Engaging with sustainability in everyday transitions:
An ethnographic study of an international airport operator

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ABSTRACT

The past decade has seen the emergence of the Transitions Management theory rise to fame as the leading approach for dealing with the complex problem of sustainability. Its underlining principle considers sustainability as inherently difficult and requiring radical system changes to the wider society. Defined as a deliberative and prescriptive framework, it sets to influence governance activities through a gradual structured process. However, concerns have been raised which question the scope and practice of Transitions Management, including the criticism of its simplistic and narrow view, focussing primarily on technological innovations and policy influence while having little reflection on the dynamics and social relations involved in transitions. This research thesis aims to develop further insights to understand better the dynamics within the transitional process towards sustainability. By looking at the case of an international airport’s ongoing efforts to become more sustainable, this thesis argues that the social dynamics offer a significant contribution to the shaping of a sustainability agenda, by enabling practices that also seem vital in the framework of Transitions Management.

This thesis applied ethnography as the primary approach to this research inquiry. The data collection involved qualitative interviews, documentary analysis, and participant observations spanning over 18 months between the periods of 2010-2012. Drawing on the critical studies of management and organisational theories, the research focus was on addressing the three key questions of what is the sustainability agenda, who decided on the agenda and how has the agenda been decided, within the context of airport operations. While other key issues have emerged from this research study, those aspects have underlined the tensions constituted in the everyday practices of an airports operations, how the conditions of tensions have enabled a positive influence, and how this is seen as significant to contribute to the theoretical understanding for dealing with the sustainability transitions process. Building on this perspective, this thesis further explored the dynamics of the individuals’ struggle, and suggests that it is part of a sense making process that also helps to construct the meaning of sustainability. In addition, it has identified how this experience of struggle has facilitated resistance “for changes” among individuals, and how this permits positive outcomes which are continuously shaping the agenda of sustainability and practices at the Airport.
DECLARATION

No portion of the work referred to in the thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institute.

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“If there is no struggle, there is no progress”

(Frederick Douglass 1857)
CHAPTER 1 - Introduction

1.1 Introduction

Sustainability has been a widely debated subject in both fields of academic and practice for many years. The growing concerns over climate conditions, the rapid depletion of resources due to rising demands and the increase in global population have been formulating the arguments in this field. The significance of sustainability and its associated issues have generally been acknowledged, with the term being widely used as part of everyday discourse, from policymaking, business development, to urban planning and even peoples own lifestyles. Despite the variation of the context that sustainability is phrased in and used, the discussions in this area largely treat sustainability as a political agenda that requires global efforts to achieve. Although there has been lots of work put into developing a more concise understanding of sustainability as a concept and societal problem, there seems to be greater interests and focus on prescribing “what to do” by making structural changes and developing a systematic mechanism to standardise practices as a way forward.

Efforts are still needed to better understand both the theory and practice of sustainability. As part of a council funded network of research projects focusing on sustainability and the aviation sector, This thesis sets out to explore and examine the sustainability agenda from the perspective of an airport operator, with the initial aim being to further establish a more multifaceted view and to highlight some of the theoretical debates that focus on the governance issue while still considering the organisational and management perspectives. The general view is to place the emphasis on “how” sustainability as an agenda is being engaged in practice, rather than providing a formulation of “what” needs to be done. Based on an ethnographic study, this research thesis has developed a particular focus on the everyday practices within an operations department at an international airport, and seeks to gain an understanding of how it implements its agenda allowing it to become a more sustainable airport operator. This introduction chapter provides the general background and purpose for this thesis. The following sections discuss the significance of the research topic, the scope of the study and provide an overview of the thesis structure.
1.2 Thesis context and research background

The publication of the United Nation’s Brundtland Commission report has popularised the term of sustainability, which has been seen to be at forefront in everyday language (Redclift, 2005). The report defines sustainability as “the development that meets the needs of the present without comprising the ability of future generations to meet their own needs” (WCED, 1987) has stimulated decades of debates and discussions on the significance of sustainability as a global agenda. Despite there being a general consensus that a sustainable society is in the best interest of everyone (Lindsey, 2011), the fragmented nature of sustainability and the ongoing debates on how best to deal with the wider issues including climate change, depletion of resources and the increase in population have seen sustainability remain as a contested concept (Garud and Gehman, 2012; Jerneck and Olsson, 2011). This thesis recognises the significance of the wider debates on sustainability as part of a societal problem, considering the existing efforts that have been made in developing structure changes and mechanisms as part of the prime concerns when dealing with sustainability, the main interest of this thesis therefore seeks to explore and generate further perspectives on the response to sustainability by examining how the issue has been addressed and socially perceived within an organisation.

There has been extensive studies and research carried out on sustainability that discusses different perspectives as well as generating approaches to better understand the issue. The general consensus is that there is an urgent need to improve the societal wide conditions to enable a more sustainable future. As the issue becomes more prevalent, how this can be achieved in practice is still seen as a key question by organisations and industries.

The nature of sustainability is considered to be complex and is perceived as a wider societal problem. While it remains political and fluid with no general agreement on how to best tackle the agenda, the initial review of literatures has found that the key emphasis often resorts to making system interventions and structural changes, which are often prescriptive based and are used as the predominant approach when dealing with the dynamics of the problem. While there is no best methodology or practice to study sustainability, in reviewing the literatures, a
diverse range of studies on sustainability have been encountered which all have a different focus on the discipline. To provide a snapshot for the diversity and theoretical interests on sustainability, Table 1.1 has categorised some examples that were found during the initial search. Despite the general interest in this area, it was found that the main focus remains on developing the proliferation of definitions for sustainability (Forsyth, 2011), with other efforts being put towards the evaluation of sustainability practice, by formulating the conceptual frameworks and generation of mechanisms for sustainability.
<table>
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<td>- Description and develop concept of sustainability as a function</td>
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<td></td>
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<td>- Multi-disciplinary approaches to science</td>
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<td>- Definition and developing practice</td>
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<td>Mechanisms and analytical frameworks</td>
<td>Darnall and Edwards, 2006; Hitchcock and Willard, 2006; Owens and Drifill, 2008; Perrini and Tencati 2006; Alshuwaikhat and Abubakar, 2008; Hubbard, 2009</td>
<td>- Application of Environmental Management System (EMS) and cost benefit analysis for organisations</td>
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<td>- Procedures and process development for implementation sustainability plans</td>
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<td>- Measuring performance and benchmarking</td>
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<td></td>
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<td>- Evaluation and reporting framework</td>
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<td></td>
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<td>- Assessment of practices</td>
</tr>
<tr>
<td>Economic and Policy research</td>
<td>Frey and Linke, 2002; Tsoutsos and Stamboulis, 2005; Foxon and Pearson, 2008; Banister, 2008; Heiskanen et al., 2010</td>
<td>- Review and evaluation of policy</td>
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<tr>
<td></td>
<td></td>
<td>- Scenario analysis</td>
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<td></td>
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<td></td>
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<td>- Analysis of production and consumptions</td>
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<td>Science, technology and innovation studies</td>
<td>Hallstedt et al., 2013; Upham, 2001; Berns et al., 2009; Shove, 2004; Geels, 2004; Geel 2005, Smith et al., 2010</td>
<td>- Study of innovation process and develop strategic perspectives for sustainability</td>
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One of the prominent approaches that have attracted a great deal of interest in recent years is that of Transition Management. Being an emerging discipline and originating from the Netherlands’s policy scene, Transition Management is an alternative model for guiding and governing sustainability, the initial theoretical discussions put strong emphasis on making systemic interventions that involve different frameworks. There are many branches of Transition Management studies covering different aspects, and some of the most prominent examples in this areas includes, Transition Management (Loorbach, 2010; Rotmans et al., 2001), Multi-level Perspective (MLP) on socio-technical transitions (Geels 2002, Smith et al., 2010) and Strategic Niche Management (Kemp et al., 1998, Smith, 2007). The general theoretical approach is rooted in System Theory and Innovation Studies, which largely views society as being made up of different systems, and those systems consist of a network of actors that include individuals, organisations, communities, institutions and knowledge that “provide a specific service for society through the interaction of different elements of the system” (Markard et al., 2012).

The literatures regarding Transition Studies have not clearly defined the term “Transition”, according to the Oxford Dictionary it refers to “the process or a period of changing from one state or condition to another”. The founding principle of transition studies sees that there is no immediate solution for the contemporary problems of sustainability, which require fundamental transformations at societies structural and system levels (Slingerland and Rabbinge, 2009; Markard, 2011). The approach has attracted particular attention as the framework for the Dutch Government’s Environmental policy development that aims to promote transitions. It sets out “to include ordinary citizens, private sectors, knowledge institutions and civic organisation in the process “(Slingerland and Rabbinge, 2009). There has been further interest from other countries to replicate the Dutch approach by looking into applying the transitions framework, including the UK (DECC, 2009). While, there is a great appetite to further theorise and develop it into practice, particularly as a governance model, the governing framework such as Transition Management has put more emphasis on the development mechanisms such as setting policy goals, regulatory enforcement and driving technology innovation. Nonetheless, the understanding in this area remains largely prescriptive and exploratory (Ferrer-Balas et al., 2010), the concept has been criticised for being too system focused, with a lack of empirical studies to support the ideas that are increasingly being seen as constrained by unformed methodology. Based on those key
arguments, this thesis has focused on exploring the condition of transitions towards sustainability that has been described by Transition Management, which is seen as hugely relevant and significant for research on sustainability. (Markard et al., 2012; Genus and Coles, 2008).

1.3 Research justification and motivation

The key justification and motivation for this thesis was initiated primarily from a wider funded research project that aims to develop a low carbon energy research community with the airport sector. The opportunity given by the research network has instigated further interest in better understanding “how airports do sustainability?” With the initial review of literatures finding very few ethnographic based studies on how an organisation or sector engages with its sustainability agenda in their everyday practices, and to respond to the call for the need to have more research into the understanding of the role of an agency and their practice in transitions towards sustainability. It highlights the need to establish further dialogues with other disciplines such as organisational and management studies (Shove and Walker, 2007; Shove and Walker, 2010; Markard et al., 2012; Geel, 2010).

The existing studies on the broader issue of sustainability within the aviation sector are largely leaning towards the macro view of governance, with the tendency to “structure” sustainability and treat it with technological solutions. The issue concerning air travel and the associated impacts generated from the aviation sector as a whole has been highly controversial, while the concerns in this area are complex, it involves different networks of sectors with diverse issues ranging from flight technologies, market trends, passenger behaviour, infrastructure planning and development, and up until now, the common perception of sustainability in the aviation sector remains fixated on developing technological innovations.

While, there have been some studies which focus on sustainability in aviation, they have largely been included within the wider aspect of the transport industry, aside from
understanding the airport as being a transportation site for people to travel in and out of the area, there is little attention being given to what actually goes on at the airport, and what an airport does. The main focus has revolved around the chain of operations that help to ensure the efficiency of people’s movement when travelling “through” the airport (Ndoh and Ashfor, 1993; Marin, 2006). Furthermore, studies looking at aviation generally focus on the development of new aircraft operations, technology innovation, or understanding the airline business rather than looking at the airport sector specifically (Graham, 2008). In comparison to the usual research interests in an aviation context, the sustainability issue concerning the airport operations has been less well studied.

The growing concerns for climate change and the visibility of the airport means that the sustainability issue is particularly acute as it is seen as the “face” of the sector (Freestone, 2009). The contemporary airport is complex and contains the facilities required to provide diverse support in terms of technical complexity and service provisions. According to Airport Council International (2012), depending on the size of the airport, in some large international airports, they see more than 50% of their revenues generated from non-aeronautical operations. These operations may include hotels, restaurants, car parking and so on. As the sector’s contribution to carbon emissions is set to escalate in the longer term, the role of an airport is beginning to shift to being largely market led and driven by commercialisation. The problem of air and noise pollution and ecological conservation are the common issues surrounding airports (Ehrenfeld, 2005; Loorbach et al., 2010), as airports begin to grow and expand to other areas such as building construction, aeronautical activities, and surface transport access (Brown and Pitt, 2001; Boons et al., 2010). The pressure for an airport operator to grow economically, will indeed add further constraints on its environmental capacities. Suggested by Brown and Pitt (2001) that there is an apparent gap in understanding the significance of non-aeronautical activities, such as how airport facilities and its infrastructure impacts upon the environment and their association with growth in air transportation.

The general view on sustainability in the wider aviation sector has largely been driven by a positivist approach, which seems to simplify and reduce the complexity that is attached to the issue. With less argument aimed at the perspective of how people engage with the
sustainability agenda within the airport operations function. There have been calls for more attention to be paid towards the aspect of dynamics within an organisation (Nicolini, 2009; Buhr, 2012), in particular on the issues of people and their activities on how it would influence the organisational processes (DiMaggio, 1988; Leca et al., 2008; Buhr, 2012). As suggested by Orr (1996), there is theoretical significance in understanding “what is actually done in the doing of work, and how those doing it make use of their practice”.

Discussions and narratives about the airport sector in academic literatures have placed strong emphasis on the management aspects of an airport as a system (Carney and Mew, 2003; Adler and Gellman, 2012). From the air transport perspective, described by Neufville (1995) that it is largely concerned with the development of an integrated network that serve the airline traffic, passengers and cargo, mostly in the case of a metropolitan area. In the context of organisational and management studies, the idea of a system refers to the self-organising system as the principle way it responds to external intervention (Stichweh, 2011a; 2011b), this thinking has its base in Parsons’s (1937) action theory and Luhmann’s (1996) social systems theory as described in some academic papers, it has also been seen as the foundation for the theoretical development of Transitions Management (Kemp et al., 2007; Loorbach, 2010; Markard et al., 2012; Jerneck and Olsson, 2011).

As the terms of “system” and “structure” has been applied throughout this thesis, primarily inspired by the sociological perception of the world, these terms remain theoretically difficult to define, (Sewell, 1992) as an ongoing research debate. For this thesis only, the meanings are largely taken from Spirkin’s (1975) view, which described them as follows:

“A system is an internally organised whole where elements are so intimately connected that they operate as one in relation to external conditions and other systems.”

“The concept of structure is to discover low-governed relations between the elements forming in a given system. Structure is the type of connection between the elements of a whole.”
1.4 Research aims

The aims of this research are described as follows:

- To better understand the theoretical meaning of transitions towards sustainability in the context of airport operations.
- To explore the literature principles of Transition Management for sustainability in connection with an organisation.
- To investigate the organisational decision-making processes in developing and implementing sustainability agenda through an ethnography experience at an international airport.
- To explore and investigate the meaning of the sustainability agenda and how this is perceived through the everyday experiences of airport members.

According to Denzin and Lincoln (2003), qualitative research attempts to make sense of, or to interpret phenomena in terms of the meanings people bring to them. This thesis seeks to explore and investigate the conditions and dynamics by which an airport comes to deal with the issue of sustainability and ongoing transitions through ethnography research and the adaptation of qualitative methods. This research mainly follows the Operations Department at Island International Airport, and these research participants are referred to as the “members” throughout this thesis.

Through interaction with over fifty staff who work at the airport, it is hoped that by taking from the interpretive research approach and some aspects of reflexivity, this ethnographic research would add value to research knowledge in the emerging concept of transitions towards sustainability, by highlighting the individuals everyday interactions in the world that is driven by rational and structure stances.
1.5 Research questions and process

The primary research question for this thesis is to determine:

*How the members of the Operations Department at Island International Airport engage with the agenda of sustainability in their everyday operations?*

This principle research question is board and simple. It aims to explore a wider spectrum of transitions towards sustainability by focusing on the following sub questions:

- What is the sustainability agenda at Island International Airport?
- Who decided on what the sustainability agenda is at Island International Airport?
- How is the sustainability agenda being decided?

Considering the view of Bryman (2008); Bryman and Bell (2003) on research process, Diagram 1.1 on the following page provides an outlook of how this thesis conceptualised the research process at the initial stage.
Diagram 1.1 Conceptualisation of research process

- Formulate and clarify research questions and objectives
  Chapter 1

- Review of literatures
  Chapter 2 & 3

- Research design and method and data collection
  How this thesis studied sustainability at the airport
  Chapter 4

- Analysis and interpretation of data
  Chapter 5 & 6

- Develop and present conceptual framework
  Chapter 6 & 7

Ethnography

Develop an understanding for the sustainability in aviation sector
How sustainability has been studied (i.e. the triple bottom line)
What are the key perspectives and issues (i.e. the rise of Transitions Management)
1.6 Contributions and originality of the study

The main contribution for this thesis is in three parts. The first contribution is on the theoretical perspective of sustainability transitions focusing on the framework of Transition Management. The general aim focuses on how the meaning of sustainability is constructed that leads to the production of practices, this thesis has further refined the understanding of the dynamic relations between people from the transitions perspective, with focus on how people interact with the conditions in which they are situated and how they influence one and another (Smith et al., 2005; Genus and Coles, 2008; Geels, 2010). The second contribution of this thesis is to stimulate the linkage between the transitions aspect of governance and organisational and management literatures, of which each have separately been dealing with related issues, however, their similarity remains largely disconnected from the sustainability transitions as a whole (Markard et al., 2012). The third contribution of this thesis looks at depth into practices of everyday organisational life from the perspective of sustainability transitions, supported by rich and fruitful stories of how the researcher went into the field, gaining first-hand experience in better understanding how individuals engage with a sustainability agenda.

While the idea of an airport is often associated with the activity of “travel”, the complexity of an airport setting and what goes on behind the scenes has not been widely discussed. This thesis has adopted the lens of viewing the airport as an organisation, and the emphasis is on a social rather than an economic view of organisational activities (Alvesson and Deetz, 2000). This sees the airport as a place that consists of a fluid and disordered working environment and involves different communities of people. In another words, it is set to “discover the details of the situations and understand the reality or perhaps a reality of what is working behind them” (Saunders et al., 2009).

At Island International Airport, the researcher learned about the social conditions that are largely downplayed by the governance framework for sustainability, and the significance of these social interactions that shape the way relevant agendas are being framed and engaged with by individuals and groups. The thesis recognised that the practice of sustainability is
indeed socially constructed (Berger and Luckmann, 1991), and the key matters that have emerged from this thesis lie with how the process of construction is being shaped and in what conditions.

1.7 Organisation of this thesis

This thesis is guided by the impression given by the literatures in the relevant field to seek a further understanding of what conducts the process that goes on within an organisation, and how certain decisions or changes impact on work carried out during everyday operations. It sets out to facilitate a better development of social structure and to take a closer look at the issue of sustainability, where the current view is that the priorities over economic, environmental and social sustainability contradict one and other, or are simply incompatible (Forsyth, 2011; Davidson, 2011).

This thesis aims to investigate how the airport operator decided on their sustainability agenda, which led to further inquiries into everyday practices of sustainability at the airport. It attempts to follow a relatively traditional format of setting research objectives, reviews of literatures, developing a methodological approach and conducting analysis at the early stage of this thesis. However, as discussed and described in chapter four, the nature of an ethnographic approach is seen to be individual, it cannot be programmed and only the researcher would learn throughout the process of what is required in order to produce an ethnographic study (Atkinson and Hammersley, 2007), and that not only does this thesis aim to answer the question for the purpose of developing knowledge in the relevant field, but equally important, it has also been a journey to learn about “doing research” and being “reflective” about the subject.

Focusing on the initial analysis framework of Ws (what, who, why and how) has helped to guide the investigation for this thesis throughout. As the researcher’s focus became more
refined in the later stages, the above questions served as a focal point to make sense of a complex network set in a dynamic social landscape.

The structure of this thesis is highlighted as follows:

Followed by the introduction chapter, the first part of this thesis presents the literature background to help answer the prime research question.

Chapter two provides a general introduction into the issue of sustainability, looking at the common approach of the triple bottom line as a dominate view to understand the concept of sustainability. It sets out to make the organisation’s approach to decision making more relevant in this thesis, as to how the sustainability agenda is being formulated, and by whom and on what basis. These are essential in helping to construct the meaning of sustainability, enabling practices at the local level or within the environment in which it concerns. It also highlights the issue of sustainability by looking at the wider sector perspectives of aviation, and how the policy which aims to guide the changes required can lead to some contradictions that will be discussed in the later chapters that follow. How policy uncertainty and short term approaches at the government level and the prescriptive approach can be difficult to digest and is embedded with the practices required at the operational level.

Chapter three moves the focus onto transitions literatures about sustainability. It also attempts to understand transitions as a newly emerging model for governing the issue of sustainability. It discusses the wider perspective of how transitions requires an evolutionary approach to shift various parts of the system including people, organisations, institutions and technologies towards a common goal. After providing some contextual foundation of the theoretical frame of transitions studies and taking views from a particular framework of Transition Management, the chapter then moves towards the context of everyday organisational life, and points out the current gaps in understanding of the role of people in the Transition Management process, and what their significance is in shaping the transition process.
Chapter four discusses the outline of the methodological approach on how this thesis sets out to examine the issue of transitions towards sustainability. Research methods and data collection techniques adopted for this research project and the justification for the selected methods will be discussed. The aspect of reflectivity has been raised, and the element of the researcher’s role has increasingly been seen as a critical part in writing the ethnography experience (Atkins and Hammersley, 2007), and the methodological issues that have been encountered throughout the journey, have reflected on the researcher being in the field.

Chapter five and six tells the stories about Island International Airport’s ongoing transitions towards sustainability. Chapter five describes the setting of the airport, and the background to its relations with the issue. It also sets out to talk about the members of the Operations Department and their everyday operations as the point of context for this thesis. Chapter six discusses further the empirical findings of this thesis with the analysis looking at the transitions process for developing a more sustainable airport.

Chapter seven focuses on answering the three research questions of what the sustainability agenda at Island International Airport is, and who developed and shaped this agenda, and how the agenda has been constructed.

Chapter eight concludes this thesis by drawing the key findings together, and providing some reflection of this research journey, it will highlight the theoretical contributions and limitations of this thesis. Some key issues identified during the study will be raised and discussed, and it ends with some recommendations for further research.
2.1 Introduction

This chapter aims to provide a contextual base to answer this study’s key research question on how an airport operator engages with the sustainability agenda in their everyday business operations. This chapter aims to set the scene, by providing a starting point for the story of this research journey. It will focus on how this thesis sets out to better understand the issue of sustainability and what it means to an airport operator. The review of relevant literatures in the field of sustainability has helped to form the foundation and rationale for this thesis, with the initial exam question of what is known about sustainability and what are the gaps and issues. It aims to show how they are relevant in the case of the transport sector and where it will lead to for the context for this thesis. The chapter is structured into three key themes, the first section explores the conceptual view of sustainability, this provides the background about sustainability as a notion and outlines some of the key debates, focusing on the most common three pillars approach to sustainability and raising the point of how the approach has impacted on the way we understand sustainability as a whole. The second section goes further into the literatures field of sustainability and shifts the focus at decision making for sustainability as the point of departure and is part of the ingredient in shaping the investigation for this thesis, and briefly reviews the concept of decision making from “the three dimensions of decision making”, decision makers and decision making processes, and to question how organisations decide about its agenda for sustainability. The third section explores the issue of sustainability from the aviation sector perspective, which later helps to form the core of this thesis; it briefly discusses the policy aspect of sustainability in the UK, and how the policy framework guides and shapes the development of sustainability at the sector level. The section is followed by a summary for the chapter which concludes with a more integrated perspective of sustainability as a challenge, and as part of the aim for this thesis, which is to develop a better understanding of the meaning of sustainability for airport operations.
2.2 The modes of sustainability

Historically, there have been different challenges concerning the issue of sustainability throughout different periods of history, and there are studies that have been developed to see how our ancestors dealt with environmental and economic activities (Brown, 2001, Costanza, 2007). Through vast industrialisation, urbanisation and globalisation over the past few decades, our societies have undergone various restructuring, which also saw a significant change in human behaviour and great alterations to our environment (Mebratu, 1998). These developments, along with the evolution of philosophies on social value such as trade, wealth and power, have contributed to the way sustainability has been perceived and evolved over time. Moreover, making societal changes were often (though not always) driven by people’s demand to achieve higher living standards, or improving the environment.

In the 1987 report entitled “Our Common Future” published by the United Nations Brundtland Commission, has been commonly used as the starting point for understanding the perspectives of sustainability. The report initiated the definition for sustainability, emerged from the concerns about environmental degradation resulting from poor resource management during the 1960s (McKenzie, 2004) suggested as a synonym for sustainable development (Seghezo, 2009; Dresner, 2002), and derived from Latin “sustinere”, the World Commission on Environment and Development (WCED) in 1987 described sustainability as “the development that meets the needs of the present, without compromising the ability of future generations to meet their own needs”. This broadly defined sustainability as a concept, and served to guide the political agenda towards development of economic, social and environmental issues (Barlund, 2004; Mebratu, 1998). While the UN report has been seen as the most prominent approach to develop a global view for sustainability, the understanding about the conception of sustainability has been contested in both theory and practice. The enquiries into what sustainability is, what does it looks like, and how do we get there have all been at the core of debates concerning our future and the future of generations to come (Johnston et al., 2007; Lozano, 2008; Davidson, 2011; Christen and Schmidt, 2011).
The publication of the UN report has sparked enquiries in search for a “sustainable” path as part of the global political agenda (WCED 1987), the term however has largely been applied in the older forestry term “sustained yield” for over two centuries (Wiersum, 1995). The popularisation since the WCED report sees wider usage of sustainability as a term, which entered into different spheres of life, from framing of government policy agenda, descriptions for business and financial operations to defining law and enforcement, the idea that sustainability is at the best interest of everyone, has become increasingly prevalent (Lindsey, 2010). There is also a rapid increase of academic publications on sustainability, focusing on concerns over the complex relationships between humans and the environment, the wider discourses has broadened as well as deepened the meaning of sustainability (Liu, 2009; IPCC, 2007). Described by Curran (2009) there are various, inter-related concepts and approaches that have bared the trademark of sustainability, examples range from Sustainable Development, Sustainable Energy, Environmental Sustainability, Sustainable Transportation, Sustainability Science to Sustainable Engineering, and Sustainability in Higher Education, this has seen the idea of sustainability being apply across all realms.

Despite the obvious interests and significance of the subject matter, the definition and conception of sustainability has been widely contested. Aside from the conception point of view, there are also questions as to the way sustainability is being approached. According to Hannon and Callaghan (2011), many organisations found it difficult to turn sustainability into practical policies and programme, based on the WCDE’s published term. Another survey conducted by MIT Sloan Management Review (2009) to examine the corporate management perspectives on the subject of sustainability, it has found that many organisations struggle to tackle the agenda due to a lack of understanding about what it is and what it means to the organisation. The challenge to “perform” sustainably has raised some fundamental issues about the concept as a whole, since it becomes apparent that sustainability is not something we “do”, but as a destination that we seek to reach through certain pathways (Curran, 2009).

The initial focus of the Brundtland Report was an attempt to bridge the gap between environmental concerns and the consequence of human activities and social-political development. This was reaffirmed and emphasised at the World Summit on Social Development in 2005, which noted the issue of environment, social equity and economic
demands as “interdependent and mutually reinforcing pillars” that also require reconciliation and integration (UNGA, 2005). While there are many ways to interpret the idea of sustainability, the most predominate approach to view sustainability can be illustrated through three dimensions, also known as the three pillars model, which shown in the following page.
Diagram 2.1. The three pillars of sustainability: Nested Model

![Diagram of the three pillars of sustainability: Environment, Society, Economy.


Diagram 2.2 The three pillars of sustainability: Multiple Objectives Model

![Diagram of the three pillars of sustainability: Environment Objectives, Economic Objectives, Social Objectives.

Source: Farrell (1999); McDonough and Braungart (2002)
The above two diagrams are part of many different approaches, yet is used as one of the most common models to visualised and explain the idea of sustainability in general. In both examples, the three components of economy, environment, and society are often presented as three interconnected rings, and the models encourage the aim to bring the three together in a balanced way, reconciling conflicts (du Plessis, 2000; Barton, 2000; Giddings et al., 2002).

There are differences between the two models, and both bear some limitations. They have been contested over the years (Giddings et al., 2002). Diagram 1 views economy nested within society, which in turn portrays society as a way for connecting between the three pillars. Diagram 2 represents a wider scope of sustainability (Farrell, 1999). There have been different views on how the sustainability models are interpreted, some argue that the three components of sustainability is about competing objectives (Farrell, 1999), others suggested that the aim is to help equalise the importance and integrate the three aspects for sustainability, which demands equal consideration for the issues of economic, social and ecological development (Ott, 2003; Lozano, 2008).

The general subject idea of sustainability is still open for of interpretation, however, the prime approach to view sustainability from a three dimensions aspect has been criticised for not adequately reflecting the complexity of contemporary society (Adger et al., 2003; Seghezzo, 2009). The WCDE’s term for sustainability forms the initial connections between the environment, economic, and social issues, yet, this also led to further concerns about the gaps between each of the components as each have different conditions for sustainability, hence create the contradictions when placing them together on an equal strand.

This has also been stressed by Robinson (2004) that the concept of sustainability bears some contradictory relations when describing the opposing imperatives of growth for economic development and limits the consumption for ecological sustainability. Over the years, discussions in this area have weaved together some common concerns aside from the rising global temperatures, greenhouse gas effects, environmental degradation and other issues such
as the production and demand for critical resources such as energy and food, the associated economic value and costs to these, have all created an assumption that sustainability is part of any solution for certain problems, to achieve a balance in meeting different needs without inflaming further the existing situation (Gremmen and Jacobs, 1997).

Significant efforts have been made to develop perspectives of practices and approaches for understanding sustainability (Curran, 2009), while many have placed the focus on seeking a general consensus for a more unified definition, others emphasise sustainability from looking at the individual perspective of ecology, economy or societal (Liu, 2009). There have also been suggestions to use different frameworks and concepts approach to sustainability issues other than the “three pillars” view, examples such as the Circles of Sustainability, which added a forth additional dimension of “culture” (GCCP, 2011), or the Five Dimension Framework purposed by Seghezzo (2009) that conceptualise sustainability with the additional terms of “Place”, “Permanence” and “Persons” within the existing three components framework. All of which have confirmed the complex and dynamic equilibrium among economic, environmental, and social aspects. There is still the need to form a more integrated view of the expression for sustainability, with further clarity required for understanding the relationship between economic growth, environmental protection and social development.

2.2.1 The environmental mode of sustainability

According to Basiago (1995) the origins of sustainability has its root in the international environmental law and policy of the 1970s and 1980s, which addressed the notion of the unsustainable civilization, hence a sustainable paradigm must be designed. In 1992, at the United Nation Earth Summit to settle the agreement of the Rio Declaration on Environment and Development, which put forward 27 principles, with numerous references to “sustainable development”; the Summit suggested an integration of economic development and environmental protection that resulted in the formulation of the Agenda 21. The Agenda,
described by Keating (1993 cited in Basiago, 1995) “is a blueprint on how to make development socially, economically and environmentally sustainable”.

The WCDE report highlighted the prime concern on the Environmental impact as the result of the growing demand on scarce resources and the pollution generated by rising living standards, as well as by the poor in society for survival. In general, the term “environment” involves the capacity of biological systems that provide goods and services to humans and other organisms. In the context of sustainability, it has a specific focus on reducing negative human impact and protecting the integrity and resilience of ecological systems (Harte, 1995; Yohe et al., 2007).

Suggestions that the climate of a region could change have been discussed as early as ancient times, though the concern about climate change is considered to be relatively recent; with the scientific discovery of climate change beginning to emerge in the early 19th century (Browns, 2001), where the assumption that environmental issues are linked to human activities has been associated with the histories of ecology and agriculture.

The 19th century is seen as a key era for initiating the concept of sustainability, where many great ideas had been generated (Lumley and Armstrong, 2003). It was suggested by Lumley and Armstrong that many of the period thinkers such as Mill (1806-1873), Darwin (1809-1882) and Henry George (1839-1897) have contributed to some great ideas in developing scientific, philosophy, politics and economy disciplines throughout the 19th century, and some of these ideas are closely related to the theoretical and policy development of sustainability to date. One of the earliest and prominent works to document the effects of human action on the environment was “Man and Nature” by Marsh (1864), which described the environmental degradation that led to the collapse of ancient civilisations. The emergence of mainstream environmental movement during this period, which focused on the preservation and conversation of the natural environment, with enquiries that were primarily focusing on the capacity required to sustain an ecosystem from an ecological perspective (Kidd, 1992). This led to debates that subsequently became what we now know as the concept of sustainability.
After the end of Second World War, further concerns about the population growth and resources was a prime concern, and had been widely discussed through publications by several influential books, which have since further shaped the idea of sustainability. This sees the focus shift from concerns over the adequacy of resources to maintenance of the environmental quality (Kidd, 1992). By the late 1960s, people began to make the interconnections between the environment and development, an idea that was promoted by Carson, who published “Silent Spring” which raised concerns about the threat of toxic chemicals to people and the environment. Carson’s works were considered as a turning point that contributed to the conceptualisation of sustainability. Though, there are many more academic thinkers and scientists who have also made important contributions in this area, both Marsh and Carson’s views provide the key basis for shaping the extent of sustainability and its principle, particularly in connecting the social causes with environmental quality and resource use. This can be reflected in the emergence of “green” discourses during the 1970s that have seen the early forms of sustainability being rapidly developed within the environmental literatures (Lumley and Armstrong, 2003; Robinson, 2004).

The concerns over deterioration of the environment were shared at the policy level, as pointed out by Mebratu (1998) the environmental issue was raised throughout different historical periods, and has seen the initial idea of sustainability being coined under different terms such as “environment and development” and “eco-development”. The UN conference on Human Environment in 1972 was thought to be a turning point when it raised the seriousness of the environmental degradation as a threat to the global population, it was then realised that concern for environment and development needs were to be considered simultaneously (Mebratu, 1998). Though views on the relationship between human impacts and the environment in associate with the issue of climate change, remain in conflict to this day. However, during the 1972 conference that saw the establishment of the United Nations Environmental Program (UNEP), which led to a series of symposiums which weave together the emerging ideas on the issues of environment and concepts of development.

Environmental sustainability seeks to sustain global life-support systems and the resources such as food, water, air and energy indefinitely. However, the argument that environmental sustainability does not allow economic growth (Brown et al., 1987; Goodland 1995; Ekins
1993) has challenged our understanding in terms of the way resources are being used (Redclift, 1992), and shaped our approach and evaluation of sustainability, this prompted a more economic interpretation of environmental issues other than from the initial scientific perspective.

2.2.2 The economic mode of sustainability

The economic component in the context of sustainability represents growth and development based on WCDE’s description. The subject contains some complex issues with a variety of aims such as reducing global poverty and increased economic prosperity, which also involved understanding the histories of political economies, human geography and development of social philosophy.

The economic development and resources issues were at a particular point after the Second World War (Kidd 1992) where it also saw the global economy entering a most remarkable era of growth. Suggested by Goodland (1995) and McNeill (2005), the end of Second World War saw the “growth” debate become more mainstream, when focus over the concerns for the environment were shifted to the scale of growing human economic subsystem verses the limited ecosystem. The publication of “limits to growth” by Meadows et al., (1974) which applied the economic growth to ecological limits has further stimulated debates on human’s impact to the environment, with specific focus on the consequences for continuous economic and population growth.

According to Redclift (1992) the notion of sustainability has clear emphasis on meeting the social and economic objectives rather than ecological ones. The post war era saw some deep changes in society, with increased trade between countries that led to a long economic boom (McNeill, 2005). This has essentially sent the scene with the goal to achieve economic
prosperity at the global level, while the key challenge is to find the correct balance between populations and consumption. Different economists’ writings have set out to address the productions and consumptions issue which can be reflected from issues of population growth and control of resources (Redclift, 1992; Turner and Pearce, 1993; Rees, 2003). The basis of these writings has also impelled a certain economic approach towards resource allocation using market mechanisms as an intervention such as implementation of carbon tax (Redclift, 1992).

Lumley and Armstrong (2003) have pointed out that despite ongoing contestation concerning the way sustainability is being defined, and that generated various interpretations, nonetheless, the concept retains, focusing on “present and future economic development, and maintenance or enhancement of the natural environment and of the long-term productivity of living resources and ecosystems.” The emphasis on the economic principle for sustainability has seen significant efforts made to develop methods for better understanding sustainability in practice, with the key concerns revolving around the issue of “measurement”. Examples such as a wide range toolbox’s of quantitative methods can be used to assess sustainability and have become available over the years, for instance, measures of productions and consumption of resources using life cycle assessment, measures of carbon footprint or the quality of environmental governance through ISO 14001 and so on. The argument of whether to put a “price” on the sustainability agenda has been heavily debated at the policy level in recent years (Burke, 2012), to determine the sustainability of an organisation described through the numeric term.

According to Upham and Mills (2005) value judgement is unavoidable in the context of sustainability. Hoffman (2010) further described that there is a general assumption that economic growth and environment management are contradictory, the common usage of terms such as Net Present Value, Return on Investment become dominating language used in discussing the operation of sustainability, which not only created certain prejudice towards the agenda but it has also restricted the shift in technologies that are needed to address climate change, as any environmental related issues would be priced or added against to the financial transactions.
Such an approach is associated with the assumption that to achieve sustainability, it is to make a balance over the three pillars of the triple bottom line, which would involve some kind of “trade off” or come with a cost (Forsyth, 2011). This also creates perverse economic signals that promote short sighted economic activity at the expense of environmental objectives (Hoffman, 2010).

2.2.3 The social mode of sustainability

The WCED report (1986) refers to the social pillar of sustainability as to issues that are linked with environmental and economic problems, such as the impact of population growth on the environment; uneven development that causes social tensions, increase of social equity and poverty alleviation. While the WCED report provides an framework for the integration of the three pillars approach to sustainability, there are fewer literatures focusing specifically on social sustainability, and this has limited theoretical definitions being developed in this area, hence, some researchers have suggested that (Lehtonen, 2004; Grießler and Littig, 2005; Dempsey et al., 2009) the social dimension of sustainability is the “weakest” pillar.

One of the main concerns for social sustainability is primarily around definition of the term. There is little clarification on how social sustainability can be measured (Hutchins and Sutherland, 2008), because the connotation of the term for “social” is board, it is difficult to distinguish whether it is an analytical or a normative concept (Grießler and Littig, 2005). In reflection with the overall concept of sustainability which is interpreted as a normative principle for regulation of socio-ecological processes, significant efforts have been put forward to develop sciences of measurement for environmental issues such as monitoring emissions and noise pollution. This has resulted in many discussions focusing on the development of the definition for sustainability and measurement using a series of indicators (McKenzie, 2004), and hence, the social aspect is commonly seen as a correlated
“consequence” or attachment for environmental or economic impacts. This has fundamentally shaped the relationship between social and the other two modes about the way to approach the overall concept of sustainability. According to Lehtonen (2004) even though the social issues can be difficult to assimilate and analyse, especially in a quantitative term, nonetheless, the conceptualisation of the social dimension of sustainability are increasingly taking an economic approach, which is either based on individual capabilities or the concept of social capital.

2.3 Sustainability and decision-making

Following the previous sections which briefly discussed the notion of sustainability, this section aims to go further into the thesis subject by exploring the aspect of decision making, to develop an outlook for better understanding the issue. Despite the ongoing debates about what sustainability is, the term has become more widely use (Farrell, 1999 Robert et al., 2005; Brandon, 2010). There are different views on how sustainability can be better understood continues to develop and evolve. Some areas of studies have shifted the focus more towards the practice of sustainability, examples in this areas include the use of indicators and process management to measure sustainability performance of organisations (Keeble, 2003; Wills, 2003; Bos-Brouwers, 2010; Chee Tahir and Darton, 2010), the economic approach to analyse sustainability from the capital resource view (Turner, 2005), and strategic planning, management and integration of sustainability in organisation operations (Epstein and Roy, 2001; Sharma and Ruud, 2003). Some of these examples show that not only are there growing interests for a more integrated approach to the environmental, economic and social aspects of sustainability, but how it can be embedded into an organisations everyday practice. There are calls to take into consideration one of the three modes into the decision making process at different levels of government and business organisations (Hacking and Guthrie, 2008; Epstein and Roy, 2003; Gibson, 2006; Brook and Pagnanelli, 2014).
As discussed previously that principles of “the three pillars” remain one of the most common approaches to sustainability. Moreover, there is an underlying assumption that to achieve sustainability means all three dimensions should be balanced, or should be equally emphasised (Gibson, 2006; Davidson, 2011). However, it has also been suggested that such an approach does not reflect the complexity of the society and human relationships, and the effectiveness of this framework is in question. Farrell (1999) stated that trade-offs may be allowed in the competing objectives view of sustainability conceptually. While Gibson (2006) argues that making trade-offs may often be necessary but which should always be the last resort, and not the assumed task in sustainability. Lozano (2008) have point out that “many approaches seek to illustrate the complex concept of sustainability in a simple manner, yet they often suffer from being centred on one point in time, being highly anthropocentric and compartmentalised and lack of conceptual coherence.” As Hansna (2007) discussed, the three pillars model of sustainability presents a process which tells of a development through all aspects of human life affecting sustenance. He further stated, to take such an approach it requires “resolving the conflict between the various competing goals, and involves the simultaneous pursuit of economic prosperity, environmental quality and social equity, with the resultant vector being technology.” On the other hand, Sutton (2000) suggested that sustainability is not about the integration of environment, social and economic issues, nor is it about widespread consultation or improving quality of life, “it is about maintaining or sustaining something.”

The debates about sustainability continue at different levels of government and society, where there are still concerns about the concept of sustainability. Nonetheless, the question of “why” sustainability agenda should be taken on board is slowly shifting more towards the “how” to be sustainable (Berns et al., 2009). Looking at it through an organisational context, trade-offs and conflicts have been suggested as the rule rather than the exception, where economic, environmental and social aspects of corporate sustainability cannot be achieved simultaneously (Hahn et al., 2010). Despite the wealth of literatures in understanding sustainability through the triple bottom line approach, conflicts and trade-offs between economics, environmental and social aspects of sustainability are still not very well understood in the organisational studies and management literatures to date (Hahn et al., 2010).
Voisey and O’Riordan (1997) argues many studies on sustainability have placed economic growth ahead of environmental protection or social welfare, and according to Davidson (2011) “the element of environmental protection no longer equates to opposition to growth and development, but has become a way of accommodating economic growth, business interests and the free market, while providing economic resources and sound market reasons to care for the natural environment.” Recognised there are still gaps in the approach to economic growth and environmental integrity, much emphasis has then been placed on understanding the tension between the three pillars, with great interests in developing an objective view with quantifiable indicators which served as “both definition and yardsticks of sustainability.” (Farrell, 1999).

Many literatures have been discussing the conceptual difficulties of sustainability as a notion and the contradictions between each of the three key aspects (Banerjee, 2003; Robinson, 2004; Gibson, 2006; Glavic and Lukman, 2007; Boons and Mendoza, 2010). Some studies (Redclift, 1999; Lozano, 2011) remain focused on seeking a balance between economic, environmental and social aspects. In many cases, consideration of the sustainability issues could be difficult if there are many stakeholders involved, and decisions influencing the path of a certain sustainable solution that one has chosen to pursue, this happens at different levels of organisation, government or society can be significant. Described by Janeior and Patel (2014) through the example of choosing sustainable technologies, while the decisions are made on the policy supporting particular technologies derive at the governmental level, equally, the decision could also be made to hinder its further development or with aim to reduce their penetration in the market such as banning certain technologies. The following sub sections briefly outline and discuss the role of decision making in connection with the challenges of sustainability with the organisational context in mind.

2.3.1 The three dimensions of decision making

When assessing sustainability, whether it is concerns about choosing a particular technology to improve fuel consumption or making decisions about an organisations resources and
capabilities from a strategic point of view (Amit and Schoemaker, 1993), suggestions have been made as the three key aspects of environmental, economic and social, needs to be taken into account (Janeior and Patel, 2014). This section provides a brief overview of decision-making by discussing what decision-making is, and how it plays a role in sustainability. It sets out to highlight decision-making from the three dimensions; the concept of decision making, the decision-makers, and the process of decision-making, which is illustrated in the following diagram.
The concept of decision-making can be traced back to the prehistory period, when people believed they had no control over events, decisions were “guided by interpretations of entrails, smoke, dreams”, or turned to priests and oracles for clues (Buchanan and O’Connell, 2006). Many historical figures like Lao-tzu, Confucius, Plato and Freud have also written about ideas and principles that contributed towards the development of the decision-making process (Buchanan and O'Connell, 2006). The publication of the Function of the Executives by Chester Barnard in 1938 became notable for its focus on how organisations actually operate, which stands out from the previous approaches that were often based on prescriptive principles. The book also became known for bringing the term decision-making from public administration into the business management field (Buchanan and O’Connel, 2006), and has since sparked further interests in studying organisational decision making.

The statement that decision-making is the “organisational activity” has encouraged a multidisciplinary approach for studies across continents over the years (Pettigrews, 1973; Gore et al., 2006). For some time, studies in organisational and management disciplines have
placed more emphasis on developing stability and orderly processes for organisations and many perspectives are largely derived from systems of thinking and often focus only on the big picture (Goldspink and Kay, 2007). The understanding of everyday practice in the past has largely been overlooked for its “ordinariness of normality” (Ybema et al., 2009), while the decisions that shape our world and everyday life are continuously being made by people behind closed doors, there is a firm position of the normative approach as the most rational way to organise society across all levels (Fleming and Spicer, 2007).

The support for rational thinking is demonstrated by the extensiveness of normative and descriptive studies of organisations in literatures over the years. It remains key interests in the field where researchers focus on studies of logic, on how certain decisions should be made in an organisation, and the rational interpretation of how decisions are actually made (Nutt, 2011; Hansson, 2005). As the positivist approach remains common practice for studying organisations, in particular in the area of decision making, movements (such as the naturalist decision-making movement) have begun to emerge as a means of studying how people actually make decisions in a natural setting, and take forms that are not easily replicated in a laboratory. The data gathered in these areas of research is often being used to determine a scientific approach that leads to development of computer simulations or cognitive task analysis. It is driven by concerns or issues of apparent negligence of social, personal factors and conflicts in the decision-making process (Gore et al., 2006).

2.3.2 The decision

The component of decision is dynamic by nature. According to Langley et al (1995), “decision is a discrete and concrete phenomenon driven by rational, albeit bounded, minds, stripped of affect, insight and history.” Although, the decision-making studies have not been particularly concerned with the definition of decision, (Meyer, 1990; Laroche, 1995), the term “decision” has been defined in various ways. For instance, one would describe a decision as only one step in an intellectual process of differentiating among relevant alternatives (Harrison, 1996), while another would describe that the decision-making consists
of “the processes of thought and action that culminate in choice behaviour” (Pinfield, 1986). In the more specific context of organisational decision making, Mintzberg et al (1976) stated that making a decision means to make a commitment to action, usually a commitment of resources, where the action has strategic consequences for the organisation.

Decision-making has been suggested as the cognitive process of selecting a course of action from among multiple alternatives. It is a standard function, which can occur under conscious or unconscious circumstance and as part of almost everything in our daily life. Common examples include making a purchase, deciding what to buy and where to buy, and such common standard activities has somehow shaped the world’s systems of government, justice and social order (Buchanan and O’Connel, 2006), and more specifically, how it shapes our understanding of sustainability and the way forward.

Decision-making is thought to be a psychological construct; therefore, it may not be able to “see” a decision. Although the behaviour of decision-making can be observable (Langley, 1995), it is thought that the intangible nature of the decision-making as a basic behavioural function, has puzzled many researchers over the years. The example of making a purchase has so much ambiguity that it remains as a subject of inquiry in the formal literature (Laroche, 1990, Langley 1995).

Organisational and management theorist Mintzberg (1979) suggested that there are various ways to determine the types of decision-making; he described three most common decisions based on their importance in the organisation, which has been highlighted in the following table.
<table>
<thead>
<tr>
<th>Types of Decision</th>
<th>Description and Character</th>
<th>Function area</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating decisions</strong></td>
<td>They follow routine processes, and are typically programmed. There is little diagnosis, or design of custom-made solutions. The decision patterns are pre-determined as identification, development and selection.</td>
<td>Executed by operators or love-echelon support staffs who work individually.</td>
</tr>
<tr>
<td><strong>Administrative decisions</strong></td>
<td>Co-ordinate decision guide and coordinate the operating decisions. They are typically routine and programmed in nature. Exceptional decisions are made on an ad hoc basis. They are non-routine and less programmed than the first two decisions. For instance, recruitment for new employees due to the introduction of a new product line, or staffs have resigned and the vacancy became available.</td>
<td>The co-ordinate decision fall into the area of planning, scheduling and budgeting, it usually made by line managers, staff analysts, and can be made by clerks or even computers. The exception decision is made within a single work constellation</td>
</tr>
<tr>
<td><strong>Strategic decisions</strong></td>
<td>The least routine and programmed of all the decisions, it usually takes years and involves many members of the organisation.</td>
<td>The decision usually set off waves of other decisions in the hierarchy, and they result in a host of changes in the operating decision processes.</td>
</tr>
</tbody>
</table>

Source: Mintzberg (1979)
2.3.3 The decision maker

While there are still questions over what defines a decision. Langley (1995) has argued that “decisions often do not exist; they are merely constructs in the eyes of the observer.” As in the case of making a purchase, if a decision is a commitment to action, then what do people take to be the commitment on sighting the item they wish to purchase? Hence there is an assumption that decision is assumed, that some identifiable moment of commitment inevitably preceded action.

A person’s ability to make an optimal choice can be critical, since the decision outcome may lead to enormous consequences. Every decision involves a degree of uncertainty and risk under sometimes-complex circumstances; the question of who makes the decision remains a difficult and debatable subject. Through many empirical studies which have attempted to describe the decision-making perspective in a constructive manner, yet, the fuzziness of the subject means there are difficulties to draw distinction to the role of the decision maker. Barnard (1938) claimed that there are simply two kind of decisions, organisational and personal decisions, and the decisions which a person makes as a member of an organisation is quite distinct from his personal decisions. However, there is a grey area as to what extent the individual will “behave organisationally” as questioned by March and Simon (1961).

Diagram 3 presents a view that the function of decision-making is inter-related with the decision maker at both the individual and collective level. However, the role of the decision-maker, who they are, and how they function, is still not very well understood. According to Langley et al (1995), at the certain point, someone may perhaps “decide”, but conceivably no one did. Simon (1961) suggested that, it is meaningless to ask who makes the decision. A decision consists of a string of actions may be taken at a different level with the focus on the same subject, and thousands of “decisions” and actions rolls like a snowball, which later generates the “decided outcome”.

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2.3.4 The decision making process

Aside from the role of the decision makers and the element of decisions, studies in this area have been to determine and understand the relationship between how decisions are made and what structures are available to help make these decisions. According to Mintzberg (1976), “a decision process is a set of actions and dynamic factors that begins with the identification of a stimulus for action, and ends with the specific commitment to action”. However, the decision-making process is considered to be complex due to the number of alternatives from which to choose (Jabes, 1982). According to Mintzberg (1979) the process of decision-making may not have a clearly defined stage for the beginning and the end, questions such as how decision processes flow through an organisation, and how it has been developed also need to be considered.

Different approaches have been suggested to better understand decision-making as a process, with focus from different perspectives of generic, structural or process terms (Harrison, 1996; Mintzberg et al., 1976; Simon, 1965). While the debates on whether a decision made, follows a sequential, parallel or linear process continues. The discussions have further shifted where it has recognised that the theoretical element of “problem solving”, which is considered to be interrelated with the decision-making process by nature. It is generally acknowledge that the process is a key factor in decision making, however, according to Simon (1962) the process of making a decision does not come to an end when the general purpose of an organisation has been determined. Furthermore, while most of the research has attempted to develop understanding of the choice process, nevertheless, it tends to be focused from a particular point in time, rather than how actions occur in the organisation (Kasperson, 1985; Langley, 1995).

The theories of decision-making and conflict in an organisation require a form of process (Pettigrew, 1973). In a research thesis of this nature, the main interest is not to develop further models or processes but to better understand how people engage with a particular issue. Hence, suggestions have been made to tackle the current gaps in understanding of
organisations and the decision making element to determine the boundary conditions for some of decision-making processes.

2.3.5 Deciding sustainability in an organisation

The growing sophistication of understanding decision-making also means that the organisations need to become more aware of the modern techniques such as risk analysis and business planning. Yet, a good decision does not guarantee a good result; even century’s worth of scholars’ research has its limited effect over uncertainty and chaos (Hansson, 2005; Buchanan and O'Connell, 2006). The last section briefly highlights the notion of decision making from the three dimension perspectives, and the overall view is that while it is seen as a dynamic subject, decision-making can be carried out at multiple levels by an individual or group and the process is far from being neutral in regard to final choices (Laroche, 1995).

In spite of the ongoing debate about the concept of sustainability, assisted by the rising media coverage and increasing regulatory rules set out by the governments, more and more organisations are increasingly recognising their role in contributing to sustainability (Hitchcock and Willard, 2006; Hannon and Callaghan, 2011; Lozano 2011). The increase of a sectors interests in taking on sustainability as an agenda has seen discussions in this area found under various headings other than sustainability, this includes Corporate Social Responsibility (CSR), Corporate Citizenships, Business Ethics, Stakeholder Relations Management, Corporate Environment Management and more (Lozano, 2011).

While, the challenge to make appropriate changes concerning sustainability at the organisational level is debatable (Wu and Pagell, 2011). Researches in fields such as organisational strategy and operational management have suggested that organisations can simultaneously achieve business goals and reduce their environmental impacts (Russo and Fouts, 1997; Christmann, 2000; Wu and Pagell, 2011), which has seen a surge in development of tools and techno-centric solutions to help them address sustainability (Lozano, 2013). Some of the common examples of voluntary initiatives developed by and for
organisations, includes Life Cycle Assessment, Environmental and Social Accounting, Environmental Management Systems, Sustainability Reporting and many others (Lozano, 2011).

Although sustainability has become more widely acknowledge as a shared responsibility, and different sectors have also recognised the relations and interdependences of the economic, environmental and social dimensions (Lozano, 2013; Elkington, 1999) for “satisfying the needs of today’s societies without compromising the needs of tomorrow’s society” (WCED, 1987). However, to embed sustainability principles into an organisation’s system, it is still seen as a challenge. As Perks (2011) pointed out that while many companies now seem to know how to talk about sustainability, it remains patchy at operational level in some organisations. He suggested that further efforts are required from organisations as to how it needs to embed sustainability in their decision making, and the leaders of the organisations need to embrace the issue fully, not just limit the idea to one or two areas, but to adapt an approach that can be applied across the organisation systematically. According to Epstein and Widener (2010) organisations need to engage with its stakeholders when deciding on organisational actions for sustainability, however, the advancement and the growing sophisticated tools such as sustainability auditing of ISO 140001, carbon metrics and Environment Management Systems (EMS) to measure sustainability impacts of an operation decision, have been widely acknowledged, many of these tools focus on facilitation of measurement as positive intervention for organisations and the emphasis has primarily been on reduction of unsustainable behaviour rather than increases in sustainability practices systematically across organisations (Ehrenfeld, 2005; Loorbach et al., 2010).

As argued by Avelino and Rotmans (2011) that an analytical approach using tools or initiatives is well suited to capture the agenda from an economic viewpoint, the reality of sustainability as a notion remains complex and ambiguous, the extent of the issue and its challenges cannot simply be described by solely using rational paradigm, equilibrium or efficient resource allocation methods. Hence, there are questions concerning how organisations decide about their sustainability agenda, and how their social actors engage with sustainability under their current framework still needs to be further explored.
2.4 Sustainability and the aviation sector

The previous sections briefly discussed the notion of sustainability, what the most common approach to the issue was, which has led to the question of how organisations decide their sustainability agenda and practices. This section will focus on sustainability starting from the wider perspective of the aviation transport sector, it first explores what is known about sustainability in the general transport sector and outline the key issues. It will then it focus on the policy context of aviation in the UK and it how aims to shape or guide the practices at the sector level toward to more sustainable aviation sector.

Starting from a broader perspective, the role of transport in general is considered as a key system for connecting people, industries and regions, which links accessibility and mobility with economic and social progress (Greene and Wegener, 1997). However, the transport sector has been securitised for its implication to the environment that causes issues such as air and noise pollution, the fuel emissions and associated impacts on climate change (Greene and Wegener, 1997; Chapman, 2007; Oltean-Dumbrava et al., 2013; Banister 2011). Follow on the WCDE’s initiation of sustainability, Black (1996) set out a broader definition for sustainable transport, which is “satisfying current transport and mobility needs without compromising the ability of future generations to meet these needs.”

Debates on sustainability and the transport sector as a whole has developed different areas of interests with various focus such as techno-centric development of fuel efficiency, alternative energy sources (Lund, 2007; Thornley et al., 2009; Cansino et al., 2012), policy review and implementation of transport planning (Stradling et al 2000, Hall 2008), to people attitudes to travel and perceptions and behavioural change (Banister, 2008; Chapman, 2007; Prillwitz and Barr, 2011; Jones, 2012). Despite the interests on the issue of sustainability in the sector, transport remains one of the most difficult sectors to decarbonise for its energy use and emissions issues.
Goldman and Gorham (2006) pointed out that transportation is a complex system that can be difficult to be addressed comprehensively. According to Chapman (2007) transport is one of the few sectors where emissions continue to rise from the usage of cars, road freight and aviation as they are key contributors to carbon emissions. Discussions in this field have so far placed much emphasis on making policy solutions for developing behavioural change, and technological innovations of alternative fuels and efficiency. Even though the policy guidance may seem fit to address sustainability issues in general, in reality it is a slow process, and it often touched on a fraction of many different forms of transportation that is part of a larger system of human activity (Goldman and Gorham, 2006). Outlined by the UK department of Transport, that there is no consensus been reached in terms of how best to deal with complex problems of economic, environmental and social issues of transportation (DoT, 2013b).

According to Greene and Wegener (1997), the problems of sustainability in transportation involved three key issues:

- Degradation of the local and global encompasses (excessive rates of consumption of renewable resources).
- Consumption of non-renewable resources that appear to be essential to the quality of life of future generations.
- Other institutional failures that exacerbate the previous two problems, such as excessive traffic congestion which not only increases pollution and fuel consumption but also generates demands for more infrastructure and all its consequences.

As the perspective on making the transport sector sustainable remain difficult to grasp, the escalating motorisation and rising demands of mobility in some economically developing nations have add further tensions and deepen the challenges to move towards a more sustainable transport sector. Goldman and Gorham (2006) argued that the approach to sustainability in transportation is often seen as an exercise in resource optimisation, and there is a disconnection between the policy and human activity systems, such as human settlement and economic production are also critical to advance to a more sustainable sector.
2.4.1 The UK policy perspective

The dependence on fossil fuels makes transport a major contributor of carbon emissions, which is responsible for around 26% of the world energy related emission (Chapman, 2007), whilst there has been a growing expectation on new technology to deliver the solution (Greene and Wegener, 1997).

The aviation sector by definition is “service activities incidental to air transport” as set out by the UK Standard Industry Classification (SIC). Department of Transport (2011) described the aviation sector as the following:

“A diverse range of primarily private sector business and activities from commercial passenger air transport to freight, aerospace, General and Business Aviation, aircraft maintenance, pilot training and many more.”

Although, there is a strong institutional link to the EU single aviation market, (which also set out the overall framework on civil air transport across the continent) policy and regulations in the UK is generally a matter which rests with the Department for Transport and the Civil Aviation Authority (CAA). Moreover, the UK government’s policy for the aviation sector is heavily regulated through environmental protection legislation and the town and country planning system. It has traditionally left the market to decide where capacity is needed and aimed to provide capacity as near to demand as possible (Kaszewski and Sheat, 2004).

There is a view that the aviation sector plays a major role in contributing to the UK economy (Charles et al., 2007; Freestone, 2009; Oum et al., 2008) and according to the recent consultation by Department of Transport and highlighted in its report (2013) that it aims to “maintain a balance between the benefits of aviation and its cost, particularly climate change and noise,” yet, the prime objective for the UK aviation sector is to achieve long-term economic growth (DfT, 2012).
The UK policy status of the aviation sector has placed strong emphasis on airport capacity, the concerns over capacity have been voiced by the industry and government, with it consistently being in the political headlines, many see the status of the government’s policy on aviation as out of date, as it was merely based on the 1985 Airports White paper (Kaszewski and Sheat, 2004). The previous government’s White Paper, “The Future of Air Transport”, published in 2003, set out a strategic framework that gave support for additional runways and other infrastructure expansion at a number of airports in the South East area of England, although this has remained politically sensitive. There has been widespread criticism over the Government’s preference of focussing too much development in South East of England.

Businesses in the sector including airlines, airport operators, and even regulators have all been calling for a long-term aviation policy that includes sustainable airport capacity growth which has been long overdue (Reals, 2012). The coalition government which came into power in 2010 has promised to make great changes and progress in this area, and has acknowledged that there are gaps in the previous aviation policy, such as not giving sufficient consideration for environmental issues such as climate change. In its scoping document published in 2011, it has set out to cancel the runway expansion in the London southeast area, while support for additional runways in Southern England remains strong.

The significance of an airport has been emphasised in the policy context, which sees it as a key component to connect the nation’s aviation system and provide essential infrastructure that is needed for the service to function (Berry et al., 2008; DoT 2009a). There have been more discussions focusing on the airline sector previously and less attention has been paid towards the airport industry specifically (Graham, 2003). The media’s attention on airport capacity and expansion has raised the profile of the airport sector in recent years, but with emphasis on the policy and practitioner’s dilemma for driving economic growth at the cost of environmental and social welfare. However, much of the studies in this area have either been concerned largely with the policy imperfections or the broader issues of sustainability which
has little impact on the industry, in particular context such as European air travel (Goetz and Graham, 2004).

The Airports Commission, which was established in September 2012 by the coalition government to consider “how any need for additional capacity should be met in the short, medium and long term whilst maintaining a UK wide perspective.” (DoT, 2012) The commission first released an Interim Report in December 2013, which was a review into airport capacity and connectivity in the UK, the report concluded that there is a need for additional runways to be in operation in the South East area of England by 2030. While the work is still on-going, the commission will release a final report in the summer of 2015 to recommend how the UK should maintain its global aviation hub status.

According to the UK Aviation Commission (2013) it states that aviation emissions currently account for around 6% of greenhouse gas (GHG) in the UK. As the demand for air travel continues to raise, its contribution to carbon emission is also likely to escalate in the longer term, as many other sectors are increasingly making efforts to decarbonised, the aviation sector is at risk of falling further behind in tackling the wider issue of sustainability. (CAA, 2012l DfT, 2009; DfT, 2011; Airports Commission, 2013b) Although the Government’s view on the future of the UK airport sector has been criticised for its initial ambiguous position, it later emerged that it was taking a new approach to focus on developing an international hub (The Economist, 2013; Topham, 2013; Wintour, 2013). Whether the UK requires another runway at an existing airport is another agenda that is still in need of further questioning and outside the focus of this research thesis.

The WCDE’s initiation of sustainability has previously outlined the institutional gaps in setting out a clearer vision for sustainability (WCDE, 1987). It recognises the interdependence between economic growth and the environmental, and sees the challenges to deal with the economic and environment as an existing interlocked structure. Much of the analysis has seen the understanding of UK Government’s in this area lie within the
apprehension for economic prosperity, and the recent publication of the Government’s aviation framework has set its policy boundary for the environmental problem to issues of noise and reduction of carbon emissions (DoT, 2013). The Government’s policy focuses on the economy and environment by reinforcing the market driven approach, where economic development comes as the priority in policy. As the policy issues remain a challenge and difficult to change within a limited timeframe, the key point that needs to be focused on at the practical and operational levels, is where changes or a transitions to sustainability needs to occurs.

2.4.2 The sector perspective of sustainability

The divergence of sustainability in theoretical understanding and principles has suggested the conflictive challenges that airports are facing in-between the economic, environment and social objectives. As Boons et al. (2010) points out; the discussion over sustainability often leads to divisive clashes between actors that advocate economic growth and those that prioritize the social responsibility of the airports. With the ongoing debate concerning the airports sustainability, the pressure is on airports to develop further efforts in dealing with the issue has been a particular issue for the sector.

The aviation sector is considered to be a complex macro industry, with a mass of activities that are being undertaken by a complementary and combined network of actors (Jarach, 2001). The privatisation in the 1990s and ongoing commercialisation of the UK’s airports, means that the sector is becoming more market driven and increasingly adopting a much more business like management philosophy; the nature of how airports has been managed and operated has also changed over the past decades. Within the aviation sector, airports play a significant part that provides essential infrastructure needed for the services to be functional. The changing shape of global trade driven by the single market approach, and the rise of low cost airlines and freedom of movement sees a speedy growth of air travel demand, and the role of airport also shifts from a sole transportation centre becoming more of an
The primary economic value has been driving the sectors growth. Moreover, the growing threat of global terrorism and unsteady oil prices has added further tension to an already heavily regulated sector environment. Whilst any radical innovation is unlikely to be introduced at present to achieve what is required to meet the climate change challenge in the immediate term (Bows et al., 2009), it is unclear how the aviation sector could best deal with the existing challenges under intensive pressures of tackling the economic, social and environmental issues during their everyday operations.

The impact on the environment from the aviation sector as a whole is much more than just their contribution to global emissions. Looking at the local level, the everyday airport operations can also have profound effects, the issue of noise, traffic congestion, pollution, land take and habitat loss are directly associated with the airport business. However, according to Graham (2008), as the airport operations are essentially linked with various stakeholders that involves dealing in complex relationships with the multiple agents, such as airlines, government bodies, local communities, and shareholders. This means that an agenda such as sustainability is often made much more difficult, as the challenge is to co-ordinate and maintain the relationships that could potentially conflict about the strategic role of the airport.

The contemporary airport is complex and entails the facilities required to provide diverse support in terms of technical complexity and service provision. According to Doganis (2005) airports were traditionally being viewed as “a public utility with public service obligations.” According to the Airports Council International Europe (ACI) report published in 2010, It states that the aviation industry continues to evolved in the current globalised world, and as a result, increases economic competition. Many airports no longer see their role as merely providers of infrastructure, more and more airports are looking for ways to generate additional revenue through other activities such as retailing or car parking to subsidise their operations. A report published by Airports Council International Europe (ACI) in 2010 and
House of Commons Transport Committee in 2009 have point out there is an increase in
competition between airports, where airports across regions are competing to attract new
airlines and services. The popularity of low–cost carriers have taken considerable market
share from full-service scheduled carriers and charter airlines (DoC, 2009a), hence airports
are redefining its purpose and are increasingly looking for new opportunities to generate
additional income.

As discussed by Graham (2003), aside from providing the basic infrastructure, airports bring
together a wide range of facilities and services, which include air traffic control, security,
baggage handling facilities, freight and the growing commercial services such as shops and
restaurants to hotels and business parks. As the result of rapid commercialisation of the
industry, greater attention has been placed on the commercial aspects of running an airport,
such as generating non-aeronautical revenue and airport marketing (Graham, 2008).
Described by Airport Council International (1998), airports are increasingly focusing on
developing other business stream from the non-aeronautical operations such as property
portfolios to generate more income, such as business from hotels, restaurants, and car parks
and so on. The pressure for airport operators to grow economically also poses some constrain
on its environmental capacities.

While there are previous studies looking at the issue of sustainability and airports, much
efforts have been put into studying the policy development (Goetz and Graham, 2004;
Freestone, 2009) or to provide techno centric solutions for examples such as air traffic
management or mitigation air pollution (Lu and Morrell, 2006). How an airport operator
engages with the issue of sustainability through their everyday operations is less well
understood. Brown and Pitt (2001) also point out there is an apparent gap in understanding
the impacts of non-aeronautical activities, such as development and management of airport
facilities and infrastructure upon the environmental impact and their association with air
transport growth.

Even though the airport sector is seen to be making efforts on tackling the overall
sustainability issue by setting targets and measurement as responses (Graham, 2005). The
divergence for theoretical understanding of sustainability has generated conflicting views on what and how airports prioritise between the economic, environment and social objectives. Boons et al (2010) suggested that the discussion on sustainability often leads to tensions and create divisive views in-between those who advocate economic growth and the others that prioritize the social responsibility. While the ongoing debates on sustainability are unlikely to reach a general consensus at both political and practitioner levels anytime soon, the matter seems to becoming more of a solitary matter for the airport operators. The issue of how airports defy the economic, environmental and social impacts is even more crucial.

2.4.3 Developing a sustainable airport sector in the UK

Traditionally, aircraft noise has been considered as the most significant environmental problem that can be directly linked with the airport operations. Over the years, the increasingly tight regulations and legislation has restricted the type of aircraft being operated, as well as more sophisticated measures to manage the standard environmental problem like noise pollution (Brown and Pitt, 2001). Despite the policy and regulatory efforts, aircraft associated noise remains as a mainstream concern in the UK.

Aside from innovation for aircraft technologies, other studies on sustainability and airport development have mostly been focusing on the area of surface access for transport and terminal building design, as there is a perception that the environmental problems at airports are primarily caused by aeronautical activity or inappropriate infrastructure provisions, such as limited public transport options (Brown and Pitt, 2001). The deregulation and commercialisation across the sector which has led to large expansion of many airports infrastructure and development of non-aeronautical operations, such as properties, car parks and retailer ventures. As the airport operations continue to expands, it also add further strain on the existing infrastructure, and it becomes more challenging to deal with other environmental issues such as water pollution, waste and energy management.
While the aviation sector includes the airport operators, around the world they are attempting to address the sustainability agenda, the practice in this area has mainly been much of a “self-governing task”. According to the Transportation Research Board (2008), it points out that many airports around the world have prioritised the practice of sustainability differently when it comes to environmental, economic and social practices, while it is subject to regions, locations and the scale of the airports. The global issues such as climate change are the most common drivers for the airports to develop sustainability initiatives. Furthermore, while both the U.S and non U.S airports have identified environmental practices as a key priority, followed by social and then economic practices, the U.S airports have put emphasis on energy and green buildings. Non U.S. airports, including the respondents from continental Europe and the United Kingdom, remain focused more on the noise issue.

As described in the previous sections, the rising concerns for global issues such as the unsteady energy prices and political uncertainty have affected the way policy is formed, governments can pose restrictions, as well as provide opportunities for the sectors including aviation. While significant changes are to be made at the policy level in the UK, it remains as a challenge. The key question that this thesis wishes to raise is about the broader concerns for sustainability, despite policy intervention, and how everyday practices could make the necessary transitions and changes towards a more sustainable future.
2.5 Summary

This chapter has briefly described the conceptions and numerous definitions of sustainability. It has highlighted the conceptual and practical challenges to implement sustainability. While debates on how sustainability is conceptually ambiguous and how the current interpretation of sustainability often places economic growth ahead of environmental protection and social welfare. The issue of how any organisation balances the economic, environmental and social factors has been discussed and debated across policy, academic and practitioner levels. Like many other sectors, the transport sector includes aviation and has been steadily moving towards sustainability development, as part of the ongoing trend to manage evolving energy and climate change issues.

The aviation sector is constantly facing changes in terms of aviation demand, technological developments, demography and regulations. With the recent economic downturn as well as the instability of fuel prices and the energy market, which remain critical to the aviation industry. Concerns for sustainability remain as a high level rhetoric with less perceptive, and the understanding of the role of airport operators and how they deal with these issues through sustainability development is less understood. The increased pressure for airport operators to grow economically means constraints on its environmental capacities and social sustainability will continue along with the demands. The perspectives of how airports engage with the issues as part of their daily operations will be even more significant.

The main purpose of this chapter is to highlight what is known about the issue of sustainability; by briefly discussing the key principles and the most common approach of the three triple bottom line to sustainability. It aims to go further into the discussion on sustainability from a practical perspective, by reviewing and determining the role of decision making and how it would enable and shape our responses to the contemporary problem of sustainability. While further clarification is continually being sought for a more constructive meaning of sustainability, a unified definition of sustainability may no longer be deemed to be critical. The ambiguity at the policy level may serve to provide opportunities for the aviation sector; this will also enable them to assess the issues from a more dimensional point.
CHAPTER 3 - A Transition Perspective for Sustainability

3.1 Introduction

The previous chapters discussed the notion of sustainability provided by the relevant literatures and outlined the development and key issues in the aviation sector. It has emerged from the relevant literatures that the notion of sustainability remains conceptually contested for its economic centric approach. This argument has been reinforced the way policy framework was set for developing sustainability in sectors like aviation.

In this chapter, it will further discuss the ongoing debates for developing a sustainable aviation sector with the context of an airport operator in mind, by reconsidering and examining the needs for setting a systematic approach to the complex problem of sustainability. While there have been different theoretical studies previously looking at the issue of sustainability in organisation and management disciplines, with analysis of the particularities from the aspects of change management, organisational studies, economic theory and others. As stated in the Introduction chapter, this thesis has chosen to focus on the Dutch model of a systemic approach for transitional perspective to sustainability for their emergent establishment as the alternative model of governing sustainability, to accommodate the growing academic interest in the subject and the wider attention being given to the issue. This thesis aims to develop a similar approach that will guide transitions in the UK.

This chapter sets out to discuss the key principles and characters of the overall concept initiated by Rotmans, Kemp, van Asselt (2001) and the later works of Geels (2002), which have been considered as the foundation for some of the most influential perspectives evolved within this field, this includes the approaches of Multi frameworks and Transition Management. It begins with the examination and discussion of the studies on Transition
Management as a governing model for sustainability. Primarily focusing on the theoretical approaches emerged from the Dutch studies as part of their reform for the National Environmental Policy Plan (NEPP) project in the 2000s. It seeks to further develop the understanding for sustainability transitions as an emerging field that will also help to formulate the theoretical framework for this thesis. The discussion aims to connect with wider debates about making systemic change, by engaging with perspectives of organisational studies and project management disciplines, to stimulate discussions in this area with particular focus on the practice in everyday organisational life, and the dynamic processes as one of the key ingredients for shaping transitions towards a more sustainable airport. The chapter then concludes with an exploration of transitions perspectives to sustainability and how they are integrated, to generate and guide the examination of the research question for this thesis.

3.2 Understanding sustainability transitions and the Dutch framework

According to Grin et al. (2010), a sustainability transitions generally refers to “a radical transformation towards a sustainable society as a response to a number of persistent problems confronting contemporary modern societies”. The extensive research and studies concerning the notion of sustainability have sparked wider debates and different perspectives over the years, which also generated different approaches to better understand the issues and associated problems that come from the social, environmental and economic realms. One of the predominate perspectives that has rose to fame is the study of Transition Management as a governing model towards sustainability, it became prominent as one of the leading principles that facilitated the Dutch governments transformation of their energy system during the early 2000’s (Loorbach, 2010). Within this field, various approaches and different perspectives have emerged to describe and approach of transitions, each with strengths and weakness, but based on the Dutch Governments Project of the National Environment Policy Plan with contributions from a team of European academics Kemp and Loorbach (2006), Kemp and Loorbach (2005) a transition has been generally defined as follows:
The shift from an initial dynamic equilibrium to a new dynamic equilibrium.
Is characterized by fast and slow developments as a result of interacting processes of structure change.
Involves innovation as an important part of a societal subsystem (Kemp and Loorbach, 2005, 2006)

Described by Kemp and Loorbach (2006) the basic underlying assumption of the Transition approach sees the issue of sustainability as inherently complex, as “society changes in an evolutionary way, to a certain extent it is comparable to the behaviour and development of ecosystems”. This can be further elaborated as the situation where there is a pattern within our society, where people’s beliefs and ideas co-evolved with politics and economy and so on, which then results in a certain “build up” of chains that intertwined with one and another, hence the issue of sustainability becomes too complex to be solved by any single organisation or government (Johnston et al., 2007; Lozano, 2008; Davidson, 2011; Jerneck and Olsson, 2011; Christen and Schmidt, 2011; Garud and Gehman, 2012).

Having identified some of the barriers to sustainability in the Netherlands policy landscape, a group of scholars with the support from the policy makers have proposed a redefinition of the policy-making approach as part of the solution to address problems of uncertainty, complexity and interdependence. Driven and inspired by multi-disciplinary of theoretical thinking, including the Systems Theory (Elzen et al., 2004; Kemp and Loorbach, 2006; Loorbach, 2007; Rotmans and Loorbach, 2009), this sees many key studies on transitions to sustainability focusing on the term of “system innovation” as the key concept and resolution, which in brief means a fundamental change in “functional systems and product chains” such as developing a hydrogen economy, industrial ecology and customised mobility, which reflect the need for change in policy making (Kemps and Loorbach, 2003; Kemp and Loorbach, 2005; Kemp et al., 2007).

Kemps and Loorbach (2003) who have been part of the early groups that were involved in the plan to foster sustainable development for the Dutch government have defined a transition “as a gradual process of societal change in which society or an important subsystem of
society structurally changes”. Diagram 3.1 outlines their description of the Transition Management as a co-evolution process that is being developed through various domains which sustain each other, these include: technology, economy, institutions, behaviour, culture, ecology and images or paradigms, as described by Kemp and Loorbach (2006), that this process is highly non-linear, with slow change that is followed by rapid change when things reinforce each other, which again is followed by slow change in the new equilibrium.

Diagram 3.1 Transition as an co-evolutionary process

The concept of Transition Management, set out as a system way to view societal change, and becomes an approach intended as a governance model to the process for guiding and exploring the most sustainable option(s), it recognises that the problem of sustainability as a whole is complex, and can only be realised through making radical interventions to systems or structures in various forms, this includes economic, social-cultural and institutional
conditions, such as injection of radical technological solutions that would help to reconfigure and co-evolve between elements such as rules, practices, and institutions that would eventually steer the transitions towards a more sustainable state (Smith et al., 2005; Elzen et al., 2011; Rotmans and Kemp, 2008; Loorbach, 2007; Rotmans et al., 2001; Rotmans and Kemp, 2008). However, it has been suggested that the theoretical understanding of the transitions approach to sustainability remains abstract (Kemp and Loorbach, 2003; Genus and Coles, 2008; Simth et al., 2010), with very few empirical and comprehensive studies of co-evolution in broad societal transitions, there are questions concerning its applicability and operationalization on both the policy and societal level. The following sections further explore and outline the key principles, characteristics, and management of the transitions approach to sustainability.

3.2.1 The principle of transitions to sustainability

Drawn from the history of science, technology studies, innovation studies and evolutionary economics by (Kemp and Loorbach, 2003; Geel, 2011; Markard et al., 2012). The initial concept and idea of the transitions approach was to “reinvigorate policy for ecological modernisation” (Smith and Kern, 2009) and had particular focus on the policy landscape in the Netherlands. According to Kemp and Loorbach (2005) the Dutch national environment policy plan has identified the following problems as the barriers to sustainability existing within the current societal structures:

- Unequal distribution: poverty causing irresponsible environment management
- Short-term thinking (in politics and business)
- Fragmented policies and institutional deficits
- Prices do not reflect external costs of environmental degradation
- Actors/Individuals causing problems that do not own the problem (they are not responsible for the solution of those problems)
- Solutions involving system changes are surrounded with great uncertainty
- Insufficient precaution
To address the above barriers, the notion of transition was then further explored and examined in academic studies commissioned by the Dutch Environmental Policy team. Collaborated between research institutions from disciplines of policy, economics, history, innovation, and climate change, have argued that only making changes to the society system could be a solution to the problem of sustainability, furthermore, “such changes in principle could be steered and that one should look for levers and be identified through causality analysis looking at causality loops”. (Kemp and Loorbach, 2005).

It also emerged from discussions that there is a condition of “dependency” and “uncertainty” in our society structure (Kemp and Loorbach, 2003; Smith and Kern, 2009). Past studies of transitions in this field have largely focused on areas like transport, consumption and production of energy and food, see (Geels, 2011; Kemp and van Lente, 2011; Markard et al., 2012) case studies from horse drawn carriages to motorised cars, sailing ships to steamships, see (Geels, 2002), are some of the key examples that have been observed when focusing on the changes in the society. These examples attempted to capture the situation in which the way our surroundings have been constructed with many preconditions and hence generated the “lock in”. The term “lock in” described where innovation, policy and practice comes into place, they began to build on top of each other, it created a path dependence through lock-in mechanisms across the social, political and technological spectrum, and people’s behaviour and their chosen life style become adjusted with the available technologies set in the current society structure, which can be difficult to be removed, see (Geels, 2012). Uyarra and Gee (2012) draw on the Melosi (2008) example of sanitary systems in US cities, highlighting the source of systems were the result of international efforts by decision-makers to resolve problems as cities grew upward and outward, and “the path dependency and commitment to permanence in urban infrastructure development often locked-in specific technologies and limited the option for future generations”.

Described by Rotmans and Kemp (2008), the basic principle to transitions is to define sustainability goals for functional systems such as energy, transport and agriculture and utilisation of on-going developments for societal goals. As clearly set out in the Dutch National Environmental Policy Plan and highlighted by Kemp and Loorbach (2005) that the transitions approach requires the following points:
• To deal with uncertainties, for instance through the use of scenarios.
• To keep options open and deal with fragmented policies; to stimulate knowledge and technological change, to pursue innovation and incremental improvements, to take a multi-domain view with attention to all relevant actors.
• To have a long-term orientation and to use this for short term policies.
• To pay attention to the international aspects of change processes and find solutions at the right scale.
• Add specific tasks for the government, namely to stimulate, mediate, engage in brokering services, create the right conditions, enforce its laws and engage in steering.

This section provides a brief outline for the barriers and elements that have been addressed from the Dutch studies of transitions process. It highlights the focus areas for developing structure change, while the highlight of these points are not portraying a explicit framework, as the solution emerged from the Dutch policy plan, but helped identify the conditions. From this, it raises some of key questions about the overall concept of Transition Management approach to sustainability, for instance, “who” are the relevant actors, and “who” set the goals and task for dealing with uncertainty, how do they create the right condition? And how to determine the long-term orientation for short term policies? This thesis does not aim to address all these issues within the current scope of the study, it only intends to raise wider questions within the transition approach and emphasise the gaps in understanding of this emerging field.

3.2.2 The structure approach to transitions

According to Dewulf et al. (2009) Transition is among the more ambitious theories, focusing on structural changes in an entire societal domain. Such a process is driven by the principle of co-evolution as illustrated in the previous Diagram 3.1. Whilst the overview on the transitions approach still requires further theoretical exploration, consideration for theories implicitly or explicitly related to transitions have so far resulted in different a range of paradigms,
concepts, methods and tools (Dewulf et al., 2009), this includes theoretical frames of complexity theory, systems theory, innovation literature, cultural theory, evolutionary economics and many others, which have contributed to the development of the concept for transitions to sustainability.

There are more specific definitions and perspectives of transitions that have emerged from different schools of studies. Some the most prominence works within the transition studies includes Transition Management (Loorbach, 2010; Rotmans et al., 2001), Multi-Level Perspective (MLP) (Geels, 2002), Technological Innovation System (Jacobsson and Johnson, 2000; Bergek et al., 2008) and Strategic Niche Management (Kemp et al., 1998; Smith, 2007). While Transition Management was set out as an overall approach to tackle the complex issue of sustainability, the latter three areas have been inspired by the scientific field of innovation and studies that were formed on the basis of addressing the issue of technological change and early adoption for new technologies for sustainable systems. Each perspective is unique in terms of content and context but with the general focus on system innovations. As this is an emerging field, there are different perspectives on how one sees what transitions is about, for instance, (Loorbach and Romans, 2010) broadly describe a transition as a fundamental change in structure, culture and practices in systemic or temporal terms, while Geels and Scot (2008, 2010) define transitions “as shifts from one socio-technical system to another”.

Loorbach and Rotmans (2006) suggest that the general assumption concerning the transitions process can be distinguish in two different types:

- Evolutionary transitions, in which the outcome is not planned in a significant way
- Goal oriented, in which goals or visions of the end state are guiding public actors and orienting the strategic decisions of private actors.

There are multiple shapes that a transition can take, it involves multiple actors operating within the “societal system” and can fundamentally change both the structure of the system
and the relations between actors through slow changes follow by rapid changes through interplay and reinforcement during the development stage (Kemps and Loorbach, 2006; Dewulf et al., 2009). To examine the dynamics of the transition, different levels have been categorised. A summary by Rotmans (2002) suggested that there is also a three pillars approach to transitions, which can be summarised in the following Table 3.2:
Table 3.1 The three pillars concepts of transitions approach

<table>
<thead>
<tr>
<th>Key Concepts</th>
<th>Approach</th>
<th>Characters</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-Phase</td>
<td>The temporal approach: Pre-development Take-off-Acceleration Stabilisation</td>
<td>A transition is the result of system innovations and other innovations and changes.</td>
<td>Biomass energy supply, industrial ecology and customized mobility</td>
</tr>
<tr>
<td>Multi-Level</td>
<td>Three levels approach: Macro (societal landscape) Meso (dominant-actor) Mico (micro-behaviour)</td>
<td>A transition is the result of interaction between changes and innovations at these three levels, slowly changing trends lead to new ways of thinking that lead to innovation and vice versa.</td>
<td>Functional services and disservices, Accelerated by one-time events, such as a war or large accident or a crisis but not be caused by such events.</td>
</tr>
<tr>
<td>Multi-Change</td>
<td>The adaptive/ curve approach: Exploitation-Conservation- Release - Reorganisation</td>
<td>A transition is characterised by processes of variation and selection, and adaptation to the changing conditions through close monitoring and learning.</td>
<td>Water management, coastal management, industrial ecology</td>
</tr>
</tbody>
</table>

Sources: (Rotmans et al., 2000, 2002; Rotmans and Kemp, 2003; Kemp and Loorbach, 2006; Dewulf et al., 2009; Rotmans and Loorbach, 2009)
While the above table is not intend to capture and present an overview of approaches of transitions, instead it sets out to outline the initial concepts and indicate the different perspectives by scope, and how the overall idea has been conceptualised as a systematic framework. The analytical framework described in the table indicated a rational intervention that can be led with clarity for the direction of transitions that can lead to system innovation. Over the years, the Multi-Phases concept initiated by Loorbach and Rotmans (2001, 2006) and Multi-Level Perspective (MLP) described by Geels (2008, 2010) have gained much prominence as the key ideas for transitions towards sustainability, with each looking from a multi-dimensional nature of sustainability and dynamics of structural change, naming the interactions between technology, policy/power/politics, economics/business/markets and culture/discourse/public opinion (Geels, 2010).

According to Kemp and Loorbach (2006), rather than focusing on individual components of the system it should try to find governance strategies at a systemic level and try to change the condition of the system. Moreover, transitions are best viewed as macro-outcomes of micro-decisions in a changing landscape that cannot be reduced to specific events and decisions. They result from the interplay of individual and collective decisions under collective structures as the rule systems in a heterogeneous sociotechnical landscape (Kemp and Loorbach, 2003).

Although the concept of transitions are not new, and society has always been subject to constant change, such as from an agrarian society to an industrial society (Slingerland and Rabbinge, 2009), the overall concept of a transition approach has gained much of the attention in recent years, there has been criticisms that the idea largely retains much of the focus on development of technology in society (Genus and Coles, 2008), and there has been calls to elaborate and specify the conceptual framework and methodological underpinnings for understanding both historical and ongoing transitions, as well as to challenge the conceptual approach as where and how they can be applied. This also includes a better understanding of the people in the context of the transitions processes and everyday practices (Markard et al., 2012; Smith et al., 2010; Shove and Walker, 2010; Loorbach, 2010).
3.3 Transition Management as a governing framework

The previous sections highlight the different perspectives of Transition as an alternative approach to tackle the complex problem of sustainability, while the last section only provides some perspectives on the evolving aspect of transition, it is not meant to be a comprehensive overview of its principle, instead, the overall concept of how the transition approach to sustainability sees “changes at the society level as a result of the interaction between all relevant actors on different levels within the context of a changing landscape”.

As the previous section highlighted there are different aspects and approaches to transitions that largely remain under construction, from the perspectives of Multi-Phases (Loorbach and Rotmans 2001, 2006) to Multi-Level Perspective (Geels 2008, 2010), and there are indeed many questions concerning the conceptual development of transition on issues such as stimulation of systems innovation and long-term technological change that are required for making of a more sustainable future. The wider attention to the concept of Transition Management has also attracted many criticisms such as the descriptive and structural approach of the principles, and there is less understanding on how governance might come to be exercised in practice, in particular within the dynamics of everyday processes (Smith et al., 2005; Shove and Walker, 2007).

There is growing interest to develop transitions into the policy context, in areas such as energy, buildings, and health care in some countries included the UK, there is the need to further develop the understanding in this area. Different studies concerning those issues for the transitions approach tend to focus on deconstruction of the transitions principles through methodical analysis, as the empirical examples are still merging, particularly in the area of Transitions Management (Loorbach and Rotmans, 2010).
According to Loorbach (2007) and Rotmans and Kemps (2008), transition is complex and uncertain, and has no clear hierarchy with controlling power being distributed, and the direction and speed can be influenced by various types of steering and coordination. Based on the evolutionary principle, the outcome is not planned in a significant way with goal oriented transitions, in which goals, visions, or the end state, guide the process. This suggested that the transition approach lies in goal-oriented transitions or in the idea that transitions can somehow be steered or managed (Dewulf et al., 2009). Loorbach and Rotmans (2006) described and further elaborated on the management of transitions as follow:

“Transitions cannot be managed in the classical command and control, top down approach. They can be managed in terms of influencing and adjusting; a more subtle, evolutionary way of steering. In other words, the direction and pace of transitions can be influence, even if not controlled directly. Transition Management therefore aims to better organise and coordinate the transition processes at a societal level, and tries to steer them into a sustainable direction”.

The diagram below provides a schematic view of Transition Management, as suggested by Kemp and Loorbach (2003) that it is based on the steering philosophy of being goal-oriented, not dictatorship or planning and control, with the specification depending on the particular context and nature of the problem at hand, in essence, Transition Management is an open-ended form of process management against agreed societal goals.
While there has been considerable efforts made to better understand the concept of sustainability associated with the issue of climate change, discussion often revolve around the challenges in making a balance between driving economic growth without adding implications to the environment and social standards (Klostermann and Cramer, 2006; Walker and Cook, 2009). However, as argued by Kemp et al (2007) there is an increasing understanding that there are trade-offs between the three goals of economic, social and environmental aspects in any type of development.

As the Transition Management set out to be a goal oriented process that evolved and consists of interactions which help in steering towards a more sustainable direction (Smith et al., 2005, Rotmans and Kemp, 2008). This description however has certain contradictions, as on one hand it placed much emphasis on the ideological of systematic change, and on the other hand, its principles lie with the premise that society cannot be steered or remade through the conventional control models. The governance approach and frameworks such as Multi Level Perspective (MLP) that set to steer transitions towards a more sustainable state, have not address this issue in particular, instead, it focuses on the interactions between “technology, power, markets and a discourse to move towards sustainability” (Geels, 2011). Analysis
framework as such, provides little insight on how the steering and interactions are developed and formulates the dynamic relationship between actors during transitions, which ultimately shape the direction and transitions towards sustainability.

3.3.1 The transition problem for sustainability

According to Rotmans and Loorbach (2006), Transition Management set out to deal with the problems of our current “locked in trajectories driven by short-term benefits instead of longer-term optimality”. It has been developed as a governing model based on a number of principles and instruments, targeting a wide range of problems that require response, but has no ready-made solutions available (Kemp and Loorbach, 2003). While Transition Management initiated on the bases of looking at problems of policy making, this is largely generated from the base of Dutch case study, in which focus on the governance of a highly uncertain and chaotic process involving diverse actors and organisations with different horizons, ambitions and values (Loorbach, 2007). Transition Management sees the key issue for sustainability lies in the current forms of governance and the nature of the policy making processes. Researchers such as Kemp, Loorbach and Rotmans (2007) have built on the barriers identified from the Dutch case study and suggest that there are specific problems which lie within the complex nature of a networked society. Table 3.3 outlines problems which have been identified when it comes to managing processes of societal change that requires some form of steering.
<table>
<thead>
<tr>
<th>Problems</th>
<th>Context and Examples</th>
<th>Propose Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissent/Consensus</td>
<td>Dissent on the ranking of goals, means and nature of the problem. For instance, there is currently no consensus about the notion and preferred solutions for problem of sustainability.</td>
<td>Continuous and iterative deliberation and assessment</td>
</tr>
<tr>
<td>Distributed control</td>
<td>Conventional control uses a top down approach to deal with various actors with different beliefs, interests and resources that can cause silos and make unitary action impossible.</td>
<td>Formulation of long term joint visions and common goals between individuals.</td>
</tr>
<tr>
<td>Determination of short term steps</td>
<td>It is unknown how long term structural change may be achieved through short term steps with little theoretical understanding in this area.</td>
<td>Strategic experiment with a dual strategy of forward and backward reasoning.</td>
</tr>
<tr>
<td>Danger of lock in</td>
<td>This refers to the danger that one gets locked into particular solutions that are not optimal from a longer term perspective, such as the current fossil base energy system.</td>
<td>Development and use of a portfolio of options.</td>
</tr>
<tr>
<td>Political myopia/Time issue</td>
<td>Certain transitions such as technological change may takes one generation or more, and span across different political cycles. Long term policies in some way must survive short-term political changes.</td>
<td>Development of the transition arena and interactions of processes at multi levels includes Strategic, Tactical and Operational.</td>
</tr>
</tbody>
</table>

Source: (Kemp, Loorbach, Rotmans, 2007; Loorbach, 2007)
As Dewulf et al (2009) pointed out, the Transitions approach recognised that there is multi-actor collaboration involved during the process of change, where each plays different roles, and has different relations to each other. However, suggestions about who those actors are and their involvement in the process of change remain indistinct and diverse. This includes roles such as that of a policy maker, politician, entrepreneur, innovator, manager, and employee or any individual.

While the general transitions approach recognised the role of actors (Geel, 2011). A broader theoretical perspective of transitions has made the presumption concerning the process of change. For instance, the conceptualisation of negotiation, steering or influencing concepts that are based on certain assumptions which often suggest that people can be motivated by clear result and incentives (or punishments) to make changes, or people’s interests are integrated in win-win situations (Dewulf et al., 2009). Such a fluid arrangement has the presumption that individuals can indeed be innovate under the right settings. There are still questions concerning the role of individuals in organisation and the environment in which the transitions are being processed. for example, how they interact and coordinate under which particular conditions of setting, and how the people help to form and shape the goal or options of sustainability which includes “steering and influencing”, all of which entails and indicate a degree of complexity that usually feature in an environment where changes take place and evolve, yet the understanding in this area as how it generates and enacts within the transitions approach remain limited.
3.3.2 The management approach

The early development of transitions studies see the terms of “manage transitions” as contradictory. Since the theoretical concept is formed on the basis that any system contains inherent complexity with uncertainty, which involved a low level of control. While the conventional approach to any transitions recognise that direct influence can be maintained with power and control (Loorbach, 2007), the emphasis on the evolution process, as a problem of sustainability is “seen to be a continuous process of adaptation to unanticipated problems” (Kemps et al., 2007). The aspect of this continuous process is often interpreted as the co-evolution perspective in Transitions Management, it is important in helping to understand the complexity of the sustainability problem. It recognised that the issue requires coordinating at different levels of governance and fostering self-organisation through a mixture of learning, interaction and innovation to steer towards in a more sustainable direction.

Loorbach and Rotmans (2010) described “the very idea behind Transitions Management is to create a societal movement through new coalitions, partnerships and networks around arenas that allow for building up continuous pressure on the political and market arena to safeguard the long-term orientation and goals of the transitions process”.

As part of the solutions to deal with the societal change, Transition Management identified the interaction between processes and suggests there are three coordination mechanisms that can be used to set transition (Loorbach and Rotman, 2006):

- Market- price mechanisms, individual product and service choices
- Plans- setting transition goals and policy strategies
- Institutions-development of transitions arenas, agendas and goals, fostering of networks and learning processes.
Illustrated in Diagram 3.2 based on the principles set out by Kemp, Loorbach and Rotmans (2007) that described the three levels of governing activities of strategic, tactical and operations. This approach suggest that a strategic transition arena focuses on problems of structuring and vision development, tactical transition coalitions and networks which involve agenda building and transition paths. The operational level consists of experiments, projects, monitoring and evaluation of progress, leading to adaptation.

Diagram 3.3 Multilevel approach to Transition Management

Sources: (Rotmans et al., 2001; Loorbach and Rotmans, 2006; Kemp, Loorbach and Rotmans, 2007)
An additional activity coined as “reflexive” had been further developed by Loorbach and Rotmans (2010) to describe the activities that relate to “evaluation of the existing situation at the various levels through debate, structured evaluation and assessment to structured and reframe the issues”. As further discussed by Loorbach and Rotmans (2010) the underlying ethos of Transition Management is to help develop new substance such as ideas and agendas to support a process of network and to subtly influence the existing system, or actors who lead on the system.
3.4 Sustainability transitions in everyday organisational life

As the concept of Transition Management has been attracting wider interest, it has also received much criticism, which is largely concerned with the theoretical structure as being too descriptive and system thinking. At the one hand, the current lack of experiments available to support understanding in this field continue to drive the focus of discussion on theoretical development (Loorbach and Rotmans, 2010). However, as pointed out by Kemp and Loorbach (2003, 2006, 2009), it consists of a number of activities, Transition management can only be defined in general terms, because they are largely dependent on the nature of the transition problem at hand and the interactive nature of Transition Management on the actors involved.

There are debates on the dynamic processes that are involved, which covers the individual’s relations with the system, it is seen as underrepresented in the transitions aspect Shove and Walker (2010), Coenen et al. (2012). Moreover, Smith et al. (2005) and Genus and Coles (2008) have also argued the issue “to focus on innovation as systems” approach in transition research. This sees less discussion on issues of people and place, however, the successful change requires the “coordination of resources across diverse interdependent actors”, and “the dissent and resistance play an important role in precipitating and modifying process of change” (Smith et al., 2005). Those views indicated certain gaps in understanding the dynamics that individuals involved in the transitions process view it, and how their interactions and relationships that may condition the transformative process and shape the direction towards sustainability. The issue of tension and conflict has not been emphasised in the Transition literatures, Dewulf et al., (2009) pointed out that the Transition Management approach has simultaneously assumed that main actors such as the policy maker at the government level would have to pave the way for the transition regardless of any resistance or conflicts that may arise, little is known about whether there is any issue of tensions and what impact it has to the process.
Concerns about the limited presence of practice issue in transitions literatures has been raised by Shove and Walker (2010), as they argued the current emphasis to drive the policy intervention on technological innovation, yet, how transition in everyday life such as acts of daily showering contains certain dynamics which includes technological (bathroom technology), social (collections of meaning such as freshness and wellbeing) and cultural processes (procedures or bodily activity).

While Transition Management was largely initiated on the grounds of policy intervention. It still required understanding the relevance and relationships between intervention and practice. This is well rehearsed in other disciplines, such as organisational and management studies. To embrace the vision for economic prosperity, social equity and environmental integrity and futurity for all beings are already seen as being difficult at the sector level. Under the existing complex political structuring with different institutions priorities, gaining a collective consensus over the sustainability agenda in the context of aviation sector has certain challenge to bear. Although it is part of Transition Management’s purpose to “tackle” the complex condition, however, the current emphasis has place much focus on developing technologies and system intervention.

Basi (1998) has suggested that organisations have moved from a paternalistic to synergistic structure. According to Daft (2009) in today’s corporation environment, it is anything but stable. As today’s organisations are becoming larger and more complex, with boundaries between functional departments and organizations are becoming more distinct, as internal structures grew more vertical and bureaucratic, researches then started to take interests in understanding the political games between organisational actors, and events that come into play in shaping the organisations (Thietart and Forgues, 1995). Many organisational theories were formulated largely in the 1960s and 1970s, and some aspects of these still remain a great influence on organisation studies to this date Suddaby et al., (2011) and Davis (2010). In light with the current views on organisations, different aspects of how organisations work required some update to reflect on the dynamics of modern settings. Described by Davis (2010) that the status of organisational theory sometimes appears to be like “a living museum of the 1970s”. Researchers such as Suddaby et al. (2011), Sandberg and Tsoukas (2011) and Vermeulen (2007) have raised issues concerning progress and development of organisational
theories as many studies “have failed to capture the rich manifestation of organisations in society”.

Garavan et al., (2010), McWilliams et al., (2006) and Willard (2005) have point out that in the context of sustainability, there is an issue between strategic intend and actual operations at the micro level, they have argued that not only do the relevant policy initiatives fail to be translated into every day practice, there are perceptions in organisations, in which many see sustainability related initiatives as costly, difficult and time consuming. The focus on how a sustainability agenda can be influenced in an organisation often looks into options such as gaining management consensus, development of environmental training and raising employee empowerment are considered as some of the key ingredients to stimulate the embedment of sustainability agenda in an organisation (Linnenluecke and Griffiths, 2010).

According to Epstein and Buhovac (2010) to implement sustainability is fundamentally different to implementing other strategies in organisations, to achieve the goal in social, environmental and financial performance simultaneously, often require longer assessment and is considered to be more difficult to measure than most of the organisational impacts. Furthermore, without relevant stakeholders understanding and their consensuses to make the agenda relevant, sustainability remains being perceived as an issue that only applies to certain areas of the business organisation. Although the role of people or stakeholders is considered to be vital in directing the transitions process (Loorbach and Rotmans, 2006), however, the issue has not particularly been emphasised as previously discussed. There is a view that the transitions process essentially contains a two way process, as the interaction between people each with different values and visions for sustainability, driven by the system provided, required further understanding in different transitions context (Berkhout et al., 2004). The following sections set to bring in the perspectives on stakeholders which have largely been studied and discussed in the organisational domain, this is to helping to make connections and expand the construct of sustainability transitions and to stimulate discussions on how engagement by individuals or groups may plays a role in enabling the changes required.
3.4.1 Stakeholder engagement in Transition Management

According to Haugh and Talwar (2010) organisations often make assumptions that managers and employees are aware of the sustainability agenda and in truth most employees may be unaware of sustainability issues beyond their immediate work responsibilities. While there is increased recognition concerning the issue of engagement, the discussions over the practice of sustainability often lead to frustration and disenchantment (Mebratu, 1998; Johnston et al., 2007, Forsyth, 2011).

The theoretical understanding about “engagement” has largely drawn from the stakeholder studies in management theory, it mostly concerned with his issue of why people within an organisation fail to engage with certain agendas. The perspectives in this field have placed strong emphasis on using analytical tools and methods to help identifying the relevant stakeholders in the associated network. Yet, the rapid changing nature of the organisational setting, which may affect the generic rules of decision-making on “who” the stakeholder is, is increasingly becoming more complicated when factoring in the assessment of the organisational process, as well as the growing dynamics and the various networks of relationships. As Gore et al. (2006) suggested, there is a need to pay close attention to people from the micro perspective that are associated within the process, and elaborate on their engagement and practices in the environment that entails constant changes.

Different studies have point out that stakeholder behaviour is key to making certain organisational changes (Linnenluecke and Griffiths, 2010; Epstein and Buhovac, 2010; Davila et al., 2013; Doppelt, 2009), particularly from an organisational cultural context, as how it often gets referred to as one of the key reasons why mechanisms such as strategic planning and re-engineering approaches fail in enabling organisational change (Doppelt, 2009). The concept of stakeholders in organisations originated from the work of Freeman and colleagues (Freeman and Reed, 1983; Freeman, 1984). The central tenet is that organisations are invariably shaped by values that transcend the sole interests of shareholders. The idea, as Freeman et al. (2004) put it, is to encourage a more responsible approach to
corporate governance to make managers more accountable in the process of building a shared sense of organisational value. Building on the Stakeholder Theory of the firm, project management scholars have over the last decade increasingly considered the management of stakeholders’ expectations as a significant managerial problem (Littau et al., 2010). Of particular interest is the assessment of who the stakeholders are, and how they simultaneously influence, and are influenced by, project outcomes (Achterkamp and Vos, 2008).

In the quest to meet stakeholders’ expectations, researchers have been focusing on articulating management processes to help capture and evaluate the plurality of stakeholder values. Models have been developed to help identify and classify critical stakeholders based on the power and influence they possess (Newcombe, 2003; Mitchell et al., 1997). Significant effort has also gone into creating processes and frameworks to manage stakeholder values in the context of projects. Male et al. (2007), for instance, outlined a three-phase approach that begins with assembling stakeholders together so that the “value question” can be determined at the outset of delivering a project. Processes have also been designed to help project teams better incorporate the values and needs of customers as a key stakeholder (Thomson et al., 2006; Kelly, 2007). Stakeholders that are typically regarded in such management frameworks include inter alia employees, suppliers and the local community (Zhai et al., 2009).

Despite considerable progress made in advancing our understanding of stakeholders and the importance of their values, a number of critical problems persist. Firstly, there is growing recognition of a disconnection between mechanistic approaches espoused in the literature and what goes on in management practice. As the project based practice has become increasingly common across all spheres of organisational and government practice, the conventional understanding of how an organisation works may no longer reflect the growing complexity and fluid reality, and many prescriptive methods and frameworks for managing stakeholder values have hitherto been considered inadequate to account for the messy, practical realities that occur (Jepsen and Eskerod, 2009). Secondly, and more importantly, the identification of stakeholders remains an area that is rarely problematised (Achterkamp and Vos, 2008).
In many accounts about stakeholders in an organisation and management context, researchers have often devoted much effort on developing formal tools, methods and procedures to identify, assess and evaluate stakeholder values. Such prescriptive approaches have been criticised for their failure to meaningfully engage with the plurality of stakeholder values in practice. Indeed, there is growing acknowledgement that the identification of relevant stakeholders is key to ensuring values are appropriately considered.

Thus, before one can meaningfully tackle stakeholders and their engagement in a project at an organisation, there is a need to ascertain who the ‘right’ stakeholders are in the first place, as well as considering the element of timing and the nature of the task which plays a significant part in engaging with the stakeholders. As Green and Liu (2007) asserted, managing values in projects is not simply about its systematisation; rather, it is crucially important to consider the enactment of sense-making processes that help project participants negotiate through the fuzzy and uncertain realities (Alderman et al., 2005). For instance, there are questions of how stakeholders understand their role and what they see is relevant to make sense of the value of a particular project or agenda. Furthermore, as Jepsen and Eskerod (2009) observed, stakeholders come and go throughout the project life cycle, and not all the needs of project stakeholders are revealed at the same time. Hence, the management of the stakeholders’ values cannot simply be resolved through reductionist approaches embodied in the implementation of the procedures or toolkits.

### 3.4.2 Everyday practice of sustainability in an organisation

Transition Management recognised the limitation in which the changes made at the government level are limited when it comes to enforcement across the society as a whole. However, societal change in general is the result of the interplay between top-down and bottom-up dynamics, and even from the policy context which has been the main focus of Transition Management, tensions arise between different transition states (Loorbach and Rotmans, 2007). However, Dewulf et al. (2007) also pointed out that “in Transition
Management steering for sustainability typically surfaces as isolated moments of reflexivity amid a sea of everyday politics”. The issue of engagement and the role of stakeholders as highlighted in the last section signalled the dynamics that need to be considered in Transition Management. As Woodhill (2007) suggest there is a set of activities that also help engagements link together in a dynamic change process.

The perspective of everyday practice has different forms depends on the subject discipline, it has largely been discussed in the social theory terrain to determine the links between structure and human action, which is known as the “practice approach”. Theorists such as Bourdieu, Latour and Foucault are some notable researchers in this area, by raising the discussions on people’s ability to act upon and change the world.

“Until the 1980s, organisations leaders in the business sectors used the word sustainability to mean a company’s ability to increase its earnings steadily” (Werbach, 2009). While sustainability as a term is seen to be at the forefront of many organisations slogans, these are largely driven by pressure to comply with policy measures that may also include the growing expectations from consumers and employees, and is associated with the reputational risk and business competitiveness (Rake and Grayson, 2008). Despite the general acceptance, there is still a general disconnection between people and organisations on this issue, as the issue of sustainability has also become more dimensional, with the wider and multifaceted definitions of sustainability, many organisations struggle to understand the meaning of sustainability, its ambiguous definition has been accused as the issue that hindered the way organisations approach the sustainability agenda as a whole (Johnston et al., 2007; Lozano, 2008; Davidson, 2011, Christen and Schmidt, 2011).

As highlighted in chapter two, studies in this areas talk about the importance of sustainability and the implications and grave impacts of not doing anything, and there is a wealth of literature that provides primarily prescriptive solutions focusing on standardising sustainability through the use of tools and matrix. While these literatures and frameworks provide a systematic approach for the fizzy and challenging issues of sustainability, they also
pose a certain frame to the way a subject has been approached and how we frame the issue of sustainability, and the constant challenge to justify its value across society.

It is widely acknowledged that sustainability needs collective efforts to make significant changes, although, to achieve this requires changes not only at the institutional level, but it also needs to be embedded into our everyday practices. While the debates of what the sustainable future looks like remains controversial, what we do in our everyday life plays a significant part in understanding the transitions process of sustainability. Researchers such as Shove and Walker (2007, 2010) have raised the practical issues and dynamics of everyday life. Their view on how people actually “engage” with the agenda and how everyday practice shapes and embeds their way of “doing sustainability” have outlined the complexity and different values of social and cultural intact in our daily life. There are questions of how the practice of sustainability came into existence, and how people “do sustainability” in light of all the studies on what sustainability is and how to best measure the sustainable behaviour, to improve the conditions that will essentially take us to what is perceived as the sustainable future.

Researchers have suggested that to the issues for developing organisational practice of sustainability lies in far-reaching changes, in employee values, or contingent on discretionary employee behaviour (Garavan et al., 2010; Linnenluecke and Griffiths, 2010; Hoffman, 2010; Mirvis et al., 2010). Although the issue of value judgement is unavoidable in the context of sustainability (Upham and Mills, 2005). The approach is rooted in the assumption that to achieve sustainability, is to make a balance over the three pillars of the triple bottom line, which would involve some kind of “trade off” or come with a cost (Forsyth, 2011). The issue of cost has been considered at the political level and the policy intervention also has a certain impact on the view of how sustainability is being framed. The policy move to provide incentives such as the Emission Trading Scheme (ETS) as well as obligations like the carbon tax are some of the examples to rationalise the agenda based on the language of economic. Organisations are increasingly adopting the practice of sustainability reporting or environmental accounting. It is still a developing practice at large, especially, when it comes to evaluation of the non-tangible activity in the social terrain of sustainability. Montiel (2008) pointed out that in spite of the myriad of quantitative studies in understanding sustainability
at organisations, and its vision seems to be more aligned with the intrinsic value paradigm, the link between economic and social performance remains enigmatic. While the sciences of measuring environmental issues using technology in areas such as carbon emissions have become sophisticated over time that allows organisations to at least develop some understanding or make a connection of their impacts.

Although, many research have maintained that the realisation of economic sustainability alone is not sufficient for implementing the overall organisational sustainability, according to Hoffman (2010), the language and terminology of the organisation is often financially bounded, terms such as Net Present Value and Return on Investment can restrict the shift for addressing sustainability related issues, and caused conflict in the relationship between economics and environment.
3.5 Summary

This chapter provided an outline for transitions towards sustainability, while it is still an emerging field with an incomplete overview, the general principle sets out to provide an alternative perspective to better deal with the long term and complex problems of sustainability in relation to climate change. The theoretical development has placed much of the emphasis on policy at the industrial level, with more examples looking at energy, water systems and transportation. However, more understanding is required to learn how sustainability transitions take place at the practice level, specifically looking at how an organisation such as an airport operator engage with the issue of climate change and sustainability and how it integrates the agenda into their daily practices.

The Dutch example to reform Environmental policy plans has attracted further interests to adopt a similar transition approach in other contexts, this includes here in the UK. Although the theoretical development on Transition Management as a new governing model for sustainability is still emerging, it has generated much interest, however the concept is primarily taken from the positivist perspective, and largely focuses on making overall societal structure changes, however, understanding in this area has largely developed in theoretical terms as there are limited empirical studies to support the concept as how it can be applied and operationalised. There are also the questions concerning the setting of the transition towards sustainability, for instance, what are the conditions, the role of the individual, and their involvement remains largely unclear in this area.

The world is changing at a rapid pace; the theoretical understanding of organisations requires constant update and review. While the issue of sustainability is perceived as complex in a world that has also become increasingly chaotic, connections between people, place and ideas need to be made. The primary aim for this thesis is not to diminish the structure approach, but to better understand how the everyday dynamics including interactions between people could help to shape the transition process. As part of the wider discussions concerning the issue of sustainability in an organisational context, the emphasis should be placed on the integration of sustainability within everyday practices.
CHAPTER 4 - Studying Sustainability in Island International Airport

4.1 Introduction

This chapter describes and discusses how the research problem and the specific research questions have been investigated. It presents the principle research question using selective qualitative techniques to explore and understand the fluid nature of sustainability as an agenda in the dynamic setting of airport organisational environment. The research applied the ethnographic methodology and adopted participant observation, interviews and reviewed documents such as internal emails, video briefs, memos and internal reports as part of the empirical data collection process. An interpretative through interdisciplinary approach within a qualitative design has been applied to address the overall main research question and the secondary research questions, which will be further discussed in this chapter and throughout this thesis. The chapter begins with a discussion and considers some of the key issues to illustrate the suitability of the chosen approach. It outlines how the research inquiry has been set out which is followed by the review of the relevant literatures in the previous chapters, the general themes which emerged and combined with the W’s framework to guide the inquiry process. The second part of this chapter provides an overview of the ethnography framework adopted for this thesis, and describes how the fieldwork was conducted, the methods used for data collection, analytical processes and the issues and limitation raised throughout this research experience.
4.2 Conceptualising sustainability transitions in Island International Airport

Further to discussions from chapter two and three, this has highlighted the notion of sustainability and the perspective of Transition Management as a governing model for dealing the complex issue of sustainability. The review of relevant literatures has prompted further questions concerning the current development of sustainability in the aviation sector when it comes to the sustainability agenda; it is largely concerned about achieving excellence in social, environmental and financial performance simultaneously. However, the social and environmental impacts of the organisation are often longer-term and more difficult to measure than most of the impacts organisations typically confront (Epstein and Buhovac, 2010).

Greater efforts have been put towards setting measurement and develop standardisation for sustainability. There have been concerns in the relevant fields that the dynamics of the environment and people involved and how they engage or interact during the transitions towards sustainability as part of a changing process have not been particularly captured and emphasised in transitions literatures (Smith, 2009; Shove and Walker, 2007; Markard et al., 2012).

Examine from the Transitions Management perspective as a governing framework, this thesis aims to further understand how transitions evolved and “transmitted”, with the focus on exploring people in certain place or context organise themselves and relate with the wider issue of sustainability, as to how people engage with the agenda in their everyday operations. The ethnography and qualitative based approach has been applied to help answer the key research question of how Island International Airport engages with sustainability in their everyday operations.

Taken an interpretive view that the world is complex and that there are details beyond a series of “law like” generalisations (Saunders et al., 2009), and the complex setting of the airport
operations as part of the aviation sector are rarely being captured and discussed without touching on the policy setting and challenges of measureable performance. As discussed in Chapter two, the aviation sector in the UK is still largely governed by the Government and is restricted to land use planning and surface access issues. Although the industry is increasingly being led by the market and is heavily associated with trade demands, many airlines and airports here in the UK as well as in some other countries remain as state owned. Areas like traffic distribution, fares regulations and others have long since given way to market-led approaches (Department of Transport, 2009). The complexity setting of the industry means that the issue of sustainability at the sector level such as airports is often a difficult one due to the many different stakeholders involved in, or affected by the airport operations (Graham, 2008). While the aviation industry continues to being criticised for its impacts to the environment and the associated implications that are imposed on the local community nearby. The vision of what a sustainable aviation sector is remains difficult to envisage and controversial from a policy, academic and practice standpoint.

Significant efforts have been made to standardise and proceduralise sustainability as an organisational agenda; the complexity of the sector’s activities, including the airport has little presence in academic studies. For instance, the airports operators' network usually contains complex relations and often has conflicting interests involving wide ranges of stakeholders such as airlines, service providers, statutory organisations, conservation and environmental groups and local residents. Issues such as loss of wildlife habitat and drainage systems at an airport can cause great anxiety and generate considerable emotive concerns at the airport and among its stakeholders. There are also impacts that may require complex technical data to be assessed, such as engineering maintenance on site, and disruption of air traffic control, which requires attention and collaboration between all interested parties. These impacts may cause difficulties when implementation of agenda or tasks are considered as standard procedures that may have to be adapted to suit the airports' individual circumstances, as it is often restricted by different requirements and issues, such as the variation in aircraft use, land-use rules, proximity to residential areas, and overall environmental sensitivity of the community at large (Graham, 2008).
There is a view that people not only interact with their environment, they also seek to make sense of it through their interpretation of events and the meanings that they draw from (Saunders et al., 2009). As Remenyi et al. (1998) describes “the details of the situation to understand the reality or perhaps a reality working behind them”. This thesis has chosen a management and organisational perspective to inquire and analyse the research question to provide a different perspective to help better understand Transition Management for sustainability. It has sought to understand the decisions the research participant’s ascribed to their everyday operations, and the environment and their place within it. By following Watson’s (2010) view on the advantages for undertaking ethnographic work in an organisational settings, which set to “wrap up” any specific concerns such as the nature of managerial and operations of work, and how it is associated with the agenda of sustainability in organizational everyday life, with broader attention given to the construction of cultural norms, expressions of organisational values, and patterns of workplace behaviour.

As discussed in the Introduction chapter, the scope for this thesis set out on the bases that there are little perceptive views which are supported by empirical evidence to describe parts of the journey for sustainability transitions. Therefore, by adopting the interpretive approach to this research, it aims to describe what goes on within an organisation behind the scenes, and how certain values are transmitted to create certain initiatives, and what people think about them, all of which will generate new insights that will assist the organisation to review its practice, and better understand how the sustainability agenda can be framed and delivered in the near future. As Hammersley (1992) pointed out, “to rely on what people say about what they believe and do, without also observing what they do, neglects the complex interaction between attitudes and behaviour, just as to rely on observation without also talking with people to understand their perspectives is to risk misinterpreting their actions”.

It was purely by opportunity that the fieldwork began at a crucial timing when Island International Airport went through a major organisational change. When the fieldwork first started, the then Chief Executive Officer of Island International Airport was retiring after almost two decades in service. By opportunity, this thesis took shape during the time when a
new CEO came into the organisation and Island International Airport began a series of transitional changes.

The researcher was then able to observe some significant events as part of the organisational changes. In addition to the participant observations, interviews, and document analysis, all of have been considered to be sufficient to meet the theoretical requirements for this thesis as well as the methodological aim of validation through convergence. The component of decision making is position in a complex governance structure of transition, however, this in turn help to guide the research process for investigation. According to Riemer (2011), ethnography is eclectic in its employment of multiple methods of data collection, and ethnographers typically observe, conduct interviews and analyse relevant archives and artefacts during single research efforts. The diversity of the research methods being employed therefore enable the researcher to cross check the validity of the collected data and analytic statements. The following sub sections provide further descriptions on how this research inquiry was set out.

4.2.1 Sustainability of what

Atkinson and Hammersley (2007) point out that, each new researcher must first discover for him or herself what is required in order to produce an ethnographic study. Further to Chapter two, in which the issue of decision making and sustainability was raised, in particular on how people make decisions concerning sustainability in the everyday organisational life. It outlined the basic principles of decision making from the three dimensions, which also helps to formulate general and flexible questions to conduct the fieldwork at the beginning (Carspecken, 2013; Hardcastle et al., 2006).

According to Atkinson and Hammersley (2007), in ethnography, researchers adopt a more flexible approach, and do not usually decide beforehand “the exact questions” they want to ask, and do not ask each interviewee precisely the same questions, although they would usually enter the interviews with a list of issues to be covered. Hence, as part of the key
research question, which is to seek a better understanding of the everyday engagement of sustainability in the life of an organisation, it has to follow the Ws framework of what, who and how, as the key focal point to guide the research process in general. With the first instance of inquiry into “what” is the sustainability agenda at Island International Airport. The questions of why and where were seen to be embedded within the framework, as the location or site of the story and why it occurred emerged as part of the exploration. According to Browne and Keeley (2007), in the research domain, there is a strong emphasis on explanations or descriptions of human behaviour, especially in the physical sciences, the focus remains on finding “the right answer”. nevertheless, the questions about human behaviour is different, this thesis is largely concerned with how people “do” or “engage” with sustainability in their environment, by following the Ws framework, the researcher was simply looking for a sense of direction throughout the research journey to seek the data that would help answer the research question posed for the thesis.

According to Creswell and Miller (2010) qualitative inquirers bring to their studies a different lens toward validity than that brought by traditional, quantitative studies. As discussed in Chapter two and three, the current understanding of sustainability and Transition Management have largely been focusing on two key areas; the development and application of tools or a matrix for measuring sustainability performance, in which most were concerned with test scores, and proceduralisation to follow a certain standard guided by policy or technology interventions as the “treatment” to sustainability. However, this thesis aims to focus on the interplay and the contextual factors of how people within an organisational context move towards sustainability. Taken from (Creswell and Miller, 2010) their view point on qualitative research is, “it is to use a lens not based on scores, instruments or research designs but a lens established using the views of people who conduct, participate in or read and review a study”.

The question of “what” is derived from the literature understanding of decision making and the principle of sustainability. Taking the theoretical view of Transition Management, in which the transition process was to be purposive, as described by Rotmans and Kemp (2008) that the basic aspect of the multilevel approach to transitions is “be goal-oriented and utilisation of ongoing developments for societal goals”. Nevertheless, from this perspective,
this thesis was able to question and to focus on how Island International Airport “decides” what their sustainability (goal) is.

4.2.2 Sustainability by whom

As the most recognisable researchers in organisational decision making, March and Simon (1967) have suggested that the basic features of an organisation’s structure and function derive from the characteristics of “human problem-solving processes and rational human choice”. The operative employee must be the focus of attention in the organisation, for the success of the structure will be judged by their performance within it. Insight into the structure and function of an organisation can best be gained by “analysing the manner in which the decisions and behaviour of such employees are influenced within, and by the organisation” (Simon, 1962).

The question of “what” sustainability agenda is at Island International Airport, would then be followed by the question of agenda by “who”, although there is no exact term that has been set out on how this question can be asked, as it could be “who” set the sustainability agenda? And “who” is involved? This is followed by the research concerns raised in the Transition Management, as “who” are the critical actors in managing the transitions and on “whose” behalf do they act (Shove and Walker, 2007; Genus and Coles, 2008). While the transitions researchers have argued that the question of “who” as concerned in the Transition Management studies, the classical command-and-control, top-down analytical framework has certain limitation to analysis the “fluid relationship” as described by Rotmans and Kemp, 2007, and to take account the dynamic of different actors with different beliefs, interests and resources involved. While both arguments come from different perspectives, Simon’s statement on the operative member in the organisation also highlighted the significance of the social actors role in making decisions on the relevant agenda, which further demonstrated that there is more need to explore and better understand the role of people involved in the transitions process, hence by taking on the question of sustainability by “who” as a guide to enable the researcher to form the appropriate inquiry that helps in answering the key question that would ultimately contribute to this disciplinary field.
4.2.3 Sustainability of how

The decisions on “how” to bring about the desired change, or “how” the sustainability agenda is carried out within operations as part of the overall Airport agenda, was derived from the concerns where even looking at the normative context of transitions to ensure governance interventions work in practice would ask the question of “how” it is done (Smith et al., 2005).

By taking the ethnography approach for this thesis, the aim was directed towards contributing to disciplinary knowledge rather than towards solving practical problems, while such work may ultimately contribute to knowledge and be of wider public relevance (Atkinson and Hammersley, 1994). While the transitions researchers argue that they do not call for any radical or upheaval of policy instruments such as taxes, regulations and incentives to be deployed in different transitions situations (Kemp and Rotmans, 2004; Smith et al., 2005), despite the impacts that systematic changes would affect how sustainability is to be approached (Shove and Walker, 2007), there is the question of “how” does Island International Airport govern its sustainability agenda and is part of the general theme for this thesis.

From an exploratory orientation, the research thesis started its initial phase with a general interest in questions, such as how the everyday work within a unit is organised at Island International Airport? And how is the sustainability agenda is selected and assessed? During the course of the fieldwork a number of issues were identified which required more precision (Atkinson and Hammersley, 2007). And in this thesis, the financial assessment at Island International Airport was soon discovered as the key framework that dominated how the people at the Airport make decisions on the sustainability agenda, however, further questions such as how is the organisational framework exercised and how does it shape the priorities for sustainability at Island International Airport.
4.3 Ethnographic design of the research

This section discusses how the researcher accessed the sites and conducted fieldwork to explore and investigate the agenda of sustainability at Island International Airport. As set out in the previous section, the three broad themes which emerged from the literatures used to guide the researcher into the field. Details of the rationale to adopt a general approach for enquiry, and how the researcher developed relationships with the members and how the role evolved in this study will also be further discussed and highlighted in the upcoming sections.

According to Proctor-Thomas (2010), organisational studies and research has long been putting too much emphasis on examining how people, processes, activities and resources in the workplace can be managed efficiently, with little attention being paid towards understanding “everyday life” within an organisation. Definition of ethnography has been the subject of debate and discussion in academia for many years (Atkinson and Hammersley, 1994; Cunliffe, 2009). There have been different perspectives as to what ethnography is and how it is characterised. For instance, (Weick, 1995) described ethnography “as sustained, explicit, methodical observation and paraphrasing of social situations in relation to their naturally occurring context”, while Humphreys and Watson (2009) sees ethnography as a “written account of the cultural life of a social group, organisation or community which may focus on a particular aspect of life in that setting”.

Van Maanen (2011) suggested that ethnography is both a methodological approach and an analytic perspective with a long history in organisation and management studies, and the essential purpose is to interpret the social world in which research subjects inhabit and in the way in which they interpret it (Saunders et al., 2009). Further described by Watson (2010) it is “a style of social science writing which draws upon the writer’s close observation of (and involvement with) people in a particular social setting and relates the words spoken and the practices observed or experienced to the overall cultural framework within which they occurred”. Ethnography has a long history within the social sciences and anthropology, and there has also been an interest in applying the ethnography approach in organisational and management studies. With some notable early and contemporary examples in organisational
and management research, which includes studies of technicians at Xerox to understand the work of technical services by Orr (1996), and cultural perspectives of organisations (Kunda, 2006), which have provided some insights of organisational life (Cunliffe, 2009). Despite this, there have been calls to encourage more engagement with the ethnography in organisational studies (Yanow, 2009; Watson, 2011; Van Maanen, 2011; Down, 2012), contemporary ethnography “is not valued as producing rich and intricate accounts of everyday organisational life”, instead, critics argues that it only provides “a room with a view” (Cunliffe, 2009).

The purpose of ethnography research is to interpret the social world that the research subjects inhabit, and in the way in which they interpret it, and to “discover the meanings that people attach to their actions” (Saunders et al., 2009). There is an idea of how individuals must adopt the practice in order to learn how a society functions, and how the members live within the system, is considered to be the core principle of ethnography research. As Pettigrew (1973) suggested, “the best way to understand the process is to be part of it” and that it is best to be close to the ground of the action when studying political aspects of an organisations life.

Hammersley (1992) also pointed out that there is a need to discovered the nature of the social world and that this can only be achieved by first-hand observation and participation in a natural setting. The ethnography is an extremely broad area with a great variety of practitioners and methods, with the use of participant observation as the most common ethnographic approach. In attempts to identify and explain the complex organisational and social setting of Island International Airport, and based on the understanding of “emergence” that capture insights of the organisational setting, which was described by Gillbert and Troitzsch (1999), it has been taken from the organisational studies view to help investigate the main research question.

According to Atkinson and Hammersley (2007) “ethnography is a methodology that facilitates the exploration and understanding of the complex social relations”. To help understand how an operator “operates” an airport, and how they engage with the issue of
sustainability in the organisations working life, it involves the ability to describe what the researcher has heard and seen within the framework of the operators view of their organisation, watching what happens, listening to what is said, asking questions, collecting data that is available to shine a light on what they do, and to meet the everyday demands by which they are confronted (Hammersley and Atkinson, 1995; Riemer, 2011).

While the notion of sustainability as well as the policy framework still requires a clearer position to facilitate the direction towards a more sustainable future across all realms, it is also equally important to understand the role and the practices of how organisations as well as the actors involved within the overall societal process engage with the issue. Gore et al (2006) suggested that there is a need to pay close attention to the micro-dynamics like the social actors who are associated within the organisational process, with focus on the dynamics and politics as resources in an organisation. With the aim to better understand how “things work” in the organisations everyday life, which helps the researcher to conceptualise the practice and process for sustainability at Island International Airport; and identify who the “operators” are, how they “see” and “do” things, by capturing their everyday practices through certain decision making processes to improve the sustainability of the airport.

Silverman (2011) pointed out that there are no true or false research methods; it can only be distinguished by its usefulness, and depending on the application of the theoretical and methodological framework for the research topic that is selected. It requires better understanding of the practices in everyday life, to build further knowledge on the conceptual framework of how sustainability transitions take place, while emphasising systematic change, but how the system is embedded into the everyday actions concerning the meaning of sustainability remain to be explored.
4.3.1 Outline of the research process

Ethnographic fieldwork can be defined as “the first-hand experience and exploration of a particular social and cultural setting on the basis of a participant’s observation” (Atkinson et al., 2007; van der Waal, 2009). Participant observation is a key aspect for this research thesis especially to help answer the research question stated in the previous section. By exploring the airport decision making process with the interpretive approach as the lens, this has helped to develop some understanding of the diversity of social actors involved and how they interact with their environment under their system. Further developed from the Diagram 1.1 in the Introduction chapter, Diagram 4.1 provides an overview of the research process for this thesis.
Diagram 4.1 Synopsis of the research process

Define research problem and formulate research idea (Chapter 1)

Review of literatures:
What Sustainability is? what are the key perspectives? (Chapter 2)

Review of literature/theoretical focus:
The perspective of Transition Management (Chapter 3)

Research design and methodology:
How this thesis studied sustainability at the airport (Chapter 4)

Data Collection Process (Chapter 4, 5)

Participant Observation

Informal/Question based discussions

Semi-structured interviews

Documentary research

Data Analysis (Chapter 6, 7)
Ritchie and Spencer (2002) qualitative data analysis framework

<table>
<thead>
<tr>
<th>Familiarisation</th>
<th>Mapping: identify themes</th>
<th>Categorising</th>
<th>Exploration</th>
<th>Explanation</th>
<th>Interpretation or theorising</th>
</tr>
</thead>
</table>

Develop and present conceptual framework

Source: Fieldwork, Saunders et al., (2009); Ritchie and Spencer (2002); Ritchie et al., (2013)
As outlined previously, there has been a growing interest in applying ethnography in the organisational setting (Watson, 2010). It was hoped the ethnography approach in this research context would bring new insights and help to further develop knowledge in the emerging field of sustainability. By opportunity, access to the Island International Airport was kindly offered by a Head of Unit within the Operation Department. Edith, (pseudonym name) who has a history of working with Universities and Academia, became involved with the EPSRC funded project in the very early stage. Through her affiliation, Edith subsequently became the main gatekeeper for the whole project team to the Airport; the researcher largely relied Edith’s network and permission to make contact with members within the Airport. An introduction meeting was arranged in March 2010, when Edith then brought in a deputy officer Anton, who was a member of Edith’s team. Anton was instructed to assists and guides the researcher access around Operations Department and across the airport. Two separate introductory meetings were held at Island International Airport to negotiate a full time fieldwork access in March and July of 2010, and both Edith and Anton (pseudonym name) provided the initial key information as to what they considered to be the “sustainability” agenda at Island International Airport. The researcher was then invited to attend a special group meeting which provided a valuable introduction to Operations at Island International Airport, where the members present at the meeting discussed the options for a boiler replacement and lighting technologies for the energy efficiency projects. The researcher was formally introduced at the meeting along with a brief overview on the purpose of the thesis research. The contacts made at the meeting provided further opportunities to negotiate further access, as each individual member at the meeting worked within different Units or carried out different Business Functions at Island International Airport. They agreed for the researcher to spend time with each unit to study their operational functions, although some of these initial agreements were unable to be followed up later on due to the changes within the organisation. This introductory meeting has help to kick start the fieldwork, and provided a pathway to allow the researcher entering the Island International Airport to gain some insights. Further details on this Special Group meeting are discussed in later chapters.

After four months of negotiation for access, the researcher began the fieldwork when the airport ID pass was eventually granted by Edith, enabling the researcher to gain access to some key areas at Island International Airport. It was made clear to the researcher that the ID
pass only allowed access to landside operational areas, and any movement with the restricted area (Airside), the researcher must be accompanied by an authorised member of staff. Aside from the ID pass, the researcher had also given an Island International Airport email account that enable the internal communication and receive organisational newsletters.

During the period of eighteen months spanning between 2010 and 2012, the researcher made weekly field visits to the airport. The fieldwork took place within the Operational Department during office hours; the researcher was offered a hot desk sitting alongside the units being observed. The researcher also occasionally shadowed shift workers outside of regular office hours when the gatekeepers agreed it to be appropriate. More than 800 hours of fieldwork was conducted, which generated more than two hundred pages of a field diary which documented details of observations, recorded daily conversation exchanges as well as the interviews information. The next section discuss the data collections and methods that been applied for this thesis.

4.3.2 Data collection methods

Table 4.1 provides a summary of the data collection with a brief description of the main focus and activities. A chorology of research with further details of the key events and activities being observed can be found in Appendix C.
### Table 4.1 Summary of data collection

<table>
<thead>
<tr>
<th>Data Collection Approach/ Technique</th>
<th>Components</th>
<th>Research inquiry and focus</th>
<th>Analysis approach</th>
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</thead>
</table>
| Participant as observer            | Fieldwork notes, audio recording and reflexivity journals | -What is happening here?  
  -Who is involved?  
  -What is the outcome? | Thematic analysis |
| Non-Participant Observation         | Fieldwork notes, video observation and transcript | -What is the agenda?  
  -Who is involved?  
  -What is the outcome? | Thematic and narrative analysis |
| Informal discussions                | Fieldwork notes and reflexivity journals | -What is happening here?  
  -What does the research participant/member thinks of what is happening? | Narrative analysis |
| Question based discussions         | Fieldwork notes, audio recording and reflexivity journals | -What is the agenda?  
  -Who is involved?  
  -What do they do?  
  -How does the research participant become involved?  
  -What does the research participant/member think about what is happening? | Thematic and narrative analysis |
| Semi- structure formal interviews  | Audio recording transcript, fieldwork notes and reflexivity journals | -Who is involved?  
  -What do they do?  
  -How do their work?  
  -What do they think of the sustainability agenda at the Airport?  
  -What do they find most challenging in their role/work area?  
  -What and how would they do differently? | Narrative analysis |
| Documentary research | Company reports, emails and internal communications, company magazines, intranet newsletters, media publications, published documents | -What has happened?  
-What is the agenda?  
-Who is involved?  
-Why did it happen?  
-How did it happen? | Content analysis |

Source: Fieldwork
4.3.3 Participant observation

Altheide (1987) argues that all research directly or indirectly, involves the participants’ observation in the selection of a topic, methods of study, data collection, analysis and interpretation. Through the reflexive interaction process, participated observation of the daily operations at Island International Airport was a means to see how members of the airport engage with the airport environment and organisational sustainability agenda. In the first six months or so, the fieldwork was largely organised through observations in meetings, daily operational activities and occasionally accompanied members carrying out their duties, meeting with contractors and assisting in basic administration works. The restricted access to the airport controlled zone (Airside) limited the researcher’s movement beyond offices and landside terminals. In the second year however, the researcher was then able to work shadow some members in different operational units, this included Environment, Engineering, Terminal, Airfield Operations and Customer Services Management. The role of the researcher had to adjust over time as the fieldwork progressed depending on the situation, and there were several hats to wear from time to time. An example of this was a time when the researcher was simply the “student on work experience” at the customer service desk helping passengers with their enquiry, sitting with the security staff when the passengers were going through outbound control and placing their items on the X-Ray scanner at the terminal check point, and shadowing airfield operational staff carrying out their daily inspections on site, collecting noise sample data or assisting VIP passengers on arrival. There were also occasions when the researcher would be semi-involved in the operational team meetings, or simply taking the observation role without participating in the flow of events when attending public or management meetings.

The interaction within informal or social settings, such as weekly breakfast with the Engineers at the airport café, lunch with the Environment team members in the staff canteens, and conversations during the after work social meetings at the local pub are all parts to form the ethnography experience for this study. The observation at the airport has brought the researcher closer to the scene, captured tensions and observed the struggle that exists in everyday life, all of this has enhanced the research experience that helps to better understand and connect with the issue of sustainability at the operational level. However, as Van Mannen
(2010) pointed out, that the learning to be in (and out) of the field is uneven, and often unforeseen, and rests more on logic of discovery and happenstance rather than a logic of verification and plan. In short, fieldwork is anything but predictable or linear.

Access to an organisational site along with fieldwork, provides the key opportunity to explore the meaning behind an individual’s practice in everyday life within the context in which they are enacted. Argued by Watson (2010) ethnography is significant as a way to “get close to the action”, and it is important for researchers to get close to the people involved in organisational practices to appreciate and recognised the issues that were being examined. While the support given from Edith at the Operations Department at Island International Airport, allowed access to certain operational level information, it also provided a great opportunity to best learn “how things work” in an actual airport setting, despite this, the fieldwork in general was a major learning experience as any researcher would expect. As Van Maanen (2010) described fieldwork as it may appear romantic and adventurous from the outside, but on the inside, there is a good deal of child-like if not blind wandering about in the field, where cultural oversights, misunderstandings, embarrassments and ineptitudes are common. Moreover, relationships based on certain kind of rapport forms only with time, patience and luck. Also suggested by May (2001), organisational researchers should be “opportunistic” in their fieldwork, even though this means researchers are not able to adopt a particular role, through this practice, a great deal about the operation of social power and relations in the setting may be uncovered.

4.3.4 Interviews and documentary analysis

A qualitative method has the ability to secure full answers to the questions asked and in terms of investigating what people actually do (Lin, 2004). Though observation is fundamental for this research to develop a view of the organisational structure and practice, however, the qualitative interviews also provide a greater and constructive depth, to ensure the reliability of the research, the use of interviews has been used to gather particular forms of data and
answer the secondary research questions which is set out in the previous sections. The key purpose of the qualitative interviews was a means to better understand what people do in relation to engaging with the sustainability agenda at Island International Airport.

Recorded interviews have been carried out with members at Island International Airport covering various levels of seniority across different operational functions. The selection of the interviewees was primarily based on the snowball technique, which was initially taken the suggestion from the gatekeepers, who felt they were instrumental or relevant in terms of the decision making process at the Airport and whom would be appropriate to participate for the interview. While access into the airport remained guarded by the “gate-keeper(s)”, and the researcher was required to follow the protocols, which includes seeking permissions from the gate-keepers when approaching potential interviewees. Further selections were made through other research participants and from the information available in the organisational domain, including Island International Airport’s internal communication website. (Bryman, 2008) has described ethnographers who take on a role that is closer to that of an observer-as-participant rely somewhat more on formally asking for names of others who might be relevant and who could be contacted. Moreover, in the case of this research, the gatekeepers have some background knowledge about this project; therefore, they have been providing point of contacts or recommending potential interviewees in the relevant areas.

While the study for a notion of sustainability and observation of the transitions possess certain challenge due to the temporal nature of the subject; the underlying argument for this research thesis is focusing on is that sustainability transitions is part of a long term process of change. Interview participants were encouraged to provide their own accounts of their works in relations to the issue of sustainability, to talk about their experiences and that were important to them. This has helped to form some understanding of the meaning which has been interacted between social actors within the airport environment, where the diffusion of transitions practices takes place.
To protect the identities of all research participants, their name and job titles have been anonymised, and provided with pseudonyms as part of the confidentiality agreement. A list of interviewees can be found in Table 4.2, with their role and function belongs, along with the date of interview and length.
<table>
<thead>
<tr>
<th>Interviewees Type/Function</th>
<th>Interviewees Position</th>
<th>Date of Interview</th>
<th>Interview Length (Approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operations</td>
<td>Participant 1:</td>
<td>Aug-10 Feb-12</td>
<td>73 minutes</td>
</tr>
<tr>
<td></td>
<td>Head of a unit with technical expertise on sustainability and infrastructure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategy</td>
<td>Participant 2:</td>
<td>Sep-10</td>
<td>73 minutes</td>
</tr>
<tr>
<td></td>
<td>Officer with expertise on sustainability and ground operations responsibilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operations</td>
<td>Participant 3:</td>
<td>Oct-10</td>
<td>56 minutes</td>
</tr>
<tr>
<td></td>
<td>Officer with environmental operations responsibilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operations</td>
<td>Participant 4:</td>
<td>Nov-10 Feb-12</td>
<td>92 minutes</td>
</tr>
<tr>
<td></td>
<td>Head of a unit with technical expertise on infrastructure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operations</td>
<td>Participant 5:</td>
<td>Nov-10</td>
<td>92 minutes</td>
</tr>
<tr>
<td></td>
<td>Senior Manager with technical expertise on infrastructure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Support</td>
<td>Participant 6:</td>
<td>Nov-10</td>
<td>45 minutes</td>
</tr>
<tr>
<td></td>
<td>Manager with Capital Investment and Finance responsibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategy</td>
<td>Participant 7:</td>
<td>Nov-10</td>
<td>64 minutes</td>
</tr>
<tr>
<td></td>
<td>Senior Manager with sustainability and infrastructure responsibilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Support</td>
<td>Participant 8:</td>
<td>Dec-10</td>
<td>40 minutes</td>
</tr>
<tr>
<td></td>
<td>Manager with Capital Investment and Finance responsibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operations</td>
<td>Participant 9:</td>
<td>Aug-11</td>
<td>58 minutes</td>
</tr>
<tr>
<td></td>
<td>Director with technical expertise on infrastructure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operations</td>
<td>Participant 10:</td>
<td>Aug-11</td>
<td>45 minutes</td>
</tr>
<tr>
<td></td>
<td>Manager with contracts management duties for ground operations</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Hodder (2003) pointed out that, “a full sociological analysis cannot be restricted to interview data, it much also consider the material traces”. As well as adopting interviews as part of the data collection methods, the analysis of documents serves as an important method in this research. According to Atkinson and Hammersley (2007) “documents can provide
information about the settings being studied, or about their wider contexts, and in particular about key figures or organisations”.

Documents as well as other artefacts such as video presentations have also been a key part of the ethnographic research investigations; this includes review of the key documents that are both available and unavailable in the public domain throughout this research journey. The public documents such as Policy and Government papers on aviation and the environment, organisational reports on sustainability and financial documents at Island International Airport have all contributed towards stimulating analytic ideas as (Atkinson and Hammersley, 2007) described, they also pointed out that the “production and use of documents is an integral feature of everyday life”.

With the consent from Edith and Anton, access has also been given to some of the company’s achieve folders, emails and information on company’s finance information. This provided a platform for developing insights into the organisational decision making process and their assessment criteria as part of their daily operations. Other documents that were not available in the public domain such as the airport’s internal newsletters, minutes of meetings, memos, internal and external correspondence also helped to form the story for this thesis. According to Altheide (1987), the meaning of a message is assumed to be reflected in various modes of information exchange, format, rhythm and style, aural and visual styles as well as in the context of the report itself. The organisational magazine and regular internal news announcements provided reflection of how Island International Airport communicates with the people working on-site. The weekly email from the Island International Airport Executives provides some rich accounts of what their focus are and how the Airport as a organisation drives certain agenda, what the management expectations are, and how they shape their organisational priorities, while the observation and interviews helped to review and validate the reactions and views from people who received those messages. According to Bryman (2008), documents deriving from private sources like companies, are likely to be authentic and meaningful, as the documents are interesting in bringing out the role and significance of subcultures within the organisation. However, they have to be interrogated and examined in the context of other sources of data, in which the following sections will
discuss more specifically as to how this thesis will organise the data and the analysis process to provide a storyline of what it set out to enquire.

4.4 Data analysis and interpretation

Mason (2002) described data “analysis is a range of techniques for sorting, organising and indexing qualitative data”. While this has long been part of the research there are “processes” or “strategies” that set to assist and analyse of qualitative data using different theoretical frameworks, to name a few, (Miles and Huberman, 1994) the three elements approach of “data reduction, data display and conclusion drawing or verification”; the notable Glaser and Strauss (1967) grounded theory, which focuses on a constant comparative method with four key steps of analytical process of codes, concepts, categorise and theory. These are some of the examples that aim to provide an organised approach to finding meaning in data (Miles and Huberman, 1984), and there are many other more approaches with aims to guide qualitative data analysis.

The process of data analysis has been largely assumed as a systematic and liner that requires well and rigorous planning to ensure the consistency of data to draw verifiable conclusions (Saunders et al., 2009). Although the description of having “well planned” method(s) to analyse data has its validity and fairness, there have been discussions concerning the so called “systematic or strategic” approach with an increasing view that the practice of data analysis is more complex and fizzy than those processes intend to describe (Mauthner and Doucet, 2003; Atkinson and Hammersley, 2007).

According to Patton (2002), there is no formula or even standard set of steps for qualitative data analysis, direction can be, and will be offered, but the final destination remains unique for each inquirer, known only when, and if arrived at. Atkinson and Hammersley (2007) also described the process of analysis in ethnography as follow:
“In ethnography, the analysis of data is not a distinct stage of the research. Formally, it starts to take shape in analytic notes and memoranda; informally, it is embodied in the ethnographer’s ideas and hunches. And in these ways, to one degree or another, the analysis of data feeds into research design and data collection”.

While the analytical data has been seen an issue, this essentially tied into the larger perspective on ethnography qualitative approach as the methodological research paradigm. There are different views on how ethnography contributes to research, often down to the discipline one focuses on, and it remains as a subject of debate in the research community. The question of each methodological approach and their value have generated different schools of thought, for instance, the principle, practice and validity of ethnography has been challenged by scientific researchers, particularly for the creditability of data collected. It is often being questioned whether the collected data is a true picture of what is being studied and if the results can be repeatable. On the other hand, the ethnographer researchers have criticised the scientific based quantitative researchers on their narrowly focused and prescriptive approach (Hammersley, 1990, 1992). Another prominent qualitative methodological approach which has sometimes been confused with ethnography is the grounded theory, which is concerned with the generation of theory from data from thinking (Glaser and Strauss, 1967), while there has also been a great divergence between Glaser and Strauss’s views on how the theoretical method can be best applied (Strauss, 1987; Glass, 1992) which is a subject of much academic debate, however, as argued by (Atkinson and Hammersley, 2007), the accounts of grounded theorising strategies seem to imply that there is a standard set of steps that the ethnographer should go through in order to make sense of their data.

Depending on one’s philosophical stance, the discussion on which best methodological approach has continuously been questioned by different schools of thought; with discussions ranged from positivists versus interpretative, quantitative versus qualitative, inductivity
versus deductive and so on. One of the main criticisms concerning qualitative methods includes ethnography as the issue of validity and generalisability, while these concerns have also generated diverse perspectives within the field. Some ethnographers have downplayed the significance of generalisation, while others have seen the needs for qualitative inquirers to step out and demonstrate their studies are credible (LeCompte and Goetz, 1982; Creswell and Miller, 2000), by developing strategies in an attempt to address the issues (Denzin 1978, Hansen 1979, LeCompte and Goetz, 1982; Lincoln and Guba, 1985). It is clear that the characteristics that exemplify the ethnographic single case study approach would not be consistent with achieving external validity as it has been generally conceptualised in scientific quantitative driven methods such as statistical sampling procedures (Schofield, 2002).

According to Whittemore et al. (2001) the conceptualisations of validity have been largely driven by the positivistic philosophy that sees reliability and validity standards to be applied in quantitative or experimental research. However, they further argued that qualitative research “seeks depth over breadth and attempts to learn about life experiences as opposed to aggregate evidence”. Taken from (Whittemore et al., 2001) views, this thesis concerns more of the contextual and subjective contributions other than focusing on generalisation and objective research, it has also has taken on the view that qualitative research is based on different epistemological and ontological assumptions in comparison to quantitative research, as to “get in close” to discover what is really happening as opposed to what participants claim to be happening, hence, the criteria of validity from the quantitative perspective hereby may be assessed differently (Creswell and Miller, 2000; LeCompte and Goetz, 1982; Hammersley, 1992; Atkinson and Hammersley, 2007). The upcoming sections describe further the process of the analytical thinking and in shaping how this research data has been “organised” and refined.
4.4.1 The analytical approach and reflexivity perspective

The Oxford dictionary defines reflexivity as “one taking account of itself or of the effect of the personality or presence of the researcher on what is being investigated”. It has been suggested that our understanding of how the data analysis processes and projects as a whole are largely influenced by the epistemological thinking as a theory of knowledge, and an ontological aspect, which is the reality, and theoretical assumptions, as well as other factors such as personal characters, emotional and institutional impacts, all of which shape the research process (Mauthner and Doucet, 2003). The question concerning the role of reflexivity in research methods and processes have been written in sociological philosophical contexts about the social construction of reality in history, literature, culture and many other forms of investigations (Holland, 1999; Davies et al., 2004). However, the issue of how conventional conceptions of social reality, knowledge and the validity of the methods of inquiry are increasing being challenged for the efforts to develop a “template” like view of the world, in which it suggest that all forms of inquiry is to provide an absolute objective perspective (Cunliffe, 2003). However, such a view has been questioned, and while it remains a theoretical debate as a philosophical issue, the discussions on reflexivity is merely concerned about “how and under what circumstances social scientific knowledge is received, evaluated, and acted upon and under what circumstances” (May, 1998).

The debates on reflexivity has also been raised in organisation and management studies over the years, the issue of how does reflexivity impact on a researcher’s ability to capture the complex, interactional and emergent nature of the social experience, have been a key concern (Cunliffe, 2003). There are studies that have attempted to better understand the relationship between the researcher and the “objects” of research as well as what has influence, how the inquiry was set out, and impact upon the claims by its results (Watson, 1995; Chia, 1994; Johnson and Duberley, 2003; Hardy et al., 2001).

Reflexivity as part of the methodological notion described by Denzin (1997) as when our “subjectivity become entangled in the lives of others”, while this may be viewed as a positive and negative strand on how it affects the researchers conduct in the fieldwork, organising the data as well as interpreting the world that has been observed. It is evident that reflexivity
plays a part in the research process that cannot be ignored in this ethnographic experience. (Alvesson and Skölberg, 2009) briefly described “reflexivity is the way different kinds of linguistic, social, political and theoretical elements are woven together in the process of knowledge development, during which empirical material is constructed, interpreted and written”. They also point out that the two characters of “careful interpretation” and “reflection” is key to help developing understanding the reflective perspective, in which one focuses on the principle that empirical data is the result of interpretation, and reflection as being “interpretation of interpretation” through self-exploration of one’s own interpretations of data.

Argued by (Mauthner and Doucet, 2003) that there are many available research methods and texts which described how to analyse the data streams “abstract, mechanical and disembodied technical procedures that some found difficult to apply to one’s own research” and most data analysis methods continue to be presented as a series of “neutral, mechanical and decontextualized procedures that are applied to the data and that take place in a social vacuum”.

This thesis came to learn the view that data analysis is not a linear process and in this case it required more than one single analytical framework to approach the data at different points throughout the journey. It has studied a combination of different analytical concepts and perspectives that includes content analysis, thematic and narrative analysis, with the views which derived from the literatures that help to understand and explain the collected data of the events, relationships, and interactions observed. The collected data was reviewed throughout the research process, in which the initial concepts detected from the data were “labelled” also known as coding, which involved identification of key words, phrases and sentences that had been captured for its relevance to answer the research questions, to reduce to a smaller and more manageable form of representation (Miles and Huberman, 1994). According to Ritchie and Spencer (2002) qualitative data analysis are essentially concerning “detection” and the tasks of defining, categorising, theorising, explaining, exploring and mapping.
Guided by the three key general themes as discussed in the previous sections; the sustainability of what, by whom and how have helped to “detect” the significance of a particular content or the text of documents, the meaning within the words of conversations and narratives that also includes an individuals’ perceptions, feelings, knowledge and behaviour (Guest et al., 2011). Followed by Ritchie and Spencer (2002) framework, this thesis has considered their six stages of analytical approach for conducting the data analysis for this thesis. Table 4.3 provide brief a description of those stages involved.

Table 4.3 Analytical Approach

<table>
<thead>
<tr>
<th>Key Analytical Approaches</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define concepts</td>
<td>Understanding structures</td>
</tr>
<tr>
<td>Mapping</td>
<td>Identification of range, nature and dynamics of situations.</td>
</tr>
<tr>
<td>Categorising</td>
<td>Creating typologies, profiling different perspectives, behaviours, rationale, drivers and so on</td>
</tr>
<tr>
<td>Exploration</td>
<td>Finding associations between experiences, perspectives, circumstances, rationale and drivers.</td>
</tr>
<tr>
<td>Explanation</td>
<td>Seeking explanations</td>
</tr>
<tr>
<td>Theorising</td>
<td>Develop ideas, concepts, theories and strategies</td>
</tr>
</tbody>
</table>

Source: (Ritchi and Spencer, 2002)

The initial analytical approach as described above was loosely followed through in different stages, as briefly argued, the data analysis is not necessary in a linear and organised format, and that these steps served to guide the researcher to make sense of the data. It was also pointed out that reflexivity plays a part in how the research data has been understood and interpreted at different point of the ethnographic experience.

This is emergent with the researchers position being continuously shaped throughout the journey of inquiry, along with the theoretical understanding of sustainability as a subject,
while discovery through experience in the airport environment continued. As suggested by Mauthner and Doucet (2003) that not only the methods of data collection and analysis need to be reflected, but also the methods of writing and reading as to how the texts can be interpreted in different ways depending on one’s social location and perspectives. While the practice of reflexivity in research has been considered to be under-developed (Mauthner and Doucet, 2003; Davies et al., 2004), Rather than being treated as a methodological problem and academic concern (Denzin, 1997; Chia, 1994) that “bias” would distort the true picture and should therefore be eliminated (Hardy et al., 2001). Reflexivity could be instructive and enlightening by helping researchers to answer the question, by opening up to variety of readings and highlighting that any research text was one representation among many possible representations (Jermier, 1985; Hardy et al., 2001; Alvesson et al., 2008).

4.4.2 The role of the researcher

Creswell (2003) described the intent of ethnographic research is to obtain a holistic picture of the subject of study with emphasis on portraying the everyday experiences of individuals by observing and interviewing them and relevant others. In most research settings, there is an expectation for the researcher to show how one should go about it with a methodological intent. With its roots in anthropology, ethnographic research is usually formed on the grounds that the researcher is required to fully “immerse” him/herself into the community.

While it has been considered that ethnographer is “the” instrument of data collection, and the aims of the term “participant observation” set to understand and consider what goes on within the social scene and how people act and interpret within social situations (May, 2001). The identity of the researcher was not concealed and the general purpose of this thesis was openly discussed at the board level since the beginning of the fieldwork, while the overt approach bears certain methodological limitations as does the covert strategy, such as the suspicion concerning the field researchers role, or the potential mismatch between the research
participants expectations of the researcher and his or her intentions (Atkinson and Hammersley, 2007).

Such issues had been discussed as part of the ethnographic practice, and it is not uncommon for ethnographer to experience the “suspicion” or “rejection” in the early stage of the fieldwork. In this context, the role of researcher was not particularly challenged when the fieldwork first started, instead, the suspicions rose, which also seemed sudden when the researcher had been in the field for more than a year. From the researcher’s own perspective, this particular instance took place during the time when Island International Airport began a series of restructuring exercises, and the role and presence of the researcher was suddenly being challenged and questioned at the time where there was a great uncertainty concerning the organisational decisions for its employees. The below extract from the field diary highlighted the researcher’s experience being reflected from a particular example:

“My chat with Mary, the operations officer did not go as smoothly as I hoped. One of the main purposes to meet with Mary was to understand more about her work lately, but also to see if there is any problem, as she has been friendly with me up until lately, there was a sudden change in recent weeks, and while I thought she might just been feeling a little down lately, but I have increasingly find it difficult to be around her in the office not only she has increasing behave rather “snappy” towards me, but she came across as if she has been “intimidated” about my presence in the team. I invited her into a one to one meeting, we sat down in a meeting room on the 3rd floor, and I bean by asking Mary if she has any questions for me. Mary was looking slightly unease at first but then very quickly she began the conversation by questioned me about my research project, her manner came across a little hostile, and every time I attempted to answer her questions, she took notes and did not look at me, it would seems like she was writing down everything I said to her about the EPSRC funding, she asked me about how this project started? What project am I doing, what was the full title? The name of our project partners, what they do? Where they based? And what will the airport gain by working with me?
She persistently in asking who our research partners is and why haven’t they been in touch with her? She then further questioned me about my PhD as what I did in my first year of my PhD research, and what I am doing for my second year? Mary then asked what the outcome will be for this PhD. She asked me what I do exactly when I come to the airport. I feel a little unease with her manner but I tried to maintain my “professionalism” during our conversation, however, I also became a little confused and surprised when she suddenly snapped and commented on how I’ve just been wasting my time at the airport so far, she also made a statement as to why has it taken me so long to figure out how things work as who’s who working at the airport, she came across very critical towards me, and in the end of our meeting, she said to me that she thinks our research project was just waste of time to the airport and she is unable to see any of my progress that I’ve made here that have contribute to anything positive at the airport, she also conclude that whatever this project set out to achieve, it will not benefit the airport at all” (Field diary 21st February 2012).

Atkinson and Hammersley (2007) have highlighted the potential difficulties that the ethnographer may experience during fieldwork; this is anticipated when developing relations with participants in the field. While the above extract only reflected from one particular experience, it was also an indication or a “trigger” of another story, and the researcher was then able to placed different puzzle together and explore the possible correlation between the sudden changes of individual’s behaviour, tension being observed and the timing when this was being documented. This instance was part of a fieldwork learning experience, when the researcher became realised how each snapshot of actions, individual behaviours, conversations would help the researcher to interpretive the data and form the meaning for the overall story.

For the first 12 months of the research field work, Mary had consistently been welcome and always had friendly interaction with the researcher; however Mary’s became increasingly “suspicious” about the researcher’s role when Island International Airport announced its plan for a major organisational restructuring, the uncertainty for the business plan and the potential job cuts have made organisation members become more aware of any changes or movement
within the organisation. While the researcher was partly seen as an “outsider” to the team that has been observed, the tension has also increases the member’s doubts concerning the researcher’s actual role in the team.

Talking from the researcher’s perspective as the ethnography instrument, it was evident that the role of the researcher was not seen as a “trusted” partner when the Airport was in transitions of change and restructuring. This sense of insecurity was sometimes expressed by the members, for instance, from time to time, the concerns over the researchers presence was raised by concerns that researcher would “tell-tales” or reveal details of conversations that had been discussed elsewhere, the suspicion was almost been encountered throughout the fieldwork, and it was reflect upon regularly comments like “please don’t record this conversation”; “be careful what you say in front of her” and the tension towards the researcher’s role through sometime confrontational remarks of “where did you get this information?”, “how do you know about this, who told you?”

According to May (2001), participant observation is the most personally demanding and analytically difficult method of social research to undertake, depending on the study, it requires the researcher to spend a great deal of time in the surroundings; to secure and maintain relationships with people with whom they may have little personal affinity; to take copious notes on what would normally appear to be everyday mundane happenings. Even though access to Island International Airport was granted, as outlined above, the role of researcher was questioned from both the methodological as well as philosophical perspectives, in particular when it comes the issue of developing the “inside/outside” viewpoints. According to Young (2005) that the concept of “the insider perspective”, is having personal experience of a culture/society, and the “outsider perspective” which is the perspective of a person who has not had a personal or “lived” experience of a particular culture/society.

The concept is also known as Emic (insider) and Etic (outsider) coined by (Pike, 1967). The general principle was that the researcher should adopt the “insider” view of the phenomena.
by observing and participating in social activity, as well as maintaining the outsider mentality, though, such binary practice is somehow debatable between the academics.

Nonetheless, Mullings (1999) suggested “the binary implied in the insider/outsider debates is less than real because it seeks to freeze the researcher’s position in place, and assumes that being an insider or outsider is a fixed attribute”. Moreover, (Wolcott, 1999) also pointed out that, to some, the ethnographer was always an outsider, from whom virtually everything could be regarded as “different”, as every view is “a way” of seeing, not “the way”, there are multiple insider views and multiple outsider views. (Dwyer and Buckle, 2009) pointed out that the “insider” refers to when researchers conduct research with populations of which they are also members, and the complete membership role gives researchers a certain amount of legitimacy.

Despite the suspicion towards the researcher’s presence and challenges experienced with certain members which were described previously. The researcher considered this fieldwork experience to be positive, and most members have made the researcher feel welcome, or even be claimed as “part of the team”. The researcher often received invitation to lunch or coffee breaks with the team as well as to attend social events outside working hours. Friendships with a number of members slowly developed where the researcher and the members would exchange and share views and experience in their private lives and occasionally maintain private conversations outside of the working hours, mostly through exchange of mobile communications or social networking sites. According to Ellis (2007), many ethnographers confused their roles when they become involved with the issue of “friendships”.

The researcher was initially uncertain about how to draw the boundary between “working life” and “private life” in the aspect of ethnography, and was reluctant to share her private life with the members to begin with. However, the private interaction as well as sharing of non-professional life experiences would not have any implication on how the researcher learnt about the everyday life at Island International Airport. On the contrary, this has presented an
insight as to how members see their colleagues and working environment, and how they interact to carry out their operational tasks. As it was later observed, different relationships between different groups, and in some, the sense of “unity” and “bond” between members also plays a part in how a certain agenda was carried out. It was also found that many members live and work alongside their colleagues or “grew up” at the airport as some would claim, and in some context, their life at the airport has also integrated partly into their private life.

There is however, the concern of “using people” and the feelings of guilt over making contact “only when you needed something” has come up as some of the dilemmas for the researcher, though, several research studies have addressed this issue (Hall, 2009). Nonetheless, it does not see as a methodological limitation; rather, it is part of a practical learning activity, which requires the exercise of judgement in context (Atkinson and Hammersley, 2007). As Mullings (1999) suggested that no individual can consistently remain an insider and few ever remain complete outsiders. While one Unit is unsure whether to invite the researcher to attend their team meeting or event, the other Unit team constantly asked the researcher to join their Group meeting or attend site visits. The researcher was “claimed” by each Unit as “part of the team”; the aspect of being “one of them” or the “outsider” would shift.

4.4.3 Methodological issues and limitation

“I had a chat with the Anton about how to best approach people in the company, he suggested that I email Edith about the progress of my fieldwork to date and seek her advice for the next step. Anton mentioned in terms of me speaking to the senior managers or beyond, I would have to seek permission from Edith, other than that it’s generally okay for me to speak to people within the department on the same level, but also as long as they are kept aware of whom I am meeting and what I am doing”. (Field diary 14th September, 2010)
The above was an extract from the field diary written during the second month into the research fieldwork. While the selection of the research site was in part pre-arranged by the Edith, the gatekeeper, who was involved with the research works through the existing research network and hence some support was being offered to the researcher. However, given the range of activities and responsibilities embedded with this research thesis, even though entry into the organisation had been granted, the challenges of accessing to people remain difficult throughout the research fieldwork (Bryman and Bell, 2003). The above field notes signalled the boundary and limits set out for the researcher from the start, and the question of “who” the researcher was allow to speak to pose certain issue not only for this research thesis, but also as part of the overall ethnographic methodology. As pointed out by Atkinson and Hammersley (2007) one of the limitations often raised in connection with ethnographic work is the representativeness of the findings, and the issues in developing and maintaining fieldwork relationships which have been discussed previously.

A standard confidentiality agreement was signed and agreed between Island International Airport and the University in the beginning of this thesis research and fieldwork study, however, this has neither been viewed as the assurance by the members for their anonymity nor does it impose limitation on this thesis research. As described, access to people outside the Operations Department as well as beyond the gatekeeper’s hierarchies had not been particularly encouraged. The researcher was unclear about the role of “the gatekeeper”, even though the initial contact was through Edith to gain access at MyAirpot, while Edith was part of the stakeholder group at the research council when the project was formed. It also became clear that many members saw the researcher as Edith’s responsibility, and that even the gatekeeper Anton had later admit his reluctance to get involved or to take part what he would considered as “babysitting” the researcher. The researcher relied on the gatekeepers to make suggestions and direction for studying in the early stage of the fieldwork, this may pose potential issue, as the information received through their network may be false, equally it is difficult for the researcher to assume the authenticity of the members own accounts (Atkinson and Hammersley, 2007).
Hence the issue of validation of data has to be considered, while this remains a subject of discussion in ethnography research. For this thesis, the process of validation to verify or review the collected data were checked with the members and seek for their endorsement, for instance, a graph which illustrated the process of particular event or accounts that were given by the relevant participants were presented. However, in most cases, the request for such endorsement either given with a general brush off or no apparent acknowledgment for researcher to follow up in some occasions. The “respondent validation” which aims to establish a correspondence between the ethnographer’s view and the members view of their world by exploring the extent to which members recognise, however, there is certain limitations to this approach as (Atkinson and Hammersley, 2007) pointed out.

There is also the concern from the representative perspective of Island International Airport as an organisation, while the aim of this thesis was not to generalise the outcome of the research, but to explore a largely unknown field, this was not seen as a major gap in this thesis but part of the methodological limitations. The challenges of access to people may impact on the richness of the data, as beyond the operators in operations are at Island International Airport, who were the key people driving the agenda and shape the experience on the ground, and while this thesis set to explore how the key individuals reflect upon their everyday operations which also determine how they engage with the agenda of sustainability. The expectation and the urge to “collect data” had concerned the researcher to get more involved and to “fit in” with the members group. The process of joining the “community” mostly began with the daily greeting, small talks and through little actions such as making tea for the team members. Many conversations took place in the communal kitchen; where the researcher attempted to make the most the teatime opportunity to interact with the members across units in the Operations Department. Like any other new researcher going into the field, the journey was a significant learning process of how to conduct research through experiences of situations and events that sometime seems ambivalent and uncertain. While there are a variety of research literatures provides guideline concerning the methodological processes. These literatures often illustrate a prescriptive and idealist view of research practices, and what the researcher would encounter and experience in the field can be a subjective issue. (Atkinson and Hammersley, 2007) stated the below:
“While the growing research training has taken place with the aim to provide key skills and essential knowledge to assist a researcher entering the field, in the case of ethnography it can present quite a distorted picture of what is involved. To a large extent, this probably derives from awareness of the fact that ethnographic research cannot be programmed.”

There are few people who would openly acknowledge their personal interest and the real intention for involvement in certain organisational activities, as those who are politically involved often claim that they are acting in the public or organisation’s interests. By taking a closer look at sustainability as the issue for the airport operator, views and accounts of details started to merged, such as the priorities over economic environmental and what its tension or incompatibility with environmental and social sustainability had been (Forsyth, 2011; Davidson, 2011).

Going into the field with the overwhelming feeling of uncertainty as to how one should behave in the organisation, how to interact and speak to the people being observed, the personal judgement as well the interpersonal skills are keys in enabling research such as in this case, while the researcher was wondering what to observe in the office environment, in reflection, this journey can be gradual and not as systematic as some would like. The relationship between the researcher and the research subject would be constantly reviewed, as discussed in the previous section on the issue of reflexivity.

According to Fetterman (2010) “ethnographic work is not always orderly, it involves serendipity, creativity, being in the right place at the right time or wrong time, and some “old-fashion luck”. This view was certainly being reflected on throughout this research journey, and as a inexperienced researcher in this field, while the excitement of discovery and leaning the unknown, it was all part of a learning curve from building the rapport, learning to “be in” the field, and “coming out” of the field, asking the questions, and so on.
4.5 Summary

This chapter has provided an account of how this thesis set out to enquire the research problem. It provides some details of the research position this thesis has taken, and how the researcher conducted the ethnography studies at Island International Airport. In some details, the general methodological approach has been highlighted and the justification to develop better understanding of how people engage with the sustainability agenda in an organisations everyday life. The theoretical issues emerged from the review of relevant literatures, along with the philosophical strand that this thesis has taken on and has shaped the process of the inquiry and analysis of the collected data.

The practice of ethnography in organisational studies has been seen as currently undervalued, while the methodological approach to ethnography in this discipline remains controversial. There is however, a growing interest to encourage more applications of ethnography in organisational and management research. The access to Island International Airport and the role of researcher has highlighted the issue where the relationships between the gatekeepers and the researcher intertwined within the research process, as how the researcher was seen by the members in the field, and the consequential impacts that in some way affect but is also seen as part of the experience of the organisational ethnography. The aspect of reflexivity was briefly raised and discussed as it also plays a part between the researcher and the research subject, while there is no obvious and clear social and philosophical views on reflexivity as a research issue, this thesis considered the question of how the researcher collect, analysed the data and theorised the findings which was also partly defined by the researcher’s wider views outside of the research studies. It also shows how it impacts on this assessment of this thesis, such as the perspectives of the people being studied, the personal characters, beliefs, as well as the institution that the researcher belongs and the environment that this thesis was designed under.

The issue of validation and generalisation in ethnography has been tied into the discussion throughout this chapter, while it remains as an uneasy issue from different research perspectives as opposed to the fact seeking scientific approach. This thesis has taken on the
qualitative approach to argue that while there has been many studies attempting to structure and formulate the issue of sustainability by setting the target through policy and structure intervention. There is the underlying assumption that these interventions would be followed through, while there has been little attention paid towards the everyday practice concerning the sustainability agenda, the view that is presented here aims to provide the challenges, tensions and choices in the organisation life that would also add value to the scientific base studies and make a contribution with the insights gained from this ethnography experience.
CHAPTER 5 – The Airport in Transitions

5.1 Introduction

This chapter describes the setting of Island International Airport and provides a contextual background of the environment under observation. It aims to examine and outline how the issue of sustainability became prevalent in the case of Island International Airport. Inspired by Orr (1996), and his vignettes approach when studying service work and life of technicians at Xerox, it presents a combination of scenes and themes for a variety of events. This chapter set to introduce the airport milieu, to understand the people involved and their lives in relation to the sustainability agenda in everyday operations at Island International Airport. The primary focus was on examining how people go about their daily operations in their everyday life, and outlining the tasks they deal with and there conditions. The fieldwork observed some tension between the members as they struggle with everyday operations and the revelation of tensions observed between individuals. These observations have raise questions about how certain factors impact on the way members relate to the agenda of sustainability in their operational areas.

The first part of this chapter considers the role of Island International Airport in the broader context of the aviation sector, it then sets out to provide some understanding of what Island International airport does and how this relates to the wider issue of sustainability. The second part focuses more specifically on how the issue of sustainability becomes relevant in the context of how an airport operates; it also explores the initial setup of the Environment Department for bird control, and how it has been identifying its role and purpose at the Airport through different transitions. The final part of this chapter focuses on the changing aspects of Island International, illustrating the shifting of perspectives from an airport operator to an airport management enterprise. Narratives of different events have been drawn on to provide further insight into the complexity of everyday operations within the Airport. This has set the scene by describing how staff members relate with the agenda of sustainability, but also identifying the contradiction between different consciences that interplay within the structure of Island International Airport.
5.2 Island International’s perspective on the role of an airport

For some time, airports in general have been perceived as purely a place for flying machines to take off and land, although this is an airports primary function; it is supported by numerous other systems. As Doganis (2005) described “it is essentially seen as a site that consists of runways for aircraft, together with buildings or terminals where passengers or freight are being transported”. Nonetheless, the aspect of airports has changed significantly over the years, and there have been various interpretations as to understand what an airport is and what it does from different dimensions. For instance, Lloyds (2003) emphasises the spatial element of an airport and how it brings together the engagement between technology and travel that shapes the form of these relationships. This view also complements further the view of others including Gordan (2008), who talked about airports as an institution from a cultural history perspective. He discussed the social dimensions of an airport in relation to how it has changed our sense of time, distance and life over the years. While Knox et al. (2008) focuses on the organisation of movement within an airport and the element of “flow” as part of the model to keep things in “order” through management of the passengers arriving at, and departing from the airport. Knox et al. (2008) also referred to how an airport attempts to manage the flows within the system to demonstrate its efficiency at receiving passengers and getting them off the ground. As views about an airport can be in different forms, as part of this thesis, the researcher sets out to outline the perspectives of the role of airport through the lenses of the people who work within the airport environment, and how they interpret their functions in everyday organisational life.

Island International Airport has long been part of the British civil transport service, with a history that can be traced back to the early 1920s. The establishment of its first aerodrome was associated with the nearby city’s involvement in aircraft production during the First World War. The Regional Government remains as the primary owner of the airport to the present day. It recognised the need to have a permanent airport in the region, and over the years, the aerodrome was expanded, which resulted in the construction of a control tower and hangar, which were completed in early 1930. The Initial site was deemed to be unsuitable due to boggy terrain and limitations of the airfield, Therefore the local government decided to cut their losses and a new proposal to relocate the airport to a different site was approved.
The airport at the current site was officially opened in late 1930s, and ever since, Island International Airport has been growing steadily from the initial airfield with a control tower, to becoming one of the UK’s busiest international airports with over 20 million passengers travelling through it annually.

As part of the local government’s agenda for economic growth, Island International Airport has been promoted as a key asset in helping to develop the local region and becoming an important hub for civil aviation catering for both domestic and international markets. Described by the recently retired Chief Executive of Island International, he described “Island International Airport as part of the UK’s key strategic assets”. For years, it has been seen as steadily expanding at both the infrastructure level and through its business model. The role of the Airport has evolved from solely being a traditional airport; to becoming a more commercially focused enterprise. While the growth element has been at the heart of Island International Airport’s agenda, the issue of sustainability has also become more prevalent as it has quickly expanded throughout the past two decades, from being a single airport operator to becoming a large holding company that currently owns and manages other aviation businesses and commercial enterprises within the UK.

5.3 Airport operations and the issue of sustainability

The previous chapters provide the essential literatures background to the issue of sustainability, where we see it remain controversial and ambivalent at both the strategic and conceptual levels. The growing concern for climate change over the years has seen the aviation sector as whole put under greater scrutiny by the media and the general public, with airport capacity in the UK remaining a key part of the political agenda. This issue fuels a wider debate on airport sustainability and the impact it has on the local communities, with the primary criticism revolving around the environmental issues of air and noise pollution (Ehrenfeld, 2005; Loorbach et al., 2010; Boons et al., 2010). The pressure on the sector as a whole to address the sustainability problem has become more evident and there is an
expectation for the sector to make further efforts in dealing with the challenges of how it becomes more sustainable.

The concerns over the airports role and its potential impact on the environment have seen vigorous environmental protests and high profile land occupation being reported by the media, as in the case of runway developments and expansion of airport operations (Upham et al., 2003). Those examples of concerns have label the airport sector as a whole “unsustainable” and “polluted”, more importantly, the visibility of the airport means that any issue related to sustainability is particularly acute for airport operators as they are often seen as the obvious target for the community. Suggested by Freestone (2009), the traditional NIMBY (Not in My Back Yard) reactions against airport developments have increasingly shaped the critiques on the aviation sector as a whole. As such, the issues have frequently put Island International Airport in the spot light, with further environmental protests causing disruption at the airport, these have led to arrests of activists and it has also resulted in law suits that were widely reported by the media.

Intense public debates around airport operations and their impact on the environment have seen more effort being put forward by the sector in an attempt to shift away from the negative image it has as a “polluting” sector. This has seen more airports adopting holistic sustainability approaches which are often being marketed under different banners such as corporate social responsibility or organisational sustainability and so on (Oto et al., 2012). From observations and research relating to the fieldwork, it was identified from the views of many members that Island International Airport has become a leading example within the sector by developing an environmental and sustainability agenda. Staff interviewed consider the airport to have a good track record in tackling these associated issues, and as recalled by one of its long term employees who has been working at the airport for over 32 years, Albert (pseudonym name), described how the airport has “been doing a lot” on dealing with the environmental issue even “way before it became fashionable!”.
The Government’s White Paper for “The Future of Air Transport” published in 2003, in which it recognised the significance of Island International Airport as an alternative location to help relieve the pressure at congested airports in the Southern part of the UK (DoT 2003, 2006). Encouraged by the central government’s objective to develop growth at regional airports, Island International Airport subsequently published a Master Plan up to 2030, followed up by a White Paper. Its aim was to set out in strategic detail its plans concerning how the airport will tackle the many and varied issues arising from growth associated with the expansion of airport operations, these include land use, community, environment, and surface access. As part of the airport’s plan for growth, the subject of sustainability was featured in the Master Plan and set out as follow:

“Sustainability will be a key factor in shaping our future. Growth must take place in the context of a balanced and inclusive understanding of the Airport’s impact….At the local level, sustainable development means maximising the benefits that arise from the Airport’s development and minimising the costs”.

The Plan further described its approach to sustainability as:

“We do not seek to simply trade off the benefits and the costs, but to maximise the social and economic benefits of our activity whilst working as far as we can to minimise and mitigate the environmental and social harm”.

Further details of Island International Airport’s strategy for “sustainable growth” was set out in the Environment Plan as part of Island International Airport’s master plan through to 2030. In this publication, the airport stated its commitment to becoming carbon neutral by 2015 and to also reduce ground operations related emissions by reducing energy use and increasing fuel efficiency in vehicles across the site. The plan outlined Island International Airport’s intentions to utilise the government’s tax incentives such as Enhanced Capital Allowances (ECA) and the Renewable Heat Incentive (RHI) on retrofit and new build energy efficient
technologies. The governments introduction of the Climate Change Levy, the Carbon Reduction Commitment scheme (CRC) and the EU Emissions Trading Scheme (ETS), introduced renewed focus on energy use and management at Island International by highlighting the need to implement systems to monitor, record and reduce emissions through lowering energy consumption and increasing the use of electricity from renewable sources. Here, Island International Airport’s commitment to the sustainability agenda has been clearly outlined as described in the above extract, however, this fieldwork has uncovered a great deal of struggle during the process and encountered the disconnection between the systems and the people set to deliver the projects needed to meet the sustainability agenda. It also detected the contradictions that arisen within the airport’s strategic intent, and the gaps in understanding the operational requirements associated with the sustainability agenda as well as recognising the impacts that emerged from this disconnection in the process.

5.3.1 Infrastructure and the operations networks at Island International Airport

The environment of an airport is dynamic and the setting is best described by Ballard (1997) as the “invisible city” or a “virtual metropolis”, which also indicates the complex network that the airport is situated in. Described by the information sources available in the public domain, Island International Airport is one of the busiest airports in the UK, it offers both domestic and international flights to over 200 destinations.

The Airport has three terminals and two runways, and a World Freight Terminal that is one of the busiest in the country. Further information from its website described that it has an aircraft maintenance area, hotels, office accommodation and other ancillary buildings that make up the Airport infrastructure. The airport also has a purpose-build ground transport interchange that caters for bus, coach and rail passengers on one central site. The infrastructure and operational scale of Island International is so large that many people described it as a “mini city”. It has over 310 companies co-located within airport premises and approximately 20,000 people employed on site, including Island International Airport
employees, airline staff, business retailers, tour operators, contractors and many other service providers.

On the surface, the airport is primarily divided into Airside and Landside areas. The area known as Airside has entrance restricted to this area due to access being available to the aircraft and aircraft manoeuvring areas. The boundary between Airside and Landside has a significant impact on how the airport manages its operations, an overnight change of policy or regulation often brings chaos and certain implications to the operations, for instance, Island International Airport changed its security procedures overnight following the liquid explosive terrorist threat in August 2006, the liquids ban was brought in which initially stopped all passengers carrying any liquids past screening points, but later changed in November 2006 to allow small 100ml liquids in clear bags on board.

The subsequent impact of these immediate changes was panic, confusion, frustration and large delays. An operations manager responsible for ground activities and terminal infrastructure recalled the chaotic scene when alarms went off all day on the baggage systems. These baggage systems transport passenger’s suitcases from the check-in desks to the plane. On the day when the Department of Transport prohibited any hand luggage to be carried onto a plane, all passengers personal items included hand bags were put through the baggage system for security screening as a temporary solution while the airport finalised the required changes (Fieldwork diary, Sep 2011, Interview with the Operation Manager). Another member of the operations department who worked as a technician in the terminal facility at the time, described how he and his team spent the whole day standing next to bag pushers on the baggage system “to ensure small items and handbags that had been put down the system didn’t become trapped and cause massive delays” “things were just flying around, as the system was never designed to process items other than travel suitcases” (Fieldwork diary Sep 2011). The brief narratives of this event outlined the different scales of operational requirements at the airport. The alteration of security measures and new rules during the early stages of the changes had wider implications, and affected every department across the
airport. These new changes caused major disruption for several months while the airport adjusted to these new regulations.

The airport operators' have a network of working relationships that usually contains complex links with the airlines, regional governments, statutory organisations, conservation and environmental groups including local residents. The multiple layers and dynamics of the network are mixed with different and often conflicting interests between stakeholders. Issues such as loss of wildlife habitat and new wastewater pipelines at an airport can cause anxiety and generate considerable emotive concerns among certain sectors. Other impacts may require complex technical data to be assessed, such as engineering works on site, air traffic control, and for all interested parties it may involve a different understanding. Some impacts may be difficult or impossible to measure adequately, and when mitigation measures are considered, most standard procedures may have to be adapted to suit the airports' individual circumstances as there are other factors to be considered, such as the variation in aircraft use, land-use rules, encroaching into residential areas, and the overall environmental sensitivity of the community (Graham, 2008).

5.3.2 Dynamics of the Operations Department

During the fieldwork period of 2010-2011, the head office and business departments of Island International Airport were largely spread across the entire airport site; a number of the core departments including Finance, Marketing, Projects and the Senior Management Team were centrally located within the headquarters office building, also known as The Cat House. The Airport Operations Department included Environment, Engineering and Airfield Operations Units situated in an older building named The T Block. The original building was first build in the mid 1950’s, with a further extension added to the building in the early 1960’s, it is also an area where the researcher would spend a substantial amount of time with the Operations Department throughout the fieldwork. The extract below describes the first day of fieldwork carried out within the Operations Department:
“Today is my first day in the Airport. It all started at the main office building reception, as I was still waiting for my landside pass to be approved, which until I receive it, means I need a member of staff to sign me in and out of the office buildings for the time being. I also need to be escorted the whole time wherever I go within the building. I sat in the reception area, waiting for Edith, who eventual came and escorted me back to the where the Operations Department and her team were based. The T Block is an old building residing between Terminals, it stands next to the newly refurbished Cat House as the main office headquarters, compared to that the T Block looks old and rundown. We walked in through one of its entrances which has a magnetic security lock on the door, Edith put her pass through the door pass reader and entered a security code to open the door, and told me that I would need to carry my pass at all times to get access to the building and almost everywhere at the airport. We went inside the building and I saw an elevator with a narrow staircase right opposite it, the interior of the building looks old with paint peeling off the wall. We came out the evaluator on the 7th floor where the Operations Department is based, we walked through a very long corridor, with a rather low ceiling, and the lighting on the ceiling was very white and bright, and there wasn’t much air flow in there. After I walked through the long corridor, Edith led me through a secure double door into the Operations Department, and I immediately felt goose bumps as I was struck by a speculator panoramic view of the runway, and there I was feeling excited to see the airplanes flying across, before I could grasp my excitement of seeing the airplanes, Edith quickly hurried me around the department by telling me where the fire exits were, where the kitchen facilities were located and where her staff sat”. (Fieldwork diary 16th August 2010)

The above extract provides a brief introduction of the researchers first day, and the experience describes a different view of the airport from a non-passenger perspective. This includes the “journey” to the office as well as the setting and location of the Department being described which presents a different insight into the airport environment, which is unlike the usual projection of people’s movement through an airport (Lloyd, 2003, Knox et al., 2008).

Taking Wieland’s (2001) research on communication studies, in which she raises the issue of how people manage paid work as part of everyday life. Triggered by this theoretical position,
the understanding of the research participant’s roles here within the Operations Department has led to further considerations of several key questions which have gained increasing interest to learn about how people navigate their work, and which of these processes are enabled and constrained by work organisations, or shape certain contexts, such as sustainability, in which they take place.

The Operations Department is one of the largest business areas at the Airport; the department is largely formed by several key departmental functions, these include Air Traffic Services, General Operations, Regional Operations and Customer Services, all of which have further subordinate units. Without going to significant details, Diagram 5.2 on the following page provides an overview of Island International’s governing structure and its relations with the Operations Departmental functions and associated subordinate units. The diagram aims to present a general overview of the governing structure with the focus on the Operations Department; it does not reflect the scale of the Airport governance for other business functions in effect.
There have been substantial changes to the airport structure since the completion of this fieldwork, each unit and its work functions were going through structural changes throughout this fieldwork period, during which time Island International Airport had a new Chief Executive and was carrying out a series of restructuring and efficiency exercises. The diagram presented here is based on the 2010 and 2011 structure of the Airport’s organisational chart. This illustration helps reflect on the researcher’s initial observations and
projections concerning the role of Operations at the Airport in the early stages of the fieldwork.

As previously described and discussed concerning the arrangement of this research thesis, the initial research question aims to explore how Island International was doing with respect to its sustainability agenda. By opportunity, the researcher had been granted access into the Operations Department, and this enabled the researcher to observe not only the everyday life of operations at Island International, but also witness parts of the “transitions period”. The observations and interactions with various members have gained further insights into the different issues and stories, which were considered as being instrumental in the shaping of the sustainability agenda at Island International.

5.4 The role of the Environment Department

Island International Airport has decades of history in dealing with environmental issues. The Environment Department has been part of Operations for as long as many people could remember. The unit covered various activities, most were mainly dealing with compliance issues; these included water quality, waste, noise, ecology, surrounding landscape and ground transport. Each specific area was delegated to individual team members, the format of Environment operation was described by its own members as “an autonomous working style”, and everyone has their own projects and areas of work as part of their everyday tasks.

There is a general assumption about what Environment function at the Airport does, and the term often lies within the principles of environmentalism and is associated with issues that concern with welfare of wildlife, endangered species and activities that advocate better behaviour and understanding towards the local environment. Although there is validity in this view, there is generally little understanding on the reality of what the Environment function entails within the context of an Airport.
As part of the research framework, it intends to re-examine the previous assumption and explore the role of Environment in practice. Orr (1996) suggests that there is a general misunderstanding and a presumption about people’s everyday work that almost no one but them understands. Such a reflective view is certainly shared by some staff members at the Airport, as comments from different individuals at Island Airport have claimed that they “have no idea of what others do in their role or what their purpose is”. This concerns more than simply a person’s job description, but the key issue here lies with the way relevant policies, rules and advice has been drawn on, and the presumption of what they think people do.

The observations from the fieldwork have recognised other perspectives of the Environment Department beyond the tasks for waste recycling and mitigating pollution. The initial insights found that there is a greater process involved in how people give meaning to their own role, and the way they conduct the role in everyday operations. There is also a sense of ambivalence that has been observed from an individual’s perspective on what they are representing within the wider organisational/airport context, and their struggle to seek better integration of their given roles into the wider Airport function as a business organisation. Explained by Mary, who has been with the team for almost a decade, stated that “everything we do here is just to make sure that the Airport complies with regulatory requirements! And that’s about it”

Below are extracts from the fieldwork notes that illustrate an environment inspection on a woodland area which includes a pond, and is located within a car park belonging to the Airport, the narrative focuses on members discussions over the concerns for wildlife activities that could impact on the Airport’s operations, it also highlights the role of various members of the Environment Department as facilitators.

“A contractor came to see Edith. She then asked me if I want to come along with them out to the airfield for a site meeting. The contractor is a freelance ecology consultant and has been working for Edith over the years on landscape and habitat projects across the airport site. We went out in the restricted area of the airfield by the side of the runway; they wanted to inspect
a wooded area which the airport is planning to take down as part of a plan to build a new radar tower on the site. Edith needed the contractor to review the surrounding field and inspect the possible impact on any wildlife habitat that may result from cutting down the trees. After the inspection on the airfield, we then all moved on to a car park area not far from the airfield. Another operations officer Alfred was asking for the pond to be drained urgently, as it is quite close to the airfield and has been attracting all sorts of bird species, which can potentially be dangerous to the activities that are carried out on the airfield and aircraft from “bird strikes”. While Edith argued that the pond had already been drained twice in the past, the contractor looked around and murmured to Edith as she wondered if there were actually any living species residing in or been attracted by the ponds at all?”. (Fieldwork diary Aug 2010)

Part of the objectives for this research fieldwork is to better understand what people do within Airport Operations and how they define their works. The observations that have been described in the above sections do not ascribe to the common understanding of “environmental operations” in practice. Instead, focusing on an illustration of the “typical” day and the routine consistency within the Operations Department, the fieldwork allowed observation of the fluid interaction and incoherent relationships that exist between members. Moreover, as the fieldwork progressed, it learned that there have been different perspectives regarding the way the associated agenda emerged and the role of the Environment Department as an Operations function. This was also questioned in the wider context of Island International Airport.

As pointed out by one of the officers in the Environment Department, he described his working relationship when approaching other members from different departments at the Airport, “people here don’t know much about what it is that we do! (if I were to approach them with a campaign such as recycling awareness, or rising climate change issues), they are always quite wary at the start, They don’t know what resources will be required from you, and you tend to find they have questions, mostly they ask if they have to pay for anything?”
5.4.1 Bird control, noise issues and community relations

Traditionally, the noise from aircraft has been considered as one of the most significant environmental problems that can be directly linked with airport operations. It is not well known at Island International Airport that the emergence of the Environment Department was largely formed on the issue of “birds”. Based on the archival records, Island International Airport Operations increased greatly with air travel demand rising sharply during the 50s and 60s, subsequently, this has also seen the concerns for noise issues grow at the local level. The issue of noise has been widely reported by the local newspapers and media for some time; however, this reached a particular high point when the rural district council began to distribute leaflets complaining about the noise problem in 1968. Subsequently, a noise consultant was commissioned to work on the relevant noise issues at the airport, and the local council remained in charge of the responsibility to safeguard any possible increase in air traffic. Described by one of its long standing members at the Operations Department, Beryl recall her earlier days at the airport, what they did and how their works essentially contributed to the forming of the sustainability agenda at Island International Airport, she commented that:

“Back in 1988, when I first came here, noise was all people complained about. It was also on the back of the growth of the airport in the 1970s, we use the word sustainability, which had not been invented back then. But they wanted us to be able to live in harmony with the local community as far as the noise issue was concerned, so mitigating complaints about the noise was the bulk of what we did at the airport.” (Operation Officer, 2011)

Despite the prevalence of the noise issue associated with Airport Operations in the early days, it was not the key purpose of the Environment Department, and the noise issue was considered to be a different operational function at Island International Airport. The setup of the Environment Department was initiated when the Airport established a link with the local university, and a full time academic specialising in bird control then began as a researcher to oversee this area but later guided the environmental agenda at the Airport. A further recollection by the Operation officer about the arrangement back then:
“Birds! That was Professor X’s background, he was probably the first full time bird scarer in the country back then, it wasn’t just about going out scaring birds, making sure the grass wasn’t too green, or too short, it was quite scientific actually, they had quite expensive kit which was used across various areas, and I remember that he was essentially the environment department, he was it!”

Following on from the establishment of the bird control unit at Island International Airport, the operational extent of the Environment Department began to grow. The officer narrated that:

“He (Professor X) had quite an empire back then, there was the bird stuff, he was also in charge of Environmental Control, which is what we now call the Environment Department, and the community relations team. On top of that, we had the Occupational Health Unit, which I think was largely under the Environment Department, probably this was the largest in the country back then!”.  

The officer further described the setting of the team, which had a team of people dedicated to dealing with aircraft noise complaints. It was a “very labour intensive” way of doing things, it was before the computer era when everything was largely processed by paper, as he described:

“But back then, everything used to be processed by paper, we used to receive a letter of complaint, and we would respond to it by letter. We first hand drafted the response on paper, and then we would pass it on to a PA, who had access to a mainframe, or word processing station we called it back then, she would type it out, print it, then come back with it and ask if
it’s okay? And then about two weeks after receiving the complaint, you would send off the reply!”

The advancement of technology has changed the workforce, as well as the role of the Environment Department. Over the years, there has been more effort put into the understanding of the regulations and government policies, which is affecting what types of aircraft can operate, as well as with advancements in technology and innovation, these have led to more sophisticated measures that have helped to decrease the general noise levels associated with aircraft movements. Despite the policy efforts and developments in aircraft technology and engineering, the noise issue remains as a key concern in the UK aviation sector. As illustrated by one of the operational managers, Albert, who has been working with the Airport for almost three decades, described that:

“If you go back a few years, like ten years even; we had more flights here than we have today! Ten years ago, the aircrafts on the whole were noisier, but I think over the time, perception and the tolerance have also changed, as the aircraft get quieter, tolerance goes up as well, so the problem doesn’t necessarily go away, even though the aircrafts are, strictly speaking, much quieter now than they were before” (Operations Manager, March 2012)

5.4.2 Environmental practice and the runway legacy

To understand the role of the Environment Department at Island International Airport, one needs to learn about the past events and how they may have impacted on today’s practices. In this case, the development of a second runway is largely responsible for shaping the current environmental practices and sustainability agenda at Island International Airport. The consideration for developing a second runway goes back to the 1970s when there were concerns about the structural weaknesses of the only runway at the time, while there were already steady increases in the demand for air travel, the plan to have a second runway was
scrapped due to the high costs involved, which the local government decided not to go for at the time. In 1994, Island International Airport began to campaign to develop a new runway, and the proposed plan for the second runway immediately caused tension between the local community and the airport, which subsequently issued an invitation for comment in preparation for releasing an Environment Report. This letter of invitation (which is one of the earliest records that has survived) documented the Airport’s earlier efforts in understanding the issue of sustainability, including the statement as follows:

“The **Sustainability means** meeting today’s needs in a way which does not sacrifice our children’s future. Business is only now coming to understand what this concept means for an individual company. Island International Airport, in seeking to satisfy the air transport demands for major parts of the UK, must try to build the principles of sustainability into our plans and activities. We intend to work alongside local communities and with our partners to ensure we get it right, both in and around the Airport… Most companies have yet to decide what sustainability means for their own operations. Although we also do not fully understand sustainability, we believe there are some points here that are important…”

Although many documents in the 1990s have been lost or destroyed, the above statement (which is now part of a special archive) is stored in an offsite secure library. It has since become the setting stone for the sustainability agenda at Island International Airport for the years since. The airport has been officially reporting on its sustainability and environmental agenda concerning its business and operations for a number of years. The first report that was published in the public domain was from 1999 in part to a response to the Government’s plan to relieve air traffic growth in the southern part of the country; Island International Airport proposed the development for a second runway in the early 1990s.
The issue of airport capacity has been back and forth in the political agenda over the years; it has not only generated intense discussions within the UK political scene but also attracted the attention of communities who reside close to airports. While the debates on airport development remain a controversial subject, there is a general acknowledgment that the forecast for air traffic is set to grow continuously (Charles et al., 2007). In light of this, the proposal for the second runway was first submitted in the early 1990s, which resulted in a lengthy public inquiry. The objections from the local communities and the environmental groups were intense, in which three protest camps were set up on site to oppose the building of the runway for almost two years. During this inquiry, a Section 106 Agreement was then developed between local councils and the airport, stipulating over 100 obligations on aspects relating to the environment, ground transport, community engagement, habitat, and highway transportation. Island International Airport then later published over 100 environmental policies and targets in its 1996 Environment Plan, which includes a legally binding agreement with the local government as part of the expansion of the runway. Progress on these obligations are monitored, and reported on annually to the local government. An Environment Officer with a doctoral degree in ecology was recruited to specifically oversee the process of meeting the obligations set out in the agreement, which can be summarise into the key areas as follows:

- Community relations including the setup of a community trust fund
- Noise control and night flying restrictions
- Landscape and habitat management
- Car parking
- Public transport enhancement
- Highway improvements

Source: Fieldwork

Over two decades on, since the Section 106 agreement, the obligations that were set then, have since become the main features of Airport’s environmental operations, while mainly derived from the second runway development, the outcome of the agreement has set the foundation for environmental practices at the airport. As the airport business continues to
expand, the concern over its impact on the environment at the local and regional level also persist.

5.5 The changing shape of Island International Airport

Airports were traditionally owned by governments or considered to be public assets (Graham, 2008). Over the years, Airports have increasingly been privatised within the UK and around the world for different purposes, including access to private sector financing (for capacity expansion) or improving economic efficiency and productivity of airport operations (Oum et al., 2008). Island International Airport has long been part of a holding company with the majority of its shares being owned by the regional government, the corporation was 100% government owned for more than 7 decades, until recent years when it then sold partial shares to a private firm as part of a long term strategic plan.

The views on the role of an airport can be contradictory, on one hand; the supporter’s see an airport as a strategically important asset to the local region it serves (Graham, 2008) and the concept of “a hub” for the city that would stimulate economic growth for the region. On the other hand, people oppose and object to the airport’s existence due to the implications that it brings with the flow of passengers and services, this includes the usual concerns for air and noise pollution from aircraft, but also the impacts that pose to the local and surrounded communities, such as the traffic congestion due to people travelling to and from the airport. Described by one of the managers in Operations about the governance of Island International Airport when he first joined in 1980:

“When I first came here, there was a governing board, and there was an airport director, but the board was much more local government… it was overwhelmingly made up by members of the city council, with maybe just the airport director and the finance director. I think there was an operations
director too, but it was very much like a local government department, but they ran the airport, because the idea of an airport was good for the city, Island International Airport has always been a fairly profitable airport, but that wasn’t the focus”.

Suggested by Oum (2008) that the governance approach and ownership have certain impacts on an airport’s efficiency, as Graham (2008) pointed out “the way in which the government owners chose to operate or manage the airport is varied, yet it does have a major impact on the airport’s degree of independence and autonomy”. The objective was to provide the necessary service that would help to meet the regional agenda, and is traditionally seen as a public utility with public service obligations (Doganis, 1992). The issue of financial profit was not considered as the main priority then. He further described the role of Island International Airport under the governments’ governance and the purpose of Island International Airport as follow:

“Back then, the focus was to grow the airport, because it was seen as economically good for the city and the region. It provided direct employment by having the connectivity. It encouraged companies to invest in the region, and the local area, plus its prestige as well you know? At that time, it was, and it still is I suppose to some extent, you know the city is provincial in the country dominated by its capital, you know? To have the airlines fly in from the United States, and from the Far East, it’s a big status really, not many provincial city airports can provide that sort of service, so that was seen as having value, that sort of thing, whether or not it was profitable, it was seen as good!”

The extracts above highlight the airports desire to build its profile as part of a wider regional agenda, the context of the airport as an infrastructure service provider is clearly defined here. The operations and services at the airport are also shaped by the idea of being an airport that provides infrastructure services.
5.5.1 Capital investment process and commercialisation

Island International Airport’s ambition is to grow as a business; this can be further reflected upon from one of its monthly briefing statements made by the Chief Executive who joined the company in late 2010, in his statement, he has set out the Group’s goal, which stated it was to become “the world’s premier airport management services company”. After seeing a steady growth in demand, this resulted in the development of a second runway; Island International Airport also became a holding company and has seen steady expansion by acquiring other airport businesses and other commercial ventures within the UK. Throughout the years, Island International Airport expanded its airport operations to be a more business focused enterprise. As well as owing several other regional airports in the UK, Island International Airport also has a property development company and other service related enterprises such as car parking and consultancy. It was suggested that despite the variety of business streams operated by the company, Island International Airport remains as the main source of income for the business as a whole, largely due to its operational scale and larger capacity than its counterparts.

Like many business organisations, Island International Airport has a defined set of financial procedures and frameworks in place. The business planning process is revised annually, which sets a three-year financial outlook with the focus typically on year one. This is a major financial planning event that deals with the operational costs and financial forecasting which ultimately requires approval by the Group Board. Once the business budget has been agreed on, it is then signed off to the budget manager, who then controls it onward for allocation to their own operational areas in the form of an Operational Expenditure budget, also known as the OPEX budget. In addition as part of the wider business planning process, the budget review across the airport encompasses another process known as the Capital Expenditure Investment Process, which is also referred to as the CAPEX process. In short, the CAPEX process is a financial application system used for considering expenditure on fixed asset replacement or to add value of an existing fixed asset, such as the purchase of equipment and property, or investment in the energy infrastructure, as in the case of this research. According to the programme manager at Island International Airport, the CAPEX is a notional budget of what the company has planned to spend on, usually within the current financial year,
although provisionally set out in the business plan it still requires formal approval before implementation. The application for the CAPEX involves several stages of approval.

There was the initial application for departmental budget allocation as part of the overall business planning process and to seek authorization for the actual spending on capital projects. The project applicants are first required to submit a paper application and then attend the “CAPEX Panel” to present the project proposal in details. The panel, which is made up of members of the Senior Management Team (SMT) has the approval right up to a certain amount of budgetary spend. The process usually requires relevant actors or stakeholders to build the business case and justify the project or purchase, which often needs to be supported by feasibility studies, financial estimations and return on investment (ROI) calculations based on the organisational requirements. As described by business and finance literatures (Bulter et al., 1993, Northcott, 1998), the process of investment decision-making in organisations are commonly known to be a complex and lengthy process that often involves several stages, however, it is a significant decision-making process that involves directing resources towards a particular business area and makes decisions to commit resources for long-term capital assets within the organisation (Northcott, 1998).

Much effort has been put in to developing the annual business plan; the plan has also been described as a collection of the “budget wish list” from all business areas. A draft plan is first collated within each unit, submitted to the head of the relevant department and then the finance department for review and evaluation; the process also contains the structure and categories of the budget, which are set out into four key themes as the next table 5.2 shows:
### Table 5.1 Capital investment categories at Island International Airport

<table>
<thead>
<tr>
<th>Investment Category</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulatory</td>
<td>Spending that needs to be made in order to comply with any regulatory requirements, this includes meeting environmental, security and health and safety obligations.</td>
</tr>
<tr>
<td>Renewals</td>
<td>Replacement of any equipment, machinery or areas of the airport that require extensive repairs or renewal.</td>
</tr>
<tr>
<td>Cost Reduction</td>
<td>To reduce ongoing costs and increase efficiency. This is often investment in new technology.</td>
</tr>
<tr>
<td>Yield Enhancement</td>
<td>To increase the income of the business without requiring increases in passenger numbers. Examples of this type of investment are the retail and car parking schemes that generates further income for the airport.</td>
</tr>
<tr>
<td>Capacity Enhancement</td>
<td>This focuses on the building development of the airport, as in creating capacity to accommodate greater number of passengers, such as building more check in desks in a terminal and baggage capacity improvements.</td>
</tr>
</tbody>
</table>

Source: Fieldwork

#### 5.5.2 Resource prioritisation and the story of waste bins

Many schemes implemented by Operations at Island International Airport, include projects relating to sustainability that require investment in infrastructure or equipment, all of these have to go through the CAPEX approval process at the Airport. However, feedback gained from the fieldwork study has observed and detected great frustration concerning the CAPEX
process, and many have described the difficulties that they endured when submitting to the process.

The changing perspective on air travel as well as the growing competitiveness between airports has seen the commercial or non-aeronautical revenues become a key agenda. An interesting example of how commercialisation has shaped the way Island International Airport makes its decisions on capital investment is in the case of waste bins. Moreover, anguish concerning the CAPEX process was detected from the storyline given by different members, and in this case, it was narrated by Daisy, an Operations Officer who has almost twenty years of working experience at Island International Airport.

For a very long time, the waste bins across the Airport have been arranged into airside and landside areas. Due to security requirements, only airside areas has the conventional litterbins, most parts of the airport include the landside areas either have no waste bins installed, or had been using the “plastic litterbins” where ever possible, this plastic bags tied to railings as an alternative to bins in the public space, the pictures in the following page is shown as example.

In some areas, where there were no waste bins available, litter was simply dropped by passengers on the floor or other areas around the terminals. The lack of waste bins has seen “rubbish” scattered around the public areas, the Operations Department relies on cleaners to go around picking up litter manually. This has gradually become an issue, not only due to the lack of suitable litterbins, but it poses practical and operational difficulties in maintaining the cleanness of the areas. This approach has also brought negative feedback from passengers, as well as concerns raised by the senior executives on the Airport’s appearance.
Recycling was not part of the carbon neutral commitment at Island International Airport and with over 18 million passengers travelling through the airport annually, the amount of the waste generated across the airport site is estimated to be around 7500 to 9000 tonnes each year. The main areas of waste generation include aircraft cleaning, catering, terminal cleaning, retail, maintenance and property. The waste management targets were set under the airport’s Environment Plan of 2007, which includes targets that will keep waste generation to less than 2005 levels until 2010, and increasing on-site and off-site recycling.

According to survey work carried out at the Airport, around 100 tonnes of plastic bottles and newspapers were discarded within the terminals cleaning waste, with the cost of one terminals waste alone accounting for around 10% of the total annual waste disposal costs at Island International Airport. Despite the Airport’s commitment for new waste management measures, the idea of installing the recycling bins permanently across the airport site had been hard to fulfil. While placing the recycling bins across airport site may seem like a
practical and reasonable step from the environmental perspective, yet, Daisy said they were not in the position to make a business case for investing the recycling bins permanently. Questions were raised about why she feels the waste bins would not make a business case, and whether anyone has requested this previously. Daisy quickly responded with no hesitation:

“Oh! I didn’t even need to try. I just knew I would never get the CAPEX approval for recycling bins. They would never give me the money for the bins.” (Fieldwork diary Sep 2010)

The agenda of placing the bins on site was immediately a subject of discussion when there was a change in security regulations, which only allowed litterbins within the terminals under certain conditions, such as special modifications made to the bins that incorporated transparent panels, and agreement to a protocol for checking and emptying the bins during normal working hours. A particular opportunity arose when the Environment advisor was approached and asked to participate in a national Recycle Zone site project. The project was developed and supported by a soft drinks company in collaboration with a charitable organisation in support of environmental causes. The project which aimed to encourage people to recycle drinks containers in public places had a target to develop 80 Recycle Zone sites across the country by 2011. A £25k grant from this project was given to the airport to fund towards the recycling bins with certain conditions attached.

Daisy pointed out that the timing of the project was key, as the airport had then been undertaking £80 million of terminal refurbishment works. It was during the redevelopment period that the Terminal Department approached the Environment Department to discuss the replacement of the existing bins due to their aging and poor condition, stating that they do not fit into the new refurbished visual environment. With additional funding made available as part of the Terminal refurbishment scheme, the Environment Department was then able to submit a business case with the justification to “improve customer experience”. As well as with external funding of the £25k grant, which apparently had strengthened the business case, approval was granted for the recycling bins to be placed across the airport.
Here, it has observed the value from the perspective of sustainability and the cost element, as well as the framing of the business case, all of which is considered to be central to the successful implementation of the recycling bins project at Island International Airport. It also becomes evident that the background to the Carbon CAPEX also has its roots from a financial centric perspective, as highlighted and concluded in the internal statement indicated at the beginning that this approach set to address:

“The benefit of this approach is already clear. Not only do these contribute to minimizing incremental carbon, but there are also significant tax advantages, with a proportion of the investment qualifying for Enhanced Capital Allowances (ECA’s). This results in significant tax cash savings for the Group”.

5.6 Complexity of everyday operations

Being one of the largest airports in the UK, the setting of Island International Airport’s site is complex and constantly changing. Often being described as a “mini city” by the airport staff, it illustrated the extent of the airport operations, the dynamic work force and the building environment. As outlined in chapter four, the fieldwork brought the researcher to different places across site that helped to capture different scenes of operations as part of the everyday functions at Island International Airport. While work shadowing and observation at the Environment Department had helped to learn about the administrative side of the airport operations, the question of how an airport operator “operates” remains fuzzy, and the role of the airport is seen to be evolving in two folds; as an infrastructure service provider and a business enterprise.

This chapter has highlighted some of the changes at Island International Airport involving the expansion of its physical infrastructure to accommodate its operational focus. Such changes have inevitability involved developing or demolishing certain functions. The last section
presents the rising agenda of commercialisation and how it began to shape the airport’s focus, and as seen from the Governing Structure in last section, there is the departmental function for “customer service” at Island International, and is highly integrated into the airport structure as a dedicated unit to focuses on “customers”. While the term “customers” has become more diverse as it covering not only just passengers, but also the airlines, retailers and tenants. This has seen the role of airport change and take shape into different forms, it also inevitably challenge the definition of how Airport reshape the way it operates and priorities their work focus.

On the point of infrastructure, including the expansion and different developments over the past decades, Island International Airport’s site consists of different infrastructure elements that have been built during the different periods of the airports expansion. This integrated mix of buildings with varying construction periods has led to identifying the source of some of these utility supplies (which are largely hidden away in roof spaces or in walls) very difficult. Locating the source and path of these utilities (such as mains electricity supply cables, water pipes, gas supplies, associated meters, switches and circuits), form a major part of the operational works in Operation Department.

To better understand how certain aspects of how operations take place and have been developed, the researcher, through participating in observations and witnessing of operational tasks, provides two examples here of some views over what airport operations entails. One describes the work experience within the customer services team at one of the terminals, as the researcher shadowed the customer services officer to assist passengers travelling through the terminal at the security check point who provided direction and flight information, it also brought the researcher into the backbone of the service and observed the facilitation and management of chaos and the messiness part of everyday airport operations. The second case details another work shadowing experience with one of the Engineers whilst carrying out a lighting inspection within one of the terminal areas as part of an engineering task.
The observation of these activities spread across several days, the accounts given here had been organised using different snapshots of the event based on the actual work shadowing with the Customer Services Team at Terminals and the Engineering unit. This has identified several issues and includes the scale of the task as part of the airport operations, the complexity that is embedded within the layout of the site, as well as the interactions between members as how they make sense of their operation and surrounding environment has been part of the highlights.

5.6.1 Walking through the terminal

From the transitions viewpoint, the roles of individuals had not yet been defined, due to them being a key part in “steering” or “influencing” the transition direction. An example which highlights the interactions between individuals, systems and technology can be described from a work shadowing experience with the Customer Services Officers at one of the airport terminals.

The Customer Services Team is the front line of the airport operations, they are considered to be “the face” of the airport as described by one of the Customer Services Team Managers. Their everyday task is to deal with customers, these are not only limited to passengers and “meters and greeters” only but also includes the retailers as well as the service providers on the site. The team work twelve hour shifts and the Managers rotate around the clock.

According to one of the officers, Sunny (pseudonym), their work is divided into four key areas, manning the information desks, customer prep, passport check and mobile, (in which officer will scout around terminal areas to provide any assistance or answer any enquiries). Sunny described the role of the customer services team, as being evolved from just working behind the information desk and being mobile, it has developed over the years, largely driven by the changes in security measures, such as the liquid ban and the implementation of digital passport systems including the self-service digital facial scanner system, all of which require
the officers to be on the relevant site to assist the passengers at the security and immigration check points. Each officer would carry a radio or mobile phone for communication, and it is essential, (especially if they were on the mobile shift), that they could always call for assistance at any point if required. An instance of this is narrated through the researchers work shadowing experience recorded on the fieldwork notes:

“I’ve been following Chris around the terminal all morning; we have both been on the “mobile” task, and our job was to walk around the terminal assisting customers when required and checking things are working, to ensure we are providing a good “customer service”. Only a few minutes into my first mobile experience, we got called to the train station for an incident, apparently there had been acts of vandalism and someone called the police. When we got there, the police said the emergency telephone box had been “vandalised”, the phone mouthpiece was stuffed with chewing gum and would not function. Although this does not seem like a major incident it was taken rather seriously by Chris, who explained that incidents such as this would cause inconvenience to customers who travel through the airport and would subsequently reflect badly upon the airport’s image. The policeman also commented on how uncommon this vandalism incident was, but it’s difficult to tackle these problems, and while we were still discussing the phone box situation, Chris received another call about a passenger having fallen down an escalator over at Terminal 2, which was about 15 minutes’ walk away from location we were at. This was considered as being more urgent as we did not know the extent of the passenger’s injury, or if there was any injury. We rushed back to Terminal 2 to look for the passenger, on route Chris checked to see if the paramedic had been called to attend to the customer”.

“On our way there, Chris explained that this is quite a common incident at the airport, it happens mostly when passengers are travelling via the escalator with their suitcases, even though the Airport has been putting up signposts and barriers to discourage people travelling with their luggage on escalators, however, this did not seem to stop the problem and accidents often occurred. Situation reports or feedback from the customers were usually reported back to the senior management, and the airport has increasingly taken the
passenger’s experience seriously, often being communicated through internal channels such as the weekly newsletter or the senior management’s brief. From Chris’ perspective, he stated that their jobs was to ensure they get the “basics” right and to prevent any further implications that may arise from this incident. However small it may be, there is always a danger of an incident resulting in a legal case or compensation claim. It also depends on the passenger’s situation and reaction whether they take it further, but the Airport regularly receives letters from passengers either praising or criticising their experience at the airport. In situations where there is an incident involved, the ground level response is vital, as it could have a major impact on the Airport’s reputation overall.” (Fieldwork diary, Sep 2011).

The above extract and story provides a different context to the operations in which it outlines the impacts of change within different areas, and how those changes interact with each other and the impacts and consequences of those changes. In this instance, it shows how the role of the customer services team has been redefined through legalisation changes and technological advancement. This thesis sets to argues that, the organisational life and the everyday complexity in a context such as this, presents a view that is essential to help shape some aspects of the overall goals that the policy makers and decision makers of the organisations, (including directors and managers of the departments) attempt to set.

The complexity of the operations work should not be taken at face value, as we have seen from the cases from the Environment Department and the Customer Service Team. With the Customer Services Team always being in view of the public at the airport (although it makes the work interesting) they often have to deal with sometimes “crazy” situations as described by one Customer Service Manager. Being the “face” of the airport, the Customer Service Team encounters a variety of situations on a daily basis, from hosting Royalties, Celebrities to arrested criminals by assisting the police in escorting them in and out of the airport. To prepare for events such as the annual “hajj flight” when thousands of passengers fly from Island International to attend the pilgrimage. Staff have encountered incidents such as drunken and sometime disruptive passengers who turn out to have a fear of air travel, or keeping delayed passengers calm and liaising with the responsible airline company; their role is to improve the passengers transit experience and ensuring the smooth flow of the passengers through the Airport to make sure that the flights depart on time.
It is hard to realise the extent of the operations and the areas that are covered unless personally involved with the tasks. As described by one Customer Services Team member, who jokingly expressed that “those senior directors in the Cat house have no idea what it is really like down here, they don’t live in the real world! And they don’t know what we have to deal with”. A Customer Services Manager described an unfortunate incident when the Customer Service Team came across a child who lost her way as she followed a member of the airport staff through into the restrict area, and then became trapped between the locked doors. The Customer Services Team on duty at the time had to keep a terrified screaming child calm, who also “pooed all over the place”, as well as trying to locate the child’s parents. While the manager laughed off this event as a “funny” one off, this has led to a deeper conversation about their roles on the front line and the pressure to deal with sometimes challenging situations. In particularly, the manager talked about the recent changes to the Customer Service Team working hours to cut staff costs down, and as a result of these changes, has forced shorter opening hours of the information desks. The manager commented on how such decisions have impacted on the team’s daily operations, where their priorities are to serve passengers who travel through the Airport. However, the change in opening hours has led to situations when passengers arrive at the airport in search for some assistance and there was no one at the information desk. They would then receive complaint letters about their experience at the Airport. (Fieldwork diary, Sep 2011).

5.6.2 Turning the lights off

Part of the Operations Department manages the major infrastructure across the airport site. The Engineering Department under Operations covers a wide range of areas of work at Island International Airport. Described by one of the Operations Managers, Matthew, who has been with the airport for over 25 years starting off as a young apprentice straight out of college, he recalled how their working functions have changed over the years; he explained that there used to be one big Engineering department across the whole airport, and everyone worked together as a team. Any problems on site they had would then be solved internally. “But things are very different now!”, as Matthew expressed. “nowadays, if you can't find out what
the problem is within 10 minutes, the company wants you to pass it on to external contractors immediately” (Fieldwork diary January 2011, November 2010).

Over the years, the airport has gone through several internal restructures. The most recent of which has seen the Engineering functions split into three different areas consisting of airfield, commercial and facilities. Some Engineers have been relocated and had their job roles changed. Different accounts on how the reorganisation has profoundly affected the Engineers and the way the structure has impacted on their works. It has also created divisions amongst the various units, and conflicts between each unit’s management structure (Fieldwork diary September and October 2011). “In the past, you would just pick up the phone, call the guys and ask them to do a certain task, now when we call, we get passed to different people so you can’t get through to whoever is in charge to ask them if they can come and do the job!” The expression from Matthew highlighted the changes of Engineering’s function and how their work has been shaped through time at the airport.

To further understand the dynamics of the operations at Island International, a case example of how an engineer performed a lighting inspection is to be presented in the following example. This example, which is narrated through the researcher’s perspective and has been based on the fieldwork diary, combined with recorded interviews and conversations.

“Carson and his team have been busy with the Smart Metering Project for the past few weeks. They are currently in the project delivery phase, and new meters have gradually been installed across the airport site and there are more that need to be installed over the next three months. Interestingly, significant efforts have been put into “locating the existing meters” throughout this project. Explained by Caron’s team, the airport buildings have been rebuild and expanded over years, with the operational area encompassing over 800 hectares and with additional non-operational areas in the region of 350 hectares. Even for a long standing member like Caron who has been with the Island International for almost two decades, he does not yet fully realise the extent of the Airport’s systems and infrastructure. As part of this “identification phase”, Jack, an engineer who has been working on the project delivery, has been carrying out a power circuit inspection across all the Terminals. The main job was to
check the circuit distribution points across the terminals, as there are additional meters waiting to be installed, he needs to go and turn the lights off at night and a few during the day time to assess the location of where each lighting circuit is fed from. When I heard he was going to do the inspection again this afternoon, I jumped at the opportunity to ask him if I could tag along.”

The map below is a general layout of the area within the terminal (in blueprint) where the inspection was carried out. Further details are narrated as follows:

**Map 5.1 Terminal blueprint of meter locations**

Source: Fieldwork

“I followed Jack into the Terminal area this afternoon. We walked through the departure check-in area, visiting each of the offices which are located opposite the check-in area. The offices are leased by different airlines, tour operators and companies using them as a point of contact to deal with passenger enquiries. Jack wanted to quickly go and look at a new meter
that was recently installed, and was situated at the back of one of these offices. The text highlighted in yellow on the above map identifies the location of these meters. The map had been drawn up after a member of the Engineering team located the meters on site, and this inspection was partly to help locate which meter was connected to which tenanted offices”.

“Jack has a roll of stickers with the words “meter quality audit” written on them, he also brought along a digital camera. I watched him putting the stickers on the first two meters we saw, which he also took a photo of each meter for recording purposes. I then helped him to do the same after the first two meters. Not all offices were open at the time, and some just looked empty with no sign of any occupancy. Jack told me he was given a key to all these offices by the property department so we can gain access to them on Monday night when we were to do the circuit identification exercise, this was necessary so to determine the location of the feeder circuits for each office. Some of the offices that we went into, looked as if they were built as a temporary unit, there was very little room behind the front of house counter with many having very low ceilings. Some of the offices looked as if tenants were about to move out or had just moved in, with many boxes and old furniture lying around; with one or two exceptions. Jack and I were outside an office which looked newly furbished; it kind of stood out from the other offices next door. While Jack was poking around looking for the circuit box, a lady from the office opened the door, she joked about how she thought we were some odd customers trying to break-in to steal flight tickets. Jack and I laughed it off and then he asked her about their office opening hours and informed her that we were going to turn the main light switch off on Monday night, she nodded and said there might be different people working here by then, but she will make sure she leaves a note for someone”.

We visited first few offices to provide notices about the shutdown in a weeks’ time, and after we had done most of the offices, we walked passed an empty office which had been under construction; Jack told me that it was going to be the new front of house counter for a new airline company who had recently established a major flight connection at the airport. This office had everything stripped out, leaving only the wooden partition boards standing, there were loads of wires that looked like power cables scattered all over the place, Jack pointed at
a beam above our head, and I saw about five small boxes attached to the beam, he said to me that each of these boxes is powering a different office above us, I didn’t understand what he meant by offices above us at the time. We left the check-in area and walked towards the main terminal exit. We walked through another door hidden next to the terminal’s main exit and went up a narrow staircase, at the top of which there was another secure door, we entered the door and this led us into a very long and narrow corridor which had no windows and many doors on one side. Jack knocked on the first door, and after we stepped into the office, it was only then that I realised that we are right above those office counters which we had just visited. This office had a big window overseeing the check-in desks at the terminal departure area. I murmured how dark these offices looked, Jack laughed and said “you’ve only see the glamorous side of the airport!” We knocked on every door on that corridor, and in each Jack told the people in the office about us turning the lights off on Monday night, as well as checking the location of the meters; as some of the meters in those offices had not yet been replaced with a new one. I wrote down all of the meter numbers and Jack said he will have to cross check them with the records they have back in the office; to see if these meters were on the list.”

“Three days after our initial meter inspection, Jack and I went back into the terminal to turn the lights off. We were at the airport around 8pm, Jack had to go back to the office and pick up his notes, on the way to the office we bumped into a lady who was locked inside the Cat House entrance, Jack greeted her with a smile and swiped the security card to let her out. As soon as we got into the lift, Jack immediately pulled his face and said to me that that lady, Kelly has been a real nightmare. I jokily asked what she has ever done to him. Jack explained that he did not come across Kelly until recently, and he probably would never have known her, had she not taken out their newly installed smart meters on site. Jack gave further details on Kelly, who is one of the many Project Managers currently working on refurbishment projects at the airport. With the scale of the airport operations being so vast, it means not everyone is aware of what everyone else is doing, as Kelly and Jack work in different departments. Nonetheless, while delivering each of their own projects on site, this had eventually led to conflict. Jack complained about how they had not been consulted about the changes on site, and the team was not aware of Kelly’s refurbishment plans as her team stripped out the designated area; they had taken out several new smart meters which had only been installed a few days earlier. In the first instance, Jack and his team were not aware of the
removal of the meters until by opportunity, when he walked pass the area and then realised
that the new meters had gone, Jack complained how it took several days for him to work out what had happened.”

Situations such as this are considered as being critical, yet it is not uncommon. Jack talked about how they should be informed about any potential on-site works taking place on the critical infrastructure. As the infrastructure and systems at the Airport change over time, so do people who work on the site, and some of these have had their jobs or roles changed along the way. Here, there seems to be an issue as to how the organisation develops and maintains its links with people, relationships and systems during transitional changes.

“While we were in the lift, Jack went on about his day and murmured that he hopes it all goes well for this evening. He talked about how he spent the whole day on the phone reminding people about the planned task of turning the lights off, even though we had given the tenants notice previously and while most agreed to the works when we visited them during our last inspection, some tenants still complained that they were not aware of this plan. Jack then talked about his argument with one of the tenants, who is the operations manager for a major airline company. Jack stated that the conversation was difficult as the manager rejected the idea of us shutting down the main power, because he has computer servers running in the office. Jack attempt to reason with the manager and said that he had visited his office previously, and that his staff had all been given adequate notice and had been informed about the task, and stated to him that there were no objections or concerns raised at the time. The conversation lasted a while and “all sorts of language had been used”. I asked what has been agreed. While Jack did not give any details as how their conversation ended, he murmured how we will just go ahead with the work anyhow.” He gave a big sigh and said how “this is the sort of thing we have to deal with on a daily basis!”

“After picking up Jack’s notes, we went over to the Engineering Control facility located within a different building on-site, it’s a place that I had never been to, and the room was hidden away in a building block not far from the Cat House. Access to the room is strictly controlled, and it has a room full of large computer screens and CCTVs, which all connect to
computerised systems that control various facilities such as baggage systems, car parks barriers, lifts and so on. Jack introduced me to the staff there, they briefed me about their work and explained that they spend their entire shift staring at the big computer screens; watching out for technical problems such as blockages on the baggage system, people stuck in lifts and others unable to find their way out of the terminals. As we walked into the room, Jack turned to me and said “this is a place where everyone will be calling in to complain when the lights go off.”

“We had been in the control room for about 45 minutes when Jack said we had to wait for the last flight to arrive, after which we could go and do the shutdown. During this time, Jack and I sat with the Engineering Control facility staff, as he was making some phone calls, the guys gave me a brief tour on what they were doing, pointing at each of the computer screens, they explained the purpose of their work. Then Jacked received another call, he told me it’s time to go and do some work, we then hurried out of the building. As we entered into the terminal, a few people included passengers and airline staff, were making their way out of the terminal building. Oscar, another terminals engineer was waiting for us near the check-in desk area. Jack asked Oscar, who was working overtime to help us during this evening. By then it was around 10 in the evening, the terminal was almost empty with no one in the check-in area but the three of us. The emptiness in the terminal allowed me to become aware of the space around us, and I was feeling somewhat overwhelmed by sense of quiet and stillness in the terminal. While Jack was poking around behind the airline information desks to see if there was anyone else in the area that shouldn’t be, Oscar was calling his family saying goodnight. I observed the empty terminal, and was amazed by the difference to how I had seen it during the day, witnessing thousands of passengers and airport staff constantly streaming through the terminal, the busy atmosphere mixed with different noises from the check-in desks and people’s chatter, was in stark contrast to the stillness that we are experiencing at night, the emptiness of the terminal was all too surreal for me”.

“As we slowly walked through the empty terminal, we noticed some lights were still on over some airline desks. Jack went into the back office behind the airlines information desk to check if there was anybody working in the office where we found people still working; we then reminded them about the power shut down. After visiting a few more offices to check
for members of staff still working, we then stopped at the new office which had been under refurbishment. Jack walked in and took hold of a ladder which had been left in the middle of the room, he began to looked around surveying all the boxes on the beam that we had found a few days earlier, he then turned to me and Oscar and said that he needs to find out which box is connected to which circuit, Oscar nodded his head, we both looked around the room that had been stripped out and then we noticed another big black metal box hidden in the back corner. Oscar turned back to Jack and asked him what that was for? Jack scratched his head, looked around, and then he said he needs to go out and check the offices above before he turns the lights off.”

“Jack quickly climbed down from the ladder and walked out of the room. Oscar and I remained in the empty room with a bare floor and exposed ceiling. We stood next to each and start talking about his job at the airport. After about five minutes, Jack came back into the room and said he had found another big box outside, and that he needs to find out what it is connected to? He pointed at a small label on each of the boxes on the beam, and said he will go out and try to find the distribution points of each of the supplies. He asked us to stay where we were, focus on the lights on the junction box and shout if it flashes. I remained in the room and Jack went off again supposedly to go and switch off different circuits from that big box. From a distance, I could hear him shouting back at us, but he was too far away to be clearly heard, so Oscar stepped outside of the room and stood right at the entrance, but only a few meters away from me. He then shouted back at Jack and then repeated what Jack had said to me.

As Jack was checking the source of the circuits supply, he would shout across to us a number, I then responded to Oscar with either yes or no, who then relayed the answer back to Jack, every time we identified a match, I then wrote down both numbers on a piece of paper. We continued and this went on back and forth for a little while, we then encountered a few that we could not identify, when that happened, Jack came back into the room, and looked at the box, muttered something about that he does not understand where it could had been fed from, he then looked around the room and went off to see if there was another main switch box elsewhere. At some point, he returned and asked me to make a note of the number on the circuits that could not be identified, he asked me and Oscar to write down what we had
identified for the evening and that he would then go back check the excel records that they have been collecting to see if anyone else in the team might know about the source of the mains power for that circuit. We continued this process the other power boxes throughout the rest of evening.
5.7 Summary

This chapter provides a general background on Island International Airport that forms the theme for this research thesis. It began by highlighting some aspects of airport operations, its connection with issue of sustainability and how it evolves at Island International. In contrast to the general discussion on sustainability of the aviation sector, this often places the emphasis on the wider implications of air travel. This part of the thesis aims to provide a further understanding on how the agenda of sustainability comes into shape and becomes prominent in an operational context.

Despite there still being a lack of consensus on what constitutes sustainability in general. And due to the visibility of an airport that is always in the public eye, it is more likely to be confronted with the subject matter and receive pressure, particularly on how it deals with the issue. This chapter draw on narratives of how Island International established its commitment for more sustainable growth before it even fully realised the meaning of sustainability. The illustration of how the Environment Department was set up to focus on bird control derived from academic affiliations, of which shine as a fascinating story on the source of sustainability at Island International. As the demand for air travel grew, encouraged by the Governments policy objectives that are designed to shape the direction and role of the aviation sector within the national framework, Island International has set out its ambitions to be a leading airport operator through expansion. While the plan for a new airport runway development was faced with strong opposition from the local communities, and activists from different areas, the resistance has publicised the tensions over the airport’s activities and implication of operations which has led to a hundred days of public enquires, but more importantly, it has also triggered a decades long environmental evolution at Island International, that has been shaped by the underlining principle of maintaining community relations and the relevant issues including noise pollution, environment and land conservation. The legacy of the runway development set the scene as to how Island International approaches its wider sustainability agenda. The growing concerns over climate change and environmental agendas have also accelerated the Airport’s commitment and efforts on this subject matter.
It is seen that the Airport is in continuous transitions; from being solely an infrastructure service provider to becoming a more commercially focused enterprise. The further perspectives focusing on how members organised their daily operations, what everyday operations actually entails, and how they work shown through snapshot of events. All of which have illustrated the dynamics and complexity within their everyday operations. The story of waste bins on one hand indicate the formalisation of the business process and execution of the investment profile in Island International, but on the other hand, it also demonstrates how the landscape of the airport operations is gradually being defined and redefined.

Through illustrations of some cases, different issues have emerged regarding the complexity of daily operations at Island International, which have been slowly unravelled during the fieldwork. The narrative about the reorganisation of the Engineering Department, which signalled the impact on changes within the organisation, not only how it has changed people’s roles and reshaped their tasks and duties, but how it has also challenged their common purpose and created division that was once united. The experience with customer services demonstrates the pressure to keep operations in order within view of the public. But more importantly, their role as the face of the Airport is transitional yet essential to facilitate any immediate changes that could affect operations; which are also being shaped by demands from technological, economical and societal requirements. Referencing the event of the smart meter installation, the disappearance of new meters highlighted the challenges in maintaining the synergy during everyday operations within the vast scale of the airport infrastructure, as well as keeping information flowing between the relevant members during the transitional process.

The events of these vignettes have demonstrated the dynamics of the everyday operations at Island International. The observations have recognised the interactions and relationship between members is much more fluid and not as linear and organised as promoted by the traditional organisational and management theorists. There is an issue of detachment between operational functions, and it raises the question as to how members develop relationships and continue to maintain the interaction during the state of transitions. The cases that have been discussed in this chapter have demonstrated the complexity of the Airport
Operations requirements to keep up with the changes in the infrastructure and the ever increasing scale of operations, it has also detected a sense of struggle of the way members are required to adopt the constant changes while acquiring new information to work with the changes.

Issues that have emerged from the fieldwork have created a window to learn about the conditions that help to shape the sustainability agenda at Island International. And it has become apparent to see that the Airport is in a transitional state in which it attempts to make sense of its own role and responsibilities through external demands and interactions with its members internally. While different issues and factors are often tangled within everyday operations, those conditions, such as growing pressures to accommodate more commercialisation and implement modern functions into the aging infrastructure, the tensions derived from the changes to the workforce, and the growing operational scales that create barriers at the operational level, all have highlighted the consequential impacts during the transitional movement. While it has become evident that certain conditions contribute to the way the sustainability agenda has been defined at the Airport, there is still question as to how sustainability transitions is processed and rationalised through continuous changes of demand. The next chapter will focus on the tension between different rationalities within the organisational boundary of Island Intentional, and will examine how certain members manage this conflict of rationales.
CHAPTER 6 – Constructing a more sustainable airport

6.1 Introduction

The previous discussions have highlighted the changing shape of Island International, how the Airport has defined its role and how it has evolved throughout various transitional periods. The complexity of the everyday operations that have been described so far, have focused on exploring the role of the airport and the operational conditions. It also shows how Island International set the scene for its wider sustainability agenda and shows some insights into the everyday conditions that the Airport has been operating under. Further understanding is needed to determine how members related to the agenda of sustainability in their everyday operations, and on how the practice of sustainability is being defined, measured and adopted at the Airport.

Building on the previous chapter, this chapter aims to further discuss other observations made from fieldwork carried out within the Operations' Department, and further explores the tension between members with different operational expertise; it will also show how they relate to the broader agenda of sustainability. A number of stories have been presented here, which focus on the narratives of some of the members and how they learn about the variation of rationality at the Airport. It is the coexistence of rationale that creates contradictions between practices within the operations' area that is being questioned. This chapter explores how members seek to “manage” those tensions and conflicts of rationality, and how they started challenging these differences which eventually led to the resistance for change. Inspired by Nicolini (2009) the analytical frame of “zooming in and zooming out” that focuses on the practice of switching theoretical lenses. This chapter aims to touch on different aspects of organisational and management aspects of Critical Management Studies (CMS) to develop a more in-depth analysis on issues emerged from this thesis. The objective here is to construct a further understanding of how members engage with sustainability and how this shapes the meaning in an everyday operational context; it also sets out to discuss how members processed or even rationalised the sustainability agenda at Island International, which formed part of the overall discussion section for this thesis.
6.2 Engaging with sustainability in everyday transitions

One of the questions that emerged from the researcher's fieldwork is how people engage with the wider issue of sustainability that enables their practices at the Airport. It was discussed in the previous chapters how the Transition Management process recognised the issue of sustainability as a complex societal problem and required a prescriptive based on a holistic framework approach. The present theoretical discussions in this area are known for their focus on technological innovation to drive change (Berkhout et al., 2004). From the fieldwork experience, it became apparent that the operational scale and setting is a complex one, despite this, it was observed that not only are the roles of individuals and how they interact in everyday practices significant, their way to engage has also shaped the meaning of the sustainability agenda and enabled the relevant practices during the transitional process.

The narratives from members of the Operations' Department described how their role and tasks have instigated how they attempt to engage with the various agendas at the Airport. Hence, the condition of engagement has slowly emerged here, including the element of struggle that was expressed through their everyday experiences. The illustration of different events such as the overnight change to the baggage system processes posed by the liquid ban, and the consequent chaos and impact that led to the immediate operational changes, and the story of the lighting audit process that saw Engineers spend part of their day scoping around the airport looking for power circuits and meters as part of a task to determine the electricity usage across the site. All of which have presented an outlook on the airport setting as to how members of the airport struggle to keep the flow of passengers moving and ensuring the smooth running of the airport in the background; unlike many previous discussions on airport operations which commonly focus on the systematic analysis of an airport as a system to transport people.

The dynamics of the operations and the interactions that have been observed have also seen several issues of how an individual engages with the organisational agenda. For instance, the story of waste bins that highlighted the complexity of priorities at the Airport to reflect the
principles of financial procedures, Daisy’s anxiety towards the CAPEX process, and how the business case for investing in bins was eventually approved, although only on commercial grounds. All of which has raised questions about the issue of engagement during the transitional process.

According to Veremulen et al (2007) individuals frame the subject to help them make sense of the environment. While “framing” is a political and self-conscious process in which its meaning is negotiated between people, the same frame may appeal to one group of people in the organisation but it may not necessarily appeal to the other (Kaplan, 2008). This framing process is seen here as a way to “define the relevance” of a particular agenda to determine the method for engagement. Previous studies have suggested that the significance of individuals and their ability to make sense of their environment is by taking appropriate action, or influencing the world they are in (van Dijk et al 2011). As Elsbach (2002) argued that the behaviours of an organisation’s members are essentially dictated by the organization's procedures; while Zietsma and Lawrence (2010) described and discussed the role of individuals and their ability to configure the institution structure can be triggered by a combination of conditions, such as the state, practices and capacities of boundaries they belong to.

Hardy (2004) suggested that “meaning is negotiated in organisations” and this thesis has seen how the members of an Airport struggle under different conditions, nonetheless, here it argues that while the state of struggle represent the challenges that exists, it also enables the “engagement” where individuals or a group come to negotiate certain a practice that would also shape the relevant agenda. To form further understanding of this perspective, the rest of this chapter will present more stories on the issues that have been discussed. These stories of events provide a snapshot and further insights into how members of the Airport actually engage with sustainability as an operational agenda. There are two particular events being presented here, one describes the observation at a meeting between the Airport and the water supply company, to discuss how the airport manages its surface water drainage system. The narrative of the story has been constructed with the aftermath and observation of interactions
with the relevant members to better present the issues attached. The second story focuses on implementation of an Energy Efficiency Project.

While the project is considered a great success and has been held as exemplary by Island International, the main focal point of this story was to highlight the journey of the project, and how that reflected on the way the airport prioritises when making key decisions, but it also demonstrates an individuals or groups’ role in enabling how the organisational agenda is being processed and rationalised.

6.2.1 Keep the water running

A meeting had been called with the water supply company to discuss a potential trade effluent consent breach and a warning issued by the Environment Agency. This concerned the airport’s surface water that was discharged into an outfall nearby and could have a serious impact on Island International if this issue is not resolved (Fieldwork diary Sept 2010). The airport site has designated surface water catchment areas, and there is one such area which drains into an outfall located at a nearby river, as shown on map 5.3. The water system around the airport is heavily regulated and audited by the Environment Agency as there were some concerns over the way the airport processed the water from the site during the 1980s. The surface water drainage system is managed by members of the Operations' Department. The more specific duties on potential water contamination issues are overseen by Officers with environmental backgrounds.

Rain water that falls within the catchment areas, would then run through a series of pipes and penstocks until it finally arrives at a sample chamber, prior to being discharged into the river, as indicated in the map on the following page. The water from the sample chamber is sent away for testing on a weekly basis to ensure the water being discharged is within consent
limits. As the sample is analysed on a weekly basis, any contamination that was detected, would only be identified five days later as this is the length of time it takes the lab to process the sample, this time delay can make it difficult to trace any source of contamination. The Airport pays a substantial amount of surface water charges to the water company every year, but it has been maintaining the system itself. There is an apparent issue of ownership and boundaries of responsibility that have posed certain challenges so far, as the Operations’ Department has argued that the maintenance responsibility belongs to the water company, as they are the “owner” of the outfall.

At the meeting, several members from the Operations’ Department were present with representatives from the water company. In the first instance, Edith, Anton, Carson and Matthew were quietly listening to the discussions between Alfred and the representative from the water company debating on the location of the water that was being discharged, a large map of the airport with the drainage system details was lying on the table, Alfred was pointing at the map while talking to the representatives. Before the meeting, Daisy gave a brief of this meeting, she explained that the Airport has been issued several water contamination warnings by the water company recently, but after some investigation, Operations Officers believed those warning were issued by mistake and largely down to human errors or delays by the water company. They believed the water company became confused with which water catchment area was which, even though they had been provided with the mapping details. At the meeting, the discussion was focusing on the location of the drainage infrastructure and the network of water distribution. The conversation became tense between the Operations’ members and the water company, as they could not agree on the contamination point, as the exact location of where the contaminated water had been discharged to. The frustration from the Operation members was clearly showing, as the water company pressed on by questioning where the water collection is being placed, was it the right place, is it still doing what it supposed to do, and which area could be the contaminated point and which could be ruled out? Carson who had been quiet throughout most of the discussion, then suggest providing the map as a PDF file to the water company, so they can “zoom in and out” to see the exact location. The meeting closed with the agreement that the
Airport will confirm the location of the water collection point in writing to the water company.

Described by a number of officers in the Operations’ Department, the drainage system is a big headache for everyone; it has becoming a burden of the Operation’s Department to the point that no one knows what to do with it. According to Alfred, Daisy and Matthew, who all have first-hand experience in managing the drainage system, they suggested that one of the biggest problems with this drainage agenda is that there is a series of conflicts of interests involved. As it turns out, the water company had been paid as a “contractor” for the Airport to process water being discharged into their territory, they had also been working as the “auditor or regulator” on the Airport to ensure the water that was being discharged is clean. An interview with Alfred has discussed this, and he explained:

“Prior to 1994, the airport discharged all of its surface water directly into the local water course without any monitoring, so it was recognised at that time that it was not best practice with the potential to cause pollution incidents. We were forced by the Environment agency do something about it, so the airport invested £10 million in a drainage system, and we built a new attenuation lagoon, pumping stations and a whole series of diversion networks so we could contain any polluted surface water, and divert that to the public sewer away from the water courses. At the time, the Environment Agency put quite stringent consents on us so that the water quality leaving the site was at a level such… basically it was clean enough to discharge into the river and into the local water course.” (Interview with the Operation Officer, March 2012)

Alfred’s narratives have described an example of how a particular practice came into place at the Airport. According to the UK Water Services Regulation Authority’s website, most rainwater falling on properties drains into public sewers owned by the water and sewerage
companies in England and Wales. These companies charge for the service in which they remove and process the rainwater. To have a better view on the scale of this particular operation, the map below has been drawn as an example to outline the area in which the airport has a pipe, which is indicated as the red line for the clean water to be discharge into the nearby outfall.
The airport owns all the drainage systems on its site, apart from this particular pipe as outlined in red in the above map. According to the Operations’ Officers, following the Water Industry Act of 1991, a trade effluent consent was required when discharging water into rivers, this is issued by the Environment Agency, then the airport is given consent to discharge water within the specified consent limits. However, in this case, the Water Service Company holds the actual consent and the agreement of this consent is made between the water company and environment agency, even though it is the airport that discharges water into this drainage system. Further explained by Alfred:
“The problem is that the consent is with the water company, if there is any issue and the water company fails their consent, they then look at us and say right! What have you been doing? Is there any activities on site which you guys have been doing, which may have caused us to breach our consent?” (Interview with Operation Officer March 2012).

Matthew, who is a qualified Engineer with background in infrastructure management provided his view of the situation, he explained that this ownership issue has gone as far as it could. He described how over the years, there has been numerous attempts from the airport to seek legal assistance on getting this ownership issue clarified. Matthew pointed out that the pipe that transports the water was actually a joint venture build by the local government and some private entity, but paid for by the Airport many years ago. Back then, there was a different water company which was owned and operated by the local government, and was the statutory undertaker for the drainage infrastructure in the region. However, the privatisation of the water company in the past two decades had changed how the water infrastructure was being managed in the country. Further complications arise when the local government sold off the water company later on, which also merged with a new private water company. Somewhere way down the line, within this privatisation and merges process, the ownership of the water pipe had been transferred to the private company which now deals with the drainage system for the airport.

The description from both Matthew and Alfred has outlined the complexity of the situation that is part of their daily operational activity. The tensions over who is the rightful owner of the drainage system as opposed to who or what poses as the centre of the challenge on how the water is being discharged from the Airport on the daily basis. From the Operation Department’s point of view, the Airport has taken the responsible for all the maintenance and servicing that was supposed to be done by the water company. Officers like Alfred have been seeking to challenge the ownership issue of the water pipe for quite some time, he believed the Airport has been the rightful owner from the start, he claimed that
“We paid to build this water pipe in the beginning, the whole drainage system serves the airport, it doesn’t serve anybody else, and the water will drain back to its original footprint rather than going elsewhere! But now, we somehow have to pay another company use the water pipe, but really, we should regain the ownership and this would save the Airport a very considerable amount of money on surface water changes annually”.

6.2.2 The rise of the energy agenda

As part of the Island International Airports’ carbon neutral commitment, set out in its Master plan, the Airport stated its aim to reduce its carbon emissions on operations through a series of schemes included “energy saving”. During the fieldwork research, the energy efficiency scheme was being promoted as an exemplary initiative at Island International. It was seen as a key scheme that was achieving a great amount of energy saving on site. The team charged with the implementation of the programme had been coined as the “champions” of sustainability at the Airport.

While the success of the energy saving programme was seen as a great triumph, according to Anton, Caron and Matthew who had been part of the project management team that overseen the development and delivery from the beginning, the success of this programme had been driven by their blood and tears. Their story on how the energy saving schemes were first initiated and formed offer an intriguing insight into the complex interactions involved in everyday operations. It all comes down to when Island International started to recognise that there was an energy issue across the site, primarily concerning the cost of utilities and increasing prices from the suppliers. During the period between 2007 and 2009, the Operations’ Department had been instructed to make efforts to reduce energy consumption, as the electricity bills “were going through the roof” at the time.
To save energy across the site, several savings exercises were given to operations officers or technicians by simply going around the airport to “switch off the lights and turning off the escalators manually”. This practice was the way to “cut the energy bills”. However, as Caron and Matthew pointed out, back then, there was no consistent data recorded on how much energy was being consumed and by whom across the site and there was a long standing problem with the metering and billing system. There was no particular unit dedicated towards managing the energy consumption across the site, the Airport simply received and paid all the utility bills including those of rental properties, retailers and private properties on site.

Some bills were frequently queried by tenants based at Island International Airport, and to add further complications to the situation, there were virtually little or no records that existed for the electricity meters across the Airport. To identify the whereabouts of those meters and when they were first installed had become a particular challenge. It also later turned out that, as the Airport site grew and expanded over the years, the meters that had been placed around the site were all different, these comprised of various types of technologies, ranging from standard analogue dumb meters to smart meters with incompatible telemetry systems, with some existing systems dating back to the 1970s, with the oldest meter on site being a water meter which dated back to the 1950s. The picture below is an example of an old meter installed at the airport with some still active up until the fieldwork period of 2012. The operations’ officers could not verify the origins and installation dates of a lot of the meters, yet they were able to determine the manufacture date that was back in the late 1960s to throughout the 1970s.
Photo 6.1 Meter system from the 1970s at Island International Airport

Photo 6.2 Water meter from the 1950s at Island International Airport

Source: Fieldwork
The insufficient records on utility meters at Island International meant that the recording of energy consumption was managed with great difficulty. It was a full time task constantly looking out for hidden meters, and a contractor known as the “meter man” had been tasked to go around the airport site identifying the locations of meters and then drawing their location on blueprints; back and forward on the daily basis. He also took meter readings manually and written them in a book, as he had primarily been hired to take manual meter readings across the site on a quarterly basis.

The expansion of the airport has seen it grow from a small regional airport with a single terminal, into the current three terminals and two runways seen today. With over 120 retailers on site (often occupying several premises each) and hundreds of non-retail tenants and seven hotels. The Operations’ Officers estimated that there are over 2000 meters measuring usage of electricity, gas and water across the Airport site. The task of reading the meters for the entire site took three weeks to complete and all data was then manually inputted into the billing system for invoicing. The changes of tenancy which sometimes modified the location of the meters during the refurbishment process, and the different metering technologies that was put in place, have all played a part in the complications of organising the energy data. In some cases where meters were inaccessible or simply not working, the numbers were based on “estimated” figures. The whole process was labour intensive and very time consuming and it also caused other problems such as those attributed to the loss of data, and time delays in retrieving such data. All of these issues had resulted in over a million pounds worth of invoices being disputed between the Airport and its tenants, with some bills which remained outstanding for a number of years.

During this period when energy saving was high on the airport’s agenda, there was continuing protests from members of the general public against Island International Airport’s operations that led to cases in court. The wider protest by the environmental activists over the Airport’s operations put Island International Airport in the media spot light. Having realised that the local government had put further pressure on Island International Airport in relation to its dealing with climate change and sustainability issues, it had encouraged a number of
Operation Managers to work with other Officers from different units with the idea to pitch the energy efficiency programme as part of the wider sustainability agenda.

A series of 19 projects were targeted, these ranged from the installation of LED lighting, boiler and chiller upgrades, to updating the Building Management Systems and the installation of a smart metering system. All these projects had been put together into one package, which then became “The Energy Efficiency Programme”. Anton whose background was primarily Environment, took the lead by presenting the programme at the Senior Management Team (SMT) meeting; he explained that as a joint effort, they have decided the whole programme should be pitch from the standpoint of achieving the carbon neutral commitment. The presentation gained positive feedback from the SMT, and was praised as “the right thing to do”.

When the global recession hit in late 2008, like many other business organisations, Island International Airport took certain financial measures through exercises including job cuts, OPEX budget cuts and reduction of budgets for capital spending (CAPEX). While the Airport continued saving energy by turning the lights off manually day in and day out, the urgency to cut the energy costs further had become more pressing than ever, in conjunction with the departmental budgets that had been cut across the organisation, the concerns for rising utilities bills at Island International Airport had become even more widespread. Both Carson and Matthew pointed out that, the manual meter reading and recording process could not be sustained with the ongoing strain over availability of manual resources to carry it out, they believed that to achieve more significant savings, a formal structure was to be put in place with proper utilisation of appropriate technologies. In the situation where resources had become increasingly scarce, Managers like Carson and Matthew had been constrained by the budget and resources cuts and was unable to make any further savings under the existing practice. It was felt appropriate that a capital expenditure application should be submitted for developing a centralised system and replacing the meters across the site. Despite the Airport’s already raised concerns for the rising energy bills, the application for the smart meters project was immediately turned down on the basis that “there is a recession currently going on, and therefore there is no budget to fund this”. 
Carson and Mathew argued that the current practice for energy saving was not sustainable, and investment was necessary, although the initial setbacks due to funding cuts did not deter their objectives. They persisted with this energy agenda, by raising it to the SMT about the criticalness of this project, they emphasised that the need for solid energy consumption monitoring was also a legal requirement to correctly meter tenants consumption, as there has been too many unsolved electricity bills, it was absolutely necessary in order to ensure full revenue recovery of tenants utility costs. It was also a requirement for the upcoming EU-ETS and CRC schemes that were going to be made mandatory by the government. Carson and Matthew highlighted the fact that if the business continues as it is without a robust utility monitoring and billing system in place, the airport was leaving itself vulnerable to fines and more importantly from the airports perspective, ever increasing losses due to energy price increases with no means of ensuring that the costs associated with tenant usage of its utilities could be retrieved. Nonetheless, the funding was not granted on the second attempt.

When Carson was eventually about to accept defeat and give up the business case, the situation took a turn when a financial associate, Violet, who had been working closely with Carson on other projects, approached the finance director, Violet presented the whole project idea and explained the purpose in greater detail to the director, who then agreed that it was “the right thing to do!” The consent was eventually granted based on the clear understanding that it would have to “pay for itself within the first year of going live by recouping lost revenue”. Although the initial funding was to re-start the metering project, it then started a series of initiatives that further generated the “buy in” other projects with the aim of saving energy and reducing costs across the entire Airport.

6.3 Emergence of intermediaries in sustainability transitions

From this fieldwork experience, it became apparent that the Airport is in a constant state of change. Described by many members that “every day is different here”, some even suggested
that the nature of the work environment is what attracted them in the first place. This sense of how the state of change interacts with everyday life at the Airport is described by one of the Project Managers for the Smart Meters Project, with over 7 years’ experience on delivering different projects across airport site, he explained:

“The Airport itself has a different terrain, it's not the same terrain, and there is multiple terrains in a single area that you can only gain by experiencing it change so readily. I once did a security access project that installed 20 doors in one area, the next Monday when I came in, they were all gone! The whole of that wall, we are talking about 40 or 50 meters of wall, that was all gone! And all my kit was in the skip! Down there!” “This is that type of environment that moves so quickly, that no one could say that's how the airport operates, because the airport is just like water, and it changes all the time” (Interview with Project Manager August 2011)

This continually observed state of change has raised some questions concerning the principle of Transition Management, relating to what extent can different subjects or objects involved in the transitions engage with each other, enabling configuration and evolving according to “steering towards a common goal”. In other words, how is engagement being defined in the transition framework? From the fieldwork, different forms of engagement have been observed, examples such as through the application of CHROMA, an Airport Enterprise Relationship Programme, which contains all key airport operational information including live flight schedules, the weekly “social meeting” between all terminal managers to catch up about the activities and events that go on in each other’s areas and the “intern” opportunity for executives to spend a day working alongside the operations’ staff to gain an overview of the ground activities. In the environment where every individual possess different knowledge and expertise that allows them to operate in their everyday tasks, their roles become vital in the airport operation that requires constant coordination in the state of change. While these examples demonstrate the formalisation of engagement, it also outlines the significance of the people who facilitate this process, and therefore, the role of intermediaries seems to be particularly relevant here.
Although there has been some interest in better understanding the role of intermediaries in the transition framework (Van Lente et al., 2003, van de Kerkhof and Wieczorek, 2005), the current discussions in this area are still being developed. Vogelezang et al. (2009) described intermediaries from the transitions perspective as part of the knowledge transfer process, in which the “research institutions would develop knowledge that subsequently translated into practice via the extension services, which is the role of the intermediary”. Much discussions in this area are largely derived from innovation management, with the initial concept originating over centuries ago in the agricultural, wool and textile industries “where they not only deal with trade but also play an essential part in disseminating knowledge about technical improvements in their field” (Howells, 2006), the present day interpretation sees this role as simply “the middleman”.

It has been argued that there are different forms of intermediaries, which can be present in an organisation, an individual broker or group. While their role has generally been defined as shaping relationships and facilitating the process of knowledge and technology which transfers across people, organisations and industries (Howells, 2006), the academic interest still seeks to develop a better understanding of their purpose and how they operate.

Looking at the transitions framework, Hodson and Marvin (2009) suggested intermediaries as “deliberately” positioned to act in-between by bringing together and mediating between different social interests”. Hodson and Marvin’s (2009) interpretation of intermediaries is highly ascribed to “strategic” functions in a particular context, and their work has placed more emphasis on the establishment for the purpose of shaping and managing technological transitions. Initiated by Van Lente et al. (2003) work on technological transitions, in which intermediaries have been described as the “knowledge brokers” to provide the coordination required between industry, policy makers, and research institutes. This view has emphasised the potential of the intermediary’s role in sustainability transitions, and how this facilitates engagement in the transitional process. The upcoming sub sections seek to discuss further the role of intermediaries and how they emerged in the airport environment.
6.3.1 Operational boundary and production of practice

Following on from the discussion concerning the role of intermediaries in the transitional environment, we recognise their significant task to transfer knowledge between individuals or groups, further questions on how they emerge and the conditions that they operate under have been put forward. Previous comments which described how the Airport Operations’ is made up of different “terrains” seem to be relevant in making this connection. The aspect of terrains or place could be discussed from the organisational studies of boundaries and practices, which seeks to focus on the interaction between two common analytical points concerning how an actor’s work can shape or even expand the boundaries, and whether the interaction between practice and boundaries has led to institutional change or stability (Zietsma and Lawrence 2010). Described by Lamont and Molnar (2002), the concept of “boundary” has been present as a distinction that establishes categories of objects, people and activities, with a certain “expectation” involved as how those elements are being set out within the boundaries (Vermeulen et al., 2007).

The theoretical debates on sustainability transitions have focused largely on making a positive change at the societal level as a whole. Here, it argues that while a positive change at the higher level matters, the impact of those changes would be local and not necessarily evenly distributed. Hence, further understanding of how different terrains involved are being defined also needs to be considered in the transitions process. An example to be presented here highlights the role of Operations’ Officers as the knowledge intermediaries. Narratives based on the meeting details recorded in the fieldwork diaries as well as interviews with members have been outlined as follow:

“Edith told me about a meeting with “the firemen” and had invited me along to meet with them. Edith explained to me that the firemen were situated on the other side of the Airport and have been particularly enthusiastic about developing some environmental projects at the fire station. William who has been involved with communicating with the firemen said that those firemen had recently completely some online course via the Open University, where
they have learnt about some environmental subjects and now seem very eager to make the fire station “green”. While I was rather interested in this story, William shook his head and said “those guys have been pressing really hard to get us to help them”; “they have just got too much time on their hands!” I was surprised to hear his reluctance, but found that the other officers also seemed disinterested in the firemen’s environmentalism. As it turned out, the firemen’s request had been passed from one to another by each Officer.

“The meeting was held at the fire station, which was on the other side of the airport. Edith had to drive us to the site while Matthew, the Operations’ Manager also attended the meeting by invitation of Edith. We were greeted by Eric and Walter who then showed us into a meeting room. Eric had a notebook in front of him, he quickly started talking about their ideas to make the fire station “green”, he had papers in his hand which listed ideas that they thought they could do, ranging from replacing the lights with LED lighting and installing a biomass boiler, to installing a meter and putting out recycling bins. William suggested that the recycling bin is a good idea and feasible, and he would look at expanding the recent roll out of the bins across the terminals to include the fire station. Eric and Walter nodded, but very eagerly asked about the feasibility to improve other parts of the building. Matthew, who has the expertise in energy infrastructure gave an overview of what is required for the fire station, he asked about their current usage of lighting and boiler. Eric explained that the station could do with better lighting, as the current system in place seemed inadequate, and the boiler they have had to be on all year round to heat the “drying room” which essentially is used to keep the kit dry, and he personally thinks that is not very good practice. Matthew explained that there are some issues involved in having a biomass boiler at the fire station, he had done the calculations previously, and “the sums just don’t add up”, he further stated that it would also be extremely difficult to gain the business case approval because the current cost of a biomass boiler does not comply with the company’s policy on payback criteria”. Edith also agreed to the biomass boiler option as not being viable based the company’s investment criteria.

Eric contested with a laugh then said “wouldn’t the installation of biomass boiler be “a big green tick” in the box for the Airport. Everyone else grinned, and Matthew then explain how
they had already considered the technology, not only was it cost prohibitive, even when calculating the Renewable Heat Incentive payments and Enhanced Capital Allowance tax relief, payback was calculated at over 7 years, he went on to emphasise that although biomass boilers appear to be a good idea by most on the outside, in his view they are in fact very unreliable and require constant maintenance. And on top of that, they would have to build a new boiler house to accommodate the biomass boiler and all its external components, like the feeder hopper, control panel, delivery loading/unloading area and fuel storage compound. The firemen listen tentatively, Matthew then said he would look into some funding scheme for the lighting offered by the airport internally, which usually funded improvements up to £5000 and did not require going through the usual CAPEX process. However, Matthew pointed out that the fund would not be enough to replace the fittings that house the lamps, but they agreed they would all look into the funding option”.

The above episode of meeting with the firemen has raised some interesting aspects. First, the role of intermediaries has been established from this observation. The presence of Edith, William and Matthew were evidently seen as the “knowledge broker” in this case, Matthew in particular demonstrated his expertise in energy and infrastructure by providing a constructive assessment and the options for the firemen to consider. While Edith and William seem to be less forward about the green initiatives, Edith acted as the facilitator and provided the link by gathering the knowledge expertise, in this case, Matthew, to participate in this meeting.

The second issue that emerged from this observation is the framing of the “green and environmental” practice, with the particular question on how the agenda is developed and interpreted by different people in this case. The initial enthusiasm expressed by the firemen provided the additional narrative concerning the role of the environment team that also reflected the wider agenda for sustainability being perceived. While the firemen sees the installation of a biomass boiler and recycling as good environmental practices, the operational implications and financial considerations highlighted by Matthew and Edith, portray another insight of how environmental practices are assessed and categorised.
Their views were based on their previous experience, and their interpretation of the organisational boundary was also how they make sense of the situation and the environment. The emphasis on the financial consideration and criteria are seen as the focus of how the decision on investment had been prioritised; the issue here is that while the discussion on the triple bottom line of sustainability seeks to develop a more balanced approach on matters that involved social, economic and environmental issues. The observations from the fieldwork have recognised that there is more effort being put forward to rationalise the financial objective as the priority.

While there has been concerns over the wider approach towards the overall issue of sustainability, this research seeks to investigate how certain practices have been initiated and how they have taken shape at the Airport, it argues that there is greater sense making processes involved on how individuals seek values and justification, but also how they frame the relevant subject as part of the process of rationalisation, which are vital to be acknowledge.

6.3.2 Establishing engagement and formation of alliance

According to Coenen et al. (2012) there is a spatial aspect to be understood in the transition framework, more specifically, there are questions as to how or where transitions take place. Outlined in chapter four, the researcher made contact with a group through an official meeting to initiate the arrangement for this fieldwork. This group which was later known as the Bees Club was put forward by Edith as a window to learn about the operations, with members from different business functions at the airport, the group is regarded as an exemplary for delivering the sustainability agenda at Island International.
The setup of Bees Club began as an informal gathering for people to talk about operations and infrastructure, this gathering slowly evolved into a regular group meeting with a formalised agenda largely concerning energy saving activities. The group which met on a weekly basis consisted of several members, specifically invited from across different operations’ functions and units, included Engineering, Environment, Procurement, Development, Finance and Information Services. William, an operations’ officer with a environment background has been involved with the group from the very beginning; he described the organisation of the Bees Club as follow:

“The Bees Club began by delivering smaller projects, but that suddenly took off completely when we got a lot of huge investment, delivering massive savings, and that's really what has happened over the last few years… it's very difficult for me to get into the nitty gritty of what actually goes on. But for certain issues, there should be a working group in which the Environment Department has a real function as advisers, not as in delivering, because that's not what we are here to do, we are here to supports others. For example, at the Bees Club, we were there to give them advice, but it's the engineers who have the expertise to be able to go and do the job, and we can support them”. (Interview with Operation Officer, Nov 2011)

Although, the Bees Club was established primarily as a point for people to engage informally, this was partially encouraged by the working experience of Carson and Anton, they initiated a regular meeting to “moan about their work and other stuff”, which led to the collaboration over the energy efficiency scheme. In turn, this defined the need to “seek a knowledge partnership” within the Airport organisation, Cason and Anton recognised the gaps to “stay informed” about operational activities across different functions on the site, their struggle to secure the CAPEX approval instigated the need for a channel which would enable better partnerships between members to share knowledge and expertise.
Previous studies have suggested knowledge can be socially distributed through different forms or channels such as social community, groups, or networks (see Beger and Luckmann 1967, Kogut and Zander 1992). Derived from the issue of space and distance, this affects how people across different functions interact with each other, and such interactions between actors can build up into more solid connections, institutions and networks. These seem particularly relevant to the Airport environment as the vast scale of Island International and its operations means that the distribution of information or knowledge can be varied. The setup of the Bees Club enabled a network to be developed that could potentially form a channel for knowledge distribution, this Group emerged as a point for allowing different expertise from various business departments to gather together where they could put forward relevant ideas and provide advice or support for potential projects.

The savings and revenue recovered as a result of the implementation of the Energy Efficiency Programme, has seen the Bees Club’s status rise to become the “sustainability champions”. The success of the schemes was widely recognised and the group was given a star award “for their efforts and works on sustainability”. They have not only had their profile increased at the Airport, but the schemes have also gained wider recognition, and the project members have been interview by various sector magazines as a leading example in implementing retrofit projects using energy saving technologies such as LED lights.

Carson and Matthew pointed out that they persisted with the intent for the senior management team to make sense of the relevance and importance of the energy efficiency agenda. The success of the schemes has not only strengthened the credibility of their technical expertise, it has also opened further opportunities and formed an alliance with key figures involved in the Airport business process. Matthew stressed their ultimate goal was “to prove to them why we need to do this! And now that they (finance) know how much money we have saved for the Airport, we can deliver more projects!”

While the Club has been highly praised by the senior management team for “taking initiatives that helps the organisation to make great cost savings”. The illustration of the schemes has
put emphasis on its achievement for delivery “great financial savings” for the Airport, the message from the senior director to all Island International members stated:

“One excellent example of cost control has been energy consumption. Not only does reducing consumption take us towards our carbon neutral commitment by 2015, but it helps us manage costs, particularly with the hike in energy prices we have seen. I am pleased to say that as a result of lots of great work by our operation team and supported by all the areas who are high energy consumers, we have so far this year managed to reduce our electricity consumption by 10%. This is great progress and if anybody has any ideas about how we can reduce energy consumption further please drop me a line and I will pass on your suggestions to the team.”

The Bees Club’s saw the gaps for “negotiating” further investment opportunities directly with the senior executives. The Club set out additional project proposals with more ambitious plans to improve the Airport infrastructure, and the formal plan for a specialised department was also developed to focus on management of energy infrastructure, the proposed plan was to create an official operations function and formalise the energy efficiency projects as a business stream within Island International's organisation function. The assurance was given when the Finance Director offered “a blank cheque” to the Club based on the financial payback conditions, this not only refined the relations and expanded the Bees Club’s operational boundary, but more essentially, this understanding further defined the trajectory of how the Airport set its sustainability agenda for the foreseeable future.
6.4 Negotiating for sustainability

“You do learn how to play the game after the while, you learn what you think is going to hit the right buttons, and press the button with the CAPEX panel…. CAPEX is a bit of horse trading, a bit of argy bargy, sometimes you would say to people here, look guys! Our reputation is at stake! You know? If we were being played as the polluter again, can you imagine if we were put on the front pages of the papers or on the BBC News with the headline Island International Airport is a big polluter? ” (Interview with Operations Director, Aug 2011)

The above extract is from an interview with the operations director which discussed his experience with the organisational process of CAPEX. His description has highlighted the particular situation as to how a certain agenda is negotiated, but also, the framing of sustainability as a practical mechanism to influence investment decisions. According to Kramer (2008), negotiating is part of a sense making process, by which “individuals acquire social skills and knowledge to assume organisational roles, the negotiation process between an organisation’s attempts to socialise individuals to fit its needs and goals and the individual’s efforts to individualise organisations to meet their needs and goals”. There have been some interest in understanding negotiation as part of the process within an organisation, the discussions in this field have been emphasising the social perspective of constructivism, this is often associated with claims that our social world is constituted by language-based distinctions which are socially defined and established (Tsoukas, 2000).

The previous sections have outlined the complexity of the operations and fluid relationships within the Airport environment, and through this insights, it has also identified the ongoing process where individuals attempt to make sense of their role in the operational territory that they have been assigned. Hence, the consideration for the theoretical perspective on negotiation as part the sense making process has been further reflected upon. Suggested by Zietsma and Lawrence (2010) “if people are dissatisfied with existing practices, they may practice work that would affect the practice directly, however if boundaries prevent such
action, they may first engage in boundary work to create the conditions under which they can influence practice.”

The perspective of this “dissatisfaction” has been considered, however it is still uncertain to what extent it drives individuals to “negotiate” their place and space. Through understanding of the stories that have been described so far, we have seen some examples that demonstrate the production of practice stimulated by certain events of situations, for instance, the shaping of the Environment practice was born out of the Section 106 agreement and the high profile public inquiry; the implementation of recycling waste bins was framed on the basis of improving customer service as a commercial project instead of an environment scheme, and the alliance of Bees Club’s members to persuade the senior management to recognise the relevance for investing in energy reduction technologies by highlighting the issue of compliance as well as the loss of revenue. These stories have in part establish the process in which the participants became engaged with the practice of rationalisation, seeking value of their decisions to invest in sustainability, moreover, it also highlights the application of the framing mechanism used to negotiate conditions that would improve the individuals status.

According to Kramer (2008) and Morrison (1994) management cannot objectively define or impose roles on employees; rather roles develop through role negotiations as employees have their own ideas concerning job roles that may differ from their supervisor’s thoughts. This perspective can be mirrored from the story of the Bees Club and the development of the energy efficiency scheme, when the members involved found themselves in a particular situation, with the lack of resources available to operate under an increasingly complex system at the Airport site with outdated technology and facilities. Together with the hike in energy prices and the ongoing dispute with tenants for outstanding bills, this reached up to £1.3 million at one point. It is seen that the combination of those pressures has added particular constraints that eventually prompted the members to pursue change. To further understand the circumstance of when and where negotiation process takes place, the upcoming sub sections will explore and examine further details that emerged from the fieldwork, to seek views on the components that enabled evasive action that lead to different forms of responses.
6.4.1 Budget challenge and competition for resource

Glac et al., (2012) point out that much of the literatures on negotiations focus on the self-interested economic motivations of the negotiators, with factors such as “strength of incentives, information asymmetry and greed” increase the likelihood for individuals to engage with negotiation. In line with this view, Bansal (2004) suggests that economic prosperity is seen as being tied intrinsically to the social equity and environmental integrity principle, and almost everything involved in our daily lives is bound to this measurement of value that is associated with the market conditions.

One of the key issues that emerged from this fieldwork has been the individuals experience with CAPEX business process. Chapter four has outlined and discussed this particular process that been perceived as a significant part of Island International’s decision making framework. However, investigation into this has uncovered some interesting aspects, not only is the CAPEX process seen as a complex procedure to make key investment decisions, but how its significance has defined the way resources are prioritised in practice. It also draws on further boundaries between functions that generate tensions among members. The subjectivity of this tension and the boundaries that have been drawn, become central in this research thesis.

One of the key elements that drove the success of the energy efficiency scheme has been the persistence of key individuals. Further descriptions concerning this particular behaviour have disclosed other issues that are more complex than initially suggested. Carson emphasised their second attempt to resubmit the business plan as a key development for their journey.

During the time when the Airport began to assess its annual budget forecast, a budget wish list would be collated from each departmental function to be reviewed and agreed by all budget holders. This “budget wish list” is part of the budget review process which
determines how resources are to be allocated between each departments, including allocation of CAPEX spend.

Investment for the CAPEX schemes are based on the cash generated from the airport business, according to the CAPEX programme manager (Interview with CAPEX programme manager December 2010) they explained that:

“Setting the business plan is an annual process, we speak to everyone in the airport about what investments they want to make? And we then develop a sort of wish list for investment, we then look to organise the structure so we can prioritise and approve the list….CAPEX is a notion of budget of what we are thinking of spending, even when they are noted in the plan, it doesn’t mean they are actually approved, they still need to go through the approvals process which follows on from the plan.. it takes a top down approach to view its financial status and capacity, the organisation is then able to set targets for capital expenditure investment for the business as a whole”’. (Interview with the Business Manager, November 2010).

The initial energy efficiency scheme was forwarded as an investment proposal to the Operations Director. The indirect discussions between the key members involved in the development of the energy efficiency scheme, which gained approval when the finance manager who had been working with Carson to formalised the plan, approached the Finance Director directly. While the scheme has already received consent from the senior management team, Carson and the team were encouraged to put forward the investment proposal to be included in the wish list. When the approved budget list with the projection of the provisional CAPEX proposals was released back to the department, Carson and the team found the energy scheme had been excluded.
Carson recalled his initial reaction was mounting fury, he compliant to the finance manager and express his frustration. While Carson was ready to accept defeat, the finance manager was unable to comprehend the initial outcome; she approached the Finance Director again to seek clarification and the rationale behind this decision. They then realised that the proposal for the energy scheme had not been submitted to the Finance Department in the first place, in fact, it was turned down during the initial review by other members of the Operations Department before being collated as part of the wish list.

This raised particular tensions among members in the Operations Department, whereas there had previously been concerns over the way operations had been prioritised in Island International. In fact, the difference in how the relevant agenda in operations needs to be organised is considered to be far more divisive than initially realised.

While making investment decisions for long-term assets has been acknowledge as a complicated issue in most organisations, the process constitutes a significant proportion of expenditure that impacts on its operation and future (Northcott1998). However, in an assets intensive business, the airport is very much dependent on the ability to provide appropriate function and facilities to operate, with infrastructure being at its core to enable this function, the extent of complications in relation to the decisions made for operations and the infrastructure seem to be a particular concern.

On the whole, every part of operations is deemed to be critical. It has become clear that members across all spectrums see their own operational territory of work as more valuable than others. In the event of budget reviews and the CAPEX process, the increasing demand of revenue for a business with decreasing budgets has only intensified competition for resources. This has led to a particular situation where different values are competing against each other, whether it is the airside operations versus landside operations, passenger experience versus the commercial partnerships with the airlines or business tenants versus private tenants, and vice versa.
The concerns over the CAPEX procedure and the way resources have been prioritised, have been widely debated by the members. The frustration was not only shared among operations members, but also within the senior management circle, who not only act as budget holders but also hold the role of assessors who review the overall budget plan. The issue of competing values is seen as a common challenge and hurdle that is part of the overall process. As one of the Directors described their experience in dealing with the budget review and CAPEX process, narrated:

“There is big pressure on us to keep departmental costs down, I can absolutely understand that! The truth is, there is never goanna be enough money to do what you want to do! People will have their own ideas, opinions, priorities, a lot of people are on parole about what they are wanting to spend on… it all comes down to a bit of horse trading at the end of the day, that is part of it, the best part of it really, they know that, if you don't have this, this is the consequence. Now, I am not saying that, my priorities are the greatest of all, but the business needs to understand what the consequences are?” (Interview with Director, August 2011)

The above has highlighted the anxieties over budget issues and power issues within the organisational structure. Further concerns expressed by another Operations Manager with almost thirty years of experience at Island International Airport. He shared his apprehension, addressing the recent budget review in which he saw his budget being reduced, he angrily stated:

“It becomes very difficult to work. Look! We don't spend money because we have it, we care for it or we love it a lot! But, we need to spend it, it's not like we are awash with money here! It’s more and more challenging year on year! I understand that you know, the business model and all what we we are doing, but it’s very difficult year on year, just keep saving! When your kits getting bigger and bigger, there is more and more of it, it's
getting older as well; it becomes more and more challenging! We constantly get challenged, and we (have) to come up with different ways of working. You just have to keep looking at the working process, and other times, I have gone overspent because there are valid reasons, you know, because on certain lines, I have had to cut that line…” (Interview with an Operations Manager Sep 2011)

Both narratives above have highlighted the pressure they are under to manage the increased demand of capacity with less budgets, one of the main issues was down to the nature of airport operations' work as being “reactive”. It has also emphasised the impact of budget reduction in certain operational areas, in which the Operation Manager felt further constrained by the capacity that they had been given and forced to take a different approach to the way work was organised.

The Manager discussed the situation further and played a video of an incident that took place in one of the terminals, it showed when a vehicle drove into some automatic doors before they had time to open, which cause substantial damage. With annoyance, he sighed, then explained:

“That’s one of the great examples that is, the automatic doors (referring to a recorded CCTV footage), I used to get a wacky bill for about £1000 every time things like this happened, so I started recording it, because that (bill) was coming out one of my (budget) lines! But now, at least I can charge it back, so it doesn't come out of that! You see, you just have to challenge yourself, and look at these (budget) lines and see how you can works things differently, sometimes, you might have to say, well we won't do this for this year now, we will have to do it next year, yeah? But then next year comes and you don't get the money, and you can't do what you are supposed to do from the last year, it's a shuffling process all the time!” (Interview with Operation Manager Sep 2011)
The struggle over budget constraints and the ongoing challenge to justify costs for operations is evident. It has outlined the complex situation that these members have found themselves in, not only have they had to compete with others for resources, but also within their own areas where each priority is set against one and another. There is also an issue here where we see individuals struggling with the changing conditions in a shifting environment, moreover, what these conditions require them to do, has an impact on the way they organise their operations.

6.4.2 Seeking value for investment and the rhetoric of justification

“The main issue here is, at what point we pay for it?” was conveyed to the panel by one of the senior directors when assessing an investment application for CAPEX approval (Fieldwork diary June 2011). This is the ultimate question that everyone seeks to learn the answer to at Island International, however, there is also a shared sense of ambivalence concerning the CAPEX process, and it has created some scepticism towards the way financial decisions are made at the Airport.

Different individual's experiences with the CAPEX and budget review processes has been met with some dismay, this in turn has placed further emphasis on the success of the energy efficiency schemes, which have been perceived as a great triumph among the operations staff. However, many see the real challenges lie with proving the justification for the investment, and there is an issue as to how the value of those investments are being perceived and related to by the people who essentially make the decisions. This is particularly the case with one CAPEX submission which related to some high maintenance requirements of the infrastructure. Another operations manager with a background in airfield policy explained their dilemma:

“How do you put a figure on an airfield? Airfield infrastructure itself doesn’t generally generate revenue; it only enables you to operate! It
may be in somewhere to improve the operations, but it’s very difficult to put a solid financial case to most of the airfield infrastructure projects! It’s probably much easier for people in the terminals and in the retail areas to puts in some hard figures and says we spent this money and get so much back! In the airfield, you very often don’t get anything back!” (Interview with the Operation Manager March 2012).

It seems that the value for investment is in question; however, how the value of investment is being assessed is largely a rhetorical question. As discussed previously, the general principle for CAPEX has been set out, and these are based on the criteria such as meeting regulatory requirements or focusing on the potential for revenue generation. Nonetheless, observation has found members attempts to grasp not only the format of the financial process, but they also seek to make sense of their own values as well as the values they are competing against.

A finance manager with an engineering background described their experience of managing the CAPEX process for members of the operations department:

“Sometimes people only see their area, and get a bit frustrated, they feel that it’s the Finance system that is getting in their way and holding them up. But, generally we try and work with people if something needs doing. They don't necessary understand sometimes why they can't get the money, when there is a good reason why they can't, because something has happened in another area, and we can see that, if a runway degrades, we get shut down as an airport […], we lose all our money, (if) a taxiway is out of commission again, or if there is a problem with a taxiway, airlines won't fly from here, so you can see why, when you get the carbon reduction schemes, if you don't do them, the airport will stay open, where some of these things, if you didn't do them, the airport would close, so, that's why I think sometimes, when you get to the decision point, they
The Finance Manager had drawn on the principles and considerations for budget spending at the Airport. They have shown that justification of investment depends on the critical aspects of Airport operations; this has been widely debated by members, as every aspect of the operations at the Airport can be argued as critical, however, this is also where tensions arise as some members see it as a disproportionate approach on how investment decisions are made. It is also apparent from the Finance Manager’s view on the way that work has been prioritised, and how the issue of sustainability is being perceived and valued, has also been challenged.

While the view on the way to prioritise the budgets for each operational function is clearly divisive, it is also evident that how a particular agenda has been framed also shapes the outcome of key decisions such as CAPEX. The common practice has been the framing of regulatory requirements, where all members see it as essential not to breach regulations. Alfred, an operations officer, referred to his experience with the drainage system that required a higher level of maintenance to ensure the airport does not breach any consents:

“If it’s a regulatory requirement, generally, capital outlay is available, it is made available!”…The Company understands it’s got its obligations to meet legislations, and it does! (Interview with Operations Officer, 2012)

Alfred also pointed out, even when the investment meets with the regulatory requirement criteria, the financial process remain as a difficult part to deal with. He also indicates his particular approach and perception for investing in infrastructure.
“It is like any business, it would try and squeeze the asset life as far as it can, until the point where it almost becomes patched up that much you can’t put any more patches on it! To a point where you then you realize you have no choice but to invest in it!” (Interview with Officer, 2012)

From this perspective, the life expectancy of the infrastructure is also taken in to account. However, the value of investment is still in question.

Another key factor that has been discussed widely when considering capital investment is the payback period. While the authenticity of this requirement has been previously contested, the line was clearly drawn in the case of energy efficiency scheme, the Finance Manager who worked with Carson and the team to develop the CAPEX submission, highlighted the significance of the payback period as follow:

“To allow us do these schemes, we had shown a good financial payback, and that was the driver behind all this actually. (For the example of energy schemes) going from the position where they would have been knocked out (because there were things in the operations budget which needed to be done first), as no specific money had been allocated for this….but if you invest now, and you get the pay back within three years, it's a good idea, it's a no brainer really when you actually see the figures” (Interview with the Finance Manager Nov 2010)

In short, the successful implementation of the Energy Efficiency schemes, which saw a large reduction in energy costs as well as revenue being generated by recouping unpaid bills from tenants on site, has led to further measures for encouraging additional schemes. While the underlying principle of the 3 year payback framework is seen as key, together with the
guarantee of financial savings and increased profit margin generated from the schemes, all of which have helped form a robust case for future CAPEX applications.

The process of the CAPEX application is the means to allow members to communicate their needs, and how the meaning of their needs are developed and interpreted are relational. The strategic purpose for practice of the financial procedure is apparent, the investment criteria helps to guide the actions at the Airport and it remains as an indicator.

Despite the financial guidelines in place, the understanding of how the CAPEX criteria can be met is seen here as an organisational rhetoric. While the financial challenge and the competition for resources will persist as part of organisational practice, the key aspect here therefore lies with the way individuals classify their operational needs and how they construct processes around it.
6.5 Summary

This chapter further discusses the experiences observed at Island International in addition to parts of the previous chapter. Focusing on how members of the Airport engaged with the agenda of sustainability, further aspects have emerged and have been examined here. Stories like that of the drainage system and the energy efficiency schemes have highlighted dynamic relations as being part of the everyday practice at the Airport. It is also clear from the observations that the growing complexity of the operational functions, coupled with the reduction in organisational budgets, were issues that posed certain constraints on the existing operations and has a consequential impact on the way members organise their work and how they conduct their operations in practice. Hence, the role of the Airport and its priorities are in question.

The way the financial procedure is organised has dominated how the Airport operates and how it influences an individual’s work. While the CAPEX process is set as a strategic function to help the Airport manages its resources. As the whole process is viewed from a financial centric viewpoint, individuals of the operations function have struggled to make sense of it. As part of the Airport’s ongoing efforts to expand the business operations beyond the usual airport services, the lengthy process of CAPEX and the complex associated procedures, determines the way the Airport sets to prioritise its investment and how it organises itself as a growing airport management enterprise.

While the financial procedures such as CAPEX offer a systematic method to managed the Airport’s resources, as the stories demonstrate; there are motions that are not able to be transcribed during the transaction of information and the meaning of certain agendas were not always systematically captured. Furthermore, the informal interactions between individuals (as seen from the case of energy efficiency schemes) have validated the dynamics that have largely been ignored from the perspective of Transition Management. It suggest that the relations between individuals and the associated networks have also contributed to the shaping of the sustainability agenda. While the aspect of how individuals relate to a particular
issue is significant and remains as a challenge, the key question here is how the meaning of an agenda is assigned to a particular situation, and how do individuals manage the competing values within their own operational areas?

The stories have highlighted regular tension as part of peoples everyday life, nonetheless, this tension has triggered attempts at further negotiation with the senior management team that allows individuals to shape and redefine their work. It became apparent that the way the financial resources were prioritised, has had a great impact on how individuals approach their work. This impact is seen as vital here, as it creates a force, or an urge for individuals to take further action. The instance of the energy efficiency schemes has illustrated an individual’s persistence to overturn rejection, instead of acknowledging defeat. The relevant members were determined to make their agenda relevant by reframing the project using different rationale.

In spite of the shortfall in agreeing to what sustainability is, the concept has largely been framed as an environmental issue with much focus being put on the wider impact to humanity in general. This has unconsciously created a prejudice towards the wider agenda of sustainability. From the stories and observations, it suggests that the agenda of sustainability is seen largely as a morality issue by the Airport, hence, there is a general concern for how sustainability is being perceived and related to by people, and how this preconception influences the way decisions are made at Island International Airport
CHAPTER 7- Governing sustainability transitions in everyday airport operations

7.1 Introduction

The overall aim of this thesis is to investigate how members engage with the sustainability agenda at Island International Airport. It sets out three key subordinate questions by asking what the sustainability agenda is, how the agenda was decided, and by whom. Drawn from the theoretical frame aspects of Institutional Logic and the Critical Management Studies (CMS). This chapter focuses on addressing these key research questions by reviewing the findings and critical issues that emerged from the ethnographic experience.

The thesis has so far described and discussed the experiences observed by the researcher at the Airport. In chapter two, it highlighted the triple bottom line as the common approach to sustainability and underlined the theoretical emphasis on seeking a balanced view. In chapter three, the governing framework of Transition Management has been presented and has treated the issue of sustainability as a persisting problem. The framework focused on developing structural change concerning social and technical systems, which would enable the transitions to a more sustainable state.

This chapter aims to develop a more unified approach to different arguments regarding the key issues that emerged from this research, and together it intends to provide a more concise understanding of the research problem it set out to investigate. This chapter is divided into two main parts, the first part of this chapter focusses on addressing the questions of what sustainability is, and what the role of the stakeholders are at Island International. The second part of this chapter examines how the sustainability agenda was formed and how it interacts with everyday airport operations. By outlining the key aspects that emerged from this ethnographic research, it aims to improve the understanding of sustainability in transitions. It sets out to provide a more critical and reflective discussion, while considering the theoretical argument for advocating a more systematic approach towards the wider issue of sustainability, this chapter discusses the gaps in understanding of these findings and are what form the key theoretical contribution of this thesis.
7.2 Defining sustainability at Island International Airport

Part of the research questions for this thesis was to examine how Island International Airport decided on its agenda for sustainability. While the notion of sustainability is still being widely debated, there are vast literatures available that focuses on a range of issues from environmental (Harte, 1995; Goodland, 1995; Kidd, 1996), economic (Turner and Pearce, 1993; Harte, 1995; Mayor and Tol, 2007), social impacts (McKenzie, 2004; Dempsey et al., 2009) to the management issues concerning the mechanism to guide or organise the uncertain nature of sustainability (Giddings et al., 2002; Epstein and Roy, 2001; Epstein and Buhovac 2010; Hacking and Guthrie, 2008).

The common understanding from the literatures has found that there are variations and subjective views relating to the wider perspective of sustainability (Klostermann and Cramer, 2006), while much effort has been placed on the pursuit of linear and organised forms of individuals or society wide. As this research progressed, it has observed that the practice in organisation is much more complex in reality, and a definitive term for sustainability seems less significant for this thesis. Argued by Jennings and Zandbergen (1995) that “addressing the sustainability issue is not required to discover the best definition of sustainability or to identify the best organisational practices, but it helps to understand how definitions of sustainability are constructed and how practices that encourage sustainability are created and adopted by organisations over time”.

The theoretical discussions have so far emphasised more on what and how sustainability “should be” achieved through development of prescribed mechanism and framework. The main interests here therefore lays with the way individuals’ structure their understanding of the relevant agenda and how it also shapes the wider practice in organisation. This thesis has so far identified the fluidity of interaction and nonlinear activities involved at the Airport process, but also seen how members tried to make sense of their role, and the tension between different rationalised values developed through the interactions between members and the process in Airport. It has witness from stories such as the energy efficiency scheme, which detect the enactment of informal interactions derived from the practice of CAPEX and budget.
allocation process, it raises questions concerning the underpinned assumptions for CAPEX as an established rule and “organising principles” (Brown et al., 2012). But it also brings attention to the reaction from members as how they attempt to affect the principles and practices that constrained them.

This thesis has taken the W’s framework of What, How and by Who, to address the boarder research question of the members engagement with sustainability in the case of Island International Airport. This approach has taken on the perspective of Institution Logics and theoretical discussions of “struggle” and “resistance” from Critical Management Studies (CMS), in which both provide the analytical frames to help better understand how Island International attempts to conform to the requirement of external environments. It also helps uncover partial views to the paradox of practice and interactions between members of the Airport and its systems in place. This in part has highlighted the tensions involved which are associated with the concepts or the practice of the sustainability agenda, but it also learnt about the impact of these contradictions that eventually led to pressure for change.

In essence, institutional logics concerning “sets of material practices and symbolic systems including assumptions, values and beliefs, by which individuals and organisations provide meaning to their daily activities, how they organise time and space and reproduce their lives and experiences” (Thornton et al., 2012). Further described by Cloutier and Langley (2013), “institution logic can be viewed as a bundled set or ensembles of higher order meanings, values, norms and rules that frame how individuals make sense of the world around them and consequently know how to act”. This aspect helps to describe how the meaning of sustainability is being generated and accepted at Island International. Following on from this, the purpose is to draw on Critical Management Studies (CMS) is to examine how its perspective on their management of work applies in everyday spheres, might help enhance the overall understanding of an individuals’ role in shaping the sustainability agenda at the Airport (Hancock and Tyler, 2004). The upcoming sections focus on addressing the three subordinate questions that were set out to examine and analyse the findings from this ethnographic experience.
7.2.1 Constructing the meaning of sustainability

“If you go back 12, 13 years ago, we were articulating what we understood sustainability to be back then. As an airport operator, which we were part of what was then a very a small group of airports saying we understand sustainability, this is what we think it is and this is what we need to do…. that was very much around environmental management on environmental issues, largely around the noise and local air quality, that sort of stuff. Carbon was a small part of it, but carbon was there in terms of energy management, not in any sort of view about global sustainability or anything like that. Now, all of that agenda has shifted, and shifted incredibly quickly”
(Interview with Operations Manager Nov 2010)

One of the starting points for this ethnographic research was to learn what the sustainability agenda is at Island International Airport. The observations and the experience has found that there are more complex aspects involved in understanding sustainability as an agenda at the Airport.

Taking the above narrative quote from one of the Operations Managers’, it suggested that there is a great deal of sense making process and reflexivity involved in the way the Airport approaches the wider agenda of sustainability. According to Weick et al. (2005) “sense making involves the ongoing retrospective development of plausible images that rationalise what people are doing”. The observations described so far in this thesis has witnessed this ongoing process of how members are making sense of different practices across different Airport functions, and their attempts to engage with the particular circumstances from which they also attempt to make sense of. Furthermore, the nature of sustainability as transitional also becomes apparent as different issues arise and are confronted the Airport throughout different time periods. The narratives and interactions between members have indicated their attempts to process the meaning of the relevant agenda and enact their concerns.
To further understand the dynamics related to this sense making process, experienced by/at
the Airport, the focus has shifted to better understand the meaning of sustainability and seek
to learn how it has been constructed as an agenda and accepted over time. The inquiry into
this has referred to a particular internal announcement, in which it focuses on the introduction
of the Carbon CAPEX, with the statement as follow:

“As part of Island International Airport’s continued drive towards carbon neutrality, the senior management team have taken a big step to ensure sustainability and environmental considerations are embedded into our capital investment decisions. Representatives from Finance, Sustainability, Environment, and Projects have worked together to review the approval process for any capital expenditure across the Group and incorporated sustainability measures. Our Group Business Analyst Manager has developed a new stage in the process, to ensure that any proposed spend focusses on incremental changes in energy consumption and the subsequent impact that this has on our carbon output. This means that we are able to consider our carbon emissions in any major purchase and new developments at the earliest opportunity, whilst also planning for the longer-term”.

(Island International Airport Internal Communication, August 2010)

The above announcement outlined the Airport’s plan by formalising any environmental impact to be part of the financial investment decision making process; a further statement also highlights the key objective:

“The benefit of this approach is already clear. Not only do these contribute to minimizing incremental carbon, but there are also significant tax advantages, with a large proportion of the investment qualifying for Enhanced Capital Allowances (ECA’s). This results in significant tax cash savings for the Group” (Island International Airport Internal Communication, August 2010)
The above announcement is one example that forms part of the Airport’s attempt to deliver its carbon neutrality commitment, while it is framed as the “sustainability” agenda; the latter statement suggests that the financial incentive is the rational disposition that forms this scheme. Suggested by Reay and Hinings (2009) that “organisations are essentially organised by a dominant institutional logic, in which it helps to explain connections that create a sense of common purpose and unity within an organisational field”. The stories so far have illustrated the variable values encountered within different operational environments, particularly on the way individuals have organised their works and how they ascribed the justification for their operational priorities. It argues here that the dominating practice of CAPEX and the budget allocation process at the Airport is a particular example of institutional logic; in which it shapes the circumstances that also influence the way members engaged within a certain agenda.

The general theoretical discussion on institutions and organisational analysis has largely been taken from a macro perspective, which focuses on the deeper aspects of social structure such as rules, norms and routines which guide our social behaviour (Thornton and Ocasio, 2008). From the fieldwork, different members form within Engineering, Business and Finance have shared their particular perspectives on how their work should be organised and operated. Their view suggest that the condition is inconsistent with the descriptions by Friedland and Alford (1991) on “institutional orders”, and that “they are practices and beliefs that shape how individuals engage political struggles” moreover, it “has a central logic that guides its organising principles and provides social actors with vocabularies of motive and a sense of self”. While the above extract from the Airport announcement on the Carbon CAPEX signalled the Airport’s attempt to define the actions required for achieving carbon neutrality, as has set out to systematically process the organisation’s activities in corporate with the energy efficiency agenda. However, this led to further inquiries into the way this has formed its institutional principles and how it has been translated into practice for guiding the day to day operations at the Airport?
An example to be presented here focuses on how members seek to understand the meaning of sustainability and what it entails in operations. Observations made at the Bees Club meetings and conversations with the members who have direct involvement with the delivery of works, have provided insights on how the relevant members interact with the rules and the particular logic that supposedly guides them. Narrated through the researcher’s fieldwork diary combined with interview extracts from different members, it focuses on how they talk about sustainability and is briefly unfolded as follows:

“Carson brought a grey haired gentlemen to the Club’s meeting today, they both stormed in to the room at the last minute, everyone else just looked on and said nothing. Carson, who normally chaired the meeting, briefly introduced the grey haired man as Mosely, who was here about the Smart Meter project. It was later revealed by Carson that Mosley is a consultant who has been brought in by one of the senior directors to help the airport work on the “EU-ETS” scheme. Carson then went through the meeting agenda, starting with progress of the Smart Metering project, he started explaining to Mosely and about the scale of the metering operations and then went on to the subject about the Carbon Reduction Commitment (CRC) which was only mentioned briefly. Carson then referred to the agenda about replacing some of the boilers on site; this then led to a more in-depth discussion regarding the situation”.

“Carson and the others began to talk about the issue they had for this particular boiler agenda, which largely revolved around the project ownership. Carson explains that he and his team wanted to replace a number of boilers that they have been managing over at the Cargo centre. The condition of the boilers had started to diminish, they had been repaired but had started to fail on so many occasions that it got to a point where they simply needed replacing. However, after submitting the business case through CAPEX they spoke about how it had it rejected by the finance team on several occasions. The latest development was that the panel had instructed that the project should be passed on to be delivered by a separate department. Carson was clearly not in favour of the panel’s decision as he expressed his concerns to Mosley, that the department assigned to deliver this project has the tendency to go for the “cheapest” options regardless, and he sees this as likely to cause further implications in the
longer term. Carson narrated with frustration, in which he talked about the wider practice of
“cost over reliability”, instead of choosing a technology solution that would be more
sustainable in terms of operation effectiveness and maintenance efficiency, he anticipant that
the other project team would install the “cheapest and easiest option”, and joked that it will
just be a big ticking time bomb. The topic of the boiler remained as the central discussion
point till the end of the meeting; Mosley remained quiet throughout but occasionally asked
one or two questions about the location of the boiler and what the initial problems were”.

The above story described the apprehension from members concerning the way their boiler
project has been processed by the CAPEX panel, and how their decision may impact on the
delivery of the project. The key aspect that emerged here was from the way Carson attempted
to make sense of the circumstance of their CAPEX application and the eventual panel
decision that saw the project being passed to a separate team. From here, it can be seen how
the meaning of sustainability is being constructed as part of the process for members to seek
the purpose of their role in this project. Carson did not agree with the panel’s decision, he
saw the project was a good opportunity to invest in new boiler technology, and it should be
based on principles of quality, efficiency and practicality that would ensure the new boiler
had a long life span. He also pointed out that the panel had assured them that the project
should be delivered in accordance to the team’s initial objective and to ensure the
sustainability of the investment. However, Carson and the team were concerned that the
panel’s insistence to devolve the project to a different department would not only dissolve the
prime agenda, it is likely to end with the “cheapest solution” that would defy the purpose of
this project. The claim for a “cheap and easy” solution as the more accepted organisational
preference was an assumption, however, it was to stress the practice that has lack of
“technical principles”, and to specify the logic for a more “technical professionalism”
involved in the decision making process.

The dominance of CAPEX as the core process at Island International is evident, as the
narratives over budget allocation and finance processes have been detected in almost daily
conversations members. While the narratives from the previous story referred to the
member’s anxiety over resource deficiency, it signalled a deeper concern in relation to the
way members feel constrained under organisational principles, and their struggle to determine the capacity in their operational environment as it has been shaped and reshaped through different transitions at the Airport. Here it argues that the meaning for sustainability is therefore socially constructed; furthermore, the stories so far have suggested that organisations are invariably shaped by values that transcend the sole interest of stakeholders.

7.2.2 Relevance of stakeholder’s value

Chapter three discussed the invisible role of the stakeholders in theoretical discussion of transitions. The boarder definition of stakeholders is typically regarded in management frameworks to include employees, clients, shareholders and the local communities (Zhai et al., 2009). It highlights the attention on stakeholders has centred on developing tools and methods for better assessing the power and influence of stakeholders, with a view to optimising the value achieved through the relationships forged with those that really count. The structured approaches tend to emphasise the importance of getting consensus of values across a myriad of stakeholders, often assuming that they can be easily identified.

For some time, studies in organisational and management disciplines have placed more emphasis on developing stability and orderly processes for organisations and many perspectives are largely derived from systems of thinking and often focus only on the big picture (Goldspink and Kay, 2007). The understanding of everyday practice in the past has largely been overlooked for its “ordinariness of normality” (Ybema et al., 2009), while the decisions that shape our world and everyday life are continuously being made by people behind closed doors, there is a firm position of the normative approach as the most rational way to organise society across all levels (Fleming and Spicer, 2007).

Anderson (1999) pointed out that complexity in organisation is often seen as a set of interdependent parts, and it has the tendency to be “treated as a structural variable that is
characterised by both organisations and their environments”. The earlier academics’ interests in complexity within organisation also encountered the emergence of nonlinear behaviour that is seen to be part of the management issues in organisations. Despite considerable progress made in advancing our understanding of the role of stakeholders, of particular interest is the assessment of who the stakeholders are, how they simultaneously influence and are influenced as part of dynamics within organisations, nevertheless, the role of stakeholders remains highly rationalised and static (Achterkamp and Vos, 2008).

In contrast to the predominate view from the more scientific approach of management studies that focuses more on organisations as systems of interrelated roles with share value (Simon, 1991), this research into the agenda of sustainability (in the context of Airport operations) present an alternative aspect that focuses on the role of people involved in non-formalised activities as part of the organisational process. It shines some light on the issue of competing values, in which members come to recognise and then rationalise the different values that co-exist in their environment, and how they seek to make sense of the variation of value in competitions. This understanding has then in turn enabled a negotiation process which allows members to formalise the structure and adding meaning in their work area.

Another key aspect that emerged from the stories is the stakeholders “relevance”, from the context of how members’ involvement became appropriated in the pursuit of a more sustainable airport. The case concerning the role of the Environment Department (in chapter five) provides a retrospective view on its initial purpose as a bird control function, and the environmental concerns that later grew from mitigation against noise complaints to ecological and social considerations with the expansion of Island International. The member’s narrative and their recollection on what the environmental practice set out to be and its transitions can be seen as an emergent process of appeasing the local community, as opposed to a more structural approach of engaging with stakeholders. Indeed, it could argue that had there not been complaints about the noise issues, as well as the opposition of the runway expansion by the local residents and environmentalists, the “sustainability agenda” would not have been implemented.
Another example that also demonstrates the dynamic influence of stakeholders is the way members of various functions sought to make the smart meters case relevant to the finance department and the CAPEX panel. The lengthy process that involved various stages and approval by different stakeholders, began with the finance accountant responsible for the business department, to the project sponsor (who usually is the senior manager of the business area where the proposed project is directly affecting), to the CAPEX panel and the final sign-off by finance director. This essentially effects the discussions surrounding resource allocation and approvals for capital spending, which in turn influences ongoing negotiations between the budget holders and senior managers and drives the pace by which various functions of operations work at the Airport.

March and Simon (1967) have suggested that the basic features of an organisation's structure and function, derive from the characteristics of the human problem-solving processes and rational human choice. The CAPEX and financial process has certainly caused a lot of frustration among members at the Airport, while it becomes evident that it has become the underlying logic that guides members actions, it also constraints them and the way they operate in their function area. However, it has also seen that members were able to turn on this “dissatisfaction” by expanding their boundary and negotiate for change. Illustrated by one of the managers concerning their CAPEX experience and how they learned to influence the project outcome:

“The problem we had was that the Finance people asked too many questions, they were always making things difficult with our CAPEX applications… I once submitted an application for upgrading the Building Management System (BMS), and they just keep coming back to me and asked me what the BMS is? What does it do? Why do we need it? Is it necessary?”

He pointed out the efforts that he and the team put in to help the finance people recognise the value of their operational works:
“Things have become better now that we work with the Finance Manager who attends our Bees Club meetings, it took some time to build that relationship, but now we’ve learnt what ticks the boxes when it comes to a CAPEX application! But in truth, we just aren’t the type of people who will let things go easily, we would always go back to them and pick a fight if we have to!” (Fieldwork diary July 2011).

7.3 Conceptualising struggle and resistance in sustainability transitions

Chapter three introduced Transition Management as a prominent perspective in dealing with the broader issue of sustainability, the primary view in this field has been focused on making incremental changes through specific types of network and decision making processes (Loorbach, 2010). According to Geels (2011) our society is essentially formulated by elements such as transport, energy and food systems that entail technology, policy, market and consumer practices that are reproduced, maintained and transformed by a network of different people, including organisations, policy makers and consumers. The discussions in this emerging field is heavily entrenched in policy research and it has so far placed the emphasis on influencing a wider societal change through configuration of the underlying structure and elements that drive the governance processes and practices. Suggested by Loorbach (2010) the Transitions Management is “a new mode of governance that sought to develop a new balance between state, market and society by reducing the lack of direction and coordination associated with governance networks in general”. While Transition Management as an academic framework and the understanding in this area is still being developed and tested, there have been particular interest in improving the concept concerning the conditions of the transitional process, as to how certain practices come into being, and then stabilise or even disappear (Geels, 2011).
The findings from this ethnographic research have recognised the changing aspects embedded within the agenda for sustainability at Island International. By observing the relationships between people and the conditions of certain practices at the Airport, it has recognised the pressures applied to Airport members and how they attempt to navigate the responsibility of their work by constructing boundaries between their operational territory and the environment in which they are situated (Wieland, 2011). Argued by Fleming and Spicer (2006) that mainstream studies of organisations, maintain a simplistic view of an organisations as “places where people move contentiously towards a commonly accepted goal”. While this principle remains at the core of understanding processes within organisations, nonetheless, this thesis questions the idea in which members of the organisations set to work on “the common goal”. Above all, the ethnographic experience has identified the significance of tensions and the ongoing struggle between members and the wider networks that formulate the Airport operations.

Hereby it argues here that the ongoing struggle is a feature that helps to shape practices at the Airport. This realisation was generated from the way people engage with relevant issues during transitions, specifically, as how they attempt to explain connections that create a sense of relevance and purpose within the conditions they are situated. According to Fleming and Spicer (2006) “at the very heart of organisational life is the struggle between those in the organisation who seek to assert power and those who seek to resist and perhaps destroy this power”. They further defined the concept as “a multidimensional dynamic that animates the interface between power and resistance”, or as “a way to talk about the close relationship between control and resistance”. Hence, this begins to form a more definitive theoretical purpose for this thesis and sees how this struggle gives members a sense of metier to make a connection or engage with certain activities that also enable changes, in other words, struggle also helps the members make sense of their circumstance and the differences of values in competitions.

In conjunction to this, another key aspect that emerged has been the way in which members managed the values in competition that led to their attempts to construct and negotiate the meaning of sustainability. This orientation is in line with a description by Grant and Hardy
(2004), as they suggested that “meanings are created and contested as a result of discursive interactions among organisational actors and organisational publics with different interests.” Nevertheless, this view that individuals have different interests and how this difference forms the dynamics, has not been particularly articulate and is somewhat being overlooked from a transitions perspective towards sustainability.

To assist the conceptualisation of struggle as part of the transitions process, an overview has been developed to highlight the ongoing changes at Island International. The overview tells the story focusing on the Airport’s pursuit of becoming a more sustainable airport, and key events that shaped this journey. This is based on various research sources that include observations, narratives of accounts from different people, and available documents detailing the history of the airport. Moreover, as explained in chapter four, by opportunity this research fieldwork started at a time when a new Chief Executive Officer took over Island International Airport and the rest of the Group, this new leadership has led to a series of transitional changes on the wider organisation structure and operations. This thesis therefore has primarily been focusing on the period when the ethnographic fieldwork took place during 2010-2011 while the key aspect here is to reveal how the past events has helped to establish certain rules and obligations that produce an understanding of the conditions on current practices at the Airport (Brown et al., 2012).

Diagram 7.1 provides a snapshot that outlines several key transitional points, and the upcoming sections set to provide further analysis on how these activities interplayed in the way the Airport has shaped the issue of sustainability, but with emphasis on examining the presence of struggle in making connections of different logics and values between stakeholders.
Diagram 7.1 Chronology of Island International Airport in Transitions

- **1994-95** Island International signed the Section 106 agreement containing over 100 obligations.
- **1997** Launch of Community Trust Funding for local community projects.
- **1999** Publication of first Sustainability Report.
- **2001** Second Runway opened.
- **2006-2009** Plans to reduce energy and a commitment for be carbon neutral was announced.
- **2007** Publication of a Master Plan up to 2030.
- **2010** A new "Carbon" CAPEx process was introduced and implemented.
- **2010-2012** Further plans for an organisational restructure was announced, during which time, several members were made redundant or left the business as part of the on-going transformation process.
- **2011** Island International launched campaign to lobby lower Air Passenger Duty (APD).
- **2012** Proposal for a Sustainability Division announced.
- **2012** Island International gained certification for the Environmental Standard of ISO14001.
- **2012** The New Group structure and operation model was announced.
- **2012** Plan for a new business model was announced, Island International sold one of its airport assets.

2007

- **1994-95** Public Inquiry for the new Runway.
- **1994** Public consultation for the Airport's First Environment Plan.

2007

- **2006-2010** Environment/climate protests took place during separate occasions at Island International, protesting against its operations and plans for increases capacity.
- **2010** A new CEO in place, and the proposal for organisational restructuring was announced.

2010

- **2010** Proposal to get ISO14001 certification and implementation of an Environmental Management System.

2011

- **2011** Official agreement with Section 106 ends.
- **2011** Plans for a new Airport business model has been announced.
- **2011** Trial and sentencing of activists for protesting related crimes.

2012

- **2012** Further plans for business expansion was made. The Airport has acquired a private investor with a long term business plan to expand the airport business operations.
7.3.1 The everyday struggle in airport operations

The element of struggle is seen as significant in shaping the sustainability agenda at Island Airport. There is still the fundamental question relating to the definition of struggle in the context that this thesis set out to investigate. The concerns over the way people struggle in their everyday working life was largely part of the analysis focussing on the subject of control and resistance. The cases have mostly been captured by the sociological studies of class struggle, described by Mumby (2005), Spicer and Boham (2007) the theoretical analysis of this form is to perceive the disparity of political ideology and economic class antagonisms in the workplace. This focus on tension between the structural conditions based on society’s rich and poor has steadily progressed over the past few decades and significant streams of work such as Critical Management Studies (CMS) has emerged and has further concentrated on the organisational processes of control and influence of management (Spicer and Bohm, 2007).

In mainstream studies of organisation and management, the expression of tension is often associated through acts of protest against control (Fleming, 2005; Hollander and Einwohner, 2004), and the notion of struggle has the tendency to be treated as undesirable tension among individuals. However, this view is increasingly being challenged by different academic school of thoughts, such as the critical studies (Ford and Ford, 2008; Dobosz-Bourne and Jankowicz, 2006), with particular interests to further examine “how people’s identities are constructed in ways that reproduce the managerially defined organisational culture and ideology” (Mumby, 2005). Suggest by Spicer and Bohm (2007) that the rise of management influence in the past decades has shifted the emphasis from the conventional view of structural causes of control, to considering more on the everyday ways that people make sense of, and negotiate their workplaces.

The understanding of “everyday dynamics” forms a key aspect of this thesis. Fleming and Spicer (2007) described the term of struggle evokes a highly antagonistic situation. Despite this, the member’s narratives concerning their experience and complexity of their everyday operations at Island International, entails a minimum sense of hostility. Observations and
interactions with these members has provided further insight into the condition that they are situated, and the specification on the nature of struggles has been exemplified through the frustration between those who gain more resources than those who have less.

The reactive nature of Operations is seen as a key aspect of the Airport. It has observed the dynamics of the customer services team, and their eventful routine from escorting royalties to dealing with disrupted passengers as they cover all front of house aspects to maintain the presentation of the Airport. It has listened to stories from technicians who work on the baggage systems around the clock, to oversee the flow of suitcases being transported, attending faulty security doors, witnessing them talking about maintenance of the runway surface and discussing the checks carried out on the cracks or the icy conditions on the runway, shadowing engineers to scout for electricity meters across the site to ensure the backbone of the electricity network is running efficiently and keeping the crucial systems of the infrastructure operational.

It therefore argues that struggle is seen as critical here in deriving the Airport’s members to make sense of the condition in which they are situated. Reflecting on from Simmel’s view of struggle, Fleming and Spicer (2007) highlight his point that sees struggle as a vital ingredient of social reality, and instead of treating struggle as the opposite of sociality, the key argument here is that struggle enables individuals a sense of capacity that allows people to engage in certain circumstances and promotes social interaction. The vignette and stories described so far have articulated the reality of the individual’s experience, in particular, how they engage in an interpretive struggle through their daily activities has been recognised (Mumby, 2005).

The principle of Transition Management recognises the flaws in the current governing framework that see the way a society should be governed, is in need of adjustment (Loorbach, 2010). While it also acknowledges the current status of society is filled with increasingly complex and unstructured issues involved in our everyday life, it continues to see any tension as a threat within the framework (Avelino, 2011), and there is little emphasis
placed on this social understanding of dynamics and the prescriptive approach. By configuring those unstructured issues, it remains at the core of transitions, from the perspective of sustainability. Shove and Walker (2007) have raised concerns about the simplistic view that has been portrayed by Transition Management and its indifference towards the political processes involved in the broader society structure. In line with this, Meadowcroft (2007) also point out “the evolution of societal values and value conflicts that are important to processes of societal change”, yet, they remain unreflective within the current frame of sustainability transitions. In response to these criticisms, Avelino (2011) have asserted to examine the paradigm of power in the governing framework of transitions, which also highlights the issue of struggle between power relations, however, this analysis have resolve to further prescriptive principles that sees the dynamics of stakeholders and power relation includes struggle as a substantive issue, in which it can be resolved through “a design process”. Described by Dewulf et al., 2009) while the aspect of resisting change has been overseen within the Transition Management frame perspective, “it simultaneously assumes that important governing agents simply have to pave the way for the transition to a new pathway”.

In contrast to the dynamics that have been observed from this ethnographic experience, the lack of attention to the role of individuals in Transition Management has undermined any conflict and tension in the transitional change. In line with Shove and Walker (2010) concerns over the scope of transitions studies, which shines a light on the gaps in conceptualise these dynamics in transitions, but also how the interactions between people and systems in their everyday life have co-evolving practices that can be crucial in designing the governance model. As the theoretical understanding of the everyday struggle has not explicitly been addressed in both sustainability transitions and organisational studies, the discussion here stimulates this gap in thinking, and therefore makes a key contribution by furthering our understanding concerning the process of sustainability transitions.
7.3.2 Resistance to shape the meaning of sustainability agenda

Suggest by Spicer and Bohm (2007) that the collective process of hegemonic struggle and resistance are interconnected. The previous section argues the element of struggle is a key feature and part of the way members of the Airport make sense of their situation. It also highlights everyday practices as the template to capture the struggles of individuals. Here, it further suggests how resistance plays a part in shaping the sustainability agenda at the Airport.

The relations between struggle and resistance have usually been treated as cohesive matters. Suggest by Mumby (2005), “struggle is subsumed beneath interpersonal forms of conflict that can be framed under the term of resistance”. Resembling the nature of sustainability, the meaning of resistance is complex and difficult to define; it is however often described by individuals in direct opposition of another that involves variety of “assumptions that includes power, domination and opposition intersect” (Fleming and Spicer, 2007). Nonetheless, the notion of resistance has been widely discussed and is often formed as part of key debates in understanding the dynamics in workplaces (Thomas et al., 2005; Thomas and Davies 2005; Mumby, 2005), the rising popularity of a critical perspective on management issues has highlighted the forms of resistance, with a central frame that focuses on organisations as the site where multiple powers are in continuous struggle (Zoller and Fairhurst 2007; Erkama, 2010; Grant and Hardy; 2003). However, the treatment that sees struggle as essentially embedded within the notion of resistance has been questioned. It has taken the view suggested by Fleming and Spicer (2007) that struggle would serve as a bridge to resistance.

Despite the theoretical ambiguity between struggle and resistance, both are traditionally seen as tension with a disruptive nature or a breakdown of sociality and organisation. However, there are increasing objections to the conventional view of struggle and resistance as a disadvantage, instead, it has been suggested that it can in fact be complementary and lead to better changes, and should therefore be celebrated (Dobosz-Bourne and Jankowicz, 2006; Ford and Ford, 2008; Deetz, 2008; Thomas and Hardy, 2011;).
One of the main criticisms surrounding the theoretical debates on resistance is the conventional frame and subject to forms of control and boundary (Fleming and Spicer 2008; Ford et al., 2008). It has been argued that resistance is not simply subject to overt opposition of managerial control by those with less power; rather, the resistance is multidimensional and can be express in different forms (Thomas and Davies 2005; Erkama, 2010). Courpasson et al., (2012) argues that resistance can in fact be positive or even productive. They highlighted the way “resisters” ability to influence management and facilitate negotiation which, when triggered by changes within the organisation, is in contrast to the dominate idea in which people simply takes orders or follows instructions from those who have the power or capacity. Taking the argument by Courpasson et al., (2012) which has further illuminated the narratives of members’ struggle during which the transitions took place and provide some perspective on how resistance can also be complementary. Here, it turns to the two key stories described in chapter five and six that exemplified resistance as a positive force to facilitate the way a sustainability agenda develops over time.

The first story of the second runway was notable by the way in which members of the Airport emphasise the legacy impacts and the significance of how their journey has been collectively driven and shaped by continuous opposition. The reform in air travel to promote further economic gateways across the nation has justified the Airport’s plan for expansion, however, the policy instruction remains indistinct in practice, and the purpose of this economic growth has not translated at the local level, where the impact happens. Resistance from the local communities that object to the Airport’s expansion is seen to be a crucial part to connect with the broader issues of sustainability. The protests and public enquiry has created a channel for all parties to be engaged with the impact of the runway development, it also imposes the requirement for the Airport to have a more active response. In effect, Island International was able to make sense of their commitment for sustainability through the demands of the local communities and relevant parties, and their request to set obligations which ultimately gained the consensus for the runway expansion. To ensure their commitment is being see through, the Airport has also expanded its existing Environment Department and employed an Operating Officer with ecology expertise to help with implementation of these obligations, which has formed the foundation of the current environmental practice that has essentially shaped the way Island International organises its operations.
The second distinctive story is that of the of energy efficiency schemes as described in chapter six. The everyday struggle of members within Operations has triggered their desire to change the way they organised work within their function. The narratives from different members of the Operations Department paint the view of their ongoing challenges to acquire resources, to help improve the efficiency of their work, and how their struggle has derived further eagerness to change the outcome of the situation. The rejection from the Finance Department and their unsuccessful experience with CAPEX applications, sparked a process that allowed them to accumulate further knowledge to enable a better interpretation into the significance of their agenda, but it also allowed them to expand their network that ultimately achieved mutual gains.

Arguably, the meaning of the sustainability agenda is dynamic. Whether it was intended for saving energy; to meet the carbon reduction target or simply as a resolution to deal with a resource shortage and improve operation efficiency, it was observed by the member’s struggle how they maintained their logic which guided the way they organise their work. Their resistance with ongoing budget constraints has ultimately built on the conviction that an individual can indeed act and make a difference (Fleming and Spicer, 2007). The success of the energy efficiency projects has consequently set the conditions which enable the production of certain practices and provides a rationale template for sustainability at Island International.
7.4 Recognising struggle and resistance “for” change in transitions

Theoretically, this thesis proposes to have better recognition for the paradigm of struggle in the transitional process of change towards sustainability. The wider debates concerning tension of struggle and resistance have been focusing on reactions to forms of control that are being imposed (Thomas and Davies, 2005), and to some, it remains as a negative and destructive condition that needs to be overcome or circumvented. This thesis therefore suggests to reconsider the status of struggle as being undesirable, instead, a paradigm shift is required to encourage a more diverse standpoint on struggle and resistance, that would enrich the meaning and as a feature which would also contribute to the way individuals make sense of their conditions and their environment. It also suggests that the theoretical emphasis could place further attention on the consequences or wider outcomes of struggle, rather than being fixated on the reactions that it has generated.

The element of struggle and resistance is seen as crucial in developing a wider perspective on sustainability. This ethnographic research has acknowledged the ambivalence of sustainability and the increasingly fragmented condition in the current setting of organisational environment. While the issue concerning how sustainability can be achieved remains as an elusive matter. The current conviction remains to seek a balance point between the disparity of environmental, economic and social goals, however, it argues here that the element of conflicts of interests and values in competition are essentially what underpin the conceptual logic of sustainability. The tensions and contradictions described throughout this thesis are perceived as significant, which not only helps to understand the wider agenda of sustainability, but also how they play a substantial role in shaping the meaning of sustainability.

The paradox between policy and practice becomes apparent within the context of this research. In essence, there has been ongoing tensions and contradictions between “how to” best achieve sustainability or “what should be done” on the boarder level. The UK government’s white paper on the aviation sector and the current debates concerning airport
capacity has reinforced its ambition for economic growth, while continuously being confronted with the increasing pressure concerning the environmental issues as well as depletions of resources globally. The government’s publication on Aviation Policy Framework in 2013 stated that:

“The Government’s primary objective is to achieve long-term economic growth. The aviation sector is a major contributor to the economy and we support its growth within a framework which maintains a balance between the benefits of aviation and its cost, particularly its contribution to climate change and noise. Aviation is an international sector, and global action to address a global challenge is therefore essential if we are to achieve progress on reducing its climate change impacts while minimising the risk of putting UK businesses at a competitive disadvantage”. (DoT, 2013)

Hereby, it can be argued that the ambivalent of policy rhetoric on sustainability is in struggle. The emphasis on economic grow has underlined the anxiety over the issue of climate change, it also affirms the policy priority by resolving it as a global issue for international responsibility. The text has also highlights concern for the potential cost between environmental issues and business growth that also hinted to these values as being in opposition.

On the contrary, there have also been concerns over the common perception which sees economic growth in conflict with sustainability of social and environmental wellbeing. Suggested by Hahn et al., (2010) the “win-win” paradigm which sees the economic, environmental and social sustainability being achieved simultaneously is rather simplistic and contestable. They argued that “trade-offs and conflicts between these three key aspects of sustainability are in fact the rule that will help to clarify the competing considerations”. In support of this argument, and building on Fleming and Spicer’s (2007) suggestion that seeing struggle as a complementary element to social relations, is the position in which this thesis has taken, it therefore proposes that struggle is a key ingredient which enables the social construction of meaning and practice among individuals.
Following on from this defining meaning of struggle, it also argues here that there is a need to further consider the outcome or wider consequences from this process of struggle into resistance. While resistance remains loosely defined within theoretical debates (Hollander and Einwohner, 2004), the analysis of resistance and its meaning is often subject to a particular relationship within forms of control (Hollander and Einwohner, 2004; Fleming and Spicer, 2007).

In contrast to the common approach that revolved around the behaviour of resistance in a negative paradigm, the discussion in the previous section highlights the potential and prospect of resistance as being complementary. There are a number of academic studies that have been debating on the conventional approach of demonising resistance to change, in particular, it has suggested that resistance can in fact be a resource and lead to better change (Thomas and Davies, 2005; Ford and Ford, 2009).

According to Ford et al., (2008) the current assumption for resistance is inherently limited through its origin, which largely sees it as a psychological phenomenon. The suggestion that the nature of resistance is multidimensional (Karreman and Alvesson, 2009; Thomas and Davies, 2005) have stimulated further inquiries into the dynamics of resistance, and challenged the conventional classification of resistance as contentious and in dualisms forms, such as “organised and unorganised, formal and informal, individual and collective”; nonetheless, Fleming and Spicer (2007) argues that “these dualisms miss important elements of commonality that blur some of these distinctions” including the diversities of individuals and the different expressions of resentment through conflict.

The stories of the runway expansion and energy efficiency schemes have demonstrated the prospect of resistance as a continuous process of negotiation; it can also argue here that the persistence of individuals has been supplemented through their interactions involved in the process. Despite the heartache and challenges throughout these processes, it also helps to establish the consensus that enables Island International to make sense of the meaning of sustainability and shapes the relevant agenda.
As such, Thomas and Davies (2005) perceived resistance as “a constant process of adaption, subversion and reinscription of dominant discourses”. Recognising the fluidity of the meaning ascribed to the struggle and resistance and its relations, this thesis instigates a broader view on the impacts of struggle and its relation with resistance, which generate the potential to facilitate a certain outcome through a shared consensus. Moreover, it asserts a more diverse meaning and advocates further conceptualisation of resistance in enabling change in the process of transitions towards sustainability.
7.5 Summary

This chapter reviews and discusses the key aspects that emerged from this ethnographic experience at Island International Airport. It reconnects with the broader research enquiry that seeks to understand how Island International engages with its sustainability agenda by using the analysis framework of what, how and by who to examine the key findings. Drawing on the theoretical perspective of institutional logics which focus on the norms and rules that shape the behaviours of individuals and organisations, it identified the finance process of CAPEX as a key feature and principle that dominates the way individuals organise their work. Following on from this, the role of individuals and their significance in shaping the organisational process has been discussed; in particular, it outlines the stories and examples in which individuals attempt to influence the management’s decision through informal interactions as part of a negotiation process.

Based on those thoughts, the chapter shifts the focus onto questioning the way the sustainability agenda has been formed and shaped at the Airport. In reflection of the Transition Management perspective for directing structural societal changes towards sustainability, it argues that struggle and resistance are the passive ingredients needed to better recognise the current framework of sustainability transitions. Focusing on the critical discussions within the arena of Critical Management Studies (CMS), which concern the management theories of struggle and resistance, the stories at the Airport, has shone a light on the complex and dynamic relations between individuals operating within the fragmented conditions at the Airport. Through the lens of the critical approach, the significance of struggle as a feature in the transitions process also becomes apparent. The key aspects that have emerged from Island International has transpired to the notion of struggle as being part of a sense making process for individuals in shaping their everyday life in the workplace. The fragmented conditions have also influenced the practice of informal interactions within networks, this has essentially challenged the current prescriptive approach of the Transition Management process, which views the relationship between stakeholders as being something that can be “designed and processed”.

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Even though the emphasis on the conception of struggle and resistance within Transition Management is incomplete. This thesis proposes that struggle is crucial in enabling an individual’s ability to engage with certain agendas or practices, and the resistance “for” change as the potential and subsequent experience. While the relations between struggle and resistance are still in question, their dynamics and prospects have been recognised. The common analytical frame that sees them as forms of reactions against repression have been challenged by some critical management theorists, it sets on to further connect with their theoretical aspects that evaluate the dimensions of struggle and resistance. This thesis provides an empirical illustration of the meaning of sustainability that is socially constructed through processes of struggle and resistance, which also helps to elaborate on the meaning of situations. It hereby suggests a more diverse conceptualisation of struggle and resistance, and instead of continuously treating them as a process that needs to be managed, it proposes that they could be recognised as a quality and a complementary feature, with the potential to supplement the shaping and evolution of sustainable transitions.
CHAPTER 8 – Conclusion towards a more sustainable airport

8.1 Introduction

This final chapter aims to conclude the findings and discussions for this research thesis. Following on the investigation of how Island International Airport engages with its sustainability agenda as originally set out, this chapter provides a summative claim for the research enquiry and the key aspects that emerged from this process also contribute to an understanding of the relevant literatures on sustainability transitions.

The thesis set out to investigate how an international airport engages with sustainability, it shifts away from the mainstream approach of a prescriptive view of sustainability, this thesis was conducted with the aim to further understand the dynamics of social relations during transitions towards a more sustainable airport. It began by exploring the notion of sustainability and examined how it has been conceptualised and discussed. While there is a wealth of literatures available devoted to better understanding the issue of sustainability, the matter remains elusive. Building on the understanding of relevant literatures on sustainability and Transition Management, the issue of tension between the operational functions and the organisational processes have emerged and became a key area of focus. The ethnography methodology and understandings resulting from this research study enriched the theoretical perspectives of sustainability transitions. In contrast to the predominant deductive practice in Transition Management, this research study also contributes to the research practice through an inductive approach from empirical studies.

The chapter also critically reflects on the ethnographic journey which forms this research enquiry and experience, by outlining the achievement, the limitations of this research, and the potential opportunities for further study. It concludes with a brief on a personal narrative of this overall experience and the research claim.
8.2 Overview of the thesis

As part of the EPSRC research programmes that seek to better understand how an airport makes decisions on investment to improve the sustainability of their infrastructure and operations. This thesis has subsequently built on an existing research project, and initiated an enquiry on “what a sustainable airport is”. The review of the relevant literatures has raised further questions on the status and the practice of sustainability, from reviewing the relevant literatures, it became apparent that the current understanding largely seeks to organise the problem of sustainability through a balanced and systematic approach. Influenced by the research project rationale to improve the operation efficiency in the airport sector, the thesis explored how an airport was doing in terms of its sustainability agenda, also inspired by the triple bottom line approach, the inquiry set out with the three key questions in mind of what, how and by whom.

The initial enquiry for this thesis was to define what constitutes sustainability, while many literatures have highlighted the growing concerns for sustainability as a societal problem; the meaning of sustainability is still in question. Formally raised in the United Nations report as a global political agenda, it subsequently sparked the ongoing debates on the way we govern the society and resources. For decades, the general concerns for sustainability was largely initiated by the problems of environmental degradation and resources (McKenzie, 2004; Robinson, 2004). The most accepted definition of sustainability is described by the Brudtland (WCED, 1987) report, in which it is coined as a “development that meets the needs of the present, without comprising the ability of future generations to meet their own need”.

However, there have been criticisms concerning the ambivalent term for sustainability that is seen to be difficult to operationalise (Marshall and Toffel, 2005). Although, there have been discussions since focusing on the development of a more definitive view for sustainability, significant efforts have been made to better understand what constitutes sustainability and its features. Avelino and Rotmans (211) argue that the term is inherently complex, normative
and subjective. Hence, the debates concerning the meaning of sustainability remain ambiguous and is seen as a global political matter (Cowell and Owens, 2005; Giddens, 2008). As discussion in relation to the meaning of sustainability continues, the pressure and tension concerning the status of our environment is mounting, yet, with no general consensus on how to best tackle the complex issue of sustainability, the concerns are largely seen as political rhetoric. Brandon (1999) pointed out that “the problem with sustainability is that it engages with the whole of human existence and the complexity of inter-relationships which make up our environment and societal conditions”.

One of the problems that contemporary society faces is the increasing demands and consumption. There are rising demands for resources to accommodate the increasing population in some countries, while our society is continuously being confronted with the status of our climate; the ongoing political discussions have a particular focus on how the issues would impact on wider economic activities. As part of the resolutions to deal with the problem of sustainability in general, it has seen a growing establishment of prescriptive frameworks, tools and methodology assessments being widely encouraged and largely applied in an organisational setting as a means to set strategic directions, operations and performance outcomes (Praogo et al., 2012)

These frameworks or tools such as the triple bottom line, the ecological footprint, and the life cycle analysis have the shared common approach to use structural and linear methods with the aim to improve processes and to help informed decisions for better management of environmental issues. As one of the widely accepted approaches, the problem of sustainability is largely assessed based on the triple bottom line, in which primarily focus on the “simultaneous pursuit of economic prosperity, environmental quality and social equity” (Gibson, 2006; Lozano, 2008). Despite the variety of mechanisms available to manage sustainability as an agenda and variations of understanding on how it should be tackled, the focus in this area has placed much emphasis on seeking a balance and an integrated perspective, with the assumption that those three areas can be instantaneously achieved (Gibson, 2006; Hahn et al., 2010).
The rise of Transition Management as an emerging theoretical framework to govern sustainability has recognised there are more complex issues involved in the overall conception of sustainability. Rooted in system theory, the principle of Transition Management views our society as having persistent problems for which there are no immediate solutions, therefore, it requires radical changes of the systems, with the principle focus being on the changes derived from technological innovation or introduction of technology. Earlier studies have looked at cases such as the transitional shift of energy sources from coal based to that of natural gas; sailing ships replaced by steam ships, the changes of the American music industry through adaption of radio sets, phonographs, jukeboxes and so on (Geels, 2002; Geels, 2006; Rotmans and Kemp, 2008). Emerged from a collaborative policymaking experiment in the Netherlands, the transitions aspect of sustainability has placed strong emphasis on the policy paradigm of governance (Loorbach, 2010). As part of the academic research groups that introduced the concept, Loorbach and Rotmans (2010) described Transition Management as “a deliberative process to influence governance activities in such a way that they lead to accelerated change directed towards sustainability ambitions”.

While there have been significant interests in better understanding the principle of Transition Management and its practice. There are also concerns for the theoretical conception in relation to the scope and practice, some of these criticisms includes the specification of the framework with a narrow view focusing on making structural changes (Genus and Coles, 2008; Berkhout et al., 2003). It has been argued that the earlier studies primarily focused on the theoretical debates, with very limited empirical examples to draw on. Even though, these issues have been acknowledge by the Transition Management theorists (Loorbach and Rotmans, 2010; Geels, 2011; Avelion and Rotmans, 2010). Some key issues remain at the centre of debates, in particular, there has been criticism concerning the positive view of transitions, which provide little emphasis on the politics and roles of people involved in the process (Shove and Wilker, 2007; Meadowcroft, 2009; Markard et al., 2012; ). In response to those concerns and criticisms, it has seen wider attention given to addressing the dynamics of social relations that had a lack of consideration in the early works of Transition Management. The recent works by Avelion and Rotmans (2009, 2010) have simulated a discussion on the social perspective of power relations in sustainability transitions. Part of the focus of their
study was to conceptualise power and sustainability through structural interpretation, and propose a power framework. While the perspective of the social dynamics from a transitional aspect of sustainability is still emerging, the understanding from Avelion and Rotmans’ works sees the focus remain fixated on developing mechanisms to manage the power relations during sustainability transitions.

Shove and Walker (2010) also raised their concerns on the Transition Management emphasis of the introduction of new technologies. They have further questioned the scope and the transitions approach in practice, and seek to better understand how various sustainable practices come into existence. To highlight the dynamics of everyday practices as a significant aspect, Shove and Walker (2010) discussed the changes of practice, from weekly baths to daily showers as an example of a social practice, with the underlining issue here focusing on “how the patterns and practices of daily life interrelate, erode and reinforce each other”. Taking on this perspective, this thesis argues that further investigation is needed to provide perspectives on “how things are” rather than “how things should be”.

As part of the wider research study concerning the sustainability of airport operations, a range of research projects have been carried out with the aim of improving the efficiency of airport operations. The academic understanding of airport operations has traditionally placed more focus on the regulation of air travel, relationship with the airlines, efficiency, and the economic impact to the region (Charles et al., 2007; Graham, 2008; Freestone, 2009). In addition, the understanding of airport in relation to the concerns for sustainability is often integrated within the general analysis of the wider aviation sector. In order to develop a more specific understanding for the role of an airport and their operations within the frame of sustainability, this research enquiry sought to see how an airport engages with the sustainability agenda in their everyday operations.

From the understanding of the literatures and the observation findings, has revealed the role of an airport is complex and continuously evolving. Graham (2008) described the conventional view on airports as “a public utility to provide a public service”. However, this
perspective has begun to shift over the years, with greater demand in air travel, globalisation and other factors, which has seen the role of airport evolve from an infrastructure service provider to becoming an enterprise focusing more on the commercial activities of non-aeronautical operations, such as property development and retail services. The ongoing discussion at the political level in the UK considered the role of an airport as centric to the economic growth agenda, however, the visibility of the airports means it they have often been confronted with the issue of sustainability, the growing concerns for climate change has also seen particular pressure being put on the airport operators, with wider protests seen as being against the airport operations (Freestone, 2009). While, there is a growing number of airport operators making efforts in dealing with the wider issue of sustainability, the extent of these efforts are largely learnt through the media press or publications released by the airport with details of their environmental performance and implementation of mitigation schemes.

In addition, there are fewer literatures that describe and discuss the diverse infrastructure systems that require an extensive level of support and management at the Airport. The limited theoretical discussions concerning the extent of airport operations and its impact in relation to the sustainability debate, as well as with the growing concerns of airport capacity issues. An understanding of these aspects has helped to reaffirm the purpose of this research inquiry. Based on the transitions perspective of sustainability and its underlining principle on the status of changes through the evolution process, this thesis undertook the ethnographic approach and sought to better understand the airport practice and the dynamics which are rarely captured in the process of Transition Management for sustainability.
8.3 Key findings of the research

The research questions were structured on the basis of the what, how and by whom framework, in which it provided the initial gateway of enquiry into the sustainability practice at Island International Airport. The aspects that have emerged from this research thesis have in part helped to answer the primarily research question and the findings can be summarised and present as the following key themes:

- Sustainability as a socially constructed practice

It has been found that the understanding of the sustainability agenda at Island International has not been correctly identified. In answering the question of what the sustainability agenda is at Island International Airport? This thesis argues that the sustainability agenda involved a process of development and construction of understanding, either within the individuals or among other people. This process is ongoing and includes the forms of rationalisation to help individuals identify the significance of a particular rationale. It has been observed from stories and narratives of Airport members, the way in which they illustrated their frustration towards their everyday operations, has identified the particular tensions they have experienced, and how those tensions have influenced the way they organise their work. The emphasis on the pressures experienced to increase efficiency while working with aging facilities, they attempt to make sense of the Airport’s priorities by framing their agenda, and supplement it through informal interactions and the development of networks, they were able to continuously build and add further meaning to the sustainability agenda, as more than a moral obligation.

- Stakeholder’s value in constructing the sustainability agenda

The initial investigation into sustainability practices at Island International pointed towards their ongoing efforts to tackle noise pollution. As noise pollution remains at the centre of
policy concerns when it comes to the sustainability of the airport, while the Airport’s rigorous approach to mitigate the noise pollution was obvious, partly driven by the policy regulation, partly influenced by the ongoing complaints by the local communities, this research study has found that the underlining principle for the sustainability agenda at the Airport was initiated on the basis of “ensuring the airport can live in harmony with its local communities”. This idea regarding the way people influence the shaping of the agenda at the Airport has helped to answer the second research question of who decided on what the sustainability agenda is at Island International?

It suggests here that the agenda is essentially decided by no one person in particular, but the decision is shaped by everyone. The wider issues of sustainability have brought together a range of stakeholders from the government, Airport employees, local communities and customers of the Airport, all have helped to shape the focus of the sustainability agenda at Island International and throughout different points in time. This has been demonstrated through the cases of the runway expansion and the energy efficiency schemes, which have outlined how certain agendas such as the environmental programme and energy reduction projects have come into practice. The underlining issue here is not to determine who the key decision maker is in deciding the sustainability agenda at the Airport, instead, it aims to provide insights into the dynamics and complexity of social relations and their significance in shaping the everyday operations that have largely been downplayed in the transitional studies of sustainability.

❖ Struggle and resistance to process and shape the meaning of sustainability agenda

Following on from the understanding which sees the sustainability agenda as a socially constructed practice. In turn, this thesis also questions how the sustainability agenda is being decided? Formed on the basis that the meaning of sustainability is socially constructed, the process requires further understanding on how individuals make sense of the conditions and environment they are situated. The observations and narratives of individuals have highlighted the tensions in their everyday operations, the short story retold by technicians on
their struggle to unblock the baggage system when the liquid ban was first introduced at the airport; the narrative by the engineer about the missing smart meters and his attempt to find out what had happened, and the Director’s views on the ongoing challenge to prioritise departmental budgets and manage the conflict in values as to how resources can be allocated within his operational areas. These stories have been articulated in a common narrative of struggle.

While the theoretical discussion of struggle is still largely undefined, the analysis in this field has the tendency to frame it in a negative form. It argues here that struggle is part of the sense making process for individuals to develop an understanding of the condition in which they are situated, in additional, further aspects on how the sense of struggle also prompts individuals to act. In the examples of the runway expansion and the energy efficiency schemes, the opposition of local communities and their demands to protect their interest have subsequently shaped the Airport’s commitment to fulfil certain obligations. The persistence of the Operations Manager and his team, were another form of resistance to the management’s rejection for not providing them the financial investment, undeterred by the previous rejections, it argues that this form of resistance is positive, as it has derived an outcome with mutual gains, and enabled better management and increased operating efficiency of the infrastructure at the Airport. Both stories have highlighted the dynamic forces involved in the process, more importantly, it has also outlined the significance of struggle and resistance as the key feature to enabled the shaping for the sustainability agenda and its associated practices.
8.4 Theoretical contribution

This study was centred on how an airport engages with the sustainability agenda in their everyday operations. Based on the understanding of different concerns, issues and challenges regarding the subject of sustainability transitions, the findings of this ethnographic research identifies the prime contribution as being the proposed concept that sees struggle and resistance are the key ingredients in enabling the social construction of meaning and practice of a sustainability agenda. This view is significant to further simulate the current debates concerning the overly structural and prescriptive approach to sustainability transitions.

In addition, there has been limited application of an organisational and management approach to the governance framework of Transition Management theories on sustainability, it is part of this thesis’s contribution that it has adopted the lens of management and organisational theories to help construct the framework analysis, and identify gaps in Transition Management which places particular emphasis on policy making. Another key contribution of this thesis is that it has extended the view of practices within everyday organisational life from the perspective of sustainability transitions. Through the interpretivist inquiry for exploring the perspectives of the airport members, and their everyday experiences by looking at how they go about organising their work and making the day to day decisions that ultimately help to shape the organisations agenda. This ethnography research at Island International Airport has provided further insights into the way its members make sense of, and engage with the sustainability agenda.

The following points summarise the key contributions made by this thesis:

- This thesis has made a contribution by providing an original perspective on current limited studies of everyday practices in transitions towards sustainability.
• This thesis has contributed to the field of sustainability through the ethnography research to help capture the elements and issues concerning the practice of sustainability in everyday life.

• This thesis has shifted away from the positivist and structural approaches of the governance framework, to stimulate discussions and generate further interpretivist perspectives on Transition Management, by studying the aspect of “agency”, focusing on how individuals give the meaning to what they, and others do within the airport organisation.

• This thesis has initiated the theoretical link between organisational and management studies and the governance framework of Transition Management, through application of the Critical Management Theories (CMS); it has demonstrated value in adopting a more inter-disciplinary approach for studying the complex issue of sustainability.

• The thesis has highlighted the role of individuals (agency) and their significance in shaping the transition process towards sustainability. The general perspective gained from this ethnography research has in-part helped to respond to the concerns (Shove and Walker, 2007; Shove and Walker 2010; Genus and Coles, 2008) for the apparent lack of the “agency” element in the current understanding of Transitions Management for sustainability.

• This thesis has initiated the concept of “struggle and resistance” to enhance the current understanding of Transitions Management for sustainability and has established a more positive perspective on how struggle and resistance can be complementary, enabling the shaping of a sustainability agenda.
8.5 Limitations of the research

While the key findings have provided sufficient insights that help to addressed the three key questions as set out above, these findings are only suggestive and serve merely as a signpost and potential resource for future researchers. Further aspects emerging from this overall research study have also recognised certain limitations for various reasons, as part of the reflection for this research journey, these limits can be summaries into the following two key points:

❖ Generalising the tensions in transitions

As previously discussed, by opportunity, this research was conducted during a particular period when Island International was going through a major organisational restructure. This research has observed how individuals cope with organisational changes, however, the anxiety among individuals at the Airport and the uncertainty around the organisational changes has limited the research inquiry, as very few members were willing to share their perspectives on the impact of this organisational restructuring process. While the particular tensions being observed here have provided significant insight into the everyday practices at the airport, it can also argue that the occurrence of these tensions might be subject to particular external influences in the form of structural changes or other personal factors. Therefore, what constitutes as the “norm” in operational practice is also debateable, and instead of focusing on the generalisation of these tensions in transitions, there are questions concerning how this organisational restructure has impacted the individual’s performance and behaviours, and whether it has posed any influence on their work needs to be further investigated.

❖ Representation of “everyday practice” and focuses of “airport operations”

Following on from the previous point, it is uncertain to what extent the organisational restructure process has influenced the operational practice and behaviour of individuals. The
perspective of “everyday practice” in this thesis was built on the general understanding of the definition in a sociological context, which seeks to recognise the “normality” of what individuals think, believe and act. However, as argued previously, what constitutes the “norm” at Island International cannot be conclusively answered in this instance, it would require longer periods of study, such as longitudinal research to assist with the validation of the issues that have been identified here. In addition, this researcher had restricted access and was only allowed into certain areas within the airport, which means the researcher was only able to focus on the dynamics within particular operational functions. While it attempts to be as inclusive as possible, the essence of struggle in other parts of the airport operations such as airfield, activities in the cargo facility and air traffic control are not certain, and further studies may be required to validate the experience of struggle and events of resistance to advance the understanding in this field of research.

8.6 Opportunity for future research and concluding remark

The overall aim of this thesis was to develop an insight into “how things are” rather than “how things should be”. The current theoretical focus on Transition Management puts emphasis on the structural changes that concentrate on policy intervention, with particular attention looking at how technological innovation would enable the changes. However, the empirical studies focusing on the way in which policy impacts on the sustainable practices within this transitional context, is still limited, and there remains opportunities for further development in the understanding that has emerged from this study. To further enhance the theoretical understanding for transitions towards sustainability, it recommends the following opportunities for future research:

- There is the need to further consider the impact of policy at the local level within the transitions framework for sustainability. An example can look at the ongoing regulatory changes on air quality or the implementation of the Emissions Trading Scheme imposed by the European Union, and to further examine the practitioner’s
perspective and issues surrounding the implementation of regulatory requirements to improve sustainability.

- Future studies may consider investigating the development of intervention for sustainability at the policy (macro) level and how it gets delivered across the two levels of industry (meso) and organisations (micro), with particular focus on the role of agency involved during the process.

- A comparative study looking at the Dutch and none-Dutch examples on transition towards sustainability.

- Future studies may consider focusing on constructing a more in-depth framework of “struggle and resistance” in the theoretical perspective of Transition Management through adoption of other research methods, such as the case study approach.

- Future studies may consider to further examine the concept of “struggle and resistance” through the sociological perspective of “power”. A more in-depth theoretical and empirical research in this area may contribute to the initiative for behavioural change in sustainability studies.

- Future studies may consider the role of intermediaries in transitions towards sustainability that has emerged from this research thesis. A more explicit view on how knowledge is formed, shared and maintained would add value by filling the current research gaps in both fields of sustainability and Transition Management.

On the final thought, this thesis suggests that the theoretical focus of sustainability and Transition Management needs further consideration from the social and inductive approaches. However, it also agrees that some level of intervention is still required to help tackle the wider issue of sustainability. Even though the issue of the sustainability problem remains complex, this research has demonstrated how the relevant agenda can be approached, shaped and influenced by elements other than that of policy interventions. It is also important to note that this research study has recognised the importance and value of a systematic approach to better organise the ambiguous and ambivalent issue of sustainability.
To reiterate on the key theoretical contribution for this thesis, it proposes that struggle and resistance are key features which enable the shaping of a sustainability agenda in transition. Although existing theoretical studies have argued that certain forms of struggle and resistance are indeed negative, nevertheless, it is suggested here that the downplaying of tensions during transitions and treating it as an obstacle would hinder the development or implementation of change. As demonstrated by this thesis, the acts of struggle and the possible resistance that it leads to, needs to be given further consideration. It also suggests that resistance can in fact generate some positive outcomes, and the underlining point here is that the tensions and difficulties experienced by individuals simply need to be understood rather than being avoided.
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APPENDIX A

CONFERENCE PUBLICATIONS


PRESENTATIONS AND WORKSHOPS

School of MACE postgraduate conference, Manchester, July 2010, presentation of poster on “Airport Environmental Investment Toolkit”

School of Construction Management, University of Chalmers, Sweden, Postgraduate seminar, 25th November 2011, presentation of a paper on “Exploring Institutional Perspective of Stakeholder’s Values: A case of sustainable projects in the aviation sector.”
APPENDIX B

Interview participants consent form

Investigation of the Decision-Making Process for Sustainable Investment in Airport Operations (Working Title)
Informed Consent Form

Preamble: This informed consent form to provide you with brief information about the afore-mentioned research project, so that you can make an informed decision regarding your participation in the research interviews.

Brief description of research project: The purpose of the research project is to investigate how the organisation makes decision for investing in sustainability. The research participants would be drawn from a range of age, ethnic groups and individuals from [redacted] or associated with [redacted] that are involved in the sustainability agendas. This is to allow researchers to gain a fuller picture of social and organisational relations in the aviation sector. The research will be based on individual face-to-face interviews lasting between 1 to 2 hours. The aim is to uncover your personal experiences and perspective on the related agenda. You are not obliged to share with us information that you find particularly sensitive or uncomfortable to discuss, and you can call a halt to the interview process at any time.

The use of research data: The interviews will be audio-recorded for the purpose of analysis, it will also be transcribed verbatim, and saved as encrypted files in the researcher’s computer/laptop based at the University of Manchester. Data will not be disclosed to a third party under any circumstance, and all information will be treated with the strictest of confidence. Where data is used in academic publications, these will be anonymised. Direct quotations will also be selected based on how typical and general these can be gleaned from the transcripts. Participants will be invited to view and agree to drafts of publications prior to submission.

Having considered the rationale for the research and the way data is collected, analysed and used:

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<thead>
<tr>
<th></th>
<th>Yes*</th>
<th>No*</th>
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<tbody>
<tr>
<td>1. I confirm that I have read and understood this information and have had the opportunity to consider the potential of my participation satisfactorily.</td>
<td>✅</td>
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<td>2. I understand that my participation in the study is voluntary and that I am free to withdraw at any time without giving a reason.</td>
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<tr>
<td>3. I understand that the interviews will be audio-recorded.</td>
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<td>4. I agree to the use of anonymous quotes.</td>
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<td>5. I agree that data collected will be used for academic purposes and may be passed on to other academic researchers.</td>
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<td>6. I agree to take part in this project.</td>
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* Please put a ‘X’ where appropriate.

<table>
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<tr>
<th>Name of participant</th>
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<th>Name of person taking consent</th>
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# APPENDIX C

## Chronology of Research Fieldwork

<table>
<thead>
<tr>
<th>Timeframe/Activities</th>
<th>Fieldworks</th>
<th>Observation at Meetings</th>
<th>Key Events</th>
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<tbody>
<tr>
<td><strong>2010</strong></td>
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<tr>
<td><strong>August</strong></td>
<td>Fieldworks commenced Introduction week at Island International Airport with the Gate keeper in Operation Department</td>
<td>Introduction meeting at the Monthly Bees Club</td>
<td>- Island International Airport Group Chief Operation Officer departure, announcement of Executives and Directors Committee (ExCo) reshuffle - Carbon CAPEX template introduced at Island International Airport</td>
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<tr>
<td>Sept</td>
<td>Operations site visit covering the following activities: - Ecology and conservation area, and overview of the Mitigation Scheme - Noise Recording Servicing/Site visit - Service Water inspection</td>
<td>- Visitor Park Project Pre-Contract meeting - Airport Community Network Meeting - Infrastructure Liaison Meeting - Environmental Health Officer - Consultation Group Meeting - The Bees Club Meeting - Eurocontrol Meeting - Sustainability Steering Group Meeting - Customer First Team on Green Fire Station Project - Airfield Operation Meeting</td>
<td>- Security alert across airport/operations shut down - Appointment of a new CEO - Sustainability Strategy Executive made redundant - Organisational briefing week event - Organisational announcement of the restructuring by implementation of “Transformation process 2011”</td>
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<tr>
<td>Oct</td>
<td>Operations Department Meeting/Departmental team review - Make It Happen</td>
<td>- The Bees Club Meeting</td>
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<tr>
<td>Nov</td>
<td>Review of fieldwork programme, proposal for wider access to Operation Department</td>
<td>-</td>
<td>- Proposal to adopt Environmental Management System at Island International Airport - Operation Department Christmas Party</td>
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<tr>
<td>Dec</td>
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<tr>
<td>Jan</td>
<td>Began fieldwork with the Technical Team in Operations Department</td>
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<tr>
<td>Feb</td>
<td>- Technology Partnership/Meeting with Contractors</td>
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<tr>
<td>March</td>
<td>- Energy Efficiency Scheme Meeting</td>
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<tr>
<td>April</td>
<td>- Presentation to the Senior Management Team</td>
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<td>May</td>
<td>- Plans for office relocations of Operation Department</td>
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<tr>
<td>June</td>
<td>- Island International Airport was named as part of the UK Government’s wider plan for Key Economic Development Area.</td>
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<td></td>
<td>- Organisational restructure exercise in process</td>
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<td></td>
<td>- The Airport launched campaign to lobby lower UK Air Passenger Duty (APD)</td>
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<tr>
<td>July</td>
<td>Relocated to new open plan office, co-located with Finance, Airfield Operations departments and Senior Management Team</td>
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<tr>
<td>August</td>
<td>- CAPEX Panel Meeting</td>
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<td></td>
<td>- The Bees Club Meeting</td>
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<td></td>
<td>- CAPEX Reprioritisation Meeting</td>
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<td>Sept</td>
<td>- Announcement for organisational business expansion plan</td>
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<td></td>
<td>- Operation Department moved in to new office block joined all other departments</td>
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<td>Oct</td>
<td>Fieldworks at Terminals, includes the following activities and operations:</td>
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<td>- Terminal Facilities Operations</td>
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<td>- Baggage handling system</td>
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<td>- Terminal Customer Services Manager</td>
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<td>- Terminal Security Team</td>
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<td></td>
<td>- Night shift with External Engineering on Runway Maintenance</td>
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<td>- A day with External Engineering Duty Manager</td>
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<td>- Night shift with Utilities Engineers on Smart Meter Project</td>
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<td></td>
<td>- The Bees Club Meeting</td>
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<td>- Runway Group Meeting</td>
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<td>- Airport Consortium Committee Meeting</td>
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<td>- Friday Group Meeting</td>
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<td>- Technical Advisory Group Meeting</td>
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<td>- Technical Advisory Group Meeting</td>
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<tr>
<td>Nov</td>
<td>- Big Green Week Event at Island International Airport</td>
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<td>Dec</td>
<td>- New organisational structure was announced</td>
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<td>- Friday Club was given STARs award for its work on sustainability</td>
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<td>- Quarterly briefing/Transforming Meeting with Finance Team</td>
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<td></td>
<td>- Quarterly briefing with managers at Island International Airport</td>
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<td>- New operational model in placed with job losses across the airport</td>
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<td>2012</td>
<td>Jan</td>
<td>Review of Departmental Teams structure and proposals for change:</td>
<td>- Changes within the Operation Department</td>
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<td>- Proposal submitted for a new operational model for current Operations</td>
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<td>Department and a new approach to Infrastructure management for the</td>
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<td>Airport business.</td>
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<td>- Island International Airport was named Best UK Airport by the Travel</td>
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<td>Award for the fourth time.</td>
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<td>- Island International Airport becomes one of the busiest airport in the</td>
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<td>UK</td>
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<td>- Island International Airport was given the accreditation of ISO 14001</td>
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