, theories and personal practices framed my explorations and translations of the Estuary site. Such research methods are ways of deeply understanding phenomena, hence the metaphor of excavation. Notwithstanding the challenge of integrating theory with artmaking, I recognised that my artistic practice and theoretical research complemented and expanded the other, resulting in new ways of thinking, seeing and making.

In particular my Workbooks have been seminal to this research, particularly when it came to reflecting and writing about the process in this thesis. They are evidence of how the emergent knowledge came about. They were included as supplementary material and available at the exhibitions of the work. Firstly, they were a way for me to keep the material I gathered, or records of it in different forms. I included the experiments with dyeing, and the use of fabrics in this gathered material. I consider this as raw data, in a research sense. I could make notes and drawings freely. Making selections and organising the material provided a record and broad base from which to explore the research questions and experiment with creative processes. They serve as documentation, and additionally facilitated narrowing down the field of study to focus on the Estuary plants. I was already analysing the 'data' in these interactions, selections and reflections. While the Workbooks started as preparatory work, they became more. Through documentation and reflection, they founded the iterative process. The creative practice of the artmaking came into its own, a form of knowledge-generating research essential to the study.

Revisiting my hypothesis

The research process generated a shift in my original hypothesis: My initial aim to draw attention to the plight of the Estuary has evolved into a more balanced perception of the negative and positive aspects of the Estuary ecosystem. This is a turn-around from my initial aims of exposing the dire situation of the Estuary. I now understand that despite the visible pollution, the Estuary's plant community is reparative in nature, it strengthens the Estuary in general by connecting the Estuary to the surrounding areas and draws to itself the insects and birds that enact this connection.

These discoveries together with my personal practices enabled the expansion of my somatic awareness; undid my initial assumptions of human superiority in understanding the local causes of and solutions to this particular environmental degradation; undid my assumptions that I control materials and artmaking processes. This is important, because as an artist close to the Estuary, I had the capacity and responsibility to create awareness of the threatened state, at present and in the future. Previously I believed that the only reparations being conducted were human-organised, as mentioned early in this thesis. The innate reparative capacity of the plants in this area, highlights the potential of these organisms to manage the degradation, to an extent. My aim subsequently adjusted to offer a more nuanced translation of the Estuary, encompassing both the degradation and the strength of the Estuary. This shift in my original hypothesis provides perspective on my role as a human being in this regard.

4.3 Summary of key findings

The findings are framed in response to my research questions.

1. How can I translate my experiences and art making materials into artworks that excavate my concerns for this Estuary?

In this thesis I have presented my research, and how I went about it. The 'how' is at the heart of this first research question, and in research, it is methodology that provides a way to systematically explore a topic. PLR as a methodology gave this project the 'how'. I have explained throughout how in excavating my concerns for the Estuary, my creative practice integrated with theoretical research expanded my thinking and understandings, and changed my practice. Using these methodologies, my meditations, walking, the development of somatic awareness all combined together and enabled smaller insights of Estuary realities. PLR catalysed my creative practice into new territory, and enabled me to create artworks that expressed my concerns in new ways. My whole understanding of the Estuary evolved through PLR.

2. How can I create artworks that transcend a literal and didactic interpretation of my concerns?

I have described how my idiosyncratic processes included bundle dyeing, motor car pressing and printing of Estuary materials, stitching, embroidery, using ink made from my exhaust pipe and vegetable matter, incorporations of vintage and reject textiles. I thought these processes

and forms were in themselves translations that were evocative and not prescriptive, transcending didacticism or insistence on a particular audience response. However, it was PLR methodologies that gave me insights to notice when an important shift occurred, and I might have missed these seminal moments had I not been following an iterative cycle of reflection on my discoveries. I was more open to experimentation and this led me to employ my materials and methods into somatic forms that humans could physically inhabit and experience the Estuary life.

3. In what ways might I display these artworks that additionally highlight the degradation and reparation of the Estuary's environmental situation?

This question shifted focus from the artmaking process and PLR methodology towards what to do with the resulting artworks so that they could perform their intended communicative potential with audiences. I see that the early stages of the creative practice which proved unsatisfying were all opportunities which pushed the work forward. Installing works in the estuary environment was also frustrating, but a necessary part of the process. Even after I made the breakthrough to the cloak forms and the somatic element emerged, how to display or perform the works was not clear and the artworks did not integrate into the Estuary environment as well as I had expected.

As stated in Chapter 3, a wearer's somatic connection with the cloak may be seen as a parallel to plants connecting with other life forms in the Estuary, causing a significant shift in my practice that somehow drew upon my previous workplace skills. The discovery of the degradation and reparation in the Estuary provoked me towards ambiguity – objects that display and function as coverings, a protective shield.

Deliberate performances by people wearing the cloaks in the Estuary when photographed and filmed were difficult to adequately document, and did not satisfy the aims of the research. This experimentation pushed the work through to the further development of more cloaks and the chairs as a directly felt, personally immersive response to the Estuary. The chairs were intended to reinforce the somatic trend emerging in the work, but they were more consciously developed than the cloaks. They mainly served as a foil to highlight why the cloaks worked – they were too literal and forced, while the cloaks had ambiguity as artworks and garments.

In the cloaks I had found a way to merge and display holistically the Estuary degradation and reparation, in a form that humans may recognise, relate to and physically inhabit. This

contributed to ways of addressing the gallery installation. Had I not experimented unsuccessfully with a display in the Estuary, and with the chairs, I might not have come full circle to the cloaks as they now exist as presences representing the Estuary, and the culmination of this PLR study. The question of how to display the work in a way that highlights the Estuary's degradation and reparation remains unresolved. Instances where audiences tried on the cloaks suggest that this is when they really come alive, 'performing the estuary'.

4.4 The contribution of this study

In Chapter 1, the rationale for my practice identified aspects that may contribute to the field by documenting my idiosyncratic and inventive creative approaches. The intersection of theories, philosophies and creative practices enhanced and extended my explorations and translations of the Estuary site, excavating ways of understanding the phenomenon. The way my work was catalysed in new directions offer useful insights for me and to other artists. The methods may be of interest to other fields where collecting, journaling, experimenting, making, and expanding into creative research could lead to new knowledge.

The integration of other practices, such as deep breathing techniques, meditation and mindful walking led to sensory awakenings and somatic experiences in the Estuary. Artists, environmentalists and others could incorporate their existing personal practices as another means of connecting with and developing awareness of natural environments – or any phenomenon worthy of deeper exploration. The discovery that the interconnectedness of Estuary life extends beyond its boundaries shows the value of mixed methods research to determine the overlap of life existing within a specified site (such as the Estuary nature reserve) and the surrounding areas. Holistic practices led me to literally interweave the different skills and practices from my life and working history into a less literal form of communicating environmental concerns.

A few insights identified limitations on my practice and on the findings of the research, but through the PLR, these insights function as emergent knowledge which has transformed and deepened my artmaking.

4.5 The Limitations of this Research

As PLR, artistic works are idiosyncratic by nature, emerging from my individual practice. This is in line with the aims of this type of research, but it can be acknowledged as a consideration when delineating the scope of the findings.

The findings and the processes I developed cannot solve the problems that prompted this study, such as the local effects of global warming. It cannot effect changes to some of the threats to the Estuary, although my artwork expresses my concerns about the setting and its vulnerabilities in the face of planned development. As stated before, this may raise awareness.

My knowledge of science is limited. I was unable to fully access knowledge of the scientific processes of cellular and genetic predispositions of plants for self-healing and off-setting pollution. It was beyond the scope of my study to conduct 'scientific' experiments in the manner of quantitative research. This would need an art/science collaborative research project.

Due to the qualitative research approach, the concept of 'scientific' validity of the findings is not appropriate, and the findings can't be generalised to all settings or all creative practices. However the insights from this PLR can be said to have some conceptual transferability that may be fruitful to other artists exploring in similar settings and to address research questions with similarly environmental foci. My detailed descriptions and reflection on my artmaking processes contribute findings that may be of assistance beyond the subject matter and setting.

Another limitation arose when textually recording my spontaneous processes and intuitive creative processes which frequently extend for hours. When I came to record what I did, I frequently had forgotten aspects or parts of my processes, or these which were verbally inexplicable. My processes cannot be fully conveyed in this text. Artist/researchers could consider the use of film to inform the progress of artmaking.

A tension between the organic embellishments and the concrete and glass structures may be said to have highlighted the degenerative and reparative elements in both exhibitions. I intended that the natural materials would slowly disintegrate and the remaining pollutants would endure, emulating the current realities. At the time of organising both exhibitions I did not consider that being indoors, galleries might also be counter to these aims. Subsequently I have concluded that these artworks would need to be positioned outdoors in the estuary to achieve this aim.

Additionally, experiencing the cloaks in the Estuary could have better served the interface between the wearers and the ambience of the estuary. When I experimented with the first installation in the Estuary, I did not consider specific long-term situations for the positioning of the cloaks and chairs. Additionally, the examiners may not have been able to experience an exhibition in the actual estuary. If wearers of the cloaks could have been present for the examiners' viewing, the exhibition would have become a stronger statement of the title. The two fragile chairs that could not bear the weight of a human, I subsequently realised as a limitation. These chairs became distanced singular visual experiences, where the viewers were unable to experience the vegetation or feathers surrounding their bodies when sitting.

These conclusions show the unresolved outcomes of these two exhibitions, which contributed to emergent knowledge about engaging with site-specific environmental art.

There were conceptual limitations. I had wanted to communicate to gallery audiences the Estuary realities. The challenge was to create an estuary ambience using a concrete and glass structure, which I had decided might work to set up a tension with the organic artworks. The KZNSA Gallery provided spotlights pick up movements of light and shadows, floating movement of materials which I amplified through using fans. I further supplemented the lighting through the use of upward facing spotlights inside the cloaks. I used a disperser for estuary smells, and I projected recordings of estuary sounds. These attempts to evoke the Estuary in an immersive installation space brought back the literal which I had all along been trying avoid. The processes of recording people's reactions when they tried on the cloaks at the KZNSA would have affected their somatic experience by making them verbalise rational responses.

4.6 Moving forward

This conclusion of this research project leaves me with a few unanswered questions that I would like to pursue in the future, such as:

- explorations of other geographic locations which could provide ecological insights and experiences.
- later three-dimensional artworks suggest further potential for exploring somatic engagement to engage with external realities in more metaphoric less literal ways.
- interdisciplinary collaborations between scientists, artists and the environment

- the knowledge and methods which emerged have potential beyond the academic realm and might serve as creative inspiration for environmentally conscious fashion and home decor designers, the industry which I was once part of.

4.7 Final conclusion

This project emanated from global concerns as introduced in Chapter 1 and the outcomes may therefore be considered as relevant locally, nationally and globally. Central to this creative research, I drew on philosophies such as Zen Buddhism (Nhat Hanh, 2020), Deep Ecology (Naess, 1973), Plant philosophy (Marder, (2014; Irigaray & Marder, 2016) and Eco-Materialism (Weintraub, 2014; 2019). My leaning towards Zen Buddhism over the last twelve years has influenced my respect for and appreciation of nature and all forms of life, aligning with the philosophies of Naess and Marder. Additionally, I have personally evolved into a more observant person. I can now focus on and appreciate the significance of so-called smaller details, a blade of grass, or leaf litter.

Through excavating my research questions, my empathy for Estuary life assisted in translations of smaller realities into artworks. My practices of deep breathing techniques, meditation and mindful walking leading to the discoveries of these smaller realities, being 'with' the Estuary, are reflections of these philosophical influences. Unexpected positive aspects of reparation emerged through my somatic awareness and sensory perceptions evolving into the three-dimensional cloaks and chair forms. These forms highlight the status of the Estuary plants as interconnectors and as the backbone of the Estuary community. Had I not integrated these philosophies and understandings into my personal practices it is unlikely I would have accessed the Estuary's smaller realities.

The value of this research project lies in my holistic creative practice incorporating the development of my research methods. This enabled me to create original work I had not envisaged at the start. My research questions, together with my Workbooks, formed the nexus of this PLR which in turn enabled my artmaking processes to be the means of this investigation. I was able to create work where my environmental concerns moved beyond the educational and literally didactic, to communicate through an aesthetic that resonated bodily, the results of a holistic process which I can now share with others.

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Appendices

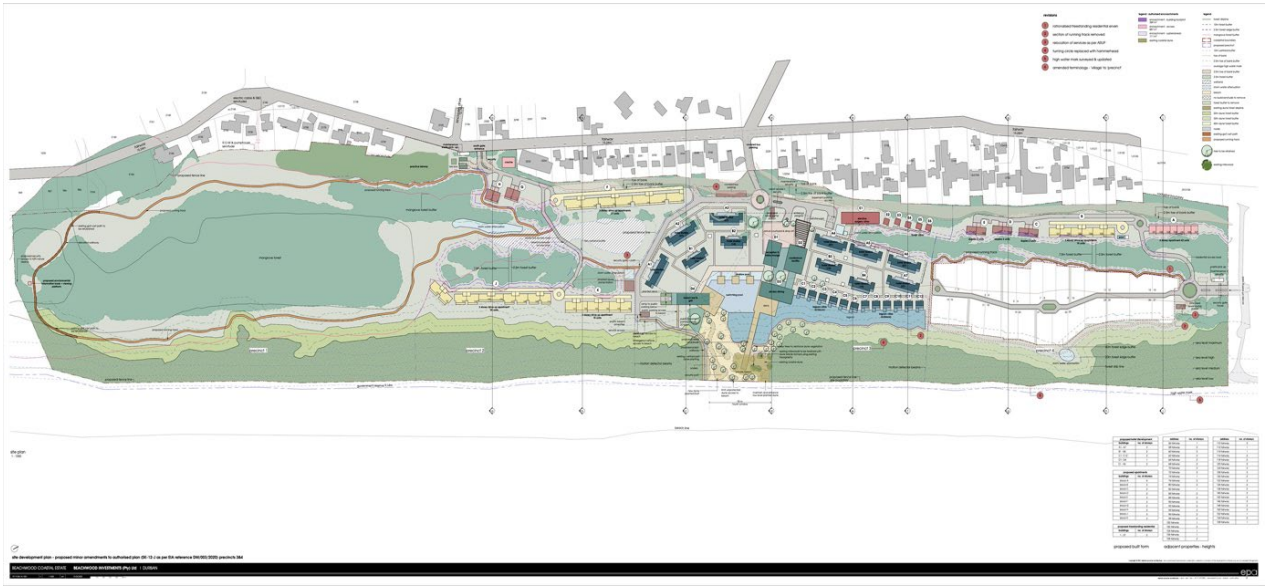
Appendix 1

The first international conference devoted to Climate Change was held in Geneva in 1979, referred to as FWCC or WCC-1. More recently, *The Intergovernmental Panel on Climate Change* (IPCC) was compiled from 14000 papers, produced by 234 scientists from 66 countries (Chestney & Januth, 2021, p.1; IPCC, 2019). The IPCC operate at a governmental and a corporate level. Their main aims are to reduce carbon levels. In order to achieve such goals, they promote alternative energy sources and fund Third and Fourth world countries, such as South Africa. The Panel at its 52nd Session (Paris, France February, 20-24, 2020) published the document titled *AR6 Climate Change 2021*, which was presented on the 9thAugust, 2021 by the United Nations. The 27th annual United Nations Climate Change Conference (COP27, 6 - 20 November 2022, Sharm El Sheik, Egypt) was attended by almost 200 countries. The 58th session (IPCC 2023, 13-17 March, 2023, Interlaken, Switzerland) presents a gloomy update on the AR6 synthesis report (IPCC 2023). The report suggests that the target maximum increase of 1.5 degrees Celsius will be exceeded, resulting in higher temperatures, droughts, fires and food shortages. All of these outcomes will impact on the Estuary.

Issues presented at the conference titled *Sustainable clusters for all* (November 9-11). TCI 2022 Global Conference, Durban, KwaZulu-Natal, South Africa include:

education, gender, sanitation, garbage disposal, poverty, egalitarianism, social justice, permaculture, soil erosion, agriculture, e-waste, water and food production. These issues are synonymous with the plight of unemployed and impoverished people. Service delivery that is non-existent or limited further exacerbates the problem of pollution. Upliftment, education, egalitarian living and practices of sustainability will indeed alleviate some pollution in the Estuary, but this kind of reparation is a long-term solution (Bukula, 2022; De Landa, 2006; Johnston, 2017).

Appendix 2



Elphike Proome Architects. (2023). ***Beachwood Proposed Development***. Layout plan number 19119-SK-14-1000. Durban, KwaZulu-Natal, South Africa.

Appendix 3

DEVELOPMENT PLANNING ENVIRONMENT & MANAGEMENT UNIT
Development Facilitation Department

166 K E Masinga Road, Durban, 4001
P O Box 680, Durban, 4000
Tel: 031 311 1111
www.durban.gov.za

GCFP No	:	21/7/3
Our Reference	:	LUMS20221110001/CN
Enquiries	:	Ms Nicole Govender
Telephone	:	(031) 311 7225
e-Mail	:	Nicole.govender@durban.gov.za

ETHEKWINI MUNICIPALITY
DEVELOPMENT PLANNING, ENVIRONMENT & MANAGEMENT UNIT
DATE: 2023 -07- 24

BEACHWOOD INVESTMENTS (PTY) LTD
SiVEST SA (Pty) LTD
Attention: Kavi Soni
P O Box 1899,
Umhlanga Rocks,
4320

COMBINED DECISION NOTICE

APPLICATION NO. : **LUMS20221110001/CN**

PROPOSED DEVELOPMENT :

PART B: **Subdivision of Remainder of Erf 3485 Durban North into Portions 59 and 60 of Erf 3485 Durban North.**

PART C: **Rezoning of Portions 59 and 60 of Erf 3485 Durban North from Private Open Space to Beachwood Coastal Estate.**

PART D: **Subdivision of Portion 59 of Erf 3485 Durban North into Portions 61-68 (of 59) of Erf 3485 Durban North.**

PART E: **Subdivision of Portion 60 of Erf 3485 Durban North into Portions 69-107 (of 60) of Erf 3485 Durban North.**

PART F: **Removal of Restrictive Conditions of Title Applicable to T34203/2017, Namely: - Conditions A. (b)(i)-(vi), A. (c) (i)-(ix), A (d), B (a)-(d), C, F AND G.**

PART G: **Cancellation of An Existing Road Servitude and Parking Area Servitude**

PART H: **Registration of A New Right of Way Servitude and New Public Parking Servitude, Both In Favour of the Public**

8.13.2 The objections received were duly considered and the Municipal Planning Tribunal is of the opinion that the merits of the application have been sufficiently established to warrant the approval of the application.

PART J

8.14 That in terms of Section 46 (1)(a) of the eThekwini Municipality Planning and Land Use Management Second Amendment By-Law, 2021 (Notice 95 of 2021) and the eThekwini Municipality Land Use Scheme: Central Sub-Scheme, the application for the Registration of Forest Servitude over Portions 59 and 60 of the Remainder of Erf 3485 Durban North situated at 9 Beachwood Place Durban North as appearing on approved Layout Plan no.: 19119-SK-14-1000 dated 28/01/2022 prepared by Elphicke Proome Architects designated as Forest Edge Buffer (to follow approximately the 40m forest edge buffer) be **APPROVED** for the following reasons: -

8.14.1 The forest servitude seeks to preserve the environmental integrity of the coastal forest where no development is permitted to take place. This will preserve the environmental assets that have been identified to be conserved and maintained and not for development purposes.

8.14.2 The objections received were duly considered and the Municipal Planning Tribunal is of the opinion that the merits of the application have been sufficiently established to warrant the approval of the application.