Planning and well-being: Aesthetic perceptions in a deindustrializing landscape

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Foreword

This Major Paper is situated within recent scholarship on deindustrialization, which emphasizes lived experiences, and considers the meaning of industrial loss for particular groups and society—cumulatively. This topic is central to my broader Program of Study, which explores community based environmental planning and design with the intention of uncovering means of sustaining and nourishing communities through boom and bust economies, and cycles of uneven development as these occur both regionally in the urban landscape and globally.

This research will examine local challenges, using environmental aesthetics as a tool for understanding and interpreting lived experiences, in order to explore intimate understandings of the landscape. The discussion will integrate these individual understandings, experiences, and opinions with the larger political and economic contexts; exposing current injustices, and exploring the ways in which possible futures appear to be, or are experienced as being, limited. This will help to consider a way forward, in this particular situation, and in deindustrialized spaces in general; for if we know what people are experiencing and why, we are better able to understand how to improve that experience, and in what ways.

This paper will answer three central questions:

1. What are the experiences of various individuals in relation to the recently decommissioned Dartmouth Imperial Oil Refinery?
2. How do individual experiences interact or fail to interact with global forces and realities?
3. How might these dynamics be changed to promote greater justice, locally and globally—both generally, and through specific recommendations for the site.

Abstract

Halifax has experienced an uneven landscape of deindustrialization since the late 1970's. The former city of Dartmouth, now a planning region within greater Halifax, is an area which has remained quite industrial relative to the Halifax peninsula. The Imperial Oil refinery was a part of this remnant industrial landscape. Situated in the neighbourhood of South Woodside, the refinery has been a prominent feature on the waterfront skyline for almost a century. It is understood, appreciated, and despised differently according to different actors and observers—creating both stigmatization, wonder. The impacts of its presence are similarly dispersed. The refinery closure was met with sadness, ambivalence, but also, quite a bit of relief. The dynamics between lived experiences, and the broader global context and forces, shape future possibilities for community development, and there is a the tendency for poor engagement among different acting bodies—a function of an entrepreneurial mode of development. The poor coordination of planning efforts, and imbalanced power in decision making has resulted in a disengaged community. If justice were to be restored in land use decisions, there is potential to both restore well-being in a stigmatized community and take advantage of synergies between community capacity building and industrial development.

Key Words: Industrial Aesthetics, Well-being, Deindustrialization, Community-Industry Relations, Waterfront Lands & Skyline Design, Public Realm, Cultural Landscapes, Art as Public Engagement

1. Introduction

Deindustrialization is a term first used in the 1980's, which captures the processes involved in, and the outcomes of, industry leaving an area or region (Bluestone & Harrison,1982; Strangleman et al., 2013). The process of deindustrialization is typically thought of as a post-1970's era phenomenon of abandonment and closure of factories in industrialized nations, resulting from a locally declining investment in industry.

Primary resource extraction, secondary processing, and manufacturing industries suffered from stalling gains in efficiency in existing industrial areas relative to emerging sectors of the economy (Cowie & Heathcott, 2003; Strangleman et al., 2013). There was a declining investment in improving existing industrial operations, as corporations sought to crush unionization during the 1960's and early 1970's, and relocate to areas where unions were not prevalent (Cowie & Heathcott, 2003; Strangleman et al., 2013 p 9). The changes in transport infrastructure and distribution capacities played a large role in making these relocations viable (Hamnett & Whitelegg, 2007). In the 1980's some large investments were made in new technology once again, and some industries were able to persist. The technology being used to upgrade facilities, and automate jobs, required labour and a production process itself, and therefore created additional manufacturing opportunities (Cowie & Heathcott, 2003). The extent to which efforts such as this have stifled trends of mobile investment and abandonment overall is debated, but older and less competitive industrial operations undoubtedly suffer under the weight of competitive advantage (Baldwin & Macdonald, 2009).

Competitive advantage in production is based on a company's ability to increase quality and production efficiencies through such things as new technology, ease of transport, differential

taxation policies, subsidies, reduced labour costs, and environmental regulations (Clark et al., 1993). The influence of these factors is catalysed by (uneven) trade liberalization policies, and the rise and progression of corporate human rights (Bush, 2012). These incentives play out within a physical world, in which built capital flows through cycles of devalorization, as land values shift, built structures decay, and landlords seek maximum returns on their built investments by allowing them to go unrepaired (Smith, 1982). Abandonment and decline of industrial sites occur more often in the west, than regeneration (Ling, 2007).

Yet within this framework of competition, variable manifestations and iterations of industrialism exists on a continuum to deindustrialization, dependent on time, location, scale, specific types of production, and socio-cultural contexts. Beyond the "ideal" progression of globalization, the causality of industrial change is variable and unsettled. The bulk of research on deindustrialization was conducted decades ago, with a narrow focus on immediate impacts (High, 2013, p. 149). Meanwhile, the global and local contexts is evolving; and the previous research has had arguably little clear success in addressing and responding to the wider challenge presented by deindustrialization (Strangleman et al., 2013).

The physical and socio-cultural impacts of deindustrialization are vast, far reaching, and shifting (Ley, 1996; Hamnett & Whitelegg, 2007). As industries leave cities and metropolitan areas, underused and derelict sites remain and have had a profound impact in the urban fabric and livelihoods in communities (CABERNET, 2006; Handley, 1996). These sites are often found in central areas of the city, heightening their impact, since urban growth has meant that complexes previously on the periphery have been engulfed by development, and now make up important parts of our environment (Jevremovic et al., 2012; Maskit, 2007). This has led to

ongoing and visible challenges, such as the large scale cases of paralyzing urban decline found in the rust belt regions of America such as Detroit, MI, and Cleveland, OH. The legacies also live on at smaller scales throughout the developed world, in quieter ways, often passively accepted and largely ignored despite their strong personal consequences (High, 2013).

With this in mind, there has been a recent call by scholars such as Steven High, Tim Strangleman, James Rhodes, Sherry Linkon, and others, to continue to explore the processes and outcomes of deindustrialization with fresh eyes, to attend to the cultural significance of industrial change over time, and through memory. As time goes on, as many deindustrialized areas still sit vacant, and more continue to empty, the question of what constitutes appropriate regeneration is at hand. Wider and deeper understandings of process may finally allow us to respond in meaningful and just ways.

2. Research Focus & Methodology

This research looks at the issue of deindustrialization through a case study of the recent closure and on-going transformation of the century-old Dartmouth Imperial Oil Refinery, to a marine petroleum shipping terminal. The refinery site is located within Halifax, Nova Scotia. Halifax is a Canadian urban regional centre with a rich history in shipping and manufacturing, especially along its harbour fronts (Parker, 1998). The industrial character of the city has been sustained somewhat longer than many other Canadian and North American cities due to its deep water port and location on the Atlantic Coast, allowing it to be a gateway and hub for activity in the Atlantic basin. Halifax continues to actively undergo a process of transformation from an industrial region, to a post-industrial one. This partial closure fits the trends of global competition in secondary processing of natural resources that have repeated for decades, and

provides a useful context in which to investigate the ways that 'deindustrialization' is continually being played out in new and different ways over time.

The former Imperial Oil Refinery is located south-east of downtown Dartmouth along the waterfront of Halifax Harbour. The site is directly adjacent to the community of South Woodside, and is in close proximity to a newly-developing neighbourhood known as Russell Lake West. The site also borders Morris Lake, and two sections of undeveloped land to the north and south-east, and the Canadian Forces Base (CFB) Shearwater Airport to the south (see Appendix C, figure 2.1). The refinery was owned and operated by Imperial Oil for 95 years, from 1918 up until September 16th, 2013 (The Chronicle Herald, 2013). At that time the site began to operate strictly as a marine terminal for receiving and shipping out petroleum products, and contractors will work to slowly dismantle the refinery over the course of the next three years. The large tract of waterfront land, on which the oil refinery has been located for the last century now holds aging and largely disused industrial infrastructure. The remaining tanks and infrastructure are on the north-east side of Pleasant Street, away from the harbour front, and will leave approximately 470 acres open. Though the site is being used as a shipping terminal which serves the area by receiving petroleum products, the site now provides negligible employment, holds an area of land much beyond what is functionally needed, and continues to restrict public use of the area.

This work will explore and integrate individual understandings, experiences, and opinions of the refinery with the larger political and economic contexts. Accomplishing this task calls for new research methods, particularly those which use artistic, tactile, and aesthetic representations of industry and industrial change to increase the understanding of the lived experience of industrial place. This research uses multiple methods, including the exploration of

aesthetic interpretations of this degrading industrial site. Aesthetic descriptions provide insight into cultural representation, personal narratives, and meaning as it is mitigated through memory. This approach grasps at otherwise hidden meanings, and unresolved political, cultural, and social tensions. At the time of writing, no other aesthetic investigations of oil refineries are known.

The interdisciplinary approaches used to examine this situation will hopefully shed light on the broader story of justice within the changing role of industry in cities and in relation to shifts in working class culture and communities. An understanding of the dynamics of this shut-down may help to expose the ways in which possible futures appear to be or are experienced as being limited, and lay ground on which to build a just future, globally and locally, in which its participants have agency and are not merely riding (or crashing amongst) the waves of change.

Methodology

Case Study

This research takes the form of an in depth case study of industrial downsizing. The context-dependent nature of case study research is useful to shed light on what can seem like broad scale changes (Flyvbjerg, 2001). Following after Mah (2012) this research takes a qualitative 'snapshot' of an unresolved situation, and considers potentials for the site. While the analysis will not show a complete process of landscape change, it is an interesting time to investigate, since those involved may be in a state of transition. By looking at a situation in flux the research may capture the roots or nascent emotions, desires, and thoughts that may later settle in submission to dominant notions of what must happen in this space. Additionally, this research simulates and practices the work of professional planning, which is done to discern an approach to moving forward.

In addition to the timely nature of the refinery shutdown, this case was also chosen for its geographic and cultural positioning. The refinery is situated in a very visible location, forming a significant part of the skyline along one of Canada's most visited tourist destinations--the Halifax boardwalk. The refinery is also adjacent to residential neighbourhoods, and is along a major through road connecting more distant, southern and eastern parts of Halifax to the regional centre. This provides the opportunity to do a multi-scalar investigation of site experience according to a wide selection of people.

The case study is developed using content analysis of mixed methods and sources. Methods include: direct observations; narrative and content analysis. Narrative and content analysis was carried out on 22 semi-structured interviews, dialogue at community meetings, a coastal development conference, participation in a design charette, and of written materials including newspaper articles, plans, regulations, policies, artifacts, local history publications, and scholarly literature. Demographic and economic data was also considered.

Direct Site Observations

Excursions to the refinery periphery were made for the purpose of direct observation on five occasions during the fall, spring, and summer of 2014. In addition to these excursions, the refinery was viewed daily since January 5th, 2014 from the author's apartment window, among other variable views. This research is considered personal, and the author's own experience of the landscape is included High (2013) writes "it is this self-awareness about one's own social location, and the politics of one's own actions, that is missing in so much of the urban exploration and industrial ruination scholarship" (p.149). Video and photographs were taken of the refinery and surrounding areas from various view-points.

Interviews

Research participants were approached by email, telephone, and in person (see Appendix A for same letter of invitation to participate in the research). Following each interview participants were asked to recommended other people who would be beneficial to interview, though not all potential participants were interviewed (see Appendix B for a record of interview participants). The interviews were conducted with individuals representing groups who are variably tied to the site and the event of the refinery shut down, in order to compare potentially conflicting interests, values, and overall perceptions. Anaf et al. (2012) advise that it is a strength to include a range of ages, a diversity of occupations, and multiple genders, and so this diversity was attempted in reaching out to participants. Interviews ranged in length from ten minutes to two hours, but were an average of 40 minutes (see Appendix C for sample consent form and Appendix D for sample interview questions). All 21 participants completed a full length interview, except for the main representative of Imperial Oil who declined to answer specific questions, but rather, made general comments regarding this research.

Interviews were semi-structured, and were conducted either in person or over the telephone. The interviews first addressed immediate aesthetic perceptions of the site, followed up by inquiry into the participant's personal background and relationship to the refinery site, thoughts and feelings on the refinery closure, and opinions about future planning and use of the site. This is a 'user-dependent' method (Penning- Rowsell, 1973) which allows respondents many opportunities to express themselves. Participants were encouraged to, and often did expand on thoughts or ideas not included in the questioning**.**

Aesthetics

The concept and theories of aesthetics are used as a starting point to stimulate reflection and bring understanding to lived experience, and can also applied in moving forward, to resolving tensions and build understanding. Within the interviews, the language and focus of aesthetics may help participants to imagine and picture possible future. In contrast to the common method of using photographic representations to stimulate aesthetic responses, imagination and memory were relied upon as the source of sensory stimulation. As we remember, we re-experience, as the same areas of the brain are triggered. This is likely to reflect the most natural and prevailing representation of their common experience of the site, as subjects recall the salient visual content of the landscapes, rather than responding to quality, scale, composition, style, editorial choices, or specific weather and lighting conditions of an image (Nassauer, 1983).

3. Literature Review

3.1 Themes in Deindustrialization Research

Deindustrialization has been approached from a variety of angles in academic and popular literature through time, due to its far reaching and interconnected impacts. It is often framed and theorized in relation to shifting global eras, analyzed in terms of its high level causality, its regional economic impacts, employment consequences, and, more recently and to a lesser extent, for the meaning of its long-term, legacies, and implications for community life.

Deindustrialization is often framed in broad terms, as a loss of industry related to a shift in advanced industrial countries, from predominant manufacturing orientations, to greater representation by the service sector (Baldwin & Macdonald, 2009). This shift is discussed in

relation to, or as part of a hollowing out of the economy (Rodwin and Sazanani, 1988); a structural economic change (Feinstein, 1999; Emmenegger, 2012); a move into a post-industrial society (Bell, 1973); from fordism to post fordism (Boyer & Durand, 1997); or a coming of a new post modern era (Harvey, 1989). Theories of uneven development and the urban growth machine models strive to explain the patterns of investment and disinvestment, and inform understandings of changes tied to deindustrialization (Smith, 1982; Massey 1995; Molotch, 1976). Deindustrialization is certainly not always seen as a problem to solve, but rather as part of a natural or necessary process of global growth and change to be understood.

The phenomena is frequently studied to gain understanding of 'high level' (global or international) forces, or structural and systemic causes (ie: Bluestone & Harrison, 1982; McKenzie, 1984; Rodwin & Sazanami,1989; Feinstein, 1999). Increased foreign trade is the most commonly cited facilitator of deindustrialization (Krugerman, 1996). Related factors commonly studied and linked to deindustrialization include shifting currency values; changing global demand; trade policy; and relative sectoral growth, in relation to certain locations and certain products (ie: Spilembergo, 1998; Krugman, 1996; Rowthorn and Ramaswamy, 1997; Baldwin & Macdonald, 2009.) It is also common to measure, calculate, and predict the extent of the industrial 'decline' based on these factors (ie: Pilat et al. 2006; Baldwin & Macdonald, 2009).

The causality, effectiveness, and extent of a transition into a post-industrial economy, is also commonly studied. This is measured in terms of the social restructuring of the last quarter of the 20th century, and the extent to which the working class population has been exchanged for a large 'middle class' of 'professionals' and managers in a new service-based economy (ie: Hamnett, 2003; Ley, 1996). The prevalence, make-up, and income of this middle class is highly

debated in the literature, and widely studied, but the weight of research suggest that middle class employment in many places, does not seem to have succeeded in filling the void left by working class labour (Burris, 1986; Krugerman, 1996). Instead, we see the creation of an 'hour-glass economy', in which there are few middle income positions, and a widening gap between the rich and the poor (Gappert, 1975; Bluestone & Harrison, 1982; Ley, 1996; Emenegger, 2012).

A shift into a 'functioning' post-industrial economy and culture is not guaranteed, and instead, occurs in uneven ways globally and even within a local regions. The displacement of the industrial mode of production by the service sector depends on the growth of financial and business services, and increased cultural consumption, making previously industrial spaces valuable for reinvestment (Hamnet & Whitelegg, 2007). Without this snowballing effect of new demand, land-use transformation is unlikely, and disuse and decline may become the new norm. This has been seen to persist for decades at a time (Hamnet & Whitelegg, 2007).

Whether or not industry is in large scale decline, or if the post-industrial economy is thriving in terms of national productivity or other measures, the removal of these industries is associated with particular and variable changes in the cultural, social, and physical structure of cities. Non-monetary implications have been considered in research since the earliest studies in the 1980's, by Bluestone and Harrison (1982). However, early research is often laden with nostalgia for prosperity and stability and lacks suggestions for forward motion.

During the 1990's, in-depth case study research became common, providing insight into many aspects of the immediate economic and social effects of industrial loss. Milkman (1997) asks: 'what is happening to industrial workers and their way of life?'. Her work focuses on workers from a single factory, and reveals the dilemmas industrial workers face in the

postindustrial age through their experiences. However, much of this work focused on the hopelessness and brokenness of the situation, with few suggestions of a way forward. Comparisons of different situations have been helpful in piecing together common themes, and moving towards appropriate policy approaches (Strangleman et al., 2013).

Case studies of the gentrification of previously industrial areas have been frequently conducted. These studies are politically charged, and often bring helpful tangible, nuanced, and well contextualized understanding to one possible post industrial pathway. Gentrification is a process of economic development, in which residents from low-rent neighbourhoods are displaced by higher-income residents, and it is common in previously active industrial spaces (Smith, 1996). Those formerly involved in working class industrial labour are not likely candidates for high-level service sector employment , and are prone to displacement (Ley, 1996). Gentrification can result from natural competitive advantages, such as location, but is also often in the form of intentional and government led revitalization. Waterfront lands, which are of particular relevance to this case study, are prime target sites for gentrification of both types. Waterfront lands often have a history of heavy industrial uses, and are more recently coming into public interest, attracting investment and environmental remediation. These ‘revitalizations’ are viewed positively by many, for providing a cleaner environment locally, and symbolize reduced labour demand and increased leisure (ie: Bell, 1973) (National Research Council, 1980; Smith, 1989; Wakefield, 2007). These areas, and cases of gentrification in general, have been studied by many, from a variety of angles, such as assessing governance structures or equity (ie: Bassett et al, 2002; McCarthy, 1996; Swyngedouw et al., 2002).

Gentrification encompasses a broad 'post-industrial' direction. Baum et al., (2002) find that as deindustrialization transforms the workforce, new neighbourhood "types" emerge. Their conclusion is that the affluent neighbourhoods are divided from the vulnerable ones along lines of the new and the old economy, respectively. Today, deindustrialization can become a community's defining character and identity (Linkon, 2013). Deindustrialized neighbourhoods are characterized by a welfare-dependent demographic, sometimes alongside gentrifiers (Crow & Allan, 1994). Mah (2012) also found that communities nearby places of ruin she researched were economically deprived, in physical decline, and experiencing social exclusion.

Job loss mitigation strategies have been studied extensively since the advent of deindustrialization, through to the present time (ie: Anaf et al. 2012), sometimes at the expense of other aspects (Ploegmakers & Beckers, 2012; Ruelle, 2012; Strangleman et al., 2013). However, similar to themes of displacement present in work on gentrification, the analysis of the inequality inherent in the shifting labour market is important in revealing uneven patterns of impact along the lines of gender, race and class, as certain groups are often cut off from the labour market, concentrated in degraded areas, and stigmatized (ie: Modell & Brodsky, 2011; Sugrue, 1996; Wacquant, 2008). Lever (1991), while still completing a high level analysis, links deindustrialization in Glasgow to the processes of counterurbanization. The uneven patterns of social and economic inequality are strong themes throughout recent, interdisciplinary work on deindustrialization (Strangleman et al., 2013).

Throughout the industrial era (approximately 1900 - 1975), the working class population was the largest social class, and communities were structured around large, labour-intensive, workplaces (Baum et al., 2002). The transition away from that format is dramatic, and far

reaching. Recent research orientation begins to provide greater sense of understanding the occurrences as part of a longer, dynamic and unstable, historical process and a wider cultural change, beyond just immediate consequences for displaced workers (Strangleman et al., 2013; High, 2013). In the new millennium, topical work has begun to integrate and establish interdisciplinary linkages between economic changes and the lived, cultural, and social reality of these physical spaces (Mah, 2012). One way that this is just beginning to be done is through analysis of representation, interpretation, and memory in culture, moving beyond previous economic, social, and political dimensions. A theme that arises in this research is the role of active choices as opposed to inevitability of process.

Cowie and Heathcott's 2003 book 'Beyond the ruins: The meanings of deindustrialization' has been a significant, and frequently referenced publication within this new orientation in research. Cowie and Heathcott (2003) demonstrate through a diversity of examples, that deindustrialization cannot be simplified, or relegated to a time period, but is instead "socially complicated, historically deep, geographically diverse, and politically perplexing" (p 1). Mah (2012) also stands out in the literature by her delicate handling, and care not to polarize capital interest and community interest. She, like many of the others, emphasizes lived experiences over detached observations, and sees landscape through a phenomenological lens, defining it "in terms of embodied practices of dwelling" where the "self and landscape are entwined and emergent" (Wylie, 2007, p 14). In this way, physical vestiges become legible traces of wider economic, but also social processes. Her method is attentive to the nature of memory and its capability to trace lines and divisions between social groups, generations, and classes. Her work also looks forward, and sees potential to build on local imaginations of the future.

The various works of Steven High are significant, and rooted in representation through memory, historical narrative, and oral histories. High expresses a personal connection to his subject matter, as well, having been raised in an industrial region of Northern Ontario. He sees deindustrialization as war—violent, wilful, and capitalist—and holds the government accountable (High, 2013). He highlights the tensions between past and present found in the active resilience of the working class culture, which still very much persists, especially smaller municipalities where nothing has come to fill the vacuum (High, 2013). Yet this culture is often shroud in shame and ignored.

Bush (2012) is particularly aggressive in his clear resistance to the routine framings of closure events as economically deterministic, and his work is an unlikely story of individual agency which succeeded in keeping a refinery in Lima, Ohio up and running through civic commitment, networking, and deal-forming. Weinbaum (2004) is also engaged in similar activism in a dramatic struggle and standoff over Appalachian plant closings.

The research described so far focuses on verbal recollections. Representation in visual mediums of photos, art work, written stories, etc., are also demonstrative of the context and values held by various groups and individuals through time (High, 2013; Strangleman et al., 2013). ‘Steeltown USA: Work and Memory in Yougstown’ by Sherry Lee Linkon and Russo (2002), for example, uses mixed body of visual representations to analyze the cultural impacts of deindustrialization. Byrne and Doyle’s 2004 essay “the visual and the verbal” uses images in an almost reverse way, to evoke responses from community members and understand lived experiences. These narrative and representational pathways help acknowledge the truths within stories often disregarded as “nostalgia”. The past was “objectively better” for some, when they

had money, stability, and meaning in their work--the tangible act of making things (Strangleman et al., 2013 p 19). As workers were made redundant, a social contract was broken, and questions of waste, fairness, justice, and control are foregrounded.

In contrast to these storied accounts of lived experiences, Edensor's popular work decontextualizes and aestheticizes industrial ruins, removing the background context, stories and people from his images and descriptions. Edensor sees the creation of ruins as "an inevitable result of capitalist development" (Edensor, 2005, p. 4), and values these spaces as grounds for play, exploration, imagination (Edensor et al., 2012). His perspective has been frequently criticized as privileged and disrespectful (Dillon, 2005), "complicit in the logic of the global market place" (High, 2013) and akin to voyeuristic ruin gazing (High & Lewis, 2007). In this way, the aesthetic gaze is catering to the new middle class that enters in to gentrify such spaces, sometimes possibly even *because* of such imagery. However, Edensor's work is also acknowledged to demonstrate, expand on, and add depth to this common and rising fascination of urban culture with decay, often called "ruin porn" (Millington, 2013). The individuals who hold this gaze, and were not directly involved in plant closures are being impacted, too, and are inheriting this decaying landscape. Their interpretations and representations are important to grasp at when looking at the shift as a broad cultural phenomena as well, in order to see what role they may rightfully play in the future of these spaces (Strangleman et al, 2013).

Although it may offend and disregard personal experiences, Edensor's acceptance and embrace of ruins is not irreconcilable with active resistance of decline. High (2013) calls for the continued expansion and use of new methods and different types of evidence to bring about an understanding of "what it means and how it feels to live in a deindustrializing society" and focus

on “cultural agency, resilience and flux” in these places, rather than having their identities fixed and stuck in place. Artists, photographers, filmmakers, novelists, digital practitioners, and others therefore have an important role in the future of deindustrialization studies, and have begun to take it up with notable increased vigour just in the past year, and this work builds upon that (High, 2013; Strangleman, 2013).

The current message in deindustrialization research tells us that the ebbing tendencies of capitalism may be forceful tides, but we are not of the same essence as the tide, and can resist, and act apart from it. Faith in permanence crumbles from all sides when the industrial era is seen as part of this capitalistic historic process (as both Edensor and the personal narratives are now recognizing), but society as a whole must learn to adapt to and regulate the flows with our values. Hope for the future in the midst of transition and change is first rooted in understanding the past and the impacts, but then letting them go, to re-envision ourselves. These spaces can be used as venues for expression and understanding, and incubators of creativity. There is a need both to understand and appreciate, but also to see the possibilities beyond.

3.2 Environmental Aesthetics, Design, Creativity & Justice

Aesthetics are what we perceive through our sensory cognition, and Environmental Aesthetics (EA) is an area of philosophical aesthetics that explores the way that people perceive their environments (Brady, 2003). The field has gone through several major shifts, and has a long history. Research in environmental aesthetics has largely focused on natural environments, but the field of interest has been expanding to the aesthetics of human environments, though little has been done with regards to industrial aesthetics (Berleant & Carlson, 2007). EA still lacks theoretical unity, however its approaches are applied in diverse settings by humanists,

experimentalists, activists, planners, policy makers, and others (Porteous, 2013). For this research, it is important to establish the usefulness of EA in shedding light on the lived experiences of deindustrialized spaces; and its usefulness in facilitating the development of creative and just approaches to planning these areas. To do so, the basics of EA theory and literature; the importance of aesthetics in mainstream planning; linkages to justice; and existing representations of industrial aesthetics, will be explored.

3.2.1 Introducing Environmental Aesthetics

Environmental Aesthetics provides a way to think through the nature of existing reality, which affects us through clouded and constructed layers, while we also influence it. We are predisposed to certain ways of looking at the environment through such influences as our shared psycho-biological nature (Kaplan & Kaplan, 1989); constructed political, cultural and smaller social group understandings; down to our own individual combinations of experiences, associations and memories. Current thought in environmental aesthetics could be said to take two main approaches to what influences our perception: cognitive and non-cognitive, which are increasingly recognized to be highly interrelated, overlapping, and compatible (Moore, 2007).

Cognitive approaches to aesthetic perception can be categorized with conceptual or narrative approaches, which emphasize the importance of learned knowledge in the appreciation of our environment (Foster, 2009). Scientific knowledge may provide the most concrete form, but collective memory, or history learned through our culture and social groups are also valid and valued forms of knowledge, since all knowledge is interpreted through a cultural lens (Brady, 2003). Where perceptions differ, cognitive approaches would say we should be able to align our understandings with certain truths (Saito, 1998).

Non-cognitive, non-conceptual, ambient, and visceral approaches to perception highlight the importance of something other than learned knowledge contributing to our perception of the environment. Here, sensory engagement brings the individual's interior world more directly into relation with the exterior, with emotion and physicality playing a primary role in informing perception (Foster, 2009). Humans are affected and emotionally engaged with the environment in subjective ways, which are undoubtedly interrelated with what is more objective, but from this approach are also thought to have their own place, independent of knowledge.

Perceptions are mediated and modified by memory through time. Neither our memories--individual, social, or cultural nor the physical landscape, are static. Memories are created in process individually and collectively (Nora, 1989). The perceived landscape is constructed by social relations (Lefebvre, 2003), and can be defined as a metastructure of relations between different systems (Brunetta & Voghera, 2008); a process and dynamic medium for our lives and a palimpsest, created and recreated continuously, but with remnants of the past living on (Mitchell, 1994). The landscape is within us, and shaped by us outside of ourselves, too. Our perceptions are dynamic with our changing selves, the changing landscape, and our changing relations with other human beings and their systems. Yet these perceptions are often "powerful, enduring", and "shape visions of what is relevant, causal and possible, proper or egregious", especially those formed in childhood or during significant life experiences (Foster 2009, p 97). Understanding why a landscape is perceived in a certain way can therefore (1) reveal important information about the person, culture and place, and time; its successes and failures to meet human needs; or human failures to meet the 'needs' of the environment (Cold, 2001). This stimulates reflection on the past, which facilitates navigation of the present. This understanding can also then (2) provide

a basis and freedom for imagining the future, and (3) the aesthetic fabric can then be manipulated to take the form that is desirable, cognitively and non-cognitively--reinforcing one another.

3.2.2 Environmental Aesthetics Research for Human Environments

The field of environmental aesthetics grew out of an interest in the aesthetics of nature (non-human environments), with theoretical and experimental investigations of human environments emerging somewhat later. Historically there was a partitioning between how art (or human creations) were perceived in contrast to the environment (Maskit, 2007). However, perception is increasingly understood as culturally and personally constructed, which allows human environments to rely on much of the same theory as environmental aesthetics and art (Maskit, 2007)--just applied to a landscape that has profoundly different psychological effects on the person (Ulrich, 1979).

Theoretical and experimental work investigates the importances of various qualities and features of the human landscape, and their relevance to us. Research finds that content is more important than pattern complexity (Ulrich, 1981), historical significance increases appreciation (Nassaur & Benner, 1984); as does the degree of naturalness (Ward & Russell, 1981), and maintenance (Nieman, 1978); and evaluative responses to urban design can elicit responses in three categories-- pleasantness, excitement, and calmness (Nasar, 1994). However, much of this must be looked at in site- or categorically-specific ways. History, function, roles in our lives, cultural considerations, engagement, and imagination are all important to appreciation of human environments (Berlearnt & Carlson, 2007; Brady, 2003). Sense of place is formed by a myriad of influences, creating specific experiences of landscapes (Cheng et al., 2003; Stedman, 2003).

More recent findings that public dissatisfaction with appearances can seriously impede the planning process through negative reactions, affect well-being and health (Galindo & Rodriguez, 2000), and property value (Henneberry & Halleaux, 2008), has inspired a body of research associated with landscape analysis—known as Landscape Preference Studies (LPS) (Sevenant & Antrop, 2010). This work integrates environmental aesthetic theory with the assessment of urban environments, and attempts to determine objective factors influencing preferences for landscapes (Ruelle et al., 2013). Since LPS seek to make generalized rules for specific sites through quantitative methods, they do not give insight into why certain preferences exist, and somewhat ignore personal site interpretation (Purcell et al., 1994). However, it is increasingly recognized that preference and values differ from context to context (Hitchmough & Bonugli, 1997), even within homogenous cultural groups and age ranges (Sevenant & Antrop, 2010). Studies consistently find that attributes of the observers, such as age, place of residence, environmental values, motivational needs; social and cultural profiles; and the novelty of the scene to the viewer, matters. Scenes are coded differently based on experience, education, and expectations about what the place could offer (Sevenant & Antrop, 2010). This supports the importance of individual, and site-specific approaches, to understand each, highly unique context in which cognitive and non-cognitive perceptions mingle and interrelate in infinite patterns (Purcell et al., 1994). The factors that have been shown to be of importance can certainly direct where to look in investigations of aesthetic perspectives, meanings and implications; and could lead to the creation of design policies, as Brady (2003) envisions, emphasizing a set of activities in the public context which promote site specific engagement. Figure 3.2.2.1 (Appendix D) provides an overview of the factors a variety of LPS have found important, and their references.

3.2.3 Aesthetics in Planning

The ways in which urban environments have been experienced and designed throughout history has been of central importance. We have, and continue to reproduce aesthetic structures and experiences intentionally to convey information and values, and meet our needs. Aesthetic conventions have been intentionally used to evoke certain responses, or please users, in ways that have sometimes been questionable and/or ineffective, often within contexts of imbalanced power relations. In many ways, these legacies continue on in planning research and practice, and in turn are altering how people desire or expect their urban environment to be formed and what they should be like. Reinventing spaces has also sometimes provided an opportunity for creative engagement and justice. It is valuable to look at how justice and aesthetics intersect, in order to see the implications of representations and memories of the past, as well as to understand how to implement 'aesthetic justice' in the future—that is, equitable opportunity for engagement in places of beauty.

Aesthetics have always overlapped and intersected with central concerns in the field of planning. This has been most directly through concern over city appearance, but also on other areas such as living conditions, concern for the environment, and efficient functioning (Hodge & Gordon, 2008), since there is no such thing as simple appearance. Aesthetics have been repeatedly leveraged to assert power and ideologies through city design, through early movements such as the the City Beautiful and then the Garden City movements. These movements celebrated corporate industrial expansion, and then nostalgia for the past in order to ameliorate the excesses of industry—with the intention of instilling "middle class values".

However these visual ideologies and their associated governing system failed, as they did not show genuine concern for the public, and lacked housing provision (Rees, 2012).

In the 1950's the urban renewal movement battled the "blighted" conditions of physically deteriorated buildings (often factories or warehouses) and their surrounding areas. The discipline of urban design began in the 1960. It is currently standard practice to have design guidelines in North America and Europe. These guidelines suggest common understandings of what is aesthetically compatible in given contexts (Nasar, 1994). Design guidelines are increasingly found to include what are considered 'new urbanist principles'. New Urbanism arose in North America during the 1980's, and imposes a pre World War II idealism in its aesthetic. One of the main failings of New Urbanism is that it is considered placeless, lacking authenticity, arising out of its "pursuit of difference, diversity, and distinction" constrained to a highly ordered form that 'glorifies the past' (Smith, 1987 p 168) that "reflects marketing strategies rather than real cosmopolitanism" (Fainstein, 2013 p 11). There are similar problems with the ongoing historic preservation of urban districts (Hodder, 1999).

Centralized and professional design and planning practice has had a strong role in encouraging or limiting activities and meanings, and strive to achieve certain moral or social objectives (Harvey, 1973). In spite of all this attention, aesthetics is still often dismissed as superficial relative to other concerns today (Collier & Scott, 2008). Porteous (2013) views recent aesthetic degradation as the result of prioritizing production, which inclines us to value everything for its exchange and monetary worth and rarely for its intrinsic importance. "Good design" is only implemented in certain areas, according to economics. Overall the practices of urban design seems to lack appreciation and application of the ways in which aesthetics and

landscape are both projected, reflected, and formed through personal lenses, as they do not engage and validate the values of those who live, or will live there. It is trying to manipulate the public into believing that we have stability and sense of place, when in reality we are lacking it. Instead, maybe our aesthetics need to reflect genuine values of engaged publics.

3.2.4 The Aesthetics of Industry and Post-Industry

Industrial landscapes have been a significant part of daily life ever since the industrial revolution, but as of yet, ways of viewing industrial sites remain largely unexplored within the environmental aesthetics, or deindustrialization literature (Bettis et al., 1977; Maskit, 2007). Though there are a few exceptions, industrial sites are mentioned mostly in passing, being called such things as "genuinely ugly" (Relph, 1982 p 52). Noxious odours, and loud noises common to industrial areas are said to "provoke uniform disapproval" (Sadler & Carlson, 1982). Understanding of perceptions of industrial and deindustrializing sites can be drawn, to a limited extent, from other sources such as the shifting architectural styles and popular media trends; the testimony of the controversy surrounding transformations in the landscape itself; artists work and commentary; and popular consumption of ruins.

Planning practice relies on the assumption that the industrial space is despised, ugly, bred poor behaviour, and that workers require a refuge from it. Zoning practices arose to a large extent from the desire to be separated from industry (Whitnal, 1931). The quality of the industrial site is acknowledged to impact the quality of the neighbourhood, but while industrial zones are meant to be buffered from other land-uses, little attention has been given to the aesthetic quality of the structures of production themselves. These sites have been designed for safety and efficiency,

and not beauty (Porteous, 2013; Letombe & Zuindeau, 2001). Industrial buildings are low on the social, and aesthetic hierarchy (Jevremovic et al., 2012).

Bettis et al. (1977) report briefly (in two pages) on an in-class experiment facilitated in a university class, to assess the aesthetics of industry. The students were asked to discuss and analyse their own perceptions of 20 industrial landscapes. Findings included a short list of features they found relevant to evaluations. The list includes 9 features, such as architectural style, age of building, actively used or abandoned, etc. This paper is an exploratory exercise, and focuses on the value of the exercise, rather than actual findings. The conclusion is that this type of study is useful to understand how industrial landscapes might be made more compatible with adjacent land uses, to understand the underlying origins of perceptions, and develop a "sense of place" for industrial landscapes. This essentially justifies the current work, which is very similar, with just a broader spanning investigation through time, and a narrower and deeper focus in space—on a single site, with lived experiences.

Two overlapping studies, Nassaur (1983), and Nassaur and Benner (1984), look specifically at aesthetic reactions to (functional) coastal oil and gas development in the Louisiana Gulf Coast in order to explore perceptions of coastal oil and gas development, for the betterment of increased oil and gas development on the coast in coming years. Nassaur and Benner (1983; 1984) find that while facilities can disrupt the visual quality of coastal landscapes, some views were considered attractive by residents and visitors. Features that contributed to attractiveness include tidiness, night time lights, and 'interesting activity'. Nassaur and Benner (1984) draw on aesthetic literature specifically assessing coastal development. Much of this work was not directly available, but they highlight the importance of content over appearance, citing Banerjee

and Gollub's (1977) finding, that knowledge of offshore oil platforms lowered ratings despite being disguised behind trees and sculptures. This provides great support for the assertion that cognitive truths and genuine values should be reflected in what is aesthetically present. They also point to findings that suggest water, panoramic views (Dearinger, 1979), time of day (Litton, 1968), and compatibility (Feimer et al., 1981) are important in coastal contexts in particular.

From early in the 20th century, the appreciation of industrial form had transferred over into non-industrial architecture. Architects, including Albert Kahn, and proponents of the Bauhaus and International Style movements, reflect a professional interest in industrial form (Jevremovic et al., 2012). Le Corbusier, Walter Gropius, and others appreciated the monumentality of industrial architecture, representing a unifying vision of progress and rational neutrality (Krivy, 2010). In the 1970's the Structural Expressionism architectural movement emerged, which intentionally included exposed piping and raw materials, sometimes to serve purely decorative function. The Pompidou Centre in Paris, constructed in 1977, houses a vast public library, and is a clear example of the style. This architecture intentionally mimicked industry with the intention of representing cutting edge technology (Venturi et al., 2000). This Industrial aesthetic hoped to align style preferences with what was most functional (Le Boeuf, 2006), similar to the way in which strategies of the 'aesthetics of care' are meant to promote environmental stewardship (cf. Nassaur, 1997). Clearly, industrial areas have been viewed in a diversity of ways since since the beginning of the 20th century, but since the onset of deindustrialization some 37 years ago, they have been re-coded in striking ways in the mainstream public eye (Ruelle et al., 2013). Where industrial sites are no longer active, the conversion of old industrial buildings simultaneously became popular, due to the media portrayal

of lofts as places of authenticity and cultural advancement—valuing exposed materials representing an industrial past. Developer advertising campaigns used words like raw, edgy, bohemian, historical, gritty, ex-industrial, and portrayed a pioneering lifestyle in the openness and constructability of loft spaces (Hamnett & Whitelegg, 2007).

Sites of labour have been preserved and converted alternatively into museums or other uses, 'preserving and making available the memory of industrial life for diverse audiences', as a photograph might (Strangleman et al., 2013 p 16). Jevremovic et al. (2012) express an interest in preservation for formal reasons in addition to history and the creation of new identities in space. "If we perceive and assess industrial and technical structures from an aesthetic-symbolic perspective, it is clear that the value of these works is not based only on their functional and technical components, but also derives from their specific poetry, monumentality and beauty […] industrial architecture plays a significant role in new forms of identification with the space, the region and the history" (Jevremovic et al., 2012).

There is tension of competition in a structure becoming obsolete, and its historic preservation. Where they are not deemed worthy of preservation or conversion, these sites can become targets for unrecognizable change. Waterfront industrial sites in particular, are prime sites for large scale, flagship redevelopment projects, leveraged to induce broader scale revitalization (Bassett et al., 2002). They are coveted for their vantage points, panoramic views, water, and are themselves significant aesthetic features--highly visible, forming skylines and contributing to distinct feelings of regional cultural identity and a sense of place (Dearinger, 1979; Jacobs, 2004; National Research Council, 1980). As a result, planning in these areas are sometimes particularly susceptible to being taken out of local hands, leading to a host of

environmental and social justice issues (Sandercock & Dovey, 2002; Jacobs, 2004). The organized effort of bringing new investment is often welcomed by many, celebrated as neighbourhood revitalization, and transition to a bright, post industrial future (Zukin, 2010). Public space creation is frequently the goal of these redevelopment projects (Wakefield, 2007). Public spaces and the public realm in general, have critical transformative potential in opening up new claims for citizenship as venues of cultural expression and negotiation of values, and the rediscovery of place (Isin and Wood, 1999; Mitchell, 2003). However, these developments consume and destroy working class spaces (Curran, 2007), and the value of the space is compromised if the processes of development are socially and environmentally unjust. The benefits are also often found to be distributed in uneven ways (Su, 2011). Zukin (2010) explains, "somehow in the illusion of smoothing the jagged edges of uneven development, the city also lost its moral authority" (222).

Yet the tension between decline and conservation does not have to be filled with development, and post industrial redevelopment is not always (or even often) swift or guaranteed--nor necessarily desirable or just. Disused, vacant, or crumbling and rusting structures are often the alternative, at least temporarily. Some research has begun to evaluate the success of post industrial revitalization. Ruelle et al. (2013), are particularly insightful, as they look systematically at the sensitivity of the community to "landscape quality" in the context of (post industrial) brownfield regeneration projects in Belgium. Their study concludes that aesthetics are very important and influence brownfield regeneration success, as negative aesthetic (quality) appeal correlates with poor economic performance, but that communities do not always like new operations even if they do produce economically. Lower standards are set in

communities where there has been dereliction, and this opens them up to the risk of continued struggle. Local perspectives also often take time to accept the loss, and transition mentally before they can appreciate industrial heritage conservation. The implication is that immediate consultation of community desires may not reflect what will bring satisfaction in the long run. They find that industrial heritage conservation yields long term satisfaction and appreciation. Factors such as green amenities, and maintenance are also important, and site complexity and multifunctionality add to effective regeneration and enhance local distinctiveness, as was previously established by Ling et al. (2007).

Lafortezza, et al. (2008) find that there is a general correlation between aesthetic satisfaction and ecological restoration on industrial brownfield sites (just as other studies have investigated for other sites ie: Botequilha Leitao and Ahern, 2002; Hobbs and Lambeck, 2002; Nassauer et al., 2002; Opdam et al., 2001). Though, there are differences along the lines of stakeholders. Ling et al. (2007) is poorly conceptualized in terms of aesthetics--isolating their functionality from other variables, but usefully specifies the importance of multifunctionality. After Brandt et al. (2000), multifunctionality includes elements and values of history; ecological function; communitarian engagement; economic change of liabilities into assets; and aesthetics. Sites of industrial decline, where there is little hope for investment, are prone to be despised, undervalued, and misunderstood (Lafortezza, et al., 2008 p 258). The work of Krivy (2010), and Maskit (2007) strive to occupy that space of tension with artistic production and exploration. Maskit speaks specifically about the potentials of digging deeper into the realm of environmental aesthetics to wrestle with our understandings of post-industrial sites.

Analysis of the complexities and nuances of perceiving industrial and post-industrial sites have thus far been best expressed in the works of artists such as Gordon Matta-Clark, Robert Smithson, Richard Serra, Bernd and Hilla Becher, and Edward Burtinsky. Gordon Matta-Clark provokes understanding of the processes of creation and destruction before and after the function of the structure, and explore meaning and value in this "negative space" (Krivy, 2010). This concept of negative space draws our attention to processes of creation that are continuous, and yet the abrupt discontinuity of individual outputs of the process (Krivy, 2010). Serra picks up the pieces of what is left and searches for potentials in formal appreciation that precludes and suspends notions of function, to appreciate the material for what it is and transform our perspective (Maskit, 2007). Bernd and Hilla Becher and Edward Burtinsky simultaneously expose the attraction and repulsion we experience, viscerally, culturally, and environmentally. In aesthetic history, where art was questioned in terms of beauty, Maskit proposes making use of a new category of "interesting", and exploring the options in perception available in the non-cognitive, visceral and imaginative realms (though he does not speak of these terms explicitly)--"despite their function" where it no longer exists (Maskit, 2007 p 327). Art can intervene directly into our aesthetic perception and alter the way we view the industrial site (Krivy, 2010). When our perceptions are understood in a unified framework of environmental aesthetics, artistic engagement can help us see these sites differently (appreciate them), in order to enable us to think of them differently, act on them artistically ('intervene'), and then transform them effectively ('renovate the site') (Maskit, 2007 p 324). This process brings us into relation with the site; create awareness; provoke thought; and produce understanding--eliciting sympathy and passion to move forward (Strangleman, 2004).

Edensor's similarly expects transformation. To gaze at ruins can impart to us the reality of the "transience of all earthly things despite the utopian promises of endless social advancement" and, like the artstic gaze, it can help us to think about reimagining the space (Edensor, 2005, p 11). Further, he suggests even a role for ruins, as spaces for play, exploration, as well as spaces of memory (Edensor, 2005). These practices, like more explicitly artistic approaches, may be a more publicly accessible way to begin the transformative process--to make what was lost new, and act as a way of mitigating loss and morphing our perceptions.

Just as Edensor's aesthetic exploration of ruins may be criticised as voyeuristic, so too may some of these art forms. Yet, maybe they do not have to make up the entirety of the dialogue, and can be but one part of the process.

Looking at the literature, it seems that industrial infrastructure has been appreciated for its (1) symbolism of technology and efficiency; (2) for sites of remembrance and past identity; (3) for excitement and opportunity it provides for new identities out of transition, whether in hard places of economic difficulty and decline, or in spaces of abundance.

3.2.5 Opportunities for Justice and Creativity

Understanding that aesthetics can be oppressive and influential as a tool, but also seeing that they are unique to people and places, we can begin to see how justice and creativity in planning practice can be enhanced through the use of environmental aesthetic concepts. Dialogues around justice have had undercurrents and connections to aesthetics, and Fraser (1995) says that "processes through which cultural (or symbolic) injustices tend to arise are fundamentally "rooted in social patterns of representation, interpretation, and communication". Where aesthetics have failed to reflect and be formed by individuals and groups with a large

stake in place, justice has also failed. Incorporating environmental aesthetics can help advance justice through facilitating 'authenticity' in landscape production.

Concepts of morality in city planning first arose in the 1950's and 1960's as a reaction to urban renewal projects of the previous decade. The positivist urban renewal aesthetics were a benevolent guise for unjust practices. Urban renewal responded to crowded cities and poor and unsanitary living conditions that were themselves tied to the rapid industrialization of prior decades. Eventually notions of power relations evolved and conversations about justice became more explicit in the 1990's (Fainstein, 2013).

Fainstein's pragmatic synthesis of justice research focuses on equity, diversity, and democracy, and is particularly helpful to this work (2013). Tensions exist within and between these concepts, but Fainstein argues that equity should be prioritized, and that we must favour those who are worst off first in decision making. Planners can facilitate this to some extent, but require support from either grassroots groups or politicians. Governmental accountability, and the need for increased integration, cooperation, and coordination amongst the levels of government (institutional 'thickness') is a major recurring theme in political research on governance (ie: Jessop 1998; MacLeod & Goodwin, 1999; Evans, 1996). Though governmental restructuring is not possible at the municipal level, Fainstein holds the state accountable, and able to counter injustices, and calls for a reorientation from competitiveness to justice.

Zukin's (2010) concept of authenticity works well as a transition from Fainstein's 'Just City', to more explicit proposals for planning applications of environmental aesthetics implementation in itself. To Zukin, authenticity is a social right to the city, and a means of gaining ownership, by any group. As Blockman's concludes, "The new challenge seems to be

how to reconcile the mechanisms of the global economy with the need for citizens to live in a community within which they can identify themselves and can feel a sense of belonging" (Blockmans, 2003 p 17). Authenticity is what "connects our individual yearnings to root ourselves in a singular time and place to a cosmic grasp of larger social forces that remake our world from many small and often invisible actions" in the context of an ever changing landscape (Zukin, 2010 p 220).

This emphasis on personal connection progresses beyond Beardsley's (1982) aesthetic justice, which advocates the distribution of beautiful places, and improving education in order to heighten appreciation and awareness. Instead, notions of authenticity are in line with Matilla's (2002) proposal for the distribution of the right to take part in design, both in terms of communicative participation, and concrete creative activities. Concrete aesthetic activities could include participatory public art, or monuments reflecting multiple and shifting identities (Sharp et al., 2005; Hodder, 1999). These have been found to reestablish a new sense of place.

Matilla's approach to aesthetics is quite engagement oriented (non-cognitive) and does not see beauty as having a standard that can be discovered. However, as our visceral and emotional experiences are legitimized, and we are given permission to engage, imagine, and use them (Foster, 2009), they can also enter into dialogue with the cognitive to be constrained and directed by various environmental truths (limitations, costs), and social truths (meaning). This would allow us to view morally, in full context (Saito, 1998). We can then take the visceral-aesthetic landscape, and internally and externally reshape it, to come into harmony with these truths (Nassaur, 1997).

As science can expose environmental functions and needs, so too can social truths be solidified through empathy in relation to emotional experiences when we listen to one another (Dooling, 2009). In collaborative planning, identities are formed within the discursive process and one does not need to have fixed or stable interests (Young 1990). Rather it requires a desire for justice, and some release of self interest (Fainstein, 2013). By negotiating and reshaping internal and external landscapes, a bond can be forged between aesthetic quality and ecological and human well-being. Health, vitality and justice can be seen as beautiful and degradation and injustice as deterring (Saito, 1998; Sadler & Carlson, 1982 p 163).

Justice should not, and maybe cannot yield to retrogressive demands (Fainstein, 2013). Though authentic rights may prize historic versions of the city, the urban imaginary should reflect changes with successive generations (Zukin, 2010). Conflict is a required stimulus for planning, and we must exist and persist when in flux. Empathy, but also imagination therefore has a role to play in spurring (re)creative activity, and motivating responsive action (Brady, 2003; Saito, 1998; Fudge, 2001). While imagination should be contained by what is moral (or just), therewithin, it can enhance the pleasure of viewing landscapes; lead to the discovery of cognitive truths; and in turn, to associations and the generation of artistic output which could lead to larger scale action (Maskit, 2007; Krivy, 2010). Creative interventions on site can also improve the aesthetics of a given landscape, and lead to greater awareness of issues, challenges, or conflicts in the space, as well as motivate stewardship and care (Nassaur, 1997).

Ignoring the complexities of engaged and cognitive aesthetics may embrace veiled injustices, but may also limit planning outcomes by failing to leverage imaginative powers, and aesthetic attraction to space. If non-cognitive, emotional aesthetic attachments and desires go undetected

and cloud dialogues and inhibit good decision making. Foster (2009) explores a case in which hidden environmental aesthetics motivated anti-development actions under the guise of scientific environmentalism, and worked to perpetuate xenophobic injustice. Foster's work demonstrates the way that aesthetic precedents are created and held deeply at the expense of others, if they are not identified and held to standards of justice and morality. It would be useful, as Brady, 2003 suggests, and as the (LPS) intend to do, to include aesthetic considerations in policy. Just as aesthetics were used to assert power in the past, they can today. Yet our convictions about who holds the power have begun, and will hopefully continue, to shift towards greater justice.

We have established that deindustrialization is a cultural change, tied to many complex emotions and experiences that require further research to conceptualize in order to move forward appropriately. This in itself is a topic that would benefit from the insights of environmental aesthetic theory. What makes matters complex though, is the way in which the aesthetic trends in popular culture, design, architecture, and art, are already addressing deindustrialization in ways that have not been clearly mapped on to and linked with lived experiences, in part because they seem to originate from onlookers and prospective residents of the post-industrial society. In what ways have the fetishizing ruins, cultural readaptation, and gentrification influenced local residents, planners, and those in power making decisions or plans for the sites future? Conversely, how do the aesthetic perspectives of the individuals relate to and reflect their positionality? There are harsh and violent realities to navigate along side shifting cultural perspectives, and in moving forward, there must be care and creativity in critiquing, aligning perceptions and emotions with truths, and trying to bring healing and renewal to these contexts.

EA may be a particularly adept framework to use in both understanding, reimagining, and transforming deindustrialized spaces.

4. Context

4.1 Coming to Know the Landscape

I am a newcomer to Halifax. I visited for the first time in Fall 2013, with the expectation and hope of doing research and living here for four to six months. I had heard stories of some of the city's history, culture, and listened to the celtic inspired music. I had seen images of rugged coasts with lighthouses, and driven through nearby areas—rushed by the maritime landscape of small fishing villages and brightly colours boats anchored along the shore. I imagined the lifestyle in small villages, of struggling fishermen and their communities. With very little actual knowledge or experience of the city, I came in conscious of my wild and rosy view.

As a cab drives me over what locals call the 'old bridge', I overlook the harbour in the night for the first time. It's raining, just like it 'should' be, and I get flutters of excitement as the feeling settles over me—of being immersed in a new place, where lives have been lived out over a different terrain and through different rhythms than my own. I can hardly see it, but the tiny lights of the refinery glow in the distance through the storm as we pass over the bridge. The cab drops me off in the South End where I am staying, and I find that the refinery lights can be seen from the window of the apartment, too. I feel lucky to be here.

The next day I walk down gridded roads lined tightly with Victorian-era wooden-shingle homes, painted in bright colours, and make my way to the harbour-front in the South End. Old piers have been transformed into a farmers market, an art college, a coffee shop, and other amenities. From the farmers market, the refinery peeks out from behind George's Island in the

middle of the harbour. The large, and rusted metal forms are an abrupt contrast to the velvety green drumlin. The boardwalk stretches northward along the water, taking me in rectilinear paths around the finger piers (figure 4.1.1-figure 4.1.3, Appendix C). There are restaurants made in renovated fishing huts and storehouses, parking lots, condominiums, a bike rental shop in a shipping container painted neon green, and children's play areas. Further along, there is public art, food trucks, historic interpretive panels, and buskers. On the water all kinds of leisure boats are docked alongside finger piers while boats move up and down the harbour.

It is a chilly and cloudy day. From a bench at the end of a pier the refinery is no longer hidden by George's Island, but it is smaller now in the distance. Jagged, metal shapes jut up and form the skyline, and geometric white rusty figures sit along the water. It stands in strong contrast to modern buildings beside it and the simplicity at the waters edge. It reads like a small city in the distance (figure 4.1.4). There is curious smoke drifting out the stacks, since the last shipment of crude oil was over a month ago. Knowing very little about what takes place on site, I wonder where the people are, and what they do amongst these structures. To me the refinery already embodies a complex manifestation of concepts and questions within an interesting, unfamiliar, and somewhat mysterious physical feature. I am aware of the media portrayal of the shut down as a loss for the community and the larger region. I am curious about the processes of corporate negotiation, and the ways they may negate local need. Yet, I do not personally feel a sense of loss, especially because of its still functional appearance, and still feel a sense of separation allowing for wonder and imaginative freedom.

Being up close on the other side of the harbour is an altogether different experience. Though it remains interesting, it is much harder to feel 'romantic' about the structure.

Approaching by car I experience its monumentality as it grows larger and I fall under its shadow in mid-afternoon. Its pipes, shafts, and chipped paint are clearer up close. The refinery appears dirty, rusty, and unpleasant--not something I would want to touch.

The site is vast, there are large setbacks, and the long channel of Pleasant Street is lined by a privacy fence (figure 4.1.5). It seems grouped together in an area from afar, but up close it appears chaotic and spread out. Only the top of the refinery infrastructure is really visible over a large chain link fence, laced with white plastic ribbons, frustrating and constricting (figure 4.1.6). Several cyclists were seen on the road, and no pedestrians, though there is a narrow sidewalk on the east side of the road. The atmosphere along the street is harsh and intentionally uninviting; large signs on the fences directly convey messages of danger, and utmost privacy and exclusion of the public (figure 4.1.7). The fence, and maybe the refinery infrastructure behind it, extinguish any hope of viewing the ocean, though it is very close by. Traffic is funnelled by the refinery, with no legal places to turn or stop, though there are large vacant areas, and no landscaping. On the east side of the street, is the station where transport trucks fill up with product. Large storage tanks positioned further back on the east side.

The refinery is visible from many places within the South Woodside community, since the community side of a hill. Where it is visible, there is a jarring and intrusive presence in contrast with the schools playground, and houses (figure 4.1.8 - 4.1.12). The more times I return, the more grating its presence feels. The southern edge of the neighbourhood actually borders with the tank field and filling station. There is also an area of tanks entirely within the neighbourhood boundaries--but these are owned by Irving (figure 4.1.13).

Continuing through the funnel of Pleasant Street to the south of the refinery, I come upon many more petroleum storage tanks (figure 4.1.14). These ones are eerie and mysterious to me at first, significantly more rusted, and numerous. I soon find that there were once two refineries here and these are unused, though a modern, glass Ultramar headquarters sits among the tanks.

In coming months I pass the refinery along the water, and see it from my apartment again and again. In different light, in different weather, in different seasons it has a different feeling to it. When it is still, and warm and clear on summer nights, it is a glowing and cheerful feature, doubled in brightness as it reflects on still waters. In cool grey fog, rain, and snow, it is a bit like a distant castle. As of the submission of this research, I have lived here for eleven months, and have no intention of leaving.

4.2 Regional Planning Context

Halifax Harbour has a long history of industrial development, which is not far from the city's memory today. At European colonization in 1749 and 1750 for Halifax and Dartmouth, respectively, the harbour was a venue for international mercantile endeavours. Industrial development along the Dartmouth waterfront included mills, foundries, tanneries, a sugar refinery, and shipyards (Boileau, 2007). Halifax's regional economy fluctuated with war, much like other cities in Canada. The economy flourished with the demand of the war efforts, and suffered at its withdrawal. The harbour however, was always prioritized, and after WWI the government began to funnel money into port development, controlling it with a heavy hand through the National Harbours Board (Brooks, 2004).

As the wars of the 20th century ceased, there was an emphasis on investment in central Canada. Marine oriented industries had begun to die as convoys disappeared, and the maritime

manufacturing, resource and service sectors suffered (Boileau, 2007). Policy began to take on a neoliberal leaning; price controls were lifted, and competition increased. Government took control of large scale developments to recover the city's image after the impacts of the war, and aimed to attract investment. Eventually, many local industries were taken over by business interests in Toronto and Montreal, due to the competition introduced by railways (Parker, 1998). Standardized shipping containers began to be used in the late 1960's, facilitating transfers from boats to trucks and trains, and had dramatic implications for what was possible in terms of waterfront development. The areas that were previously needed for shipping in Halifax's downtown fell into disuse and were redeveloped as part of the downtown core (Interview 6, June 24, 2014; Boileau, 2007). Deliberate efforts were made to focus on increased containerization. Containerized shipping achieved the most significant, sustained growth, was considered by authorities to be central to the future prospects of the port of Halifax. Carefully planned and co-ordinated efforts by both private sector firms and government agencies sought to increase Halifax's share of containerized shipping through extensive and strategic marketing (Pinfold, 1970). Employment numbers in shipping and industry dropped dramatically with containerization, but the remaining jobs were higher paying and more stable, and the amount of cargo going through the port increased fairly steadily over time (Pinfold, 1970; Boileau, 2007)

New development spread a long way along both the Halifax and Dartmouth waterfronts, but more so on the Halifax shore. Many industrial areas were transformed into spaces of public recreation, along side office towers, hotels and restaurants. The provincial crown Waterfront Development Corporation Limited (WDCL) was created in 1976, and became responsible for facilitating much of the non-industrial waterfront development (Boileau, 2007). The WDCL is a

land owner and developer, and works alongside the Federal Government's Port Authority, to collaborates on large projects across lands which are Federally owned (Interviews 6; 22). Through time the port, and the city have been governed variably, with a trend towards devolution of power to lower levels, and greater commercialization.

In 2011, Halifax as a whole had a population of 390,096, growing by 4.7% from 2006 (Statistics Canada, 2011). Planning strategies use the circumferential highway as a delineation of the Regional Centre on the Dartmouth side, where development efforts will be concentrated in an effort to counteract natural dispersion. It is within the Regional Centre that 50 million dollars will be spent on an economic strategy implementation between 2014 and 2018 (HRM, 2014c).

Halifax has displayed slow but steady economic growth through time, with a clear preferential growth in the service sector compared to goods producing industries. Nova Scotia, like Canada, saw a significant loss of 10 % of all manufacturing jobs from 2004 - 2008 (Bernard, 2009). Halifax has struggled in transition from an industrial to largely post-industrial region, but is doing well relative to Nova Scotia, particularly compared to areas such as Cape Breton, that have experienced much more devastating levels of industrial ruination (Parnaby, 2013). As of 2011, the service sector made up approximately 88% of all employment in Halifax, while goods producing work comprised 12% in (Statistics Canada, 2011).

The development and expansion of serviced and well located industrial land is a strong focus of economic development in Halifax, and Burnside 'industrial' park is Halifax's second largest employment area—though this park includes little traditional industry (GHP, 2005). Port industrial lands in particular are seen as vital to the region's economy, and are zoned as "I3" for protection. As of 2011, there were approximately 7,000 direct and indirect jobs in port-related

activities within the city (HRM, 2004). New and expanded port related activities are encouraged in particular areas, many of which were nearby the Imperial Oil site—including the vacant property to the east, the former Ultramar refinery site, Nova Scotia Hospital lands, the Coast Guard site, Dartmouth Cove, and the Dartmouth Waterfront in general (HRM, 2014b). The regional plan acknowledges that there is a need for retraining of workers from disappearing manufacturing, fishing, and forestry industries, however culture is conceptualized of in terms of creativity, and is disconnected from working class values (HRM, 2014).

The current Municipal Planning Strategies for Dartmouth, as well as preliminary research, emphasize the importance of carefully balancing the amount and location of industrial presence with other competing interests for limited waterfrontage, including tourism and recreation (HRM, 2004; HRM, 2014b). Halifax Harbour has seen enormous growth in the tourism industry, contributing approximately $700 million to the economy each year (HRM, 2004). Preliminary harbour plan maps as well as regional, and active transportation plans show an extension of trails along the Dartmouth waterfront, from the Woodside Ferry Terminal to the Shearwater Flyer trail, through the Imperial property (HRM, 2014a). Residential development, conversely, is discouraged along the harbour (HRM, 2004).

Due to the legacy of industrialization Halifax Harbour is highly contaminated in many locations, as a result sunken ships, alongside refinery leaks and spills, as well as a history or poor sewage treatment practice (Province of Nova Scotia, 2009). Regional plans, provincial policy, and studies prioritize the environment through encouraging the reuse of brownfields, creation of an open space network, protection of water resources, increasing renewable energy, lowering emissions, and addressing climate change (HRM, 2014; SNSC, 2009; HRM, 2004). Nova Scotia

has new Contaminated Sites Regulations and Ministerial Protocols, released in July of 2013. These have been nationally recognized for their clarity, simplicity, ability to provide confirmation of remediation, and to provide liability closure; they were even nominated for a "Brownie Award" by the Canadian Urban Institute. Provincial policy emphasizes a need to transition to alternative sustainable forms of energy, away from imported sources and petroleum, which currently makes up 63% and 90% of usage in Nova Scotia, respectively (Hughes, 2007).

4.3. Local Community Planning Contexts

The refinery site has the closest relationship to South Woodside, with North Woodside being separated by Highway 111 since 1961, and the hospital since 1856. Russell lake is also separated by undeveloped lands and South Woodside. South Woodside will be the main community emphasized in this research (refer back to figure 2.1 in Appendix C for a map). The land that is now South Woodside was originally the property of John Fairbanks, sold to Scottish immigrant George G. Dustan in 1865. Throughout its history Woodside remained a place for industry. The Halifax Sugar Refinery was built and operated here between 1884-1942. It was adjacent also to a lime manufacturing operation, and the Mount Hope Lunatic Asylum, established in 1856 (South Woodside Plan, n.d.). It is unclear exactly when much of the residential development in Woodside was established. However, by 1971, 40% of homes in South Woodside had been occupied for ten years or more. The neighbourhood has long struggled with the challenges of isolation and industrial surroundings. In the late 1970's, the community was targeted by the Neighbourhood Improvement Program and Residential Rehabilitation Assistance Program, largely to address a lack of access to recreational opportunities, as well as to improve streets, sidewalks, and for general beautification. An amount of $623,114 was

contributed to the improvement of the area, yet some similar problems remain today (South Woodside Plan, n.d.). Today the extent of South Woodside's physical connections include an unmanaged path at the top of Waynewood Drive, connecting through undeveloped land to the Russell Lake community. There is also the obvious throughway along Pleasant Street, but this is not pedestrian friendly and is quite far from some areas of South Woodside. Respondents indicate minimal social connection among the communities (Interview 1;2) (Please refer to Appendix D, figure 7.0.8 for a table of interview dates).

The area surrounding the refinery is considered municipal District 3 - Dartmouth South - Eastern Passage, which includes the South Woodside, and Russell Lake neighbourhoods but is cut off at the circumferential highway—excluding North Woodside, and being excluded from the Capital Region. This area had a population of 3126 in 2011, with a slightly older population than the rest of Halifax, with a median age of 42.3 compared to 39.9 for Halifax. The population is quite transient, with 1005 individuals (32%) moved between 2005 and 2010, and 71% of those moved just within Halifax (Statistics Canada, 2011).

South Woodside is also cited as being home to a large number of low income families, many of whom are said to be on welfare, according to quotes in plans, and in interviews conducted for this research (SWIAR, 2012). This does not show up clearly at the census tract level, but out of 425 households in the three closest dissemination areas, 80 households have an income between $30,000 to $39999; and 70 households are between $40,000 and $59,999, making this is a fairly mixed income area, with a low income presence (Statistics Canada, 2011). South Woodside residents tend to be employed in industrial work slightly more often than

Halifax (See figures 5.3.1 and 5.3.2). However, unemployment rates are also elevated, at 9.5% for the Woodside-Russell Lake CT compared to 6% for Halifax.

Industrial land uses in the Woodside area have changed over the years. One of the most major changes was the closure of Moir's Chocolate Factory, which existed in the area for 200 years (CBC, 2007, Dec 21). There is a strip mall on the site now. The majority of the land has remained held by Imperial Oil (HRM, 2014b). Current land uses apart from the marine terminal include, petroleum and propane storage tanks and a wharf that belong to Irving Oil, and Superior Propane, respectively. North of Highway 111, is Woodside Industrial Wharf and Woodside Industrial Park. The industrial park struggled, housing a bowling alley and dentists offices, after their intended focus on Ocean Industry faltered in the 1990's (HRM, 2008; Interview 2).

The current Halifax regional plan calls Woodside a 'Regional Local Growth Centre', and Russell Lake, an 'Urban District Growth Centre" (HRM, 2014). The Woodside area is seen as in need of attention due to its proximity to the Ferry Terminal, Highway, and a new community college, but also because of an above average rate of unemployment, and social challenges. Planning in this area is more specifically guided by the 'Dartmouth' MPS, and in 2006, Woodside—both North and South, were targeted together as a priority neighbourhood, and in 2012 community visioning produced a proposal for a 25 year plan. The community calls for the improvement of public safety, green space, public access to the harbour, landscaping, connectivity, activity programming, public art, cultural and heritage recognition, in order to enhance resident quality of life (WCVAP, 2012). The vision also states that the area should be mixed-use, and aim "to prosper in industry and commerce while still providing distinct

residential neighbourhoods and community services" (WCVAP, 2012). The community visioning plan is to be used as a basis for the creation of an official secondary plan.

South Woodside Elementary School was assessed for closure in 2012 due to the age of the building, maintenance costs, low attendance, and environmental concerns (SWIA, 2012). Many members of the community reacted strongly to this, and wrote a report outlining the importance of keeping the school open, due to its central role in the community, as both an educational and recreational centre (SWIA, 2012). As a result the school will stay open for another 5 years, and then will be reevaluated for closure.

Currently, the lands surrounding the South Woodside residential area are continue to be zoned for industrial and marine industrial, with a small amount of commercial, and expansion is planned. Long term expansion of light industry is planned for the lands to the east of Imperial Oil's site (HRM, 2014b), and the Woodside Industrial Park, which has 128 acres yet to be developed, is being actively marketed as a bioscience park (HRM, 2008).

Morris-Russell Lake watershed is the exception to nearby industrial land uses. It is a Comprehensive Development District undergoing greenfield commercial and residential development after having expanded the city boundary explicitly for this development in the late 1980's. The development of this area may directly decrease incentives and interest in Woodside, since it has opened up opportunity to forgo brownfields for greenfields.

Environmental concerns in the area relate to air quality, spills, fires, and explosions in and around the school, as well as and watershed management. Air quality was mentioned as a consideration in school closure. The spilling of hazardous waste was an issue with the nearby Ship Shape Dry Cleaners, which leaked dry-cleaning fluid onto school property in 2005, while

simultaneously catching on fire (SWIA, 2012). Though no incidents are revealed online, interview participants including community members and former refinery workers reflect the extremely high level of danger that there was being around the refinery (Interview 13). Concerns over the quality of the lake link to many historic land uses including a piggery, gold mining, more recent polluted urban run-off, and extraction of water by the refinery (Griffiths Muecke Associates, 1998). Based on records, the actual withdrawal rate by Imperial was around 9 million l/day, or 3.28 billion l/year. With Imperial Oil's shut down, there will be a cessation of pumping and approximately 24% increase in water flow through to Cow Bay River, and could result in flooding (JWEL, 2004). The lake is mostly mesotrophic, but has already become somewhat eutrophic. According to the Dartmouth MPS, Imperial will assist in researching the consequences of their pumping cessation.

Other environmental concerns may be ecosystem chain effects related to the plants, and animals that access the contaminated lands, and potentially introduce contamination into their own bodies, and the food chain. It is common habitat to red-back salamander, red squirrel, and snowshoe hare (Griffiths Muecke Associates, 1998). The edge of the forest is also important habitat for whitetail deer, and there is a nest of osprey beside the Imperial pumping station on Morris Lake. Overall, species counts and diversity are generally poor, but there are no rare or endangered species present (Griffiths Muecke Associates, 1998).

4.4 The Development of the Imperial Oil Refinery, Company Profile & Responsibilities

The development of the Imperial Oil refinery was a wartime initiative (Imperial Oil, 2013). The land was purchased by Imperial in 1916: 228 acres from the McNaab family and 151 acres from the Grant family. It was thought to be an ideal site for a refinery with a harbour

frontage and provision of fresh water from Morris Lake (Hartley, 2010). Beginning in 1917, the site first held a storage plant, which received Mexican crude oil from steamship tankers, and transferred it to rail tank cars to be refined in Montreal. The refinery was constructed late that same year and began with an initial capacity of 2,200 barrels daily (Boileau, 2007).

Imperial developed a company community called Imperoyal Village in 1918, to house workers. Hartley's 2010 book Imperoyal Village: Our Place in the Past, reflects on the experience of living in the village. The village was located on the west side of Pleasant Street, at the Harbour's edge (figure 4.4.1). Imperial built a school, and was known for having the first operational ambulance in the region. The village also possessed recreational amenities, and a church. Hartley's book includes resident accounts, and shows that the neighbourhood was well loved, and residents experienced a deep unity amongst the members of the community. The ferry was built mostly to bring workers over from Halifax (Hartley, 2010).

Through the economic downturn of the 1930's the refinery remained a reliable employer, and expanded significantly during World War II (Hartley, 2010). Imperial was not affected through centralization of economic activity in Canada in the 1950's, and rather, grew, in importance due to heightened demand of modern mechanized farming and automobile use. In 1946, Imperial as a whole, sold 6.275 million cubic meters of crude, more than any previous year (IDCH, 1999). The refinery was now able to produce 10,000 barrels per day. The expansion and erection of new storage tanks meant demolishing Fort Clarence, one of Canada's oldest defences (Piers, 1947). According to archival images showing workers laying the foundations, portions of Fort Clarence are likely still intact, buried on the refinery site.

The oil market was doing so well that Imperoyal Village was torn down, or moved to Eastern Passage in the early 1960's to further expand the capacity of the refinery, and in 1963 a refinery was built by Texaco Canada Inc., just minutes down the road in Eastern Passage. Texaco had approximately 25% of Imperial's refining capacity (CAPP, 2014). In February, 1989 Imperial Oil bought Texaco Canada Inc. for C $4.96 billion, but the Canadian competition authorities felt that this would unduly lessen competition and give them too much of a monopoly on the market (Nova Scotia, Attorney General v. Ultramar Canada Inc., T.D., 1995). Imperial had to divest a portion of its assets, including the refinery in Eastern Passage (IDCH, 1999). Imperial also radically altered its business format at this time, due to spiked concern over liability to do the oil spill and sinking of its boat, the Valdez, in Alaska. It sold every boat, and tanker trucks began to use contractors (Interview 13). The company focused on its public image regarding the environment and community relations (Interview 13; IDCH, 1999).

When Imperial divested the second refinery, Ultramar purchased it, signing a contract to operate it for a minimum of seven years, until 1997. When markets took a turn for the worse, Ultramar claimed material adverse change had occurred, and planned to cease operation. The province took them to court, but the ruling favoured closure and the Ultramar shut down in 1995 (Nova Scotia, Attorney General v. Ultramar Canada Inc., T.D., 1995).

The market was becoming flooded with product, and Imperial's own sources of crude were decreasing (IDCH, 1999). Imperial dramatically cut and consolidated its operations in 1992. Former employees noted that they feared and somewhat expected to lose their jobs at this time (Interview 17;13). Managers were asked to work under increasingly tight budgets, and the entire operation in Dartmouth was considered to be at risk.

Today Imperial Oil is the second largest of Canada's five integrated Canadian oil companies, meaning that deals with both upstream and downstream components of petroleum (Pinfold & Ervin, 2005). The company as a whole produced $31,188 million in revenue in 2012, with a net income of $3,766 million, representing their second largest annual earnings on record. Imperial also holds $29,364 million in assets (Imperial Oil, 2013). Just the downstream segment of the company produced a net income of $1,772 million in 2012, and was down to $1,052 for 2013 (Imperial Oil, 2013). Imperial Oil employs 5263 people Canada wide. Prior to shut down, the Dartmouth refinery held approximately 200 full-time permanent positions, and an additional 200 contract jobs (Imperial Oil, 2013). The corporation owns the land in Dartmouth, but based on purchase date, the wharves are likely on what is known as a 'post-confederation' waterlot, and are subject to the management of the Port Authority.

During its operation in Dartmouth, Imperial put out seasonal newsletters to demonstrate its presence in and commitment to the community, show a performance 'score card', and included a message from the refinery manager. The manager, Leo Sanchez, writes "We appreciate that the refinery's close proximity to the community means that our neighbours are very interested in our operations […] I believe we have a very positive story to tell of working hard to continuously improve our performance and reduce our environmental footprint"- (Imperial Oil, 2011). Imperial provided information on environmental performance and demonstrated a constant commitment to improving its performance with regards to emissions. Its Summer 2011 newsletter claims that its 2009 upgrade to the plants sulphur recovery unit has resulted in a 27 % decrease in sulphur dioxide emissions, and that nitrogen oxide emissions that contribute to smog formation were reduced by 19 % in 2010 versus 2009. It also replaced three

tank roof seals in order to reduce the release of volatile organic compounds, and the greenhouse gas emissions were lower than the previous year--though this was aided by maintenance that prevented continuous production (Imperial, 2011). Imperial also made ongoing efforts to reduce water usage and improve the quality of output into the harbour, to exceed regulatory limits.

However what is not made clear, is that the standards within industrial approvals do not have to meet the same ambient air quality standards established within the Province of Nova Scotia Air Quality Regulations. There are no provincial monitoring stations close by (A. Hegelan, personal communications, Nov 17, 2014), and many toxins emitted by refineries, such as benzene, toluene, and xylene are not included in standard provincial regulations. Imperial would have been required to have ambient air quality monitors on site, but this data is not publicly available. The water quality is subject to the same personalized approval process. Research has shown that refinery effluent in the past typically has had a lethal impact in the zones closest to the source--changing through space to have an over enriching nutrient impact (Wake, 2004).

There is a legacy of contamination in the soil, which impacts the quality of storm water run-off, as well as the health of species which come in contact with it. A former worker reflected: “back in the old days when they have to drain something they had the valve and, it hit the ground, and they covered it with a load of gravel in life when on” (13). Imperial says it invests in reclaiming sites, but requirements are only those which are included in the approval agreements, determined by the Province of Nova Scotia, which, as this point is unclear.

Community donations and volunteerism are highlighted in publications, in media coverage, and in personal interviews for this research. Imperial Oil is known to contribute

generously and reliably to many local groups, both within South Woodside and beyond (Interviews 1; 8; 10; 12). The South Woodside School is one of the greatest beneficiary of Imperial's funding, providing for their breakfast programs, and offering technology grants, totally approximately $12,000 this past year (Jeffrey, D., 2013, June 27). It has confirmed funding for the coming year as well, despite the operational changes (Interview 8).

Safety is one of Imperial's strongest emphases, in the midst of extremely toxic, and explosive substances. The refinery maintains a direct phone line to the principal's office that is routinely tested, and is to be used in case of any emergency (Interview 8). Imperial's commitment to the safety of its workers and the surrounding community is largely corroborated by interview responses across the board.

4.5 Closure of the Dartmouth Refinery

Right up until shut down, the refinery remained a major industrial influence in the area--seen by some as one of "the last vestiges of Dartmouth's industrial past" (Boileau, 2007; P. Manual, personal communications, June 16, 2014). After many years of tenuous existence, Imperial Oil announced its decision on June 19th, 2013, to transition to a storage facility and shipping terminal for petroleum products refined and produced elsewhere (Alberstat, J., 2013, June 19). Refining operations ceased on Monday, September 16th, 2013, after a final shipment of crude oil on Sunday, September 15th, 2013 (The Chronicle Herald, 2013, Sept. 13). Of the full time (non-contract) employees, 20% have retired, and the others were offered jobs with Imperial Oil elsewhere in Canada (The Chronicle Herald, 2013, Sept. 13). Imperial was not forthcoming with information as to where workers would be moved, and as a result many found new jobs with other oil companies, mostly in Alberta (Interview 13). The transitional process from refinery

will employ a large number of contract workers in the short term, but the terminal operation ultimately employ approximately 35 people.

4.5.1 Logic of Closure

This closure follows a pattern of refinery shut-downs in the Atlantic Basin in recent years (Gebrekidan, June 21, 2013). Since the 1970's, the number of refineries in Canada has plummeted from 40 to 14, and there has not been a new refinery built in Canada since 1984 (CAPP, 2014). Canada only refines approximately 25 % of the 1.38 million barrels of crude produced here daily; yet 0.7 million bpd of crude oil are imported (Mendleson, May, 24, 2012). Several key factors, though, are also speculated to be significant influencers in the decision to close the Dartmouth refinery in particular--all of which are tied to cost. These include: the refinery's age, and therefore its (1) aging infrastructure, (2) less efficient technology, and (3) relatively small size and differential production process and labour costs internationally, (4) the falling demand in North America, in contrast to (5) the increasing glut of product, and finally, (6) the poor transport network in Canada, which impacts both sales of refined product and (7) the relative cost of crude.

Many components of the 95 year old refinery needed replacing. The refinery has been upgraded repeatedly, but as budgets became increasingly tight, refinery employees reported decaying and rusting pipes, patched up, instead of replaced (Interview 17; 13). Also, despite updates, the technology lags far behind newer refineries (Interview 13).

The refinery has undergone repeated expansion, yet, this is a very small refinery compared to the facilities being constructed more recently— processing 88,000 bpd. The Irving refinery in St. John, New Brunswick was built in the 1960's and expanded in the 1970's to a

capacity of 300,000 bpd, which is typical of refineries built in the 1970‘s (The Economist, 2012). There is an even greater disparity between Dartmouth, and refineries located in China, India and the Middle East, which are being built with capacities of up to 1.2 million bpd (Canadian Press, 2013, June 19). Refineries of the 1970’s were already over sized, and often do not operate at capacity even now (Pinfold & Ervin, 2005). These larger refineries achieve greater economies of scale, and are able to dump the oil into the market of the Atlantic Basin, for now (Interview 13). The jurisdictions overseas, in which many of these large refineries are cropping up, also have weaker currencies, and lower labour costs and environmental regulations (Hughes, 2007). North American petroleum product demand is decreasing, which creates further disparity between capacity and need (The Economist, 2012). Nationally, Canada currently consumes 1.5 million bpd of refined product, and this has remained relatively flat for 30 years, declining slightly in 1980 for the first time, and more so during the 2008 recession (Pinfold & Ervin, 2005). Since spending decreased, less was produced and transported, leading to less fuel use upstream in addition to the decline in consumer trips (Shore & Hackworth, 2010). Gasoline prices have doubled in recent years; cars are being made more fuel efficient, and more diesel vehicles are encouraged which further reduces overall demand but especially gasoline (Pinfold & Ervin, 2005; Shore & Hackworth, 2010). Decreased demand and large product availability can itself also cause price increases, which contributes to a negative feedback cycle.

The products of the Imperial Oil refinery in Dartmouth have been supplying the Atlantic provinces and Eastern Quebec through a network of agents and distributors for decades (NOIA, 2013). Atlantic Canadian market had domestic sales (demand) of 63,959,826 barrels in 2010, or the equivalent of 719 full capacity days of refining at the Dartmouth location (Statistics Canada,

2010). However, this market is split three ways, with two additional refineries in St. John, NB, and another in Come-by-Chance, NL, and Imperial only serves Nova Scotia and PEI. Remaining capacity is difficult to market; Nova Scotia has exported the least refined product of any province, while importing the most crude (Statistics Canada, 2010).

The east coast has a poor network to transport products to inland North American markets, and to access inland crude, which is less expensive (Pinfold & Ervin, 2005). Without any tax incentives, U.S. buyers of product are apt to purchase both refined product and crude oil from inland sources who are accessible, and less expensive due to the use of cheaper crude. Though Canada produces enough crude oil to meet the capacity of all its refineries, it does not make it to the east coast. The Atlantic on and offshore upstream oil extraction activities seem to be of little help. These endeavours produce 103,143,458.62 barrels/year, and additionally exports approximately half of that, leaving 47,736,517.32 barrels/year of crude for provincial use (Statistics Canada, 2010). This would only be sufficient to support the regional refining capacity of 504,000 bpd, for 94.7 days. Agreements described in Chapter 6 of NAFTA create a free market scenario with the United States, and result in elevated sales, where exports gain more than imports cost— according to regional access. Under current market conditions it is advantageous for eastern Canada to import both crude oil and refined products, from foreign locations (Holden, 2006).

The refinery would pay 'New York Harbour' prices for its crude oil, which are higher and more volatile (Hughes, 2007). The Dartmouth refinery has been relying on foreign crude from the Atlantic Basin, using only 21% of Canadian Crude from Eastern Canada, and the rest are from foreign sources--48% being from OPEC countries (Statistics Canada, 2010). The cost of

production at the Dartmouth refinery is therefore more expensive than at other refineries even within Canada. It may have also been problematic that this refinery used brent crude oil, which is a sweeter, lighter, and a generally more expensive stock of oil compared to what is now being used by the prime competitors in the east (Van Loon, J., 2013, Aug 1).

Though this was the least profitable of Imperial's four remaining operations in Canada, this says nothing about actual profit margins, that is, in what sense Imperial was actually 'losing' money on this operation.While it is considered the responsibility of a company to make the highest profit for its investors, this is not necessarily complicit with what would be financially profitable for Canada as a nation. Imperial Oil made an attempt to sell the refinery but did not find a buyer.

4.5.2 The Terminal Operation

The transitional process began in 2013 and will be completed in three years. The refinery parts are being dismantled and sold off. The loading station, and tank fields will remain on the east side of Pleasant Street, as well as the docks on the west, and everything on the waterside will be taken down, leaving only 142 acres in use.

Imperial will continue to fulfill large federal, provincial, and private contracts through the shipping terminal but will no longer supply asphalt, butane, propane, or Bunker C fuel (Interview 13). These are a low grade end product of refining that does not have high enough profit margins to bring it in for resale (Power, June, 26, 2013). The market for Bunker C fuel will also be shrinking in coming years in response to tightening environmental regulations under the North American Emission Control Area agreement (Power, June, 26, 2013).

Remaining petroleum products, including gasoline, diesel, home heating fuel, jet fuel and kerosene are now coming in from abroad and not from regional refineries in New Brunswick or Newfoundland (Taylor, May, 27, 2014). This is likely, for three reasons. Canadian shipping rules make international hauls cheaper, whereas shipping within Canada has to be done on a registered Canadian vessel, which is more expensive (Taylor, May, 27, 2014). Nova Scotia is also unable to get gasoline from the Irving operation in St. John, because of a difference in ethanol content. The government implemented a requirement that we have to have 10 - 15% ethanol in the gasoline core. This requires a different type of handling because of the way it draws moisture. Instead of conforming ubiquitously to this requirement, Imperial took its total production of gasoline from the 4 refineries, and upgraded 3 to meet the 10% demand alone (Interview 2; 13) Finally, as discussed above, product from more distant locations is often less expensive.

4.5.3 Regional Economic Impacts of the Transition

The main regional economic impacts of the transition from a refinery to a marine terminal include: (1) a loss of tax dollars both corporate and individually, (2) a loss of synergy with local businesses, (3) further degradation of regional energy security, (4) the deepening of national "resource curse" symptoms.

Tax money was lost through property taxation of the industrial site, production taxes, as the taxes of the well paid employees incomes, properties, and spending. Imperial Oil's was taxed $41.00 per barrel of daily capacity, based on a deemed daily capacity of 88,000 barrels per day, payable per annum pursuant to clause 2(1)(a) of the Oil Refineries and L.N.G. Plants Municipal Taxation Act Municipality. Property taxes paid to Halifax diminish as the refinery changes designation from manufacturing, to transportation and warehousing (Interview 13). However,

legislation allowed the Province of Nova Scotia to place a cap on property assessment, which reduced the tax revenue from Imperial Oil by $600,000 per year since 2003, to approximately $3.6 million (CBC, 2012, March 12). Now this tax break has been removed; the property will be assessed at its full value and annual taxes will be approximately $2.6 million--resulting in a loss of $1 million annually. The impact of tax loss associated with individual income, property tax and tax on purchases, can be multiplied by approximately 200, as Imperial directly transplanted workers to Alberta and Ontario.

Local businesses, particularly those that had contracts to supply the refinery with parts, and equipment such as K & D Pratt, will suffer a downturn in business. However, much of the refinery's sources were located in the US according to former workers (Interview 13;17).
The media, and interviews, reflected a widespread concern by the Port Authority, shipping companies, and individuals, that the loss of the refinery would seriously compromise Halifax Harbour's status as a full service port. There are continuously efforts to ensure that Halifax remains a prominent global port. Concerns stem from the discontinued provision of butane, propane, and most of all Marine Bunker Fuel C (The Chronicle Herald, 2013, Sept. 13; Van Loon, J., 2013, Aug 1; Zaccagna, R., 2013, Sept. 11). Bunker C fuel is currently used by commercial vessels in the Port of Halifax, and is a significantly cheaper option, though not the only type of usable fuel. It produces considerably higher toxic emissions. The higher cost of alternative fuels could deter harbour activity, which links to other facets of the economy--most directly on-land transport connections or local retailing. However, recently other retailers have stepped up to make these products will be available to the port, such as Wilson Fuel Ltd, and Sterling Fuels Ltd. (Zaccagana, 2014, January, 16; Taylor, R., 2014, May 27). Avid harbour-

watcher bloggers have in fact noted an increase in harbour activity, as the fuel sources diversify (Taylor, R., 2014, October, 23). Increased activity of any sort is positive for the Port, since boats entering will have to pay harbour dues, or use the port's piloting boats (Interview 22).

Product may continue to be available, but there has been some concern over decreased quality. Both former workers that were interviewed independently reported that the refinery has had some problems with poor quality, "wet" product coming in (Interview 13; 17). The impact of poor quality product is not clear but reinforces the overarching concern of supply security, since Nova Scotia is no longer in control of their refined product supply.

The public has expressed fear of supply shortages and increased retail prices for businesses and for drivers at the pumps (Boutiller, 2012, March 9; Taylor, R. 2012, May 17). Bringing in refined product makes availability more subject to weather conditions (Taylor, May 27, 2014). Nova Scotia has already experienced shortages in the past, related to the crude being sourced internationally, and was unable to get gasoline from local refineries then, because of the ethanol content discrepancy (Interview 13). Importing, especially from countries which are not obligated through free trade agreements, allows for great vulnerability to world market changes and decisions. While it may be cheaper to import product currently, long term it may change as demand increases elsewhere in the world, and supplies become tighter. Agreements described in Chapter 6 of NAFTA mean that Canada's energy security, and price changes, are tied to the U.S.'s as well (Hughes, 2007). The U.S. has less crude oil, and consumes more product than Canada, which puts Canada in a more vulnerable position in the event of crude oil shortages— as we will possess the oil, but will be unable to refine it.

With the Shutdown of the refinery, other petroleum product suppliers want to have less reliance on Imperial Oil's facilities. Reports are Irving Oil, which relies on Imperial to supply its local Nova Scotia gas stations, is looking to rebuild their previously condemned wharf in Woodside, where it currently hold a tank farm (Halifax Shipping News, 2013, December 28).

While the logic of this closure may result in Imperial improving its profit margins, it is somewhat questionable in the long term for Canada's broader economy. It is projected that crude oil will become increasingly abundant if fracking succeeds in taking off, and the tar sands continue to develop (Marine Link, 2013). As Canada export of crude oil increases, while the downstream refining sector struggles, the country may be increasingly subject to a "resource curse" or "Dutch disease" scenario. This is a situation in which the development of natural resources results in long term economic problems due to resources crowding the economy, without providing positive expansion and spillover in diverse supporting roles, or, due to money coming from abroad and strengthening the currency and thereby making other exports unprofitable (Bergevin, 2006). Canada is beginning to displays many of these symptoms. Exports are increasingly natural resource based with energy being Canada's single largest export sector by far, and crude oil and bitumen being the highest of all products, at $ 80,983.2 million in 2013 (Statistics Canada, 2014). The rise of the Canadian dollar has been correlated with the price of oil (Bayoumi & Mühleisen, 2006). Large exports of crude contribute to the collapse of secondary industries such as refining, through lack of interregional supply.

5. Results

Analysis of the research materials yields 440 unique discursive features. These comments were often similar in nature and their content was analyzed to bring out common concepts. The

concepts were separated into seven thematic types, which roughly correlate with the question categories used. (1) Aesthetic Features (notable, memorable or impactful aesthetic features); (2) Meanings (symbolic representation, associations, and impacts triggered by aesthetic features or reflection on the site as a whole, pre and post closure); (3) Relationship to Imperial (the nature of, and feelings of interaction between the company and the individual and their 'group'—including interpretations of why the closure occurred); (4) Retrospective Ideals (opinions of what should have taken place in the past); (5) Possible Futures (conceptual and concrete imagined futures for the site, which both reflect meanings and provide possible solutions); (6) Identity (details of personal experiences and identity in relation to the site).

Responses of individuals sometimes contradict one another, and not everyone mentioned something relevant to a any given theme, so not all interviewees are accounted for evenly. The resulting aesthetic themes in groups 1 and 2 were then analyzed in terms of cognitive and non-cognitive origins of understandings, as well as the formative positive and negative impacts on lived experience. "Meaning" here is taken to be inclusive of impacts as well, which are experienced directly by some, and are more theoretical and representational for others. Themes in groups 3 to 5 were analyzed in terms of the framing and story lines (assumptions) about power relations, the consequences for future possibilities, and their causality in terms of site meanings. Themes in group 4 largely reinforce themes in group 5, and reflect the ideal world people envision. These ideals and hopes were measured in terms of Fainstein's assertion of equity focused justice. Themes in group 6 were used to contextualize the data in groups 1 through 5. 'Identities' could be clustered according to a variety of factors. Tables 7.0.1 - 7.0.8 in Appendix D summarize themes.

6. Analysis

Section 6.1 and 6.2 describe the experiences of individuals in relation to the refinery site as they have changed through time, and explore the reasons for these experiences.

6.1 Experiences, Aesthetic Interpretations of the Refinery Site & Future Hopes

The refinery site is interpreted in a variety of ways by different people and groups through time and space. It has been simultaneously despised and appreciated, and it has changed and evolved, both improving and degrading.

The refinery is appreciated for the contribution it has made to the economy, employment levels, and the local community over the years; for its function as a place of family and friendship; its long and rich history in the area; and the sense of place it has provided. Seven participant mention the refinery's significance in providing jobs—associating then entire form with the idea of jobs: "Every time I drive by it I'll still think of all the jobs that were there....you still do when you drive by the Ultramar. Hoards of people used to work for the Ultramar refinery and they still remember" (2). Those who worked there in particular were the ones who enjoyed the strong bonds. As one former worker said, "it was like a second family—this is the second generation working there, and I had brothers who worked there" (17). At closure these meanings began to degrade and shift to memory instead of active meaning, but positive associations were in a process of decline for many years.

Interpretations of the refinery began to turn negative, as culture shifted. A newer resident, and planner in the area says, "flames and smoke stacks no longer represent progress, though they used to. Now it's cranes. In the past it might have played a role in sense of place because of the link between the industry and the community around the refinery" (3). As Halifax saw a shift to a

service sector economy, Dartmouth did not see the same level of 'success', and is commonly thought of as Halifax's 'poor cousin' (22; 17). One participant compares her experience with the Dartmouth refinery to the feeling she had about the ones she grew up around: "...in Edmonton, when you see the refinery at night…in the distance. When you were coming into the city and the first thing that you see when you come back is the glow from the refinery, and it's just like huge industry. [It's like this] seat of power. [In Alberta], that's the reason why they're wealthy. It's just kind of that weird feeling. It's not necessarily good. But it is a strong feeling… here, it is a little different because it's dying, but it also has more history than the ones in Edmonton" (21).

There has also been a growing disconnect between the refinery and the community, and to some extent, amongst worker groups within the refinery. Imperial Oil and the South Woodside community, among others, have had a relationship that can be summarized as transactional (Table 7.0.4). Imperial provides funding for significant local programs, and so the community is appreciative, and tolerant, but there is no genuine engagement or social connection to the refinery. Imperial does have a record of being much more communicative than Irving Oil, which is notoriously silent in the media, and also has its tank farm in the neighbourhood. A resident who has often made attempts to contacted local industry, says "I've always found that imperial oil are forthright with us and Irving never was" (12). However, the company is very cautious in its communication—speaking only through managers during operation, and now through one public relations contact. Employees suffered from being uninformed as well. During the process of reassigning workers, many felt they were being strung along, and were not told where they would be moved with enough notice. As a result many workers joined other oil companies (17).

The degradation of one of Imperial's highest value--safety, further contributed to the recent erosion of relations. One interviewee reports that she feels trust has broken down in the past year, when an emergency alarm sounded, and the refinery could not be reached by the school over the direct line to the principal's office (Interview 12). Employees experienced an atmosphere of increasing pressure over the last decade or so, working under tighter and tighter budgets, under the threat of closure, and alongside declining maintenance and safety considerations (Interview 13;17;18). Refinery workers were separated into salary employees, and wage labourers. The management (salary) were moved every three to five years. They were made to compete with one another to stay employed. "They would cut and slash, here and there. And then they were off, and we were stuck there with the stuff that would break" (17).
These trends within the refinery, and the broader global trends meant that closure was met with immediate shock, but little genuine surprise. Few personal impacts reported among the workers and former workers interviewed. They all expressed a genuine sense of thankfulness for their retirement and 'old age' packages, or their continued employment (Interview 13; 17; 4). There was empathy expressed for those that had to move away (Interviews 1;2;3;4;9;8;10;11; 17;19) and a deep sadness over the loss of friendships, community, and camaraderie as workers left to work elsewhere in the country (Interview 13; 17).

For others (Interviews 1;2;8;9;10;11;12;16) there was some sense of relief. Negative aesthetic features and meanings tend to dominate experiences during Imperial's operation, with 60 negative associations compared to 46 positive, and 19 neutral. The negative meanings softened the blow of closure, and are transformed into current positive impacts. Though, the weight of comments in relation to its closure is also negative (40 positive compared to 45

negative condensed themes) the negatives were much less personal and deeply felt in the majority of cases. Negative aesthetic features included bad smells, noise, a lack of landscaping, rusted infrastructure, and the presence of an 'eyesore' on the waterfront. "I think the area will probably turn more positive. Fall out from the stacks—[Imperial] had to pay for people's paint jobs on their houses, and cars when stuff came out the stacks—that's gone. It's visually gone. It'll be quiet. […] It will make a positive spin on the property values in that. As people move on, and new people move in, they'll be happier" (13). Noise included the sounds of heavy trucks traffic--including jake breaks, routine bells, the roar of the flame, and testing of the alarm system.

There were improvements over the years in some areas, like emissions. A life-long resident of North Woodside reflects, "When I was a little girl you'd hang white clothes up and they wouldn't be white anymore later. It smelled like rotten eggs. It got in everything. Everything smelled like it. As time went on it got better. They started doing screening and filtering and as the technology improved it would get better. The smell probably stopped 10 - 15 years ago now" (1). Since refining ceased, participants notice a quieter atmosphere, and less frequent odours.

However, other issues grew worse over time. "Every summer they used to hire a lot of extra students to come in and paint to cover up the rust, but they stopped doing that a long time ago" (17). The degrading quality of site maintenance beginning in the early 1990's provoked Mayor Kelly to call the refinery an eyesore in the mid 2000's--a verbal legacy that seems to have carried through, as this particular word was used by six individuals. In response Imperial erected the privacy fence, to little benefit according to several participants.

Negative associations of the past include: the stigmatization of Dartmouth and Woodside as unattractive industrial areas; the isolation of South Woodside, and disconnect between

Dartmouth and Eastern Passage; blocked views and access to the waterfront on the Dartmouth side; and its rusted appearance signifying degradation and a lack of care along the Halifax waterfront. Safety is a concern in terms of explosion, and fire; as well as environmental pollution of the air, water, and soil (see Table 7.0.2). Seven participants specify that they wouldn't want to live close to the area, and three who already do show preference to be further east on the hill and away from the refinery. A resident of Eastern Passage was recently trying to sell her home, and was refused by one woman who was concerned about the effects of the refinery, she remarked "if I can't sell my house out here because of the refinery I can't even imagine how difficult it must be to sell in that neighbourhood!" (21). For her, the presence of the refinery adjacent to South Woodside represents a landscape of uneven wealth and poverty: "I always think", she said "when I cross that site, that residential area is so close […] There's a school, and the community centre right across the street, and that bothers me […]. I'm not sure how real my concerns are, but it does concern me that they are so close. It makes me think of environmental inequality—social inequality. There are certain social demographics that are forced to live in that situation" (21). Some of this may now have the opportunity to change, with the reduced hazards of the area, and removal of much of the obstructive infrastructure. Already participants remark that Woodside has been 'improving'—moving towards less noxious, land uses, including restaurants and retail.

The expressed desire to live far away from the refinery was often a qualifier for its positive aspects. Alongside negative impacts, appreciation, inspiration, and imagination coexist. Participants express a sense of cultural and historic loss, as well as significant emotive and affective experiences. The flare, billowing smoke, twinkling lights, network of metal pipes, massive tanks, were among the refinery features that in themselves captured interest, sparked

contemplation, or offered pleasure (see table 7.0.1 & 7.0.2). Lights, smoke and the effect against the sky are positive, non-cognitive, experiences for participants--not linked to any concepts. The billowing smoke is mentioned twice as an element of beauty, in the way it caught the light. The small rows of white lights throughout the refinery piping, and their twinkling reflection on the water when viewed from Halifax, is mentioned by seven respondents. One mentions the lights in a neutral way, while the rest describe them as nice, pretty, or beautiful. The way the refinery infrastructure contrasts with the sky at sunset, or glowing in the dark also contributes to its attraction for six participants.

Six participants mention the abundance of metal, forming a network of pipes, and "paraphernalia"—forming intricate patterns. Four see the complexity of the metal structures inspires appreciation of human ingenuity: "Unless you understand what's going on...it's just like this intricate web of metal dealing with oil…on the technical engineering side of it, it's hard not to admire" (20). "I also like the idea of human ingenuity that went into making it. […] The amounts of human planning and thought that went into constructing something that's so complex… it's fascinating" (21). There is a mysterious lack of human presence, which creates an illusion of an independent "machine at work in isolation, doing all this work for people" (20).

Mystery, novelty and massiveness create interest. The cylindrical storage tanks for oil, and spherical globes which hold butane, are highly recognizable geometric features, particularly from the waterfront, and were often the first thing people recall. "Those things are fascinating […] because they're huge, with the staircases that curl up around the outside. It's just very different from other things I experience" (20).

For participant 18, the flame was a specific “symbolic torch of industrial hope” (18). He could see the flame from his bedroom window, it was viewed imaginatively: “It’s always been a feature of our view and, you know, you go to bed at night and you can see the flame there, up on its stand. Sometimes [my wife and I], we’d even joke that it was like our romantic candle!” (18).

Six participants considered the refinery to be captivating in a non-cognitive way— in spite of its current or former function. It was described as unique, special, magnificent, and dramatic. Intrigue was also drawn by the sites derelict nature. Expressions of appreciation here were tied with cultural artistic representations. Two participant were artists themselves, one of whom had done several paintings of the refinery (see figure 7.1.1). A third mentioned drawings by a local artist (20), two others associated its derelict appearance with apocalyptic themed film drama. An interesting examples of artwork in addition to those mentioned, is Wendy Bissett Beaver’s recent work, presenting an optimistic outlook for the city of Dartmouth—including an imaginative vision for the oil refinery (figure. 7.1.2).

The imaginative gaze led to appreciative meaning in the structures form, however, for three participants, there is hesitancy or even guilt in saying that any aspect of the refinery was beautiful, as they were also cognisant of its polluting nature. The contradictory feelings of certain participants demonstrates the fluidity and possibility of the coexistence of negative cognition alongside positive, non-cognitive affect. In the media, the duality is also noted. One article from The Coast notes, "You can't miss the Imperial Oil refinery, as beautiful as it is stinky” (Landry, n.d.). The pending loss of these imaginative and emotive opportunities in the landscape was saddening for several participants and positive experiences were sometimes at the of root of knowledge and meaning creation, but objections to closure did not stem at all from them. Non-

cognitive experiences were less forceful in motivating future desires than either pre-existing knowledges and convictions (though the later contributed to the former), or negative visceral experiences. For example, the motive to keep these lands industrial for many planners is an outcome of their professional training, and the positive experiences are possible because the industrial presence is seen cognitively as a good thing. Comparatively, a participant who worked for the Canada Cost Guard (CCG), a unit responsible for the safety and economic use of the waterways, had professional experience which would position her to value of marine industry. Yet, noises, smells, and socio-cultural isolation, overwhelmed her interests (12).

Objections to closure come most strongly from notions of natural resource sovereignty and global environmental and social justice. Some participants have strong desires to see Canada able to add value to its crude oil extraction, as well as to be self reliant. In terms of global justice, several individuals have strong convictions about the manner in which it was produced is environmentally and socially responsible. “If the industry is getting shipped over because from an economic standpoint it is advantageous, is that simply just because we're lowering our standards of labor or environmental quality? I don't know that this is necessarily happening at the refinery…[but] that is what I find disconcerting […] I would like to see companies that are operating in North America have to, to some extent, pay for the benefit of having a North American market by ensuring that minimum standards are met. I think that's fair if products are going to be sold in our markets, we should know where they are coming from” (20).

In a context where this information is not provided to oil consumers, there is a sense that this awareness will be further degraded with the removal of the physical refining infrastructure. Currently, the structure signifies the oil industry and activities that go on off-shore that we

already can't see. Though there is very little actual relationship to these industries, it produces consideration—further awareness of that lack of connection could come from that consideration and potentially heighten local awareness and commitment to justice. But when it is out of sight, it may also be out of mind. "If you did hide it, everyone thinks there's no problem here" (21). "we [will ideally] have a holistic sense of our impact on the environment, and it's impact on us. And [] not hid[e] that impact from ourselves by selling it to the other side of the world. We have an integrated sense that, [if] we want vehicles 'this' is the cost. If we want electricity 'this' is the cost. But I want to reach that [] in a way that allows us to enjoy a clean space" (20). Justice needs to be supported by awareness, to motivate it, and keep it in check. Eventually, it would be ideal if petroleum products were no longer needed (Interviews 3;17;18;20;22).

Eight individuals overall, are pleased that the refinery will soon be gone. Nine individuals had a greater deal of ambivalence, and three wish that it had stayed. All individuals, though did very much accept closure as inevitable, if not natural. Post-industrial progression in a centre as large as Halifax is seen as appropriate, even by proponents of industry (18).

All participants recognize value in the area, see opportunities to build on, such as the nearby ferry terminal, potential for panoramic views, and relatively direct access to downtown Dartmouth. Participants all saw improved potential for future development in the absence of the refinery. Yet there is tension in opinions on what moving forward means in terms of outcomes and process (see table 7.0.5). Some desire more of what Halifax has in terms of tourism, identity, and investment, for Woodside, and Dartmouth in general. Others just desire improved community services and connectivity, to improve the liveability of the community. Desires for industry in the area compared to non-industrial uses is split, but more people reported desiring a

mix. Three interviewees mentioned the concept of beauty in future development, “I don’t think anything has to be ugly”, said one woman, industrial or not (16). There is an equal split of opinions over how change should occur: through active efforts--mostly government led, or passive expectation of change through new investments.

6.2 Factors Influencing Experiences & Desires

Experiences and hopes for the future are intimately tied to the unique constellation of factors influencing an individual at a given time. A diverse set of meanings, feelings, and experiences were attached to particular site features, and varied with factors internal and external to the individuals, during operation, currently, and in imagining the future. Externally, the scale and proximity to the refinery, the duration, frequency and timing of exposure, had an influence on site experiences. Internally, individual level of engagement, particular knowledges held (or lacking) in relation the site or its use, as well as the function it may have to serve personal needs, all influence experiences of the refinery. Understanding causality of interpretation will assist in revealing the need for power balances (justice), in order to improve well being.

Proximity is equivalent to visual scale and increased intensity of odours and noises. Throughout interviews, proximity intersecting with duration (over many years), and frequency (visits over the duration) are the strongest set of forces influencing site interpretations. In general, close proximity (from Pleasant Street, or within South Woodside) combined with frequency exposure over a ‘medium’ length duration (between 2 and up to 12 years) produces the most negative experiences of the site (i.e.: 1;8;9;10;12). These participants were exposed to the harshest and most chronic odours and noises, which overwhelmed their senses. When the duration is longer—over 30 years, or for the participant’s entire life, the response to the site is

less vocal, and more accepting of it during its operation (i.e.: 2;9;11). Residents who have lived in the area for under 12 years reported a strong awareness of the refinery's presence, "it's been there for hundred years. So I guess everybody is kind of used to it. But I'm new to the area, relatively—I'm not used to it" (21). All participants beyond that time limit have little to say about its appearance and often said they got used to it. For them the features are self evident and not worth mentioning. It may also be that these participants were never bothered by the refinery's presence, and that is why they have remained for so long. These individuals are more likely to be satisfied with the Woodside neighbourhood (9), and had a harder time envisioning change (2).

At the other end of the spectrum, close proximity and lower frequency, or medium proximity (within Dartmouth, but further away than in South Woodside or Pleasant Street) with a high frequency, over a long duration (typically entire lives or over 30 years), produced the most positive site interpretations (ie: 7;14;18;19;20). This long connection had a positive impact: "I would say it does [provide a sense of place for me] because of the place that it has had in my childhood. And growing up in this area. If I was a newcomer to Halifax I don't think I would feel the same way to be honest with you" (20). Seeing the site less frequently leads to a sense of mystery, and intrigue associated with novelty, but interest does not seem to be lost quickly in the long term for those who are not chronically exposed to the site, just as the negative impacts did not become less noticeable for those up close for many decades. These participants tended not reside in Halifax, and may have lacked some of the stigma Haligonians associate with the industrial culture of Dartmouth. Two of these respondent grew up in England (18, 19) amidst industry, and may also have grained understanding of these features as appropriate in cities.

Along side non-cognitive, emotive and imaginative experiences, these participants also appreciated the cultural and historic aspects of the site, and relevance the city's economy.

When viewed from a distance on the waterfront, regardless of frequency, the tendency was to view the refinery as an eyesore and a stigmatized place. Four participants mentioned the negative industrial character of Dartmouth. However the time of day and appearance of the sky had the ability to alter its appearance both across the water, and on the Dartmouth side (7, 19). At night time, when the lights were glowing and reflecting on the water many appreciated it, including two who frequently see it from the Halifax waterfront (21,15). (Particular lighting, added to the attraction on the Dartmouth side too—"[it is] very dramatic one when you've got the sunset behind it. I think in regular daylight it's not so interesting" (19).) Many who most often viewed the refinery from the waterfront had not lived there for very long (typically between 3 and 8 years) and remarked that if they had lived there longer, it might have meaning for them.

Terms of engagement with the site augments these dynamics significantly, and have to do with particular knowledges possessed by the viewers, and functionality for personal means. Former and current workers (4,13,17), as well as those engaged in the harbour economy (6,22) tended to view the site dominantly in terms of its economic functionality—providing their wages and livelihood, and relationships associated with the place itself. The formal aesthetics of the site had little mysterious impact on them—it is purposeful, and they are aware of how the machinery functions. Cognitive knowledge led to the awareness of hazards. While a participant at a distance may be able to imaginatively romanticize the flame, for refinery workers it had a much stronger meaning as a signifier of danger. For individuals who simply are engaged with the economy as developers, business managers, or planners (3,7,15,18), the primary interest is also often

economic, but they tend to have a wider and less personal scope of aesthetic appreciation than those workers on site, and imagination was often possible alongside functional interests. For a local historian, and those with long personal histories in the area the history was particularly relevant (14). This was more widely celebrated through the 'Skyline of a Community' exhibit, which reflected on the refinery's presence with pride and nostalgia (McKay, 2009, Feb. 13). Respondents with educational backgrounds in social and environmental work, were interested and concerned over the possible local social and broader environmental impacts. The awareness and association with artist interpretations is a form of cultural knowledge which augments meaning with positive association. For respondents around their 60's or older, jobs were often very important, which is reflective of their experiences and knowledge of the political climate of the 1980's when they likely would have been entering a well established workforce.

In the same line of thought, the lack of engagement with the refinery for those who are in close proximity with high frequency (namely, the South Woodside community members), contributes to their distaste for the site, which has no functional purpose in their lives. Members of the community accepted it "because it provided jobs"—but these jobs were not for them. The funding they receive makes some impact on this disconnect, but it is a passive rather than an engaged act "Once I got involved in schools SAC committee, and learned that they made regular contributions to the school, it made a difference. But it's minimal to me, very minimal" (12). Furthermore, in lieu of knowledge, negative forms of imagination can also take root--whether justified or unjustified. Community members often live in fear and concern of the unknown and unquantifiable health consequences over the long term as well as risk of disasters. A community centre worker in North Woodside recalls the stories and ambiguity of health impacts: "People on

Chadwick street—cancer. All dead. In South Woodside, people used to complain that their kids would get ear infections. But mostly cancer [here], although who can really say why it was" (1).

Overall, chronic exposure to objectionable noises, odours, overall visual and physical oppression, and a lack of personal relevance, as well as narrow views of personal functionality tended to overpower and suppress the ability to see the site positively and imaginatively. The aesthetic oppression, and associated hazards here have profoundly been concentrated on and in South Woodside, and contributed to stigmatization and stagnation in this community. Imaginative and positive viewing enhanced the lived experiences of those who were able to view the site in that way, and did not give rise to harmful assumptions. The imaginaries were able to exist because the individuals were sheltered from chronic abrasiveness of the realities of the refinery. Awareness of the situation in Woodside did not extinguish positive interpretations, but did increase self consciousness and moral ambivalence about the site. The positive experiences were enhanced by a certain level of ignorance, and lack of first hand experience, but produced knowledge and appreciation that could be lost when the form is gone. The coexistence of empathy for lived experiences in South Woodside, as well as imaginative possibilities may be the uncomfortable middle ground that is important to find in negotiating the terms of future use.

7. Discussion

This discussion will consider how the dynamics between personal experiences relate to and coexist with norms, regulations, and realities of the context, and shape future possibilities in planning. These dynamics are considered in terms of the refinery closure, and of planning dialogues in the area. The resulting power dynamics, and outcomes are measured against Fainstein's equity based notion of justice. Two trajectories for future planning are speculatively

mapped and a vision is produced with a view to minimize negative and maximize positive meanings and affect and utilizing participant input.

7.1 Actor Interactions in Closure and Planning, and their Influence to Date

The refinery closure was enabled by the natural permissions and freedoms given to businesses in the current international context—which, throughout local history has been manifest in the progressive focus on attracting business interest. The process of decision making within Imperial Oil was kept private. At closure the manager, Leo Sanchez, was not even aware of it until a week before the announcement. A South Woodside community member recounts, "Leo [had] stood up [at our community meeting] and said 'I guarantee you that the refinery will be here for a long time'—the next week they decided to close it. He came back and said 'Ooh Jesus I was wrong on that one!' " (2). The individuals responsible for the decision are unknown, so personal considerations are not clear. However, a representative in business development with the Halifax Port Authority, involved with the attraction of industry, sheds light on an element of large decision making in his work. For him, economically astute decision making is personal in its interconnectedness with pay and livelihood (Interview 22). Imperial's decisions likely progressed through individuals in similar positions, as well as being direct share holders.

Ultimately the closure of the refinery was of financial benefit to Imperial Oil and its investors; while for the city, it is a desirable land use, and government would have benefitted financially from its ongoing presences (HRM, 2014b). There is a legal precedent, set by Ultramar, quashing government capacity to force operation. Ultramar had signed a contract saying it would continue to operate beyond when it decided to, and the Province could not win the court battle to keep it open. In a situation where no contract exists, the Province has no

powers to influence refinery operations to continue. The viability of continued operation under current market conditions is genuinely questionable. Even if not highly profitable presently, government ownership is not unheard of. That this was not considered may indicate a true financial limitation, without alteration of trade and pricing regimes. However, the provincial representative of this constituency is also personally pleased with the closure (11).

The process of decline as well as Imperial's intentional efforts to appease locals contributed to a passive acceptance at the local level. "I think Imperial did it right…" said a member of local government, "they let people know it was coming. They gave people jobs." Imperial Oil transferred its employees from the province and provided moving costs, new homes, and even sold their old houses for them (Interview 17). Imperial also continued, and even increased funding in the local community. This sort of passivity coming out of personal comfort is quite a ubiquitous cause of injustice globally today as we grow personally comfortable. One respondent remarks—"The challenge in Canada, we have an extremely high standard of living that we're getting use to, but how far can we go?" (22).

The content of existing plans typically lines up with the desires expressed by individuals according to where their identities were aligned largely with either Dartmouth (emphasizing industrial land uses or Woodside (desire for non-industrial elements), and conflict with one another. The interests of the Woodside Community Vision, and interviewees affiliated with Woodside, mainly include increased commercial and residential activity, leisure, trails, green space, and pedestrian oriented streets. The visioning plan wants to attract businesses that will draw people to the community and develop housing. It makes no mention of enhancing industrial

uses in the area. One resident did have some desire for industry but was unilinearly pleased the refinery is being taken down from an aesthetic perspective (Interview 2).

The Municipal Planning Strategy for Dartmouth does not clearly support this vision for Woodside, heavily emphasizing industrial development, at the peril of commercial land uses, design, landscaping, and waterfront access in this area. Housing is also explicitly discouraged along the waterfront and beside industry. Halifax's municipal planners who were both from Dartmouth strongly support industry and have aesthetic preferences for it as well.

The plans, and the personal perspectives of the planners demonstrate a lack of awareness or empathy for the lived experiences of South Woodside, and operate at a different scale of experience. The exclusion of industrial enhancement in Woodside shows a lack of appreciation of the significant of industry to the region. The exclusion may also be reflective of their negative experiences which have tainted the community's concept of industrial presence, resulting in a disregard for safe, and pedestrian friendly streetscapes amongst industrial uses.

The 25 year Woodside Visioning Plan was adopted just about a year before closure was announced, and the relevant components of the Dartmouth MPS has not been updated since. Imperial Oil was invited to visioning but did not come, says one of the planners who facilitated the visioning project in Woodside (Interview 7). Several of the residents involved in the visioning say they would have planned things differently had they known about the closure (Interview 2; 12). There are plans to put a trail through the Imperial Oil property, to connect the Dartmouth Waterfront trail to the Shearwater Flyer trail, but it does not seem like Imperial was involved in its planning. Poor coordination and collaborating regarding this vision plan is not encouraging. This echoes of past failures to coordinate improvements in the area, including an

instance recently of adding connectivity to the Woodside Industrial Park by connecting Mt. Hope Ave. to Caldwell Rd across the Shearwater lands (Interview 2). In the 1980's, municipal efforts attempted to channel investment centrally using an urban development boundaries which Woodside was within. This boundary ended up being expanded after petition of a private land owner, and likely had a directly negative effect on Woodside by allowing investors to skip over the area and funnel investment into the Morris-Russell Lake area. Planning in the area so far separates and layers responsibilities; and conflict is avoided along with coordination, to the prevalence of large scale development and investment interests.

7.2 Planning Trajectory Under Current Conditions

The future of the area will be tentatively dictated by the Secondary Plan, which is to emerge from the Woodside Visioning Plan, and Imperial's interests. It is unknown what the Secondary Plan will hold, or how it will be harmonized with the Dartmouth MPS and Land Use By-law. And at this point, it is unclear what Imperial's plans are for the site. Public relations said it is too soon to be thinking about future uses of the site, but said "maybe in a year or two" (5). The WDC and municipal planners directly state that community interests are not considered in harbour-front development, but rather, these areas prioritize economic development for the good of the greater public (Interview 6). Neither the WDC, nor municipal planners expressed interest in leading development, reportedly due to high cleanup costs or expectation of private investment, though these groups did say they would expect to be involved in providing advice and facilitating a plan for the site (Interview 6; 18). As far as the Port Authority is concerned, this site is still active on the waterfront, but would like to see an enhanced use of the site.

In terms of method, an entrepreneurial approach to urban development prevails within both the Dartmouth MPS and the Woodside Visioning Plan, and in interviews with the exception of South Woodside residents and two of the school employees (Interview 1;12;8;10) who express an interest in government and community led change (called 'active' renewal in table 7.0.5). Participants are optimistic about the potential of passive attraction of investment. The type of which is currently regulated by the Dartmouth Land Use By-law—intent on maintaining industrial development. Yet, with the increased quality of the area and new potential for ocean views, pressure may be for residential or commercial uses, which is complicit with the Woodside Visioning Plan. The trend has been for softer industries and land-uses. If this continues and status quo of planning practice is held, there will be improvements to the quality of life in South Woodside. However this positive effect is potentially linked with the dilution and dispersion of the current, stigmatized, population ("As people move on, and new people move in, they'll be happier" (13)). If the neighbourhood improves significantly, and more outsiders move in and stay, the strong existing and multi-generational resident group may feel marginalized and dissolved instead of strengthened and built it up after such a long legacy in the neighbourhood.

However, it is likely that growth will be moderate due to residual physical challenges. South Woodside will still be extensively hemmed in by Highway 111, and the refinery lands. According to prevailing local attitude and precedent, the expected trajectory of urban process seems to be an attraction of alternative investment nearby, while likely Imperial's unneeded land vacant for decades. The former Ultramar Refinery right down the road has set a strong precedent of dereliction and vacancy, and people have little hope in industry responsibility, especially when it comes to a refinery situation. One of the local politicians who lives in Eastern Passage tries to

be hopeful, “there used to be one of those right there, where all those tanks are, and it got taken down, they just never took the tanks down. [It's been] twenty years, and the community is sick and tired and we’ve started to band together to get rid of those tanks. Those rusty tanks. Because the only tanks they use are on the water side and there’s four tanks. Up there and they use those tanks and they keep them painted and they keep them nice. But the other ones have turned into a horrible rusty mess, and I would hate that to happen to Woodside” (11). While many of Imperial’s tanks will still be in operation, this by no means guarantees aesthetic maintenance. There are also ones that will be going out of use “There’s a lot of old tanks. It costs hundreds of thousands of dollars to take them down. Watch your pennies and your dollars will take care of themselves. That's their attitude. So if they don't have to spend they’re not going to” (13).

South Woodside has remained through exposure to noxious odours and hazards over an extended period of time. The cycle of shifting industry has torn through Woodside repeatedly, some changes more devastating than others to locals. From the Halifax Sugar Refinery to Moir’s Chocolate Factory, to a strip mall; from an Ocean Industrial Terminal to bowling alley; Refinery to a marine terminal. When the illusion of permanence dissipated this community held on to one another. There is a section of the population who have lived in the neighbourhood for five generations in some cases, while the other section of the population has a very high turn-over rate. Long time resident of South Woodside didn’t come expecting to stay, “it was the people and the friendships that made me…” (2). Residents express a strong connection to their community, and a pride in its history, despite poor living standards in the community (SWIA, 2012).

A steadfastness in the face of change is rare, and may be both good and harmful. In their isolation, a core of the community seems to have remained, but to do so, it seems maybe they

developed an insular resilience, maybe as a coping mechanism. These people seem to have strong bonds, but few bridges to anyone outside the community. In interviews with long time residents of South Woodside, they held a sense of resigned acceptance of what is handed to them (2,9). This is consistent with trends in the literature which say communities with low economic vitality often reduce their requirements which leads to a cycle of dereliction (Ruelle et al., 2013). The deconstruction of the refining infrastructure itself is pleasing to some members of the neighbourhood—just excited to have the refinery structure, smells, and noise gone, and maybe a glimpse of the water. It is a relief to them that this is guaranteed, and does take a small step towards a more even housing landscape in Dartmouth, at first. However, the residual impacts of the refinery go deeper than a continued physical presence. There is residual social damage from the long legacy of isolation that will not likely be restored just through passive investment. If instead, justice becomes the focus and orientation of planning this site, there are much greater, synergistic, opportunities through which this community may be able to see restoration.

Three of residents of the Woodside area mentioned experiencing a lack of respect and identity, and a feeling of being politically cut off due to shifting political boundaries—just barely being excluded from the central planning area of Dartmouth. Though they do not intend it to, their identity is tied in with the oil refinery—'Outside Woodside, if you say you're from Woodside, people will say, 'where?' Then you say, the neighbourhood by Imperial Oil, and then they'll know what you're talking about' (1). The elementary school students drew pictures of what is important to the community to help save the school when it almost closed, and the refinery is always in them (SWCIA, 2012). The community is denigrated by others outside it, as "that type"—who has a sense of entitlement, and complains a lot (13). Online comments spare

no politeness when describing the neighbourhood “Moved into the trailer park in 1978 and got out in 1982. Never so glad to leave a place in my life. What a hole this neighbourhood was. Constantly getting our shit stolen, drug dealers and welfare bums all around. Can't believe the refinery didn't buy all these dumps and turn them into a tank farm” (Hotoilhands, 2011). Another commenter said “Woodside is where they put all the mutants. I lived there for 9 years in the 80s. Man am I some glad to be in Halifax” (SpaceWars2025, 2011).

Those who have only one foot in the community, through work, or who are have long contemplated packing up and moving out feel passionate concern and frustration with the insular, unwelcoming, and at times dangerous nature of the community (Interviews 8;10;12;17). Violence among youth, theft, drug and alcohol abuse, and high instances of exposure to the sex industry among young girls, are among the experiences of this community (Interview 10). One resident recounts the years of questioning whether to stay or go, due to the social troubles. She says, “If you would ask me six months ago I would've said, ‘I'm moving!’ I still don't know 100%. I know that some things in my neighbourhood will need to change for me to stay long term. And I don’t know that the stuff that we’re talking about here is really what needs to change for me. […] What does need to change for me is the people in our neighbourhood. I need to see the students at my daughter’s school, and how they interact with each other [change]. I see their behaviour and I see the lack of support from their parents, and towards the staff of the school in dealing with the issues that are happening at the school on a regular basis. And personally for me at the end of the day it's going to be my daughter’s safety and welfare that I’m concerned about, and I don’t know if that’s going to happen in South Woodside” (12). Explaining the transience of the community, a school employee says, “what happens in this area is that people who are not familiar with the

area would move in, but not stay. They move in because maybe the price of housing is fairly low, but without the knowledge of moving into a low income neighbourhood" (10). She concedes that in her opinion, the school, which is the heart of the community, should be shut down in order to offer greater opportunities for interconnection with surrounding neighbourhoods, and foster more open-mindedness—"I'm not the only one who feels this way", she adds (Interview 10).

Beginning with Fainstein's assertion that we should orient value to justice and not competitiveness—is the emergent landscape likely to be "just"? The dynamics certainly continue to be oriented towards competition. While some local improvements might result from the refinery's closure, decision making is not favouring the most needy, who have lived in the shadow of the refinery for generations, and the standard of living remains low—making it evident that provisions for all people are not being considered equitably. The money gained by market forces first prioritizes those who already have a high standard of living . But this is not an efficient means of helping those in need. We all desire the same things—as one resident said "we just want what anyone wants for their community" (12). It would seem that there is a great deal still to be done to restore the community beyond the removal of some of the environmental hazards, noises, and an oppressive physical feature. Though some South Woodside residence may view the relief from noxious odours and noises as sufficient, does not mean that it is. This is the legacy of the environmental depravity and physical isolation has likely caused problems which are too late to restore for previous generations, but maybe there could be an opportunity for restoration now, and for the next generation.

7.3 A Justice Oriented Approach & Vision

Large scale changes with regards to competitive market forces are beyond the scope of daily practices of urban planning. However, at the municipal level, beginning with improving communication and collaboration between the private, variously levels of the public sector, and the community would be a great start. The Woodside Vision should not have been made entirely in isolation, and without awareness a) that the refinery would be closing—which they likely knew but kept to themselves; without understanding of the value of the area in terms of industrial. If there is a genuine valuing and interest in people's desires and needs within planning practice, we will work harder to integrate them with larger scale issues, and educate various groups as needed.

This community has a gift of a core of stable people that is increasingly rare. This research though has revealed that sense of place and stability, though they may be enough to ride out cycles of uneven development and decline, are insufficient without the knowledge and capacity, or assistance to navigate and be involved in the changing society.

Steps to rectify the isolation, stigmatization, lack of identity and engagement, and to build on local relationships and sense of place can begin with concepts from this research regarding site experiences and meanings. Possible ways to improve experiences in a place include: engagement with a site, historic appreciation, imagination, knowledge of positive functionality, and of course freedom from noxious odours, noise, and physical constraints. And while doing so, a local scale project can counteract and ameliorate the harms being caused by the larger forces—which can assist in providing meaning in positive functionality.

7.3.1 A Vision of Recreation

The current section will focus on a concept that may be achievable at the site level, starting with a two basic areas of need, (1) degraded livelihoods and associated stigmatization; and (2) the use of petroleum products. Many areas of synergy and convergence are evident in expressed desires, plans, and meanings, that could be combined to produce a place of innovation and identity, with great benefits that could reach beyond the community. See Table 7.0.6 in Appendix D for the ideas offered by participants.

To provide opportunities for these ways of viewing the site, which are not currently possible, individuals could be welcomed to participate in the design, research, construction, maintenance, and operation of the site as a multifunctional space that includes:

- renewable energy production using wind turbines, solar panels, and/or a vegetable oil fuel production hub;
- connection to an elevated wooden board-walk trail traversing the site along the waterfront and connecting to the Shearwater Flyer Trail;
- sculptural elements taken from the original refinery structure
- phytoremediative efforts surrounding boardwalk and elsewhere on the site;
- Interpretive panels including images and history of the refinery, as well as information about the wind and other renewable energy on site, and remediation efforts.

Overall, this project supports the importance Nova Scotia places on utilizing brownfields, and maintaining industrial lands. This site is also multi-functional and can act as a place of recreation and tourism, which provides benefits for the community and beyond.

Renewable energy and fuel production provides a direct transformation of site meaning as a place of environmental pollution, to a place of care. With the passage of The Electricity Act (May 2010), Nova Scotia has adopted aggressive renewable energy targets which are likely to be achieved in large part through the use of wind energy (HRM, 2014). According to regional plan, this site falls within one of the only areas designated for wind turbine location. This small endeavor could also be scaled up significantly depending on funding and capacity, to be a robust hub for renewable energy generation or research on new and relevant forms of renewables, like tidal energy. This would include more in depth training and skills development. The larger scale the project, the more genuine the outcome, and the greater contribution to provincial energy targets, and local land use policy--zoning this area as industrial, and marine industrial.

The wooden boardwalk meets the trail plans that already exist, and add connectivity and opportunity to access green spaces for Woodside residents. The raised boardwalk could limit the amount of preemptive environmental remediation that needs to be done, and added signage could ensure users or pets would know not to come into contact with the ground or foliage.

Research has found that around sites of contamination, or industrial loss, people often despise the idea of preserving “industrial heritage”. This may be for a variety of reasons. There is tension between the structures becoming obsolete, and their historic preservation. Maybe they are tired of seeing it, do not yet see its value as history but only as a functional place, or because of its ongoing association with contamination or other negative experiences. Here, not surprisingly, individuals who found it aesthetically pleasing mentioned the possibility of keeping sections of the refinery to be used as sculptural elements. But even those who did not appreciate it at all as an active element of the environment, while imagining the possibilities for the future

of the site either mentioned it themselves or, when asked at the end of the interview how they felt about it, responded positively

Phytoremediation is a way to carry out visible and aesthetically pleasing remediation. Similarly, the entire site, and the interpretation panels act as a visual and educational reminder of what was present here before, and our impact on the landscape.

From the outset, it is assumed that the possibilities on this site are explored in terms of the blank spaces owned by Imperial that will no longer be used for marine terminal operations, and would be available for reuse or sale. This amounts to approximately 470 acres over the site. In terms of funding, it would be appropriate for Imperial Oil to contribute a significant percentage of the sites start up and operational costs. The benefits to Imperial Oil would be significant in terms of public image, and could even be economically profitable. Since the trails network is a city initiative; and wind turbines are typically provincial, various cost saving, public-private partnership could be formed.

The approach laid out here is but one scale-able example of a way to ameliorate the negative affects of a legacy of industrial stigmatization and the ongoing affects of an under-utilized plot of land. It was contributed to by research participants, and transforms the negative meanings of the site into positive ones. Though there was no final process of agreement, participants were quite open to imaging ideas, and the strongest opposition was not so much in concepts but in their assertions that no one would ever invest the money to act on the site. A next step in implementation would be to carry out a greater depth of integrated visioning, and catalogue social capital and skills in the Woodside area.

8. Conclusions

This research has revealed a story about deindustrialization that is different than many others in the literature, and corroborates the assertion that instances of 'deindustrialization' are highly unique and contextual. This is a case of industrial loss that is situated in an urban region which has largely transitioned to a post-industrial economy, but which is actively making efforts to hang on to industrial lands for the sake of nurturing an economic niche surrounding the Halifax Port. Woodside is not in decline, or suffering from deindustrialization, per se, but rather, is suffering from chronic cycles of active industrialization and subsequent loss. Insult is added to injury, as Dartmouth—and the Woodside area to an even greater extent, is visible along the harbour to be ingrained in the regional consciousness as the 'poor cousin' of Halifax. These cycles are directed to Woodside by plans and intentions to attract investment, and there is seemingly little concern for the long term stability of an industrial use, so long as the lands remain industrial. Though zoning was developed to protect residential land uses from heavy industry, it now seems that it is the industrial that is prioritized to the peril of this community. This interface needs to be renegotiated. If the economy is being prioritized for the good of the public, as the government proposes, it should not trample that value in its very physical presence.

Woodside has had financial support from the municipality in the past, and the area is seen to be improving recently—seeing increasing amounts of non-industrial activity. However, the stigmatization and social challenges remain. These challenges cannot be solved by simple channelling of funding, but negative meanings must be transformed through innovation and engagement to build positive images and associations of industry, if industry is to prevail in Dartmouth with excitement and vigour instead of stigmatization.

Beyond meanings for Woodside, the loss of the refinery as one of the 'last vestiges' of highly visible heavy industry along the Dartmouth waterfront also could mean the loss of some consciousness and awareness of the products that sustain our lives, and a further progression into lives buffered from the harsher realities of our impacts on the environment. The aversion to a refinery's presence in a city here, goes beyond local impact. It is not *only* a problem because it affects the health and well-being of a small marginalized group of people, as many who were repelled by it did not give a thought to the community impacts. It was thought of as an eyesore—something uncomfortable to have to look at, because it represented negative meanings. As Porteous (2013) explains, ugliness is indicative and symptomatic of a system which does not value things intrinsically. When the physical environment embodies what is healthy for people, and the environment, and people are aware of, and engaged in it there will be appreciation. The goal of establishing businesses and structures which can be intrinsically valued, especially in places where there are negative legacies to contend with, can begin to smooth the constantly shifting landscape of unevenly distributed environmental harms, locally and globally.

Reflections on the Value of the Research and Limitations

There was a diversity of opinions and site interactions captured, responding to a call for more "real-life" studies in environmental aesthetics, as research is most frequently carried out through simulations, which negate the complexities of lived experience (Foster 2009; Cold, 2001). This is an example, not only of a real life, but is also a multi-scalar analysis, using individuals from diverse backgrounds, and reveals correlations and departures between professional understandings compared to the public—all of which are considered lacking in environment aesthetics research (Ode et al., 2010). Though this research lacks statistical weight,

this multifaceted analysis was an exploratory endeavour of aesthetic application which can be built upon, improved, and expanded upon in the future.

With 22 participants from diverse backgrounds, this research does not approach statistical legitimacy, and individuals cannot be assumed to be representative of their "category". It is a limitation that no input was retrieved from Imperial employees who were relocated to new refineries, homes, provinces—along with their families, since these are the individuals whose lives were most affected by closure. However, two colleagues who remain both reflected that, for themselves, they would have had mixed feelings but would have overall enjoyed the excitement of moving to a new place on Imperial's dime, so it may be that they too would have reflected a pacified experience.

There is also the problem of complexity and informality in semi-structured interviews. The questions asked during the interviews were intended to bring understanding of aesthetic perceptions of the site, and spark conversation about what was important about the site to them and their community or group. However, it may create uneven trends as a result of variability in prompts, if participants did not understand the question or had nothing to say. Questions meant as prompts could have been leading at times, while at other times themes naturally emerged without specific questioning. The latter may have had more significant meaning, and were emphasized in the analysis.

As people talked with me, their judgement of the site was sometimes augmented even through the course of the conversation, on what might be possible on the site. Where people started out closed off and jaded about the options, they sometimes ended quite passionately with further questioning on why they thought change was not possible. This was noted as introducing

‘error’ into work (Sevenant & Antrop, 2010). However, here, I think this is demonstrative of the functionality of aesthetics as a tool for creativity and justice in planning.

I personally came at this site as a planner and researcher, but also an artist, a tourist, and a transitioned to a resident. My perception of it shifts as time goes on and I discover more about it. Coming in with an imaginative excitement, it has grown less mysterious and exciting as truths about its operation were revealed. I was particularly influenced by the private and confidential nature of the companies public relations. This is a particularly abrupt contrast to the otherwise friendly feel of the business culture in the city. However, with increased knowledge and awareness, this study has heightened my connection to and appreciation as Dartmouth as a place of industry, and has peaked my interest in methods of improving the proper integration (or separation) of industries within the urban landscape, and their sustainability and viability as influenced by global policy. A question this research has raised, and on which further research could be done, is in clarifying the extent to which industry profit margins practically limit their ability to meet heightened environmental and labour standards. Relatedly—how reliant is a given industry on investor funding, and how would that be affected by lower profits? Would improving the environmental and social quality of the production process be capable of enhancing and targeting a different market of investors?

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Appendix A - Sample Questions

Aesthetics
1) If you think about the Imperial Oil Refinery site, how would you describe it, or what are the main characteristics or things that come to mind?
Prompts as needed:
Does it stand out, or do you pay attention to it?
Is there anything about it that you particularly like or dislike about the structure?
Does it provide any sort of sense of place to you?
Do you notice any difference between now and when it was in operation?
Do you think you would miss it at all once it's all torn down?)

Personal background and relationship to the refinery site & local industry
2) From where do you usually see the refinery? (ie: while at work, on the way home, while walking along the harbour front)
3) Can you tell me a little bit about yourself? Anything relevant to what you know, or think, about the site or local industries ie: profession, how long you've lived in the area, etc.

Opinions, thoughts, and feelings on refinery closure (and terminal operation) & Industrial presence in the area
4) What forces, if any, do you see as being responsible for the refinery closure or for other struggles to attract industry to the harbour? Was there anything that could have or should have been done?
5) Has the refinery closure had any impact on you personally?

Future Uses
6) What would you personally like to see develop on the Oil Refinery site in the short term and long term—what is your hope for that neighbourhood?

Appendix B - Consent Form

Planning and well-being: Aesthetic perceptions of an industrial landscape in transition
Stephanie Mah, MES Candidate, 2014, e: stephkm@yorku.ca t: 902-817-7238

Purpose of the Research: The purpose of this research is to explore perspectives on the Dartmouth Imperial Oil Refinery and consider how they relate to current and future planning in the area. Participants will be asked a series of questions in relation to the site, including personal background and relationship to the refinery site; thoughts and feelings about the refinery's closure; aesthetic opinions of the site; and thoughts on future use of the site. The length of the interview will vary with depth of the participants interest, but will be approximately 30 minutes in length.

Risks and Discomforts: There are no foreseeable risks or discomforts associated with your participation in the research. You have the right to not answer any questions.

Benefits of the Research and Benefits to You: This research will improve our understanding of how to address deindustrialization from a community planning perspective. There are no direct incentives to participate.

Voluntary Participation & Withdrawal from the Study: Your participation in this study is completely voluntary, and you can terminate participation in the study at any time, for any reason, without prejudice. Your decision to not volunteer, to refuse to answer particular questions, or to terminate participation will not affect your relationship with the researcher, York University, or any other group associated with this project, now, or in the future. In the event you withdraw from the study, all associated data collected will be immediately destroyed wherever possible.

Confidentiality: Unless you choose otherwise, all information you supply during the research will be held in confidence and unless you specifically indicate your consent, your name will not appear in any report or publication of the research. The data will be associated with you only by general characteristics with which you identify such as by profession, community member, etc. Hand written notes will be taken during the interview, and supplemented by audio recording to ensure accuracy. Your data will be safely stored on the researchers personal computer for a minimum of two years after the completion of the study. Confidentiality will be provided to the fullest extent possible by law.

Questions About the Research? If you have questions about the research in general or about your role in the study, please feel free to contact Dr. Jennifer Foster either by telephone at 416-736-2100, extension 22106 or by e-mail (jfoster@yorku.ca). This research has been reviewed and approved by the FES Research Committee, on behalf of York University, and conforms to the standards of the Canadian Tri-Council Research Ethics guidelines. If you have any questions about this process, or about your rights as a participant in the study, please contact the Sr. Manager & Policy Advisor for the Office of Research Ethics, 5th Floor, Research Tower, York University (telephone 416-736-5914 or e-mail ore@yorku.ca).

Legal Rights and Signatures:

I, _____, consent to participate in this study, entitled 'Planning and well-being: Aesthetic perceptions of an industrial landscape in transition' conducted by Stephanie Mah (MES Planning Candidate, 2014). I have understood the nature of the this project and wish to participate. I am not waiving any of my legal rights by signing this form. My signature below indicates my consent.

Signature_____ Date
Participant

Signature_____ Date
Principal Investigator

Appendix C - Images & Maps

Figure 2.1 Imperial Oil refinery context map. Purple is the Woodside Industrial Park; Red is South Woodsidel Blue is Russell Lake, and grey is Imperial Oil's property

Figure 4.1.1 Panorama from the Halifax boardwalk

Figure 4.1.4 (right) bench on the boardwalk, positioned for viewing of the refinery on a cloudy day.

Figure 4.1.2 (left) The view of the refinery from around the southern start of the boardwalk

Figure 4.1.3 the refinery and George's Island

Figure 4.1.5 The view driving South on Pleasant Street in Woodside, with white privacy fence hiding the majority of the refinery

Figure 4.1.6 View from a slight hill in the employee parking area, exposing more of the refinery

Figure 4.1.7 Sign discouraging access

Figure 4.1.8 Stark juxtaposition of refinery to South Woodside School playground

Figure 4.1.9 View from within the South Woodside neighbourhood

Figure 4.1.10 A view of the Imperial Oil Tank Farm from within South Woodside (Image taken from googol street view, November 15, 2014)

Figure 4.1.11 A view of the Imperial Oil Tank Farm from within South Woodside (Image taken from googol street view, November 15, 2014)

Figure 4.1.12 A view of the Imperial Oil Tank Farm from within South Woodside(Image taken from googol street view, November 15, 2014)

Figure 4.1.13 The Irving Oil tank farm, which is surrounded by houses within South Woodside(Image taken from googol street view, November 15, 2014)

Figure 4.1.14 The rusting and unused Ultramar oil tanks, south on Pleasant Street in Eastern Passage

Figure 4.4.1: There were 33 houses along two streets, most of which were long, low bungalows, with larger houses for senior staff. They homes were considered high quality, and the neighbourhood is remembered as being attractive and well maintained. (Taken from Hartley, 2010)

Figure 7.1.1: Participant 19's painting of the Dartmouth refinery (left)

Figure 7.1.2 Wendy Bissett Beaver's optomistic vision of the Dartmouth Oil refinery (below)

Appendix D Tables

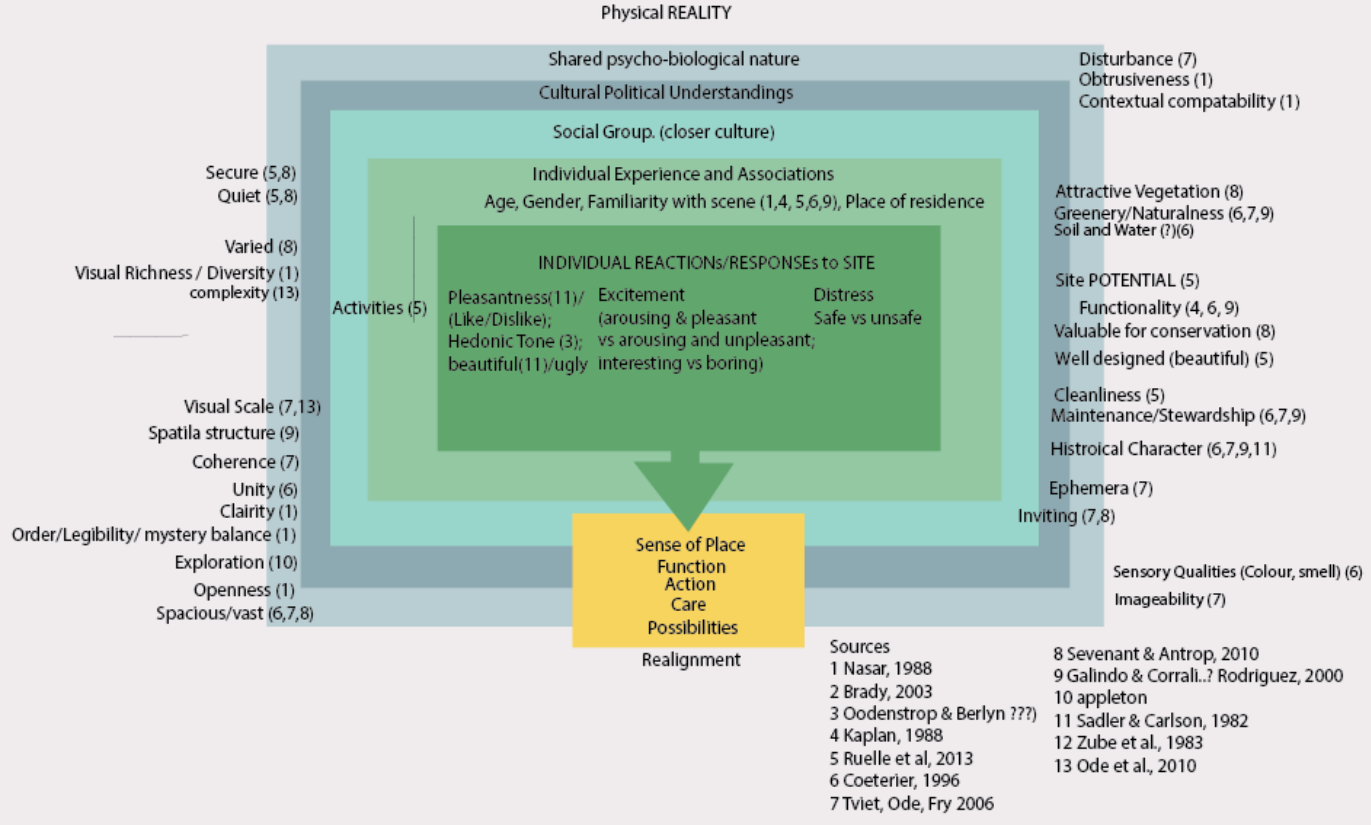

Figure 3.2.2.1 Summary of Landscape Preference Study findings

Occupations: H Trades, transport and equipment operators and related occupations; I Occupations unique to primary industry; J Occupations unique to processing, manufacturing and utilities			
	2001	2006	2011
Halifax (CMA)	15.60%	15.30%	14.30%
Woodside-Russell (CT)	18.90%	18.60%	23.20%

Figure 5.3.1 Comparison of Halifax and Woodside's percent employment in industrial occupations

Industries: 11 Agriculture, forestry, fishing and hunting; 21 Mining and oil and gas extraction; 22 Utilities; 23 Construction; 31-33 Manufacturing			
	2001	2006	2011
Halifax (CMA)	12.20%	12.40%	12.30%
Woodside-Russell (CT)	16.50%	16.60%	16.60%

Figure 5.3.2 Comparison of Halifax and Woodside's percent employment in goods producing industries

Tables 7.0.1 Features of the refinery site that were mentioned by respondents, the fraction of respondents who mentioned the feature, and all of the specific respondents who did

	Aesthetic Features of the Refinery	Respondent mentions /Total	Specific Respondents
1	The flare	9/22	3, 6, 8, 10, 11, 13,15, 17, 18
2	Very bad smells	9/22	1, 2, 9, 10, 11, 12, 18, 19, 21
3	Smoke	2/22	7,19
4	Lights, "twinkling"	7/22	2, 7, 14,15, 19, 20, 21
5	Metal, pipes, stacks, confusing “paraphernalia”	6/22	7, 9, 14, 18, 19, 21
6	Cylindrical tanks and globes	6/22	3, 6, 8, 10, 15, 20
7	Noisy	4/22	2,4,9,12
8	Fences and lack of landscaping	5/22	2,13,15,17,21
9	No human presence	2/22	19,20
10	Patterned and intricate	3/22	7, 19,20
11	Dark, and not comforting	2/22	11,16
12	Greasy, oily, dirty	2/22	4,20
13	Rust	4/22	12, 13, 17, 22
14	Ugly--"eyesore"	9/22	3, 10, 11, 12, 13, 15, 16, 17, 21
15	The contrast with the sky -- sunset or night time	6/22	7,14,15,19,20,21
16	It is a large physical obstruction	8/22	2,3,6,7,8,10,11,14
17	Captivating (unique, special, mangnificent, dramatic, eerie)	6/22	7,15, 16, 18, 19, 20
18	Highly visible from the Halifax waterfront and on the ferry	4/22	3,6,20,21
19	It really stands out	21/22	1,2,3,4,5,6,7,8,9,10, 11,12, 13,14, 15, 17, 18, 19, 20, 21, 22
20	Desire to live away from it (association of nearness)	10/22	2,7,9, 10, 11, 12, 15, 17, 18, 19
21	*The further away from it the better from within the neighbourhood*	3/10	2,9,12

Table 7.0.2 Meanings and representations mentioned by respondents regarding the refinery during operation; the fraction of times it was mentioned, the specific respondents, the specific features the meaning was linked with, the primary mode of interpretation, and whether it was viewed positively, negatively, or neutrally (can be multiple)

	Functional Refinery Meanings & Impacts	Respondent mentions /Total	Specific Respondents	Specific Features Associated w/ Meaning & method of interpretation	(+) (-) (/)
1	Associated with the disconnection between Dartmouth & Eastern Passage	12/22	1,2, 3, 6, 7, 8, 11, 14, 18, 19, 20, 22	16 + functional	-
2	A functional place --"just an industrial site"	9/22	1, 2, 3, 4 ,11, 16,18, 22	11,12 + Cognitive	+/
3	Symbolized hope for jobs & industry; Represented economic activity	7/22	2,3,9,11,13,18,21, 22	1 + Cognitive + Imaginative	+
4	Embodies and signifies hazzard	6/22	8, 11, 12, 13, 17, 18	1 + Cognitive	-
5	*Flame directly signifies harm or safety*	*3/9*	*13, 17, 18*	*1 + Cognitive*	-/
6	Represents environmental pollution	9/22	3, 9, 10, 11, 13, 18, 20,21,22	1, 3 + Cognitive	-
7	Imaginative use as a romantic urban fixture	1/9	18	1 + Imaginative	+
8	Exemplary of an old and obsolete type of progress	2/9	3,15	1,6 + Cognitive	-
9	Symbolic of human ingenuity	7/22	7, 12, 18, 19, 20,21, 22	5 + Engagement + Imaginative	+
10	Uncared for (unmaintained, derelict, degraded)	7/22	11,12,13,15 16,17, 21, 22	8,11,13,14 + Cognitive	- +
11	Associated with cultural appropriations in art	2/22	19, 20	3,4,5,6,10, 14, 17 + Cognitive + Engagement	+
12	Associated with family, friends, and personal identity	3/22	12,13,17,18	Cognitive	+
13	Signifies uneven distribution of wealth and poverty	1/22	21	Cognitive + Imaginative	-
14	Signifier of the oil industry and what goes on offshore	1/22	3	Cognitive + Imaginative	+/
15	Exemplary of regional history	8/22	2,3,6,7,10,12, 14,22	Cognitive	+
16	It is iconic	6/22	6, 7, 15, 17, 18, 19	16, 17,18, 19 + Cognitive + Intangible Experiences + Imaginative	+/
17	Represents the stigma of Dartmouth as inferior to Halifax	7/22	1, 3, 15, 16, 17,18, 22	Cognitive + Imaginative	-
18	Sense of place	9/22	7, 8, 14, 15, 17, 18, 20, 22 (+12)	16, 17,18, 19 + Cognitive + Intangible Experiences + Imaginative	+ -

Table 7.0.3 Meanings and representations mentioned by respondents regarding the refinery after closure; the fraction of times it was mentioned, the specific respondents, the specific features the meaning was linked with, the primary mode of interpretation, and whether it was viewed positively, negatively, or neutrally (can be multiple)

	Post Closure Refinery Meanings & Impacts	Respondent mentions /Total	Specific Respondents	Specific Features Associated w/ Meaning & method of interpretation	(+) (-) (/)
1	Signifies a network of environmental consequences and displacement	2/22	20, 21	Cognitive + Imaginative	-
2	None to very little personal impact	5/22	1, 4, 9, 16, 19		+
3	Loss of friendships and community	2/22	13, 17	Cognitive	-
4	Concern that community funding may cease	5/22	1,8, 10,12,13, 17	Cognitive	-
5	Empathy for others potential hardship in losing work and transience	10/22	1,2,3,4, 9, 8,10, 11, 17,19	Cognitive	-
6	Provides greater community development opportunities	21/22	1, 2, 3,4,6,7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 21,22	Cognitive	+
7	Improved odour	7/22	10,11,12, 13, 14, 17, 22	Affective	+
	Reduced Noise	3/22	2,12,	Non-Cognitive	+
8	Potential general aesthetic improvement	2/22	11, 17	Non-Cognitive and Cognitive	+
9	Safer now	2/22	13,17	Cognitive	+
10	Sense of loss culturally and historically	6/22	7, 8, 10,14, 18, 20	Cognitive	-
11	General economic down turn	11/22	1,2,3,8,9, 13, 14, 15, 16, 17, 19	Cognitive	-
12	Concern over a possible rippling effect causing other industries in the area to lose business	3/22	8,13,17	Cogitive	-
13	Shut down Introduces market uncertainty	6/22	4, 6, 13, 17, 21, 22	Cognitive	-
14	Happy the refinery will be gone	8/22	1,2,8,9,10,11,12,16	Non-Cognitive and Cognitive	+
15	Ambivalent or neutral that the refinery is going, yet accepting	9/22	3,6,7,14,15,17, 19,20,21	Non-Cognitive and Cognitive	+ / -
16	Wishes the refinery had stayed, but accepts it is going	3/22	13,18,22	Non-Cognitive and Cognitive	-/

Table 7.0.4 An overview of key perspectives mentioned regarding the refinery's relationship with the South Woodside Community

	Imperial's relationship with the local community	Respondent mentions /Total	Specific Respondents
1	The refinery presence is an 'evil' with benefits	11/22	1,6,7,8,9,10,11, 12,13,17,22
2	There has been a growing disconnect between the refinery and the community	7/22	1,2,3,11,13,17,22

Table 7.0.5 Desires expressed for the future of the area

	Hopes for Future Development (Conceptual) 1/2	Respondent mentions /Total	Specific Respondents
1	Dartmouth wants equity with Halifax, and a unique identity	3/22	1,2,11
2	Woodside to have active renewal to be a liveable community	5/22	1,8,10,12,21
3	Woodside to get 'passive' renewal	5/22	1,7, 8, 14, 17
4	Woodside is fine as it is	2/22	2,9
5	No notice or immediate concern for Woodside	8/22	3,6,14,15,16, 19, 20, 22
9	No more industrial	3/22	1, 12, 14
10	More industry	5/22	2, 3, 6, 15, 19
11	Mixture of industrial and non-industrial uses	6/22	7, 8, 11, 18, 20, 21
12	Woodside is not a good place for tourism	2/22	3,19
13	Desire for control over oil resources	2/22	3,13
14	Desire to stop using oil eventually	5/22	3,17,18,20,22
15	Transparency, education, awareness of our lifestyles/ resources	3/22	3, 20,21
16	Remediation-- remove contaminants	4/22	3,4,6,20
17	Beauty and good design	3/22	2,16,17

T**able 7.0.6** Specific Land Uses participants desired to see on the site

	Hopes for Future Development (Concrete 2/2)	Respondent mentions /Total	Specific Respondents
	Non industrial		
1	Housing (not high rise condos; maybe for aging population)	3/22	1,10,11
2	More services (banks, grocery store, family centre/parentin classes, events)	6/22	1, 2,10, 11, 12, 14, 17
3	Waterfront access (Recreation ie: kayak tours, clean beaches, boat tours to mcnaabs, cruise ships)	8/22	1,3,11,12,14, 16, 17,20
4	A view	2/22	8,11
5	Golf course	2/22	1,17
6	Industrial heritage for tourism, education and commemoration	10/22	3, 7, 9, 10, 12, 14, 17, 18, 20, 21
7	*Education/museum*	2/22	7,20
8	*Commemoration: place of memory (including for Fort Clarence)*	3/22	1,14,20
9	*Playground structure resembling it*	1/22	20
10	Linear park, or green sace	9/22	1,3,6,7, 8, 10, 12, 14, 18
11	Trails for increased connectivity	6/22	1, 2, 3, 7, 12, 17
12	Paint Tanks with murals (or just white)	7/22	3, 9, 10, 12, 13, 15, 18 (3;13)
13	Landscaping/greenery	6/22	1,2, (9-prompted), 13, 14, 15
	Industrial		
14	Marine Industrial	9/22	2, 4, 6, 13 7, 15, 16, 18,22
15	Make use of the shipping terminal & rail: create blended products, attract large ships that will redistribute to smaller ships LNG (Liquefied Natural Gas) terminal--synergy with the offshore gas industry	2/22	18, 22
16	Marine science work	2/22	6, 19
17	Desalinization plant	1/22	6
18	Collaborating with "ships start here"	1/22	12
19	A new refinery	1/22	13
20	Textiles factory	1/22	16
21	Warehouses	2/22	16, 17
22	Advanced technology & innovation	4/22	2,13,19, 22
23	Energy production: windmills; ethonol	3/22	17, 20, 22

Table 7.0.7 Personal information about interview participants, used to analyze responses

Identity Traits	Specific Respondents
Primary identifier	
North Woodside Community Representative	1
South Woodside Employee	8,9,10
South Woodside Resident	2,9,12
Small Business Owner Dartmouth	2, 11
Planner (academic or professional)	3, 7,15,18, 21
Refinery Employee (current or former)	4, 13, 17
Waterfront Development Corporation Representative	6
Local Politician	11
Local Historian	14
Local Artist	16, 19
Environmental Lawyer	20
Port Authority Business Development Representative	22
Residency	
South Woodside	2,9, 12
North Woodside	1
Dartmouth (central)	3, 7, 8, 18 (20)
Eastern Passage	11, 21
Cole Harbour	13, 14, (20)
Halifax	6, 15, 16, 17, 20
Outside the city, in a rural area	4, 10, 19
Place(s) of Exposure	
Home on Dartmouth side	2, 9,12, (18)
Home on Halifax side	15
Place of employment	2,4,5,6,8,9, 10, 22
In transit to work	2,3, 4, 9, 10, 21
The ferry or other boat	3, 15, 18, 17, 22
The boardwalk/farmers market	3,6,13, 15, 16, 20, 21
Driving through (On the Way to Eastern Passage)	2, 3, 7, 8, 11, 14, 18, 19, 20, 22
Walking along Pleasant Street	21

Identity Traits	Specific Respondents
Duration of Exposure to Refinery Site	
Entire life	1, 2, (6), 11, 13, 20
Over 30 years	18, 17, 19, 22
10 -15 years	4,7, 9,12
6 to 9	6, 10, 14, 16
2-5 years	3, 8, 15, 21
Approximate Frequency of Exposure	
Daily	2,3,4,6,8,9,10 ,12,13,15,17, 18, 21, 22
Weekly	5, 11, 20
Monthly	1, 7,14, 16
Rarely	19
Identity in relation to relevant things	
Self identified environmentalist	20
Grew up in England around industry	18, 19
Coming from a rural setting	*10*
Husband worked in steel	*19*
Self identifed activist	*12*
love of mechanical work	*13*
grew up around refining in ON or Edmonton	*17, 21*
Approximate Age	
70's	2,19
50's - 60's	1, 5, 8, 7, 9, 10, 11,13, 17,18
40's	3, 4, 6, 22
30's	12,14,16
late 20's	15, 20, 21

Table 7.08 Codes for Interviews used in in-text citations

Participant number	In Text Citation	Date of Interview
1	(Interview 1)	6/17/2014
2	(Interview 2)	6/17/2014
3	(Interview 3)	6/20/2014
4	Interview 4)	6/20/2014
5	(Interview 5)	6/23/2014
6	(Interview 6)	6/24/2014
7	(Interview 7)	6/27/2014
8	(Interview 8)	6/30/2014
9	(Interview 9)	6/30/2014
10	(Interview 10)	6/30/2014
11	(Interview 11)	6/30/2014
12	(Interview 12)	7/3/2014
13	(Interview 13)	7/3/2014
14	(Interview 14)	7/4/2014
15	(Interview 15)	7/5/2014
16	(Interview 16)	7/5/2014
17	(Interview 17)	7/6/2014
18	(Interview 18)	7/7/2014
19	(Interview 19)	7/8/2014
20	(Interview 20)	7/8/2014
21	(Interview 21)	7/9/2014
22	(Interview 22)	7/14/2014