

**RESILIENT PLACES?
HEALTHCARE GARDENS AND
THE MAGGIE'S CENTRES**

By

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A Thesis submitted to the University of Arts (UAL) London
in fulfilment of the requirements for the degree of
Doctor of Philosophy (PhD)

January 2014
Falmouth University

ABSTRACT

This thesis takes as its focus the Maggie's Cancer Centres exploring for the first time the impact of their designed gardens. This research is situated within the immediate context of Maggie's ambitions as an organisation and looks closely at their design process. It is also set within the wider debates about the effects of green space on health and the historical context of the restorative garden. By exploring both historical and contemporary examples, it argues that a healthcare garden may be a space for transformation.

Using four different Maggie's gardens as case studies, the research seeks to investigate the role of these outdoor spaces and their impact on users. Through ethnographic and sensory methods, each garden is considered and mapped. It looks at the design brief and the intentions of the designers', but the core work is an exploration of the experiences of staff and visitors. The focus is on the everyday use of these gardens as well as the design historiography. The experiences of gardens within healthcare are examined in order to expose the ways in which gardens, people, health and care are entwined.

Through the qualitative research process this thesis develops a new hypothesis as to how healthcare gardens may operate – offering a new definition for them as “resilient places”. Careful analysis of the data reveals the specific networks and affordances presented by these gardens. The thesis argues, based on the evidence of users, that healthcare gardens can uniquely embrace certain “essences” where essence is defined as conveying a quality or attribute. These garden essences are identified as thresholds, sensory richness, the density of time and homeliness. The thesis also argues that a healthcare garden can provide specific and unique opportunities for care and this, in turn, can enhance the healing ethos of an organisation such as Maggie's.

PREFACE

Angela Butterfield studied Art History at University College London before completing an MA in Garden History at Bristol University in 2008. She has worked as an art historian, primarily within gallery education for over 20 years. She is also trained in horticulture. In 2004 she founded the national bereavement support charity, The Sand Rose Project. Her research into the role of gardens in contemporary healthcare has evolved through both her academic interests and professional work. This includes teaching at the Barbara Hepworth Museum & Garden in St Ives and her work for Sand Rose, where she has developed the garden at the project in Marazion, Cornwall.

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ACKNOWLEDGEMENTS

I wish to first acknowledge all the people who took part in the research and interviews and kindly shared their experiences of the gardens.

I would like to thank Maggie's for their collaboration in the research, including the Professional Advisory Board and Maggie's Executive who granted permission to visit the case study sites. I would especially like to thank Charles Jencks and Laura Lee who encouraged me to take up this research. Thank you to the Maggie's Centre Heads: Lesley Howells, Andrew Anderson, Bernie Byne and Jane Fide. I am grateful to each of them for their help in facilitating the research. A very special thank you to Lesley Howells who has offered advice and support throughout in her role as Research Lead for Maggie's.

In addition to the Maggie's team, I thank Wendy Brewin & Alexandra Wagstaffe, Sensory Trust, Joanne Trussler, Great Ormond Street Hospital and Jennifer Dransfield, Macmillan Cancer Care. I also thank Daryl Martin, Colin Porter, Kate Muse, Jenny Graham and Wendy Gagen.

I would also like to thank Norman Hindmarsh, Lily Jencks, Dave Williams, Flora Gathorne-Hardy, Jane Kelly, Rosemary Creaser and Maggie's who kindly allowed me to use their photographs throughout this thesis.

Thank you to my Director of Studies Deborah Sugg Ryan and my supervisors David Hawkins, Michael Depledge and David Kamp.

ABBREVIATIONS

AAT	Aesthetic Affective Theory
ANFARCH	Academy of Neuroscience and Architecture
ANT	Actor Network Theory
ART	Attention Restoration Theory
BREEAM	Bre Environmental Assessment Method
BTCV	British Trust for Conservation Volunteers
CABE	Commission for Architecture and the Built Environment
CHD	Centre for Health Design
C&NN	Children and Nature Network
DSDC	Dementia Services Development Centre
DOE	Department of Education
DOH	Department of Health
EBD	Evidence-based Design
ECEHH	European Centre for Environment and Human Health
EHE	Enhancing the Healing Environment
GDP	Gross Domestic Product
GHH	Glasgow Homeopathic Hospital
GOHWell	Geographies of Health And Wellbeing
GOSH	Great Ormond Street Hospital for Children, London
HERD	Health Environments Research and Design
HRQOL	Health Related Quality of Life
MIND	Mental Health Charity
MNW	Measuring National Wellbeing
MQEM	Macmillan Quality Environment Mark
NATCEN	National Centre for Social Research
NCFI	Care Farming Initiative
NHS	National Health Service
NHSForest	National Health Service Forest
NICE	National Institute for Health and Clinical Excellence
NUFU	National Urban Forestry Unit
ONS	Office of National Statistics
PCT	Primary Care Trust
PFI	Private Finance Initiative
POE	Post-occupancy Evaluation
PRS	Perceived Restorative Scale
PTSD	Post-traumatic Stress Disorder
RHS	Royal Horticultural Society
SGD	Society of Garden Designers
WEMWBS	Warwick-Edinburgh Mental Well-Being Scale
WHO	World Health Organization

CODING FOR INTERVIEW PARTICIPANTS

All interviews with staff, patients and family members were conducted anonymously using a coding system that identifies the relevant garden (see list of acronyms) and is used throughout the thesis when quoting participants and in photo-elicitations. The coding also identifies, where possible, staff or a visitor by number and their gender.

Examples:

ML3 male, staff = male staff member at Maggie's, London

ME21 female, cancer patient = female cancer patient at Maggie's, Edinburgh

The research has not quoted from any participant more than twice in relation to one issue and more than four times overall.

For a list of interviews with designers, gardeners and managers see page 398.

LIST OF ACRONYMS FOR CASE STUDY GARDENS

CS	Creative Spaces (Trevarna Garden) (appendix 2E)
GOSH	Friends Garden, Great Ormond Street Hospital (appendix 2D)
GOSHOS	Friends Garden, Great Ormond Street Hospital, Online Survey (appendix 4B)
MACC	Macmillan Crewe (appendix 2A)
MACW	Macmillan Warwick (appendix 2B)
MC	Maggie's Cheltenham (appendix 1D)
MCOS	Maggie's Cheltenham Online Survey
MD	Maggie's Dundee (appendix 1B)
MDOS	Maggie's Dundee Online Survey
ME	Maggie's Edinburgh (appendix 1A)
MEOS	Maggie's Edinburgh Online Survey
MF	Maggie's Fife
MH	Maggie's Highlands
ML	Maggie's London (appendix 1C)
MLOS	Maggie's London Online Survey
MN	Maggie's Nottingham
SRP	Sand Rose Project (appendix 2F)
SRPVF	Sand Rose Project Visitor Feedback Survey (appendix 2F)
SRPOS	Sand Rose Project Online Survey (appendix 4B)

INTRODUCTION

FIGURE 0.1. Fra Angelico (1387-1455), *The Annunciation* (c.1438-45)
(Bridgeman Education)

In Fra Angelico's painting of *The Annunciation* (c.1442, Museo di San Marco, Florence) c.1438-45, the artist has composed his image to combine human being, room and garden (see figure 0.1). Everything is carefully balanced to ensure the viewer is drawn into the event taking place. This painting was the subject of an essay by the architect Alvar Aalto in 1926 where he praised Fra Angelico for conveying, 'important architectural essences' and encapsulating an 'ideal image of home' because it connected both internal and external space with a sense of intimacy which was both physical and emotional (cited in Pallasmaa & Sato, 2007: 30). The painting provides an ideal of 'entering a space'; the 'verb-essence' (ibid.) of architectural experience by speaking of the act of entering the room and not of the formal design of the porch or the door. Aalto (ibid.) also talked about 'reversed imageries' where indoor spaces were represented as outdoor spaces and vice versa.

Aalto's ideas and Fra Angelico's painting provide a constant point of reference for this thesis. The term "essence" is borrowed and applied to gardens. Essence is defined within this thesis as a core property or character – the intrinsic nature of something or a

fundamental quality or attribute (*Concise Oxford English Dictionary*, 2004).¹ The proposition is that certain “garden essences” are operating within an effective healthcare garden. If these essences are combined with proper maintenance and care a healthcare garden has the potential to become a “resilient place”.

This thesis, as the title indicates, looks at healthcare gardens. It takes as its focus Maggie’s, a cancer charity that provides non-clinical cancer care across the UK at its specially designed centres. It looks at four of Maggie’s gardens as case studies, presenting new knowledge of the experiences of these gardens by the people who use them (see figure 0.2). With this new knowledge this thesis explores the idea of healthcare gardens operating as “resilient places” and it questions and probes the ways in which Maggie’s gardens may or may not be such places.

Within the UK, Maggie’s are independent of the NHS; they offer complimentary services to those provided within mainstream hospital settings. Their buildings and gardens are distinctive and domestic in scale, presenting a striking visual contrast to the large-scale hospital complexes typical of the cities in which they sit.

Maggie’s was founded by Maggie Keswick and her husband Charles Jencks in 1995 to pioneer a new approach to cancer support. It was the experience of Maggie Keswick as a cancer patient that led her to design a blueprint for a cancer caring centre. In an essay written before her death (Keswick, 1995), she wrote of the influence of environmental factors in the experience of health and illness, especially at the point of clinical diagnosis. Since her death, Charles Jencks, has worked as an advocate of the Maggie’s agenda, and has prompted more consideration of the role of architecture in the delivery of healthcare. Jencks, an American architectural theorist best known for his writings on post-modernism (Jencks, 1983, 1996, 2007), has remained a strong influence within the organisation. He locates the spaces commissioned by Maggie’s as part of a more general move ‘towards more humane and varied building types’ (Jencks and Heathcote 2010: 14) to provide person-centred care, answering wider social expectations about healthcare.

¹ The author has referred to a range of dictionaries within this thesis in order to give precise definitions relevant to the context under discussion.

² See note 1.

³ There are differing views on the spelling of wellbeing. The hyphenated version is used by the Office for 21

Maggie Keswick, whose family are part of the Scottish business empire, Jardine, Matheson and Company, was herself a garden designer and historian best known for her knowledge of Chinese gardens (Keswick, 2003). Although Charles Jencks' interests have increasingly turned to science and landscape architecture (see chapter 4), he brings to Maggie's a very particular history and theory of architecture which has had an impact on the organization. This biographical context is important to acknowledge from the outset. The reputation of both Keswick and Jencks has produced a particular set of dynamics. They have brought to the organisation not only access to material resources but influential contacts and associates within their circle of architects and designers.

Today Maggie's is a company and registered charity having to raise over £12 million per year to deliver their patient-focused cancer support programme across the UK. There are now eleven Maggie's Centres operating in the UK and one in Hong Kong; there are four more with interim services, and eight further centres planned, including one in Barcelona. Each centre is characterised by a distinctive and highly individual design by leading international architects and landscape designers, thereby highlighting the significance of experimental design within the healthcare sector.

This research about Maggie's gardens is set within the context of the organisation's wider aims and objectives. In addition, a selection of other contemporary healthcare gardens has been examined for comparison and contrast. The Maggie's gardens are also positioned within the broader historical and research context that looks at the relationships between gardens and health.



FIGURE 0.2. The four case study gardens. *Top to bottom*: Maggie's Edinburgh, Dundee, London and Cheltenham (Butterfield, 2012)

Through a mixed method, qualitative research process, this thesis develops a new hypothesis as to how a healthcare garden may operate. It offers an in-depth study of the experiences of these gardens by their users. By looking closely at these outdoor spaces, observing their use and interviewing staff and visitors it presents new information on contemporary healthcare gardens and highlights the ways that gardens, people, health and care are entwined.

This thesis first looks at the idea of the restorative garden through history. This is not about historic or modern gardens *per se*, but a very specific history of outdoor spaces that are designed, included and used within a healthcare setting. The research also maps current debates about the effects of green space on health. A contemporary healthcare garden has to be set within this varied historical context as well as some of the very recent debates.

This thesis acknowledges that there are two very different frameworks; that gardens are essentially constructed, subjective artistic endeavours; whilst healthcare is grounded in objective scientific research. To explore the context of a healthcare garden it is necessary to consider both frameworks and draw on social science research, ethnography, geography as well as design, garden and art history for both context and methods. However, this research remains at heart a humanities project.

In this introductory chapter key terms are defined and the aims of the research set out. Central themes are introduced and reasons for choosing Maggie's explained. This chapter sets out to define the parameters of the research and offers an outline of the thesis.

0.1: Definitions

The term 'garden' means 'yard' or 'enclosure' and denotes in its most basic definition ways of organising earth, water, plants and people, animals and art (*New Oxford Dictionary*, 2001).² Throughout this thesis the term garden is used in this broad sense to denote an area of earth, water, plants and art designated for use by people. The artificial nature of a garden is acknowledged from the start; that a garden is situated as an art form that combines human design with ecology. Throughout this thesis the author focuses on the role of gardens as designed green spaces.

It is important to distinguish between gardens as a defined area, which has received, at some point, systematic design and planting for some purpose, and landscape. Within a healthcare context the latter implies greater size and scale, and may include urban features as well as some mature planting and which are often more simply about areas between buildings. While "landscape" and "garden" are terms often used

² See note 1.

interchangeably by critics and historians (and this is true in relation to Maggie's designs), within this thesis care will be taken to distinguish between the two terms. Likewise, the term "landscaping", which can often imply some element of design, is avoided wherever possible in favour of garden design. On occasions landscaping has been used by the author to infer something which is larger in scale or which is perhaps about an overall site, environment or setting. On occasions Maggie's gardens are described as 'landscapes' because this seems to fit better with designers' intentions, which in some cases seem to have more to do with creating outdoor sculptures and 'land forms'.

Beyond this basic definition of a garden it is acknowledged that many gardens have the capacity, and are often specifically designed to embrace nonfigurative concepts. Gardens, since ancient times, have been used for expressing ideas of the sacred and of human aspiration towards perfection. They have always been seen as serving needs beyond those met by the production of food or amenity space (Hunt & Willis, 1975; Thacker, 1979; Strong, 1992; Brown, 1999; Francis & Hester, 1999; Hunt, 2000; Hobhouse, 1999; Quest-Ritson, 2001; Fearnley-Whittingstall, 2002; Turner, 2005; Richardson, 2007).

Even the most cursory look at garden history reveals that gardens have the capability to communicate complex abstract ideas. The etymology of the paradise garden, and its lineage from Persian, Roman and Islamic origins, is an example of meanings attributed to gardens across history and cultures. It also demonstrates the interweaving of real and metaphorical ideas of enclosed spaces. The English word 'paradise' is derived from the old Persian 'pairi-daeza' meaning 'enclosure' or 'park' and refers to early husbandry and the need for secure areas of land. The Arabic for 'paradise', 'janna', has the additional meaning of 'garden'. The Greek 'paradeisos' came to refer to not only the Persian garden but also to the Garden of Eden (Moynihan, 1979: 1-5). The sacred notion of paradise has been central to many cultures for many centuries. In Judaism, Christianity and Islam the very first garden is regarded as somewhere on earth where our ancestors were in direct contact with God.

Inherent in the idea of a garden is some kind of care or attention (i.e. gardening) beyond the initial design; their stories are always evolving. A central theme for this research is the idea that gardens offer not only physical but also psychological and emotional orientation. Gardens function in different ways; beyond their immediate form

and place they are able to communicate or project ideas, sensations and emotions. This is one reason why this research probes people's experiences of gardens in order to understand how the real and the ideal often combine.

People bring preconceived ideas about gardens to their experiences. For example, this research discovered that for some people a garden is automatically conflated in some way with ideas about a haven, an oasis, a sanctuary or restful place. This reveals the role gardens play within society and how they conjure complex cultural associations. It is also highly significant for a healthcare context where there may be a deliberate desire to create a sense of sanctuary.

In this thesis when considering the framework of healthcare, the concept of health is taken in its broadest sense to be 'a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity' (WHO, 2009: 1). Illness or to be unhealthy is considered to be a state of imbalance that is a threat to wellbeing. Healing is presented here as multidimensional and includes physical, biological, mental, spiritual, emotional and social elements. The word heal derives from the old English word 'healan' meaning 'wholeness', also suggesting integration and connectedness (Onions, 1996). As Sternberg (2009: 14) writes:

If illness and health are nouns, then healing is a verb. It is a movement in a desired direction – a journey that takes you from illness to health. There are as many kinds of healing as there are cells and organs in the body and diseases that can affect them, but all involve restoring the body to a state of balance.

Healing is therefore not necessarily being cured, but feeling whole, suggesting that no matter how sick a person is they are able to heal and find a new stability.

Healthcare is defined as the diagnosis, treatment and prevention of illness, disease, injury and other physical and mental impairments to human beings. Healthcare is what is required by people who are unwell and involves curing, healing and caring (Cooper, G., 2006: 13). The gardens discussed here are all directly linked to healthcare whether within the public or private sector. For practical and logistical purposes the study has been confined to the UK. However, within the historical and contextual chapters reference will be made to healthcare in other countries where appropriate.

Personal wellbeing is defined within this research as a dynamic state.³ While situating the concept of wellbeing within the current debates about quality of life, this research suggests that certain places and spaces enhance a positive sense of wellbeing in the terms of enabling people to feel more comfortable and at ease, less stressed and calmer (ONS, 2012; Self et al., 2012; WHO Quality of Life, 2004; Bird, 2007; Wellbeing 2013). Perhaps the best description is for people to feel comfortable – to be ‘at home’ – where they feel included and both able to talk openly or, if they prefer, to sit quietly. Definitions and ideas about comfort and homeliness will be discussed further in relation to a central theme of this thesis in chapter 9.

The starting point for this thesis is the concept of the restorative garden. Indeed it is possible to argue that throughout history within most cultures, there have always been gardens and plants associated with health. Historically, and more recently within the field of environmental psychology, it is acknowledged that a garden within a healthcare setting can provide a place to restore one’s equilibrium, effectively mitigating some of the stress of illness and institutional environments.

The definition of the restorative garden is distinguished from other garden types such as healing, meditative, contemplative and therapeutic. As Gerlach-Spriggs and Healy (2010) point out, healthcare gardens are often described by a broad and vague collection of overlapping terms.⁴ The ‘therapeutic garden’ is often the preferred term because it implies treatment or remedy with the expectation of a positive measurable outcome. By designating a garden ‘therapeutic’ the implication is that it somehow conforms to a medical model. For this research the term ‘restorative’ is preferred precisely because it sharpens a focus on the experiences of people in garden spaces and the specific (and different) qualities a garden offers.

Restoration can be regarded as ‘the process of renewing physical, psychological and social capabilities diminished in on-going efforts to meet adaptive demands’ (Hartig, 2007). Restoration leads to changes that are considered beneficial and embraces ideas such as to strengthen, improve, stimulate, relieve, create, reclaim, reform and connect (*Concise Oxford English Dictionary*, 2004). Restorative sites are therefore

³ There are differing views on the spelling of wellbeing. The hyphenated version is used by the Office for National Statistics (ONS, 2012), however throughout this thesis the term wellbeing will be used.

⁴ For the purposes of the literature review it has been necessary to undertake a key word search that included all these terms.

places that contribute to the wellbeing of individuals (physically, mentally, emotionally and in relation to social health) and communities (in regards to access, empowerment and community efficacy).

While at various points this research acknowledges the concept of the health of the landscape (ecosystem function) this broader definition is beyond the scope of this thesis. The term 'environmental health' is purposely avoided although consideration is given to recent redefining of public health within an ecological context that emphasises the interconnections between people and environment (Rayner & Lang, 2012; Reis et al., 2013). Indeed health is not considered purely in human terms, rather, it is argued that a healthcare garden can be a "resilient place", epitomizing the dynamic and inclusive relationship between humans and the natural world – restoration may depend in part on the characteristics of the place and, in part, upon us. Therefore, resilience is defined here in relation to a place that provides opportunities for people to recover or adjust to misfortune, change or disturbance (*Longman Dictionary of English Language*, 1984; Svendsen, 2009).

The definition of 'restorative' is pushed to the point where, within this research, it is replaced with the idea of resilience. This links to the nineteenth century idea of salubrity, which embraced the quality of wholesomeness and healthfulness (Martensen, 2010: 27-28). Salubrity is an ancient Latin word that appears through the ages in discussions about environmental health. Hence, salubrious places (healthy places) were those favourable to the preservation of health. Whereas the notion of restoring something to a prior point following a disturbance or traumatic experience can be misleading, the word resilience embraces the idea of both jumping back to the past but also leaping forward to the future. This word is also felt to be more appropriate when discussing cancer care too (see chapter 4).

The study is presented primarily as a piece of qualitative research and no attempt has been made to measure wellbeing in relation to a garden. Nor are the related issues of gardening, horticultural therapy and the history of healing plants discussed in detail. Rather the focus is on the narratives that people construct to explore their relationship to gardens. The interview technique developed for this research had a twofold advantage; firstly of gathering these stories and, secondly providing insight into people's wellbeing because participants inevitably spoke about their feelings.

A starting point was to consider what is a “sense of place” and how do we create our own sense of place, let alone a place that is resilient? A central theme of this thesis is to tease out of the analyses the emerging ideas about place (in this case a garden) in relation to illness and wellbeing. If healing is a constant process, then so is a sense of place. Our perception of the world around us changes not only with events, location, time and weather but also with our moods and health. Our awareness of space and place changes when we are ill, and changes again when we begin to heal.

The proposal within this thesis is that a healthcare garden may be not merely a healthy but also a “resilient place” that embraces a dynamic and inclusive relationship between humans and the natural world and one that can evoke past sensory memories and future orientation. Gardens, it is argued, are to do with the emotional and psychological needs of people which are equal to their physical and medical needs. They can create an atmosphere in space where people feel safe, secure and empowered and this is significant for healthcare.

0.2: Aims of the research

This research questions the roles of healthcare gardens with special reference to Maggie’s. It asks if Maggie’s gardens are “resilient places”. In order to do this it looks closely at the design process at Maggie’s, discussing both the design brief and the designers’ intentions, before examining the evidence of users. The research aims to situate Maggie’s in relation to both the historical and contemporary context for the healthcare garden. This includes a review of the literature on the history of the restorative garden and green healthcare. The research aims, not just to present information on Maggie’s gardens, but to more generally refine and clarify the character and purpose of a healthcare garden. The central research question is, ‘what roles can a garden play in a contemporary healthcare setting?’

The research has focused on people’s experiences of gardens within healthcare. By developing qualitative research methods from ethnography and landscape studies, the research asked participants to discuss their experiences of gardens. Evidence was gathered to consider whether the inclusion of gardens has an impact on the experience and wellbeing of the staff and visitors within a range of healthcare settings in the UK.

The case study work aims to offer new knowledge of the experience of these gardens by the people who use them – that is, the staff, patients, friends and family. The research explores and analyses the experiences of these users. It also considers the interests and concerns of designers. The methods developed for this research stresses the importance of fieldwork and user experience. The research investigates how these gardens are used and link to the day-to-day lives of various healthcare organisations.

During the field research a range of questions were considered. What are the characteristics of the gardens offered within these healthcare settings? How are these outdoor spaces used? Are there barriers to their use? What parts of the gardens are most used and why? How much time is spent in them? Is it important to have privacy within these garden spaces? What features, sensory or symbolic details of the gardens are most valued? What are the staff attitudes to the gardens? How important are the inclusion of gardens for patients and their families? In what ways do they impact on their overall experiences of the centres under question? Are views of green space enough, or is it important to have access to outside spaces? How may the gardens be improved? Do views and experiences differ between different constituent groups, locations and type of healthcare setting?

Visual representations of gardens as both paintings and photographs are used extensively in this thesis. The images are used as a form of practice within this research. They are there as evidence and to further elucidate key ideas and issues. Their presence does not mean that visual representation is in some way prioritized. Photography was also used extensively, as will be explained, by participants in the research. For ethical reasons it was not possible to take photographs that include participants. For this reason alone there are very few photographs of gardens that include people.

0.3: The garden essences, architectural placebo and the narrative of resilience

This research started from the premise that gardens are ‘not a neutral scene, but a place considered, a probable opportunity, an occasion’ (Comito, 1979: 105). This does not mean that the author assumed that green spaces are always of benefit. On the contrary, the research revealed how some healthcare gardens are not useful. Simply placing a garden within a healthcare setting does not give it value or meaning.

Likewise, it was acknowledged that for some people gardens are always going to be unimportant and hence of little health value.

This research explores a selection of gardens designed and developed within healthcare settings in order to develop a clearer understanding of how they function. It began from the premise that a healthcare garden should be regarded as a contested space; a space that has to operate in a number of ways and will have different, and perhaps conflicting, functions and meanings for different people. What is, or might be, helpful for one individual or group may not be for another. Likewise, the design process is a contentious one. It is important to question where the ideas come from, who participates in creating a healthcare environment, and whether there is equity in the evaluation of design features. It is never assumed that the design statement or public description of the garden is an accurate account of how the garden is actually operating. By focusing on the experience of the people who use these gardens, the research underlines the complexity of these spaces.

Throughout this research the aim has been to bring into sharper focus the specific ingredients of healthcare gardens. What emerged from the qualitative research analysis was evidence of key qualities that were valued by participants. These are defined as the “garden essences” and are discussed in detail and have been directly drawn from the data. The author identifies these garden essences as thresholds, sensory richness, the density of time and homeliness. What also emerged was evidence that a garden provides unique opportunities to refine the quality of care; that a garden can enhance the ethos and activities of a healthcare organisation and make a positive contribution to its daily workings.

Maggie’s adhere to a belief that the designed environment has healing potential, which amplifies the effectiveness of their support. Charles Jencks (2006) offers the term, ‘architectural placebo’ to draw out the potential of the relationship between buildings and health. Notwithstanding the complexities of placebo, Jencks’ analogy draws attention to the relationships between patient, caregiver and environment. That care can somehow be enhanced through both social activities and design. He states:

It is the interaction between the carers and the patients – the ethos between them, the team spirit engendered that has to be supported by architecture... Put as theory, I would say that when the style and content of an institution are mutually supporting, they can produce the Architectural Placebo... (Jencks, 2006: 454)

A critique of Jencks' theory is presented in chapter 4; however, it is useful to draw attention to it now because it highlights the need to look not only at the materialities of design but also the relationships between architectural design and the social activities of a centre. Could this analogy be useful for garden design too?

The suggestion is that healthcare design can only really be discussed through the narratives of the community within which it exists. And indeed the qualitative analysis revealed some of the complexities of the interactions of design, people, place and activities. And this is precisely where the new type of qualitative data that was generated is important – through the images and words of the participants the research offers access to rich detail and nuanced accounts. It highlights the stories and layers of experiences of these gardens, which become defined, within this research as the “narrative of resilience”.

0.4: Why research Maggie's?

Before this research the impact and use of Maggie's gardens had not been understood. No analysis as to the roles of outdoor spaces at Maggie's had taken place, apart from previous work by the author (MacDonald, 2008)⁵. Could using Maggie's as a case study cast light on the effect of the built and green environment on health? The very fact that Maggie's are not hospitals yet operate in direct relation to them means they perform a specific and interesting role as an integrated 'healing landscape' that needed exploring.

Jencks' architectural placebo is intriguing. It acknowledges the powerlessness of architecture to exert real medical benefit but also implies there is an unseen benefit. Maggie's emphasis on the designed environment presented an opportunity to explore the effects of environment (both built and green) on patients, their families, friends and staff. Maggie's also offered the chance to explore the possibilities in relation to how the designed environment can act as part of a broader cultural process, one which helps people through illness.

Maggie's presents a model of commissioning healthcare spaces that focuses on the individual designer responding to their brief. While Maggie's take great pride in their

⁵ The author's previous surname was MacDonald

'communities' there is little evidence of a broad collaborative design process. They do not engage in community, user-led or co-creation design practices. This research sought to explore the roles of the gardens as experienced by their regular users. When this research started in 2009 there had been only one post occupancy evaluation (POE) of a Maggie's Centre and this focused on the building (Stevenson & Humphris, 2007). Beyond the annual visitor audits, this was the first attempt to gather detailed user feedback. The organization has now established a research focus and currently qualitative, user-focused research is being undertaken in collaboration with the University of York examining the role of architecture at Maggie's Gartnavel, Cheltenham and Oxford (Martin, 2013). There has also been some user-focused research concerning the architecture at Maggie's London (Annemans et al., 2012; Marijsse, 2013; Van der Linden, 2013).

Maggie's have built a name for themselves as leaders in the field within healthcare architecture. Their buildings have won numerous awards and their centres are repeatedly showcased. They are frequently described as 'leading the way', as outlined below:

Maggie's like one-offs. Each one is a signature building. They're not trying to roll out a brand, they're trying to bring good design into healthcare. That's something that has been sorely lacking in this sector for a long time. So much money goes into the mechanics – the machinery, the scanners and so on – but having good architecture around all that can really help the recovery process, too. The situation is changing though and Maggie's is leading the way. (Wimshurst, W., Project Architect, RSHP, cited in Ling, 2008: 82)

Maggie's Inverness was included in the Commission for Architecture and the Built Environment's (CABE), *Designed with Care* publication as one of fifteen of the best neighbourhood healthcare buildings (Mason, 2006). When the American President's wife, Michelle Obama, visited Maggie's London in 2008, she described the centres as 'community jewels' (C21, Issue 3: 12). In 2010 Maggie's staged an 'Architecture and Health' symposium in London that brought together experts from a wide range of fields.⁶ In 2011 the Victoria and Albert Museum and the Royal Institute of British Architecture Gallery hosted an exhibition dedicated to the design behind the centres entitled, 'Architecture and Healing'.

⁶ Speakers included Cor Wagenaar, Ken Worpole, Edwin Heathcote, Michael Hopkins, Rem Koolhaas, Jonathon Gray and Robert Leonard (Maggie's, 2010).

Significantly, Maggie's states that one of the ways they identify themselves is by their environments. But even they seem surprised at the impact their buildings have had. They state, 'we hadn't realised, until it happened, how powerful a tool it would be that each community feels so proud of its Maggie's' (Jencks & Heathcote, 2010: 219). This, they say, works well for them on a number of levels. Their unique buildings engender a strong feeling of ownership and this encourages people to come in and to talk about Maggie's. This in turn works as a strong marketing tool for them. Crucially it helps them to raise money to build more centres and to keep them running.

Writers like Gesler warn that 'a very good reason for landscaping a healing institution or building an inspiring building could be to promote a place' (2003: 104). Designs that 'catch the eye and open the pocketbook' can be more about 'marketisation' and less about creating healing environments (ibid.). Can Jencks' claims be supported? Is this really a serious attempt to reinterpret and enrich a cultural tradition to do with healthcare design? Or, are these buildings in reality architectural follies, strong on gathering media headlines, clever at fundraising, but weak on user input?

Furthermore, while some of the gardens have been showcased it is striking how the architecture rather than the Maggie's environment (that is building and garden) are usually prioritized in press reports. It is interesting to note that their gardens have only won two awards in comparison to the many won for their buildings.⁷ Why are the gardens seen as less important within the design process and the ensuing narrative of the organisation?

0.5: Gardens matter

A question often voiced within healthcare design is 'do gardens really matter?' Where does their value lie or rather where should their value lie? Gardens and views are, as will be discussed, important at Maggie's. Clearly landscape designers are playing a role, by considering carefully what sorts of spaces are appropriate in relation to each centre and what is important for cancer patients. But the role of their garden spaces and how much they matter has yet to be articulated to its maximum effect.

⁷ The garden at Maggie's London was used as an exemplary case study within the Forestry Commission's recent publication about green space and health (Shackell & Walter, 2012: 33-34).

What roles do the gardens play for the centres and how might Maggie's develop these spaces further? Could they offer a paradigm shift for what a healthcare garden might be? Can gardens embrace the science and technology, but also the importance and meaning of cancer care today? If the Maggie's buildings represent a new 'hybrid building' (Jencks, 2006: 454; discussed in chapter 4), is it possible that this terminology can be extended to include the outdoor spaces as well, suggesting Maggie's are pioneering a new type of healthcare space appropriate for the twenty first century? These are some of the questions this research has asked.

Beyond the specific context of Maggie's, this research has evolved in relation to, not just healthcare, but also the history of art and design. It also came out of the author's experience of two very different gardens in Cornwall. The first, working as a teacher and art historian at the sculptor's, Barbara Hepworth, garden in St Ives (see figure 0.3). The second, working within a garden for bereaved families at the Sand Rose Project in Marazion (see figure 5.30).⁸ While these gardens perform different functions, a long-term relationship with both has ensured deep engagement with some key ideas that are explored in this thesis. These include the impact of a garden as a creative project and repository for ideas (an artist's studio), and as a place for both sadness and recovery.

FIGURE 0.3. Portrait of Dame Barbara Hepworth (1903-75) by Peter Kinnear, seated in her garden next to one of her sculptures (Bridgeman Education)

⁸ See Preface

0.6: Outline of the thesis

Chapter 1 attempts to locate the healthcare garden within larger historical and cultural narratives of the restorative garden. It offers the historical context, examines the decline of the healthcare garden in the twentieth century, and probes more recent initiatives to enhance the healthcare environment. It looks at healthcare gardens through history including *Asclepieia* in ancient Greece, the medieval *hortus conclusus*, the European *physik* garden, pavilion style hospitals, sanatoriums and modern hospice gardens. It discusses historical ideas about sensory refreshment and the therapeutic landscape.

Chapter 2 presents the research context for this thesis in order to position the Maggie's gardens within the wider debates around environment and health. It looks at a range of material linking nature contact with wellbeing. Theories about therapeutic landscapes, restorative and healthy places, green research, green care and the current wellbeing agenda are all discussed. The specific context of gardens within healthcare, research based on post occupancy evaluations and current ideas about cancer care and environment are included. The chapter concludes with a look at current design theories that have direct relevance to healthcare gardens today.

In Chapter 3 some of the issues and problems associated with studying healthcare gardens are raised and addressed. This leads into a discussion of the methods chosen for this research project. Both Actor Network Theory (ANT) and an ecological (affordance theory) approach have informed the methods chosen. Ethnographic and multisensory methods inform the qualitative research and case study work. The role of fieldwork and the stages of mapping the case study gardens are discussed and the data sample for this research are presented.

Chapter 4 looks at the specific context of Maggie's. The history and aims of the organisation are discussed in order to focus on their ambitions for the designed environment. This includes a discussion of their architectural brief as well as the interests of their founders, Maggie Keswick and Charles Jencks. It also presents an overview of the gardens across all sites.

Chapter 5 introduces the four case study gardens drawing on field research and interviews with staff and designers. The case studies from other contemporary healthcare gardens are also discussed. This chapter then moves to a discussion of the

research data generated by the case studies. The data analysis process is outlined and an initial finding considered.

In Chapter 6 the first garden essence “thresholds” is discussed. Drawing on the research data, it shows how participants valued those gardens that offered a range of thresholds that connected and softened the overall healthcare environment. It reveals how gardens helped participants to cross the threshold of a healthcare centre. It also demonstrates how intimate garden spaces were able to “hold” people. This chapter concludes with a discussion of the need to re-focus on natural landscape within healthcare.

Chapter 7 defines the second garden essence as “sensory richness”. Participants’ experiences of sight, smell, taste, hearing and touch are all discussed in relation to the case studies. It also reveals how participants valued opportunities for sensory moments and that many of the gardens’ features triggered sensory memories. In view of the findings in relation to sensory design, this chapter also explores the idea of a healthcare garden resonating a sense of belonging, which can be both soothing and uplifting.

Chapter 8 looks at the third essence described as “the density of time”. Here it draws on the data to show that participants valued opportunities presented by the gardens for movement and different activities; opportunities to slow down or speed up. It also explores participants’ responses to seasonal change and variation and opportunities to contemplate life and death. It discusses the conflicting responses to memorials as well as to the use of symbolism to do with science and health. Based on the findings, this chapter suggests that healthcare gardens can provide people with different and perhaps more calming or soothing experiences of time; that time and space can be interwoven with a sensory richness in a different way to the experience of being indoors.

Chapter 9 discusses the fourth garden essence, “homeliness”. Across the case study sites the role of the gardens in providing intimate, homely places for participants, whether staff, patients or family members was highlighted. The concept of home is explored and unpicked in an attempt to pinpoint the contribution a garden can make. The findings are discussed and explored specifically in relation to the Maggie’s ethos as well as the wider healthcare context.

In Chapter 10 the value placed on the maintenance and care of the case study gardens is examined. It highlights some of the practical problems to do with managing healthcare gardens and discusses evidence suggesting that where gardens are cared for by one gardener there is greater user engagement. It also looks more closely at the role of gardens for staff within healthcare. Drawing on the data, it is argued that gardens can enhance the quality of care within healthcare. It argues that compassion is an essential quality of any well-maintained garden and that healthcare should take more note of the so-called garden virtues.

Chapter 11 revisits the data to demonstrate how, if a healthcare garden embraces the four essences, it will generate stories. This chapter takes further the hypothesis of the healthcare garden as a resilient place. It introduces the idea of the narrative of resilience and attempts to clarify and refine further the roles of a healthcare garden. This chapter explores ideas about the garden as a liminal space in order to refine the potential for transformation within healthcare. Finally, it refers to two more recent garden projects at Maggie's as evidence of a new approach.

The conclusion summarises the key findings, highlighting the new knowledge gained by this research. It revisits Maggie's suggesting that this organisation is in a strong position to develop a new healthcare garden paradigm. It challenges Maggie's to consider a new design brief based on the research findings. The conclusion also offers suggestions for further areas of scholarship.

CHAPTER ONE

Gardens for Restoration: The Historical and Contemporary Context

The Restorative Garden in both paradigm and practice has many precedents capable of informing the interpretation of contemporary examples. This research has been prompted by a particular set of gardens in contemporary healthcare. However, many of the issues raised by these gardens can be understood more clearly by looking at historical precedents. The health benefits of gardens have been appreciated as far back as 600 BC. Indeed throughout history and within most cultures, there have always been gardens (and plants) associated with healing (Minter, 1993 & 2005; Stuart, 2004).

The belief that contact with trees, grass and flowers fosters wellbeing and helps to reduce the stress of urban living is evident in ancient Egyptian, Persian, Greek and Roman culture. There is also a long history of creating gardens attached to places of healing or spiritual care. That gardens operate as restorative, therapeutic and rehabilitative environments for people who are unwell, has been part of the mainstream medical environment for centuries. Although the maintenance of gardens in hospitals has not been consistently championed throughout history, there has usually been a commitment to the experience and experimentation with outdoor green space within the healthcare context. Gardens have always had a role in humane medical care.⁹

This chapter looks at key moments in the history of the healthcare garden. It is not a comprehensive historical overview; instead it focuses on examples or where a particular set of circumstances offers insight or precedent for the situation at Maggie's today. It begins by looking at Epidaurus in Ancient Greece and then moves to the *hortus conclusus* associated with many early European hospitals. It discusses historical ideas about sensory refreshment, fresh air and the therapeutic landscape. It highlights how many twentieth-century hospitals became exercises in sensory deprivation before moving to some of the more recent initiatives to enhance the healing environment. Finally, it considers how some contemporary ideas about gardens embrace both personal and community restoration including the modern hospice movement.

⁹ The term "green space" is discussed and defined in chapter 2

1.1: *Asclepieia*

In Egypt and Greece gardens were closely associated with medicine (Carroll, 2003). At least since the fourth century B.C. to the sixth century A.D. Greece had healing centres or *Asclepieia* devoted to the god of medicine and healing, Asclepius. *Asclepieia*, places where Asclepius was believed to heal, could be found throughout the ancient world. One of the most famous shrines was the sanctuary at Epidaurus in the Eastern Peloponnese, south of Athens (see figure 1.1).

Figure 1.1. The Sanctuary of Epidaurus, Greece by Frederica Leone (WHC UNESCO)

For over a thousand years people came to the Epidaurus, believing that Asclepius would appear in their dreams while they slept at the site and heal them. The sanctuary at Epidaurus is in a secluded spot in rolling hills with a good water supply and beautiful scenery. Archaeological research demonstrates the topography of the site combined with a unique configuration of buildings and green space. As a historical site it contributes to an understanding of gardens and health. It was regarded as sacred and this was an important part of the creation of a healing environment. Gesler (2003: 30) calls this 'an ecology of sacred buildings' or, alternatively, 'sermons in stones' because it indicates how human aspirations embodied in architecture interact with nature.

At Epidaurus it appears that careful attention was given to the relationship between the natural landscape, the site and its buildings because this was considered important to the healing process. It embraced the ancient idea of geomancy which is broadly

defined as the art of siting buildings auspiciously; in this case to create a healthy site.¹⁰ The buildings, which included temple, loggia and theatre, were designed to ensure awareness of the surrounding landscape. Recognition of the cosmos, a word that means order and beauty in Greek, was part of this process that included the cure of 'temple sleep' and 'cathartic theatre' (Jencks & Heathcote, 2010: 56). Scully (1962: 302) states that at Epidaurus, 'the whole of the universe of men and nature [came] together in a single quiet order to be healed'.

1.2: The Enclosed Garden

Enclosure has been central to many types of gardens across the world including the Persian pleasure garden, the Islamic *chahar-bagh*, the Roman courtyard, Chinese and Korean courtyard gardens and Japanese dry rock gardens. While such enclosed spaces were primarily dictated by climate or the need for physical protection, they also embodied the idea of restoration. In medieval Europe the *hortus conclusus* or enclosed garden, derived from the Roman courtyard, generally provided a safe haven, a calm and quiet breathing space separated from the chaos of city life or the unsafe countryside.

Enclosed restorative gardens were intimately connected with the European medieval monastery (figure 1.2). As Carole Rawcliffe (2008: 3) writes, 'before the development of the microscope and the advent of modern medicine, gardens constituted a frontline defence in the battle against disease'. Recent archaeological research (Elliott, J., 2005), including studies of seeds, at the ancient hospital site at Soutra in Scotland suggests that Augustine monks had sophisticated knowledge of medicinal plants and developed their garden accordingly.¹¹ Gardens adjoining institutions for the care of the poor, sick and infirm were commonplace and known to be integral to the daily routines and rhythms of institutions. Monastic practices combined popular herbal remedies and dietary prescriptions with Classical Greek medical theory emphasising the close relationship between health and the environment.

¹⁰ Geomancy is derived from the Greek word meaning 'earth divinations' and is here defined in this broad sense of siting buildings auspiciously rather than referring to its other meaning as the 'divination from the configuration of a handful of earth or random dots' (*Concise Oxford Dictionary*, 2004). This idea links to the ancient Chinese practice of Feng Shui and the Indian practice of Vastu Shashtra.

¹¹ Medieval medicine was based on Aristotle's theory of the four humours, the *Hippocratic Corpus* and the system of physiology and anatomy developed by the Greek physician Galen (AD 129 -199). Knowledge of plants was based on Dioscorides' (AD 40-90) *De Materia Medica*.

Most monasteries included medicinal gardens next to the infirmary, reflecting the fact that botany was closely allied with the practice of medicine in the Middle Ages. However, beyond growing medicinal plants, these enclosed courtyard gardens functioned as restorative spaces (Rawcliffe, 2008). They were places for contemplation, gentle recreation and spiritual regeneration. Set within the grounds of the monastery beyond the city walls these early institutions linked to the ancient idea of the pantheistic *Asclepieia* or sanatorium in its rural idyll. The rise of cities in the Middle Ages meant that hospitals became increasingly connected to urban life.

In England, hospitals such as St Bartholomew's (1123) and The Savoy (1505) in London or St Giles in Norwich (1249) included spaces such as a walled herb garden, a kitchen garden, orchards and a 'paradise' garden where inhabitants were able to engage in quiet contemplation. This latter space, common to most establishments, was modelled on the central cloister of the monastery.

Within the monastery, the paradise garden was the most important, not only for its location next to the church but also because it was regarded as a sacred space that symbolised Eden. This space was designed to offer meditation upon man's fallen nature. The medieval paradise garden or Mary Garden was associated with the Garden of Eden.¹² It usually included allegorical details such as the four paths and a central well or fountain. Everything was intended to encourage a reflective mood, and the wish for spiritual transformation of the viewer (Comito, 1978: 41-50). Surviving plans of St Gall (c.816-12) in Switzerland, Christ Church (c.1165), Canterbury and Peterborough Abbey (1302) all reveal the location and layout of the paradise garden (Harvey, 1981; McLean, 1989) (figure 1.2).

¹² The paradise garden is described in the Old Testament of the Bible in Genesis 2: 10-15 and the Song of Songs.

Figure 1.2. A modern copy of plan of the monastery at St Gall (812-20), showing the cloister garden situated right next to the church. Other gardens include the vegetable garden, the physic garden and the orchard and tombs (Garden visit)

Significantly the enclosed or courtyard garden is found in the first hospitals in Britain. The use of cloisters functioned not just as an architectural feature linking building and garden and all the activities of the hospital, but provided access to fresh air whilst providing protection from wind and rain. Surviving medieval buildings, such as the Hospital of St Cross (1133-36) near Winchester or the Hospital of St Oswald in Worcester (1085), reveal gardens and enclosed courtyard spaces integral to their design (figure 1.3).



Figure 1.3. The Hospital of St Cross and Alms House of Noble Poverty (1133- 1136) near Sparkford, Winchester (Butterfield, 2010)

St Bartholomew's Hospital, founded in 1123, provides an interesting case study as one of the oldest urban hospitals in England, but also because it has remained on the same site, which has always included garden spaces. The historical plans of the site from its early days as a hospital reveal how courtyard gardens were integrated with the buildings. When the hospital was rebuilt in the eighteenth century the main square took on a much more formal layout. A courtyard remained at the heart of the hospital and nineteenth and twentieth-century records show how this space functioned within medical care providing outdoor wards for patients. The fountain in the square was a later addition added in 1859 replacing an earlier well. Sadly this space has become today, like so many green hospital spaces, a car park (figures 1.4-1.6).

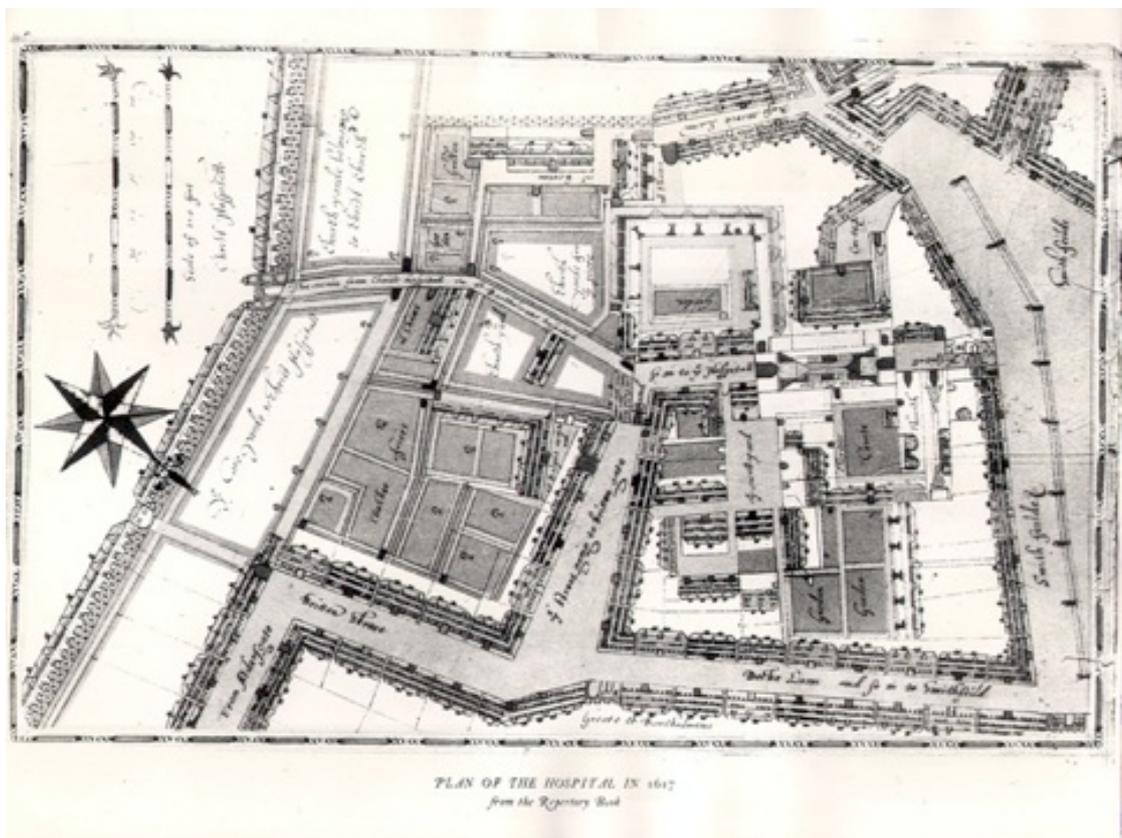


Figure 1.4. A plan of St Bartholomew's Hospital, London in 1617 showing inclusion of enclosed garden spaces (St Bartholomew's)



Figure 1.5. A Postcard from the 1930s showing nurses tending patients in the square at St Bartholomew's Hospital, London (Bartholomew's)



Figure 1.6. Photograph of the square at St Bartholomew's Hospital, London taken in 2010 (Butterfield, 2010)

Beyond the specific religious symbolism the *hortus conclusus* would often include *momento mori* (artefacts designed to allow people to reflect on their own mortality) such as sundials, clocks and inscriptions. Few of these gardens survive and most knowledge comes from writing, paintings and engravings (figure 1.7). Although the tradition of the courtyard garden is more often associated with a hotter climate than the UK, enclosed gardens have always been important, first within the monasteries and then as botanic and 'physik' gardens and eventually as the walled kitchen garden.

Figure 1.7. 'Emilia in the Garden', detail, Anjou (c.1460), based on *La Teseida* by Giovanni Boccaccio (1340-1341), (Wikimedia Commons)

1.3: Sensory refreshment

In the medieval and early modern period it was generally believed that because gardens could refresh the senses, they had an impact on health. Saint Bernard's (1090-1153) famous description of the courtyard garden of the hospice at Clairvaux monastery in France encapsulates this idea (see appendix 4A).

Within this enclosure, many and various trees, prolific with every sort of fruit, makes a veritable grove, which lying next to the cells of those who are ill, lightens with no little solace the infirmities of the brethren, while it offers to those who are strolling about a spacious walk, and to those overcome with the heat, a sweet place for repose... The choir of painted birds caresses his ears with sweet modulation, and for the care of a single illness the divine tenderness provides many consolations, while the air smiles with bright serenity, the earth breathes with fruitfulness, and the invalid himself with eyes, ears and nostrils, drinks in the delights of colours, songs and perfumes.

The importance of fresh clean air and scent upon human physiology and psychology was particularly stressed. Colour was also thought to have a profound effect upon mind and body and green was widely believed to soothe, refresh and nourish the eyes. Thus the health giving properties of lawns and meadows were considered and this perhaps explains why many people chose to study in gardens. In monasteries books were often stored in carrels (small cubicle or enclosure with a desk for study) around the cloister where monks would sit and read surrounded by green turf.

The distinction between the healthy countryside and unhealthy towns is reflected in the writings of key figures in garden history (Wear, 1992: 119-149).¹³ Albertus Magnus believed that gardens contributed to the health of people and he placed great stress upon the atmosphere and appearance of the pleasure garden. In his *De Vegetabilibus* (1260), he wrote at length about the importance of smell, sight and wind direction in the promotion of health and contentment. Thomas Hill's, *The Gardeners Labyrinth* (1577: 25), argued that gardens were crucial to health and mental wellbeing. His book lists many remedies for a 'weariet mind' and 'dull spirites' and he writes of what is to be gained from the 'delectable sightes' of a 'beautifull and Odiferous Garden' (ibid.: 33, 55 & 90). Gervase Markham (1613, chapter II) writes in the *English Husbandman* of the importance of siting your house away from low-lying places to ensure good air quality.

In his celebrated *Of Gardens*, Francis Bacon (1597-1625: 127) described the garden as 'the Greatest Refreshment to the Spirits of Man'. Bacon emphasised the importance of fragrant plants and herbs, listing his favourite and even recommending burnet, wild thyme and water mints to 'perfume the air most delightfully' when passed by or trodden on. Robert Burton discusses in *The Anatomy of Melancholy* (1632: 79), the importance of good air for good health claiming that 'bad aire is a cause of melancholy'. Burton (ibid.) also recommended that the melancholic should walk amongst orchards, gardens, bowers and arbours. From at least the Elizabethan age in England there was a regular tradition of solitary contemplation and an understanding of its health benefits, found in the artificial nature of a garden (Coffin, 1994) (figure 1.8).

¹³ For example, Cogan's *Haven of Health* (1584), Tobias Venner's *Via Recta ad Vitam Longam* (1628) or John Graunts' *Natural and Political Observations upon the Bills of Mortality* (1662).

Figure 1.8. Nicholas Hilliard (1947-1619) Henry Percy,
9th Earl of Northumberland (c.1595), (Bridgeman Education)

John Evelyn was a passionate advocate of fresh air and the benefits of green space. He believed, like many physicians, that country people lived longer and healthier lives than those who dwelt in the cities. His book, *Fumifugium* (1661: 26), proposed a variety of measures for the improvement of the 'Aer of London' for the 'health, profit and beauty' of the place. This included the establishment of surrounding plantations with trees and 'odiferous and fragrant [shrubs]...by which the city and the environs about it, might be rendered one of the most pleasant and agreeable places in the world' (ibid.: 23-24). Evelyn was to see little improvement in London in his lifetime, however he did build his own 'sweet-scented' garden at Sayes Court which included open-air 'Cabinetts' for reading and contemplation as well as his own private walled garden.

The secularisation of hospitals and the decline of the monastic paradise garden signalled the decline, though not disappearance, of restorative gardens. Hospitals remained prominent, even pivotal architectural elements of European cities, but the (premium) green space within and around them became less valued. Once divested of their religious content, courtyards and open spaces within and surrounding the

hospitals of the Renaissance and Reformation Europe became the subject of accidents of local wealth and architectural tradition. The prison and hospital reformer, John Howard (1789: 53-69) reported only two gardens associated with hospitals in the British Isles during his tours of the 1770s & 1780s. Interestingly he (ibid.) reported favourably on hospitals with gardens in France, Italy and Austria, where he admired the flow of fresh air and the chance for patients to see gardens through windows and the opportunity to walk in them.

Many catholic establishments did maintain their gardens and fifteenth-century Spanish hospitals, following the Arabs, continued the courtyard tradition. Brunelleschi's Foundling Hospital in the centre of Florence (1419-1445) is often cited as a model of an effective hospital building where fresh air, fountains and access to green space is maintained by the cool arcades. Enrique Egas' Hospital de la Santa Cruz, Toledo (1504-14) is also good example. Although no longer a hospital, visitors today can see how the cruciform plan with courtyards, chapel and cloister created a series of carefully mediated spaces and a strong buffer between outside (the city) and inside (the hospital); between public and private (figure 1.9).



Figure 1.9. Enrique Egas' Hospital de la Santa Cruz, Toledo 1504-14 (Butterfield, 2011)

1.4: The pavilion style: Therapeutic landscapes and sanatoriums

The notion that landscape and art could benefit health never completely disappeared. Joseph Addison (1712: 411) wrote in the early eighteenth century that ‘delightful scenes, whether in nature, painting, or poetry, have a kindly influence on the body, as well as the mind, and not only serve to clear and brighten the imagination, but are able to disperse grief and melancholy’.

The pastoral and romantic poetry of writers such as William Wordsworth and Samuel Taylor Coleridge extolled the restorative powers of nature; gardens and landscapes were once again endowed with heightened emotional force and religious power (Hickman, 2008; Gesler, 2003). Artists and writers looked to nature for hope and consolation for our mortality and this is a theme that has been picked up in more recent times.

It was not really until the late eighteenth century, when attention to hygiene and the development of modern statistics began to indicate the importance of fresh air and light that the significance of green spaces within healthcare re-emerged. By this time hospitals in Britain were becoming secularized institutions, linked to political and industrial upheaval but also representing advances in medicine, science and social philanthropy. Hospital reformers Dr Philippe Pinel in France and William Tuke in England worked to improve hospital and mental healthcare at this time.

As a nation defined, at this time, by its empire building ambitions overseas, it is no surprise that it was within naval medicine that some significant advances were made. The first dedicated Royal Naval Hospitals at Haslar, Gosport (1761) and Stonehouse (1765), Plymouth were both built around large quadrangles. Stonehouse was built on a 24 acre site and the quadrangles were surrounded by a detached ward block planned to prevent the spread of infection. Images of these hospitals emphasise the sense of open space, light and greenery as integral to the hospital environment (figures 1.10-1.11).

Figure 1.10. Royal Naval Hospital, Stonehouse designed by Daniel Alexander (1768-1846), showing the pavilion plan; separate buildings arranged a central quadrangle and connected by covered walkways (colonnades), (Plymouth City Council)

Figure 1.11. Godfrey Jervis Gordon (1992-1944) *Royal Naval Hospital, Haslar*, view through an arch into gardens (Wellcome Library)

The proposals of Jacques Tenon; the direct experience of doctors and nurses such as Florence Nightingale; and the theory of 'miasmata' in which disease was caused by polluted air led to the pavilion-style hospitals that became the norm in the nineteenth century. These hospitals were designed on the evidence that clean, airy, well-kept and sunlit hospitals meant lower mortality rates (Hickman, 2008 & 2013). Nightingale (1863: 99) famously advocated the use of hospital gardens in her influential, 'Notes on Hospitals':

The square within the hospital, and the spaces between the pavilions, should be laid out as garden ground with well-drained and rolled walks, and shaded seats for convalescents. It is of great importance to provide places of exercise under shelter, for patients, to be appropriated to that purpose alone. Such recreation and winter-airing grounds may be comparatively large, and yet cheap construction, if roofed on the Crystal Palace Plan.

Within mental healthcare the 'Moral Treatment', as it became known, emphasised the importance of outside space. Here it is important to discuss the York Retreat, a purpose-built asylum by the Quakers between 1794 and 1796. This foundation was regarded as a ground-breaking psychiatric institution because its therapeutic regime offered a new, humane attitude towards the mentally ill. Significant to this research is that it is perhaps one of the earliest planned 'therapeutic environments' where both building and green space were developed to create a deliberately domestic and non-institutional feel. The therapeutic environment as a concept within health geography will be discussed in more detail in chapter 2.

Akehurst (2011: 73) demonstrates how architects and benefactors chose a design and environment that was more 'a vernacular of equality' compared to most public healthcare at the time. For example, they put the kitchen and the household services at the centre of the building reflecting the desire for a more homely environment and also reflecting the Quaker's emphasis on the family. The Retreat's setting, in the suburbs of York, also offered privacy and grounds that accorded to the Quaker idealization of the rural life (Hickman, 2013: 62-63) (see figure 1.12). The Retreat had 'a few acres for Keeping Cows and Garden Ground for the Family, which will afford scope for the patients to take exercise, when that may be prudent and sensible' (Akehurst, 2011: 85).¹⁴

¹⁴ Akehurst's research is extracted from the 'Retreat Directors' Minute Book 1792-1841, York Retreat Papers, Borthwick Institute for Historical Archives, University of York

Figure 1.12. The York Retreat (1842) designed by William Tuke, John Bevans and Peter Atkinson the Elder and the Religious Society of Friends (1794-6), (Wellcome Library)

The York Retreat's gentle therapeutic regime and emphasis on a carefully designed environment was, in its time, the exception to the rule. The majority of secular hospitals that emerged as the industrial revolution moved apace were modelled on Palladian mansions and country houses. Hickman (2006b: 3) shows how hospitals since 1800 tended to layout their gardens in the current 'country house' style of the day. They lacked ornamentation and were increasingly urban sites with little access to greenery or gardens. Furthermore, Heathcote (Jencks & Heathcote, 2010: 66) makes the point that in Britain there was a peculiar conflation of building types between hospital and prisons through this period that had a lasting impact.

The York Retreat had more direct impact within mental health and its design did eventually become a blueprint for other psychiatric institutions. It established the fact that landscape and the location of the asylum within it was important, and features such as 'airing courts' (separate walled areas adjoining the house where patients could walk), larger pleasure grounds, sports grounds, fields and an estate became the norm for how the majority of Victorian asylums were designed (Hickman, 2013: 25-115; 2006b: 3). The role of farms and kitchen gardens within these estates were two-fold; they provided food for the asylum as well as outdoor exercise and therapy. Rutherford's (2003) research into the English public asylum in the nineteenth century concludes that these institutions developed a distinct landscape type specifically adapted for therapeutic purposes.

Towards the end of the nineteenth century, gardens associated with general hospitals began to lose their importance. This trend coincides with the medicalization of the general hospital and the increasing focus on the short term; the acute and surgical cases rather than long-term convalescents. The pavilion plan was no longer necessary as the nature of infection control and hygiene were better understood.

Where the garden continued to play a role was with specialist hospitals or ones that advocated 'open-air' therapies where there was still an emphasis on the longer term. Fresh air formed an important part of the treatment for tuberculosis, with many sanatoriums using open windows and balconies. Indeed you could say that Epidaurus foreshadows the idea of the sanatorium in which rest, fresh air and scenery provided a setting for healing to take place. As Stevens' (1918) account demonstrated, many hospitals and sanatoriums in the early twentieth century regarded site and green space important because rest and recuperation were considered an essential part of patient recovery.

Edward VII Sanatorium, near Midhurst, Sussex (1906) is an example of a sanatorium where the grounds were designed by garden designer Gertrude Jekyll (figure 1.13). Features found in hospitals practicing open-air treatments included open-air shelters, verandas and balconies. For example, revolving sleeping chalets were a feature of the treatment at Mundesley Hospital, Norfolk from around 1900 (see figure 1.14).

Figure 1.13. Edward VII Sanatorium, near Midhurst, Sussex with landscaping by Gertrude Jekyll (Frith, 1906)

Figure 1.14. Shelters at Mundesley Hospital, Norfolk (English Heritage, c. 1900)

For a brief period in the twentieth century, this emphasis on purity, hygiene, fresh air and sunlight partnered with modernist architecture to produce some innovative designs, particularly in relation to the care of tuberculosis sufferers (Campbell, 2005; Hickman, 2013: 152-206). The connections between architecture, health and nature were explored by modern architects such as Frank Lloyd Wright, Richard Lovell and Alvar Aalto (Campbell, 2007; Menin & Samuel, 2003). They were explicit about the health benefits of well-planned architecture and about the importance of nature and natural views in health and healing. They were interested in designing buildings that appeared to grow out of their natural settings, epitomized by Lloyd Wright's *Fallingwater* (1939-59) in Pennsylvania (Pearson, 1994: 77; Nash, 1996: 53-55).

In contrast, modernist traditions and much post Second World War urban planning, including hospital sites, divorced architecture from site. As Woudstra (2000: 150) writes, architects such as Le Corbusier promoted the 'machine for living', but with little regard or sympathy towards people, place and nature and little understanding of the concept of 'landscape for living'. British landscape designers such as Christopher Tunnard (1938), Elizabeth Beazley (1960), John Brookes (1969), Peter Shephard (1969) and Geoffrey Jellicoe (1980) all lamented the cavalier treatment of the space between buildings. Significantly many looked to twentieth-century Scandinavian designers such as Alvar Aalto and C.Th. Sørensen because they placed value on siting and landscape detail (Woudstra, 1999).

The influential Paimio TB sanatorium (1929-32) designed by Aalto in Finland became a model for later hospitals. It included a patient's wing with light-filled rooms that faced south overlooking a forest (see figure 1.15). Unlike many other modernist buildings Aalto's building showed incredible attention to detail and he designed everything from door handles and washbasins to light fittings and chairs. The combination of nautical, industrial, organic and Nordic features and the landscape setting gives this 'modern block' a domestic feel and firmly states that the environment is important for the patient.

Two other modernist healthcare projects need to be mentioned here because both sought to transform urban environments and both asserted a belief that design, including outside space, played a central role in ethos function. Both projects showed a concern for creating community space believing there was a strong link between people's social and physical environment and their health.

The Pioneer Health Centre in Peckham, designed by the engineer Owen Williams, opened in 1935 as the home of the Peckham Experiment, a project led by George Scott Williamson and Innes Pearce. The project was predicated on a model of preventative medicine and the brief for the centre was to create a 'building as an instrument of health' (Darling, 2007). Set back in a two acre site with gardens the centre included a swimming pool, cafeteria, open air nursery and gym (see figure 1.16).

The Finsbury Health Centre in London by Berthold Lubetkin and Tecton (1935-38) was more focused on public health than preventive medicine, but also embraced a similar belief in transforming healthcare with design. This centre included a TB clinic, foot clinic, dental surgery and solarium. The original plans did not include a reception area or formal waiting room and murals and the walls were decorated with murals designed by Gordon Cullen, which combined scenes of healthy living with slogans such as 'live out of doors as much as you can' (Darling, 2007). Significantly, the building was designed as an 'island site', physically protected from its urban setting by a footbridge (ibid.) (see figure .1.17). The building, which included two glazed wings and a solarium or sun terrace on the roof, was surrounded by a garden 'moat'. Green space in the form of a lush garden provided a threshold between the city and the centre. It was almost as if Lubetkin was suggesting that patients who entered were taking a transformative journey.

The writings of Rudolf Steiner (1861-1925) should be mentioned in this context because he influenced some of the most architecturally radical and humane healthcare buildings to appear in more recent times. Steiner advocated the notion that all buildings should have the physical and spiritual health and wellbeing of their inhabitants at their core (Bayes, 1994). Although Steiner did not write about gardens *per se*, the development of his influential biodynamics as a form of agriculture and food production emphasised ecological, social and economic sustainability. He also recognised the role of community within design and this is something these pioneering projects all have in common.

Figure 1.15. Alva Aalto's (1929-33), Paimio Sanatorium, Finland (Sandy Isenstadt, 2010, ARTstor)

Figure 1.16. The Pioneer Health Centre in Peckham (1935), set in 2 acres of gardens, designed by the engineer Owen Williams (Cassie Clark)

Figure 1.17. Lubetkin and Tecton's Finsbury Health Centre (1935-38) showing the green space and footbridge (E-architect)

1.5: Sensory deprivation

The twentieth century witnessed the decline in establishment and maintenance of gardens associated with medical institutions. Between 1950 and 1990, interest in the value of gardens all but disappeared from many hospitals in Western countries. During this period, which coincided with the technological specialisation of medicine, indoor spaces were designed for hygiene and clinical efficiency and outdoor spaces primarily for parking.

In the UK the vision and skill associated with many of the traditional asylum gardens and estates gradually decreased. Furthermore, many specialist institutions and psychiatric hospitals were closed due to changes in therapeutic care and the increased effectiveness of drugs. Hospital sites saw urbanisation gradually encroaching on their open spaces; some land would be sold off while further buildings would appear in a 'hotch-potch' fashion (Hosking & Haggard, 1999: 27). Land care became the responsibility of estates staff and they tended to prioritize maintenance of buildings and technical resources. The cost of maintaining gardens often weighed against the need for parking. Little value was placed on the aesthetic and sensory benefits for patients and staff of quality land usage or design. Gardens came to be viewed as luxuries rather than an important therapeutic element. When the National Health Service (NHS) was established in Britain in 1948 it inherited a mix of buildings and sites. Many of the major NHS trusts today still operate within this confusing mix of buildings, car parks and scraps of green space (figures 1.18 & 1.19).



Figure 1.18. An example of hospital green space (outdoors) at the Royal Cornwall Hospital, Truro, (Butterfield, 2010)



Figure 1.19. An example of hospital green space (indoors) with (dead) planting at Great Ormond Street Hospital, London, (Butterfield, 2010)

It was not until the mid-1950s that new hospitals began to appear in Britain. Heathcote (Jencks & Heathcote, 2010: 79) charts the typologies of these new 'superhospitals', which he lists as the 'podium and tower paradigm' and the 'superblock'. The general approach was to stack wards in a tower rising from a podium containing all other accommodation. Shaped by new lift technology and a desire for short walking distances, it was nicknamed 'matchbox on a muffin' (Building Centre Trust, 2005). Although many of the new buildings did pay attention to landscape and light, the reality was that these urban centres were becoming larger and larger and their settings more and more neutral. The general acute-care hospital was transformed into a compact, multi-storey building resembling an office or laboratory. As Heathcote (Jencks & Heathcote: 54) writes:

The hospital became more machine than monument, a stripped-down, functional series of boxes accommodating the increasingly complex technical apparatus for prolonging life. Architecture flatlined.

The general hospitals that dominate the urban landscape in the UK today are often high-rise blocks with air conditioning and limited outdoor terraces, balconies or gardens. Many of the Maggie's Centres are positioned next such buildings. These large hospital sites such as Raigmore in Inverness operate 'at a scale associated with major engineering plants' (Cooper, G. 2006: 10) (figure .1.20). Their architecture and landscape design is equally plain and industrial in character. Sometimes the overall

effect is quite intimidating as, for example, with the oncology unit at Cheltenham General Hospital (see figure 1.21). This building is not far from where Maggie's Cheltenham is located.

These medical institutions do not conjure images of a healing place. As Gesler (2003: 83) writes:

People expect treatment for physical or mental illnesses in hospitals, but rarely anticipate spiritual, emotional, or social healing. In many times and many places hospitals have been looked upon as a last resort or a place where one goes to die.

Once inside the typical UK medical institution the visitor is unlikely to have much sense of the seasons and have limited access to green spaces. There are, of course, notable exceptions to this such as St Thomas's Hospital (rebuilt 1960s) and Charing Cross Hospital (built in 1973) both included gardens (Hickman, 2013).



Figure 1.20. View of Raigmore Hospital site, Inverness (Butterfield, 2010)



Figure 1.21. The oncology unit, Cheltenham General Hospital (Butterfield, 2011)

The modern hospital is much more a provider of services than of healing environments, especially with the emphasis on reducing length of stay with day surgery and ambulant care. These places are often seen to exhibit a negative sense of place or ‘unauthentic landscape’ (Arbury, 2008; Gerlach-Spriggs et al., 1998: 31-33). Their huge scale, banal, dull interiors and tarmacked exteriors have become what anthropologist Augé (1995) describes as ‘homogenised non-places’ – places nobody wants to go. Worpole (2009: 5) states that many hospitals have become ‘exercises in sensory deprivation’ as the examples of Cheltenham and Inverness suggest (see figures 1.20 & 1.21). The historian Wagenaar (2006: 11) despairs:

Hospitals are also built catastrophes, anonymous institutional complexes run by vast bureaucracies, and totally unfit for the purpose they have been designed for. They are hardly ever functional, and instead of making patients feel at home, they produce stress and anxiety.

Sternberg (2009: 4) writes that often ‘the hospital’s physical space seemed meant to optimize care of equipment rather than care of the patient’. It appears that within modern health systems, which have focused on disease, rather than patient care and comfort, some of the age-old understandings about nature and place were temporarily lost. Attitudes have changed, especially with increasing evidence that patients and staff with access to green views and gardens experience less stress (this is discussed in chapter 2). In the last twenty years a healing art and design dimension that includes gardens has re-emerged across a range of health facilities.

1.6: Enhancing the healing environment with gardens

As demand for less hostile and more patient-orientated hospitals has emerged, research (discussed in chapter 2) has also indicated that post-war hospital edifices are not only unwelcoming, but actually unhealthy. Since the 1980s, research, primarily in America, has led to a gradual revision of hospital design and an increasing emphasis on patient-centred care, including the therapeutic value of green spaces. Gardens have begun to be valued again for their part in creating a healing environment.

There is now a small body of literature looking at gardens within healthcare, although empirical studies are still scarce (Paine & Francis, 1999; Gerlach-Spriggs et al., 1998; Bass Warner, 1993; Zeisel, 2009; Ziesel & Tyson, 1999; Rainey, 2010; Hickman, 2006a, b, 2008 & 2013). Researchers (Cooper Marcus, 1995, 2005 & 2010; Cooper Marcus & Barnes, 1995 & 1999; Cooper Marcus & Francis, 1999; Worpole, 2009;

Grahn & Stigsdotter, 2003; Hosking and Haggard, 1999; NUNFU, 2004; Cooper Marcus & Sachs, 2013) have begun to focus on two issues. The first is that gardens may be able to relieve stress of staff, patients and families in the medical environment. The second point is that gardens provide opportunities to nurture social activities that counter the ill effects of isolation experienced by many patients.

Within the UK, while most of the NHS sites remain problematic and essentially built environments there are hospitals where gardens and art have become valued. In 2002 Primary Care Trusts (PCTs) took control of local healthcare and finance and the Private Finance Initiative (PFI) provided a way of funding major capital investment in new buildings.

At the same time The Commission for Architecture and the Built Environment (CABE) consistently championed the idea of the therapeutic environment within healthcare (Mason, 2006; CABE, 2009a & b).¹⁵ This resulted in many new projects and opportunities for landscape architects to become more involved.¹⁶

The King's Fund programme, which developed a series of grants for healthcare improvement, provided some opportunities for garden design. The largest of these grants was allocated to Enhancing the Healing Environment (EHE, 2013), a nurse-led programme of hospital improvements designed to make a significant impact on NHS design. The EHE programme raised awareness of the ways in which environment affects our wellbeing and has developed various Environmental Assessment Tools. Some of the projects have included landscaped courtyards and gardens.

Many of the more imaginative healthcare gardens have been developed within the context of healthcare arts, often with gardeners and landscape designers working alongside other arts professionals (Ternent, 2008). Staricoff's research (2004; Staricoff et al., 2004) as well as the work at University of Durham (2005) and University of the West of England (2007) all developed the evidence base, suggesting the arts have the potential to assist in the quality of care. In 2007 the Arts Council and the Department of

¹⁵ CABE was the government's advisor on architecture, urban design and public space between 1999-2011.

¹⁶ Practitioners such as Richard Mazuch of IBI Nightingale or Jeremy Parker of Fira Landscape Architects have become sector leaders in the 'therapeutic environment'. Mazuch (2005) has developed 'Sense Sensitive Design', 'Emotional Mapping' and 'The Design Prescription' drawing attention to research in this field, while Parker has developed a number of landscapes for Macmillan Cancer Care.

Health published three strategic documents (DOH, 2007b & c; Arts Council, 2007) strongly advocating the importance of arts within healthcare across the UK.

Another area where the importance of gardens has begun to emerge is within smaller healthcare projects and in relation to new children's units. Examples include the initiative by Arts for Health Cornwall at Truro Health Park (2006-10), Mike Westley's Play for Life garden at Royal Cornwall Hospital (2007-10) (Westley Design, 2008) (see appendix 3F), and Horatio's Garden at the Spinal Treatment Centre, Salisbury (2012). Many healthcare centres have taken on new nomenclatures such as treatment centres and polyclinics. At the same time the development of new typologies such as the spa, wellness centre, relaxation clinic, retreat centre and rehabilitation clinic have re-introduced the importance of the designed environment and the idea of the therapeutic landscape.

Historians (Jencks & Heathcote, 2010; Hickman, 2006a, b & 2013; Worpole, 2009) have highlighted some of the more innovative gardens projects within hospital and healthcare buildings. The recent Forestry Commission research (Shackell & Walter, 2012) has also highlighted many of the best examples of gardens and active use of green spaces across contemporary healthcare. There are numerous examples relevant to this research, however, two projects stand out. The first is the Healthcare Centre San Blas in central Madrid by Estudio Entresitio (2010), which incorporates internal (but inaccessible) courtyards. The courtyards are designed for visual effect only and contribute to creating a calm and light atmosphere (see figure 1.22).

The other example is the garden room at Barnet Hospital (2010) (see figure 1.23). This space was developed in response to the needs of relatives of patients receiving palliative care at the hospital. There was nowhere for them to retreat to when they needed some time away from the patient's bedside. Relatives were sometimes found in their cars – the only place they could find some privacy (Waller, 2011: 32). The project, which was an EHE initiative, created the room in a previously underused courtyard and planted the surrounding 'Garden of Gifts' with species from around the world, all donated and planted by volunteers.

Figure 1.22. View of the interior courtyards at the Healthcare Centre, San Blas, Madrid designed by Estudio Entresitio (2010), (Mimoa)

Figure 1.23. The Garden Room at Barnet Hospital, London (2010), (Building Better Health Care)

1.7: Contemporary gardens of sanctuary, healing and community

Today across the UK there are many examples where thought and care has been given to the role of outdoor space within a healthcare setting. Research for this thesis has involved visits across the country to a range of different garden projects (see appendices 2 & 3). Clearly there is renewed interest in the idea of the garden as a

restorative space both within and beyond the specific healthcare context and there are some key ideas driving this.

The first is the idea of the garden as place of retreat or sanctuary. Whether this is someone's own back garden or a specially designed space, there is a renewed interest in gardens providing space for private reflection. This is seen in initiatives such as The Quiet Garden Movement or more personal projects, such as the Matara Gardens of Wellbeing in Gloucestershire.¹⁷ It is also reflected in the renewed interest in the enclosed garden (Aben & Witt, 1999; Baker, 2012) and Japanese garden design where emphasis is placed on creating contemplative spaces (Borja, 1999; Koren, 2000; Mizuno, 2002). Within healthcare the notion that a garden automatically talks of these qualities is frequently encountered. This can be both a help and a problem which will be discussed further (see chapter 10).

The second idea links to debates that focus on gardens and green space being important for human wellbeing. For example, there is renewed interest in the use of medicinal herbs, horticulture as a way to understanding local ecology and plant life and horticultural therapy as a way to help people recovering from trauma and mental health problems. Examples include Herbs for Healing in Gloucestershire (2005), Pishwanton Life Sciences Project in East Lothian (1992), the Ecology Centre in Fife (1998), The PoLLeN Project (People, Life, Landscape & Nature) (2011) and the Young At Heart Allotment Group (2011).

The traditional idea of a garden as a place of retreat and meditation has for many been replaced by a range of newer sensibilities created around the belief that we are also part of nature and that by strengthening our connections to the natural world we may be healed. There is also an emerging interest in the ethics or virtues of gardens and gardening (Brook, 2010a & b, see chapter 10). In a sense religious symbolism has been replaced by a secular ecological allegory. The growth in natural or woodland burial in the UK provides evidence of this.

The third idea is the increasing use of gardens and gardening as a way to build links within communities. Richard Reynold's Guerrilla Gardening (2013) initiative, which

¹⁷ The Quiet Garden Movement within the Church of England has encouraged the provision of garden spaces in cities, prisons, churches and private homes for peaceful reflection and prayer (Quiet Garden, 2013).

started in 2004 as a one-man crusade against the 'neglect and scarcity of public spaces and places to grow things', has become a worldwide community movement. While individual projects such as The Hidden Gardens, Tramway in Glasgow (2003) embrace the idea of a garden being able to make links across histories and cultures through the shared identity of a calm and peaceful place to be. Organisations such as the Sensory Trust (2013) have consistently promoted the use of outdoors spaces to help break down social exclusion to bring health and social benefits to people. There have also been campaigns for school children to have access to green spaces not just for curriculum work, but more fundamentally for their health and wellbeing (Titman 1992, 1994 & 2007; Thompson, 2013; RHS, 2013; O'Brien & Murray, 2006).

The Gardening Against the Odds scheme (Conservation Foundation, 2013) has highlighted the range of projects around the country that focus on the health and wellbeing of people and strengthening communities. Many of these projects are, in effect, horticultural therapy initiatives; the social and physical activity of gardening is key. However, through this process some very special gardens, often small and hidden, have emerged such as Roots and Shoots in Lambeth, London, or the Butterfly Garden in Cheltenham (ibid.) These gardens are, by their very nature, resilient places where their relationship to the health and wellbeing of the community and local ecology are understood.

Any research looking at contemporary healthcare gardens should also take account of the hospice movement. Perhaps more than any other healthcare brand hospices have continued the long history of connecting medical care with the close proximity of gardens. Since Dame Cicely Saunders established the first hospice in Sydenham in 1967, there has been a consistent attempt to provide less institutional, small scale and more domestic places for the dying.

The role of gardens has always been part of the hospice ethos and green space is an integral part of new centres, while many older hospices have made gardens around their buildings. The voluntary status of hospices has also perhaps given them greater freedom to choose their sites to develop. Worpole (2009: 9) points out that hospices tend to create more human-centred buildings that focus on a domestic scale and emphasise the relationship between indoor and outdoor spaces. Many hospices appear to understand that their gardens can help to make their visitors, patients and staff feel more welcome and 'at home'. For example, St Oswalds Hospice, Newcastle

was carefully designed to include green views and gardens and was featured by CABI as a Health and Wellbeing Case Study (2009) (figure 1.24).

Figure 1.24. St Oswalds Hospice, Newcastle (2009). Designed by Jane Derbyshire and David Kendall Ltd (Derbyshire and Kendall)

Worpole (2009), who has undertaken research the UK, Ireland and Scandinavia, makes the point that the quality of the gardens is a vital element in the success of the hospice movement. He even suggests that hospice gardens offer a new garden type 'mixing elements of the ornamental, the naturalistic and the ceremonial while attempting to avoid obvious references to more established memorialising traditions' (ibid.: 79 & 88). Recent research by Porter (2013) reiterates this idea that hospice gardens represent a unique type of healthcare garden that can support both the therapeutic aspirations of the hospice and the needs of the wider community through volunteer support. Hospice gardens will be discussed again in relation to slow design in the next chapter.¹⁸

This renewed interest in the garden as a restorative space is also linked to the growing research across the disciplines, which suggests that gardens are important to human wellbeing. In this chapter key moments in the history of the healthcare garden have been highlighted. The aim has been to provide the historical context in order to situate Maggie's gardens within the wider arena of 'gardens of health'. These historical gardens will be returned to at various points to demonstrate this historiography and,

¹⁸ Trinity Hospice in London and the North Devon Hospice were researched in detail for this thesis and are included in appendices 3B & 3C

where evident, the direct links to Maggie's gardens. First, however, it is necessary to look in more detail at some of the theories that have informed both past and more recent healthcare projects.

CHAPTER TWO

Gardens and Green Space Research

In this chapter the research context for this thesis is discussed. The aim is to position the Maggie's gardens within the wider debates around environment and health in order to better understand their context and value. Maggie's own approach, which will be discussed in chapter 4, is undoubtedly connected to current ideas about environment and health. Likewise, their designers, discussed in chapter 5, have been influenced by various theories that revolve around the notion of the restorative garden.

The aim in this chapter is also to explore theories that can help to position the significance of healthcare garden research more generally. The literature review provides the basis for establishing appropriate research methods for the study of healthcare gardens and specifically it provides a way to validate the methods chosen for this project.

This chapter therefore looks at a range of material, from geography, environmental psychology and landscape design research linking nature contact with wellbeing. Theories about therapeutic landscapes, restorative and healthy places, green research, green care and the current wellbeing agenda are all discussed. The specific context of gardens and healthcare is drawn out. The role of gardens within evidence-based healthcare design, patient-focused care and the science of healing and place are explored. Research based on post occupancy evaluations and current ideas about cancer care and environment are included to provide specific context for Maggie's. The chapter concludes with a look at current design theories that have direct relevance to healthcare gardens today.

Despite the increasing preference for urban living in modern societies, nature is recognised as playing a role in protecting humans from future problems. As Pretty (2007: 28) writes:

[E]vidence is beginning to show that exposure to nature can make a positive contribution to our health, help us recover from pre-existing stresses, have an immunizing effect by protecting us from future problems, even help us to concentrate and think more clearly.

A wide range of research across the disciplines focuses on the idea that green places are good places. Any discussion of contemporary healthcare gardens must sit within this wider arena. Maggie's must be situated within this developing field of what is now usually termed "green space research".¹⁹

The importance of distinguishing between the terms "garden" and "landscape" for this research has already been highlighted (see Introduction). Within green space research the term "nature" is used to broadly define any organic environment where the majority of the ecosystems are present. This is usually then divided into urban nature or urban green space (which includes gardens), agriculture nature, natural forests and wild nature (green wilderness) (Townsend & Weerasiriya, 2010). As gardens are not always within an urban context researchers often prefer the term "nearby nature" (Kaplan, 1992a).²⁰

The literature review for this thesis focused on green space research that had direct relevance to gardens. Throughout the problematic and contested character of the terms "nature" and "landscape" are emphasised (and thus garden by association). As Castree (2005) points out, knowledge of nature and landscape is constructed and contestable. There is also the problem with research that it is automatically constructed within a nature-society dualism. This point has led to careful consideration of suitable research methods for this thesis and will be discussed in chapter 3.

2.1: Theories of restorative and healthy places

Beyond simply soothing the senses, gardens and garden practices have been appreciated as conducive to wellbeing. The idea that a garden has a special potency and can be a space for transformation is embedded within many of the ancient ideas of the restorative garden. The ritual of healing associated with certain places (some of which were gardens) such as Epidaurus discussed in the last chapter, bestows upon them the idea of the sacred. These are places where people encounter mysteries of

¹⁹ The term green space (sometimes spelt as one word 'greenspace') should be considered to refer generally to the natural world – to include wild landscape and cultivated gardens, trees and plants. It is acknowledged that not all natural outside spaces, such as some Japanese gardens, are green.

²⁰ Kaplan (1992a: 125-133) uses this as a generic term to define 'vegetation that is proximal' within the whole range of urban and non-urban settings and includes flowers, plants and trees. It can be indoors or out-of-doors; often it is outside but viewed from the inside.

the sacred world; they present as such an *imago mundi* and are separated from the surrounding profane world (Eliade, 1957).

Through the centuries, according to social and cultural traditions, theories have developed as to why gardens have a restorative effect. Writers such as Hildegard of Bingen (1098-1179), Francis Bacon (1597-1625), William Cowper (1731-1800), William Wordsworth (1770-1850) or John Stuart Mill (1806-1873) all had their views on why medicinal plants, fresh air, pure water or magnificent scenery played their part. In the Western world, the scientific arguments of the nineteenth century that stressed the importance of light and air have been replaced by a range of theories in more recent times.

2.1.1: Biophilia, theories of nature restoration and horticulture therapy

The idea that nature is somehow an essential part of human existence was captured by Wilson's 'biophilia hypothesis' in the 1980s (Wilson, 1984; Kellert & Wilson, 1993; Kellert et al., 2008). This states that response to the natural environment is genetically based and that the affinity an individual has to setting is strongly determined by survival instincts (Kaplan & Kaplan, 1989; Heerwagen & Orians, 1993).²¹ The close links people have had with the natural environment in times past have ingrained this affinity through the evolutionary process.

The concept of biophilia, which in its most general form is 'the love of nature and living things' (Sacks, 2009), has resulted a range of studies looking at the affinities people have with plants.²² For example, 'prospect refuge theory' argues that people prefer locations that contain both access to prospect and refuge (Appleton, 1975), while the 'savannah hypothesis' states that humans have an innate affinity to savanna or park-like settings, including visual openness and uniform ground cover associated with large-diameter mature trees (Orians, 1986; Sullivan, 2005).

Many researchers have postulated that the strong attention-holding properties of nature or what is known as 'attention restoration theory' (ART) are an important

²¹ Such research has linked data, indicating a high aesthetic liking for certain vegetation and tree structures to scientific measurements showing a high potential for obtaining food, drinking water and shelter in such settings.

²² Sacks (2009) offers the word hortophilia for the desire to interact with, manage and tend nature.

mechanism in restoration and stress-reduction (Hertzog et al., 2002; Hartig et al., 2003; Katcher et al., 1984). Kaplan & Kaplan (1989 & 1999) argue that the natural settings have restorative effects on people suffering from directed attention fatigue – mental fatigue associated with tasks or conditions associated with sustained, intensive or taxing attention. They define four key characteristics of the restorative experience; ‘being away’, ‘extent’, ‘fascination’ and ‘compatibility’ (Kaplan, 1992a: 137-8). While non-natural experiences could have these four characteristics present, many studies have shown that contact with nature is the most common and most reliable source of mentally restorative experiences to contain all four simultaneously (Hartig et al., 2003; Herzog et al., 2002).

In contrast, the ‘aesthetic-affective theory’ (AAT), sometimes known as stress recovery theory, is based on the immediate positive response to views of nature (Ulrich, 1979; Ulrich et al., 1991). This theory assumes that there is an inherent reflex (involuntary) associated with the oldest part of the brain – the limbic system – that causes the body involuntarily to respond. Researchers of AAT have also looked at ‘overload’ and ‘arousal’ theories proposing that settings with vegetation as opposed to the complexity of many built environments have positive stress-reducing effects on people (Ulrich & Parsons, 1992).

Other theories emphasise ‘learning’ and ‘cultural explanations’ as the key mechanism for acquiring positive responses to plants (Korpela et al., 2001). While the ‘theory of relaxation of response’ suggests that, regardless of the cultural sources, individuals are able to develop a subjective state similar to that produced during meditation based on four basic elements; a quiet environment, something to focus attention on, a passive mind and availability of comfort (Katcher et al., 1983). This theory has obvious relevance to gardens because they can provide a quiet, comfortable space without external distractions as well as features such as the sound of water to focus on.

Horticultural therapy is an umbrella term that has its origins in the social reforms of the nineteenth and early twentieth century. It has come to signify the innate therapeutic potential of contact with plants and especially the curative effects of gardening. It can involve gardening as an activity to stimulate people physically or mentally, but it is also a process by which individuals may develop wellbeing using plants and horticulture (Relf, 1999; Lewis, 1995; Linden & Grut, 2002; Sempik et al., 2002 & 2005).

Horticultural therapy is not a central concern of this thesis, however it is important to

acknowledge that many of the ideas developed in relation to horticultural therapy have relevance to a general discussion about healthcare gardens.

2.1.2: The ecological approach and affordance theory

Research within environmental psychology concerning environmental perception has been dominated by a static and visual approach to perception (Heft, 2010: 9). Most preference studies and the work looking at the restorative effects of green space (ART and AAT) have proceeded by identifying stimulus properties considered independently of the on-going actions of the perceiver. However, these approaches fail to provide information on how environments are experienced by users in the course of actions, which are the subject of this thesis. They do not involve people's emotions, senses (other than sight) or their life history.

Another view, the ecological approach, suggests that perception and action are intertwined and places emphasis on the dynamic, reciprocal relationship between perceiving and environment (Gibson, 1979). This has led researchers to discuss 'nature deficit disorder' or 'nature deprivation' suggesting that experiences of the outdoors can have a therapeutic effect on one's social, emotional and mental functioning and is thus especially important for children (Bronfenbrenner & Ceci, 1994; Bagot, 2004).

The ecological approach, which was initially developed by James Gibson in the 1970s, seems of particular value for researchers looking into the health properties of green space because it can link the properties of the environment to their functional and relational significance for an individual. This is the idea of 'affordance':

Affordances are not mental constructs that a perceiver subjectively imposes on the world, nor are they interpretations of a physical world in the 'head' of a perceiver. Affordances are properties of the environment that are both objectively real *and* psychologically significant. (Heft, 2010: 19)

An affordance is neither an objective property nor a subjective property; or it is both if you like...it is equally a fact of the environment and a fact of behaviour. It is both physical and psychical, yet neither. An affordance points both ways, to the environment and to the observer. (Gibson, 1979: 129)

Affordance offers a dynamic understanding of how environments are experienced and engaged with and can convey information on both functions and meanings, which are

vital to the design process. The ecological approach prompts designers to think about landscapes as arenas for action and emphasises the experience of landscape over time – a point that often seems to be forgotten. It stresses that experience of nature affects people differently largely depending on their life situation. The ecological approach to perception suggests we inherently, and through conditioning, look for certain characteristics in our environment, which afford us various utilities. Some affordances are important to all people while some affordances are more private.

This thesis argues that affordance considerations can lead researchers to a deeper engagement with the qualities of experiencing the environment in the course of action. Recent research into landscape and health (Ward Thompson et al., 2010) and the experiments at the Therapeutic Garden at Alnarp in Sweden (Grahn et al., 2010) are points of reference for this thesis.

At Alnarp researchers constructed a garden based on theories related to horticultural therapy, ART and AAT but they also embraced understanding of affordance theory. The observations at Alnarp led to the development of a new theory, 'scope of meaning/scope of action', suggesting that 'nature-assisted rehabilitation from stress-related mental diseases is a matter of *communication* as regards senses, emotions and cognition' (Grahn et al., 2010: 153). The garden at Alnarp was redesigned as a series of rooms to accommodate the different stages of rehabilitation and to acknowledge that each person's own life history will affect their response to an environment and that correspondingly each environment presents affordances of different intrinsic and perceived worth.

2.1.3: Therapeutic landscapes and health geography

Gesler (1992) introduced geographers to the term, 'therapeutic landscape' to describe locations associated with treatment or healing. Therapeutic landscapes are places understood to encourage feelings of wellbeing amongst their visitors and users. They are places in which 'physical and built environments, social conditions and human perceptions combine to produce an atmosphere which is conducive to healing' (Gesler, 1996: 96). For Gesler (2003: 18), 'place matters to health'. The concept of therapeutic landscapes has now been studied extensively within the field of health geography and as a consequence enhanced understandings of health and place (English et al., 2008; Curtis et al., 2007; Geographies of Health & Wellbeing, 2013). It has encouraged

researchers to recognize that certain places not only have the potential to enhance health but also contribute to healing.

Gesler (2003: 18) argues that 'healthy places' are not just dependent on the physical and environmental characteristics of a site, but involve the particular values or sense of place that people ascribe to it. This sense of place can be built up through a range of lived experiences and involves the transference of moral, value and aesthetic judgements to a site. Gesler (ibid.: 7) identifies four different environments that all contribute to a restorative place; the natural, the built, the symbolic and the social (table 2.1).

Table 2.1. Aspects of Healing Environments²³

Environment	Aspects
Natural	Belief in nature as healer Beauty, aesthetic pleasure Remoteness, immersion in nature Specific elements of nature
Built	Sense of trust and security Affects the senses Pride in building history Symbolic power of design
Symbolic	Creation of meaning Physical objects as symbols Importance of rituals
Social	Equality in social relations Legitimization and marginalization Therapeutic community concept Social support

Gesler (2003: 8)

Gesler (ibid.) demonstrates how all these aspects operate at places strongly associated with healing such as Epidaurus, Bath and Lourdes. His research has concentrated on landscapes that could be described as extraordinary and outside of people's day-to-day lives. More recently researchers (Martin et al, 2005; Williams 2002) have focused on everyday therapeutic landscapes within home and community-based environments.

²³ Note the 'aspects' he applies to the built environment could also be appropriate for a garden, as is argued within this thesis.

Researchers (Williams, 2007) have also looked at contested landscapes as therapeutic providing evidence that what might be healthy for one person or group, might in fact be unhealthy or threatening to another. English et al.'s (2008: 76) interviews with breast cancer survivors revealed that feelings associated with healing are linked to the emotions embedded within particular places such as home or community. They argue that there is a strong interplay between emotions and locations of healing suggesting the existence of what Davidson and Milligan (2004) term an 'emotio-spatial hermeneutic'. They write (ibid: 52), 'emotions become understandable ...only in the context of particular places. Place must be *felt* to make sense'.

An understanding of therapeutic landscape research is important for this thesis. When organisations such as Maggie's make claims to the value of the 'healing environment' it is necessary to consider this wider context. What Gesler and subsequent researchers have done is to demonstrate how each 'environment' is inter-related and that the natural and built environments affect our moods and emotions, but that ultimately it is the meanings (symbols) and *communitas* (social activity) that are most important.

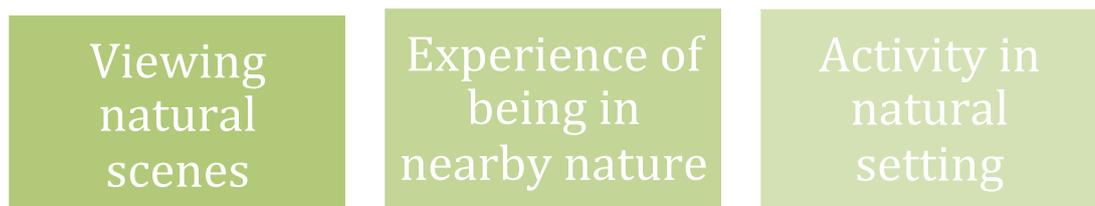
2.1.4: Gardens, self and world

David Cooper (2003 & 2006) offers another perspective that is also relevant by pointing out that gardens can contribute to wellbeing because they involve the qualities of humility, care, respect, disinterestedness and hope. Gardens and garden practices thus understood belong to the concept of 'unselfing' or the process of detachment from absorption in what concerns one's own interest and ambitions. This sensibility is exposed not through cognitive analysis, but through reflection on and engagement with a garden, thereby emphasising the co-dependence between human creative activity and the 'ground' of the world (Cooper, 2003: 156). Cooper elaborates on some of the ideas set out by Comito (1979: xi-xiii) suggesting 'the garden as the scene of those privileged moments of that interpenetration of self and world'. It is precisely because gardens make visible the intersection of art and life that they have restorative potential. They make visible the intersection of mind and nature within a human context and narrative and they bring with them mythology, poetry and history.

2.2: Research linking nature contact with health and wellbeing

There is now considerable research linking nature contact with health and wellbeing. Research focused on 'nearby nature' contact divides into three areas (see table 2.2).²⁴ The literature suggests there are five key ways in which exposure to the natural environment is beneficial to human health (see table 2.3). These are: enhanced personal and social communication skills; increased physical health; enhanced mental and emotional health; enhanced sensory and aesthetic awareness and the ability to assert personal control; and increased sensitivity to one's own wellbeing. Beyond mental health research, there is now considerable research looking at nature contact in relation to children's development, elderly people and people in work environments, prisons and hospitals (Louv, 2008; Bagot, 2005; Peacock et al., 2007; Moore, 1981; Stigsdotter, 2004; Kaplan, 1993; Lewis, 1995 & 1996). Specifically in relation to healthcare environments, researchers have identified that contact with green space can lead to the reduction of pain and stress, the alleviation of depression, reduction of aggressive behaviour, increased patient satisfaction, improved recovery rates and improved staff performance and retention (Shackell & Walter, 2012: 6-7) (see table 2.4).

Table 2.2. The three areas of nature contact research



²⁴ As already noted definitions of nature and the significance of preferences and cultural context vary in relation to these studies. Within this thesis there has been a focus on research that has looked specifically at gardens or so-called 'nearby nature'.

Table 2.3. The five key ways nature contact is beneficial to human health

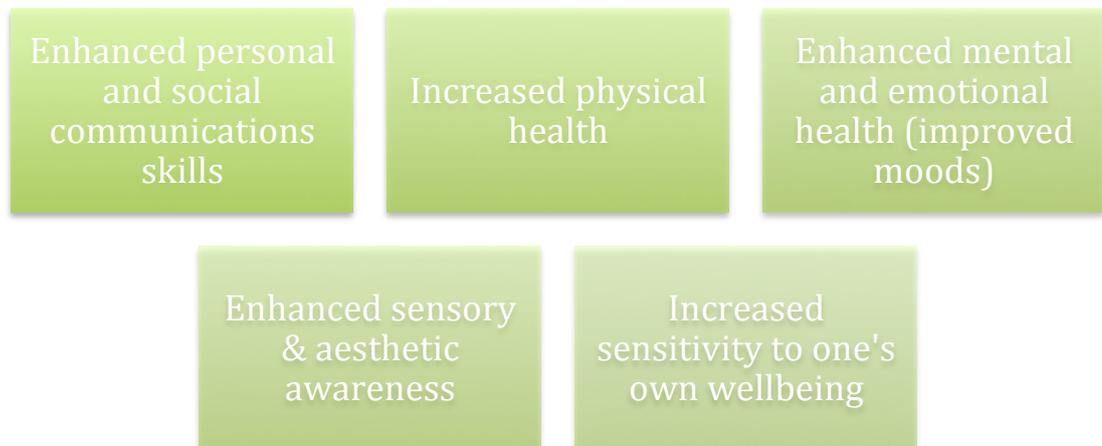


Table 2.4. The impact of nature contact on healthcare



Research has examined the stress reduction of nature and nature views through psychological (self assessment and preference studies) and physiological measures (Verderber, 1986; Ulrich, 1999; Ulrich & Parsons, 1992; Hartig et al., 2003; Barton, 2006; Pretty, 2007). The best-known example is by Ulrich (1984) who revealed that hospital patients with a view of natural landscape (whether direct access to a garden, a balcony, indoor plants or nature pictures) benefit from improved recovery rates.

There have also been extensive preference studies (Kaplan, R., 2001; Kaplan & Kaplan, 1989; Kaplan S., 1995; Pretty & Barton, 2010; Depledge et al., 2010) looking at both the natural (green and blue) and virtual natural environments as ways to

promote health and wellbeing. There is a large body of research on recreational experiences. The most comprehensive research on horticultural therapy has been spearheaded by Sempik (2003) in association with Thrive (2013) and the Centre for Child and Family Research at Loughborough University. Other work (Neuberger 2007) proposes 'phyto-resonance' as the human reaction to plants and argues that gardening influences people's wellbeing at a deeper (internal) level than just the physical.

2.3: Patient-focused care and evidence-based design

In chapter 1 it was noted that in the last twenty years healthcare design has changed. Research had begun to show that the typical hospital environment was highly stressful, causing negative impact on the quality of medical service, patient care and safety. The same research had also begun to focus on what role nature can play in the environment of care. What features enhance comfort, facilitate stress reduction and improve mood for patients, patient's families and staff – this development has become known as 'patient-focused care' (Sherman et al., 2005).

The growing evidence that viewing nearby nature can measurably reduce patient stress and improve health outcomes was a key factor in the resurgence in interest internationally in providing gardens in hospitals and other healthcare facilities (Ulrich, 1999, 2002). Researchers began to argue that green space and green views impact on two levels; they play a direct role in the recovery process, but also an indirect role in enhancing the quality of care (Cooper & Taylor, 2000: 47-8). The garden, as Rainey (2010: 14) writes, was 'reappearing as a significant complement to high-tech medicine'.

Ulrich (1984, 1999 & 2002; Ulrich et al., 2004 & 2008), whose own research grew out of a tradition that posited a connection between architecture, health and nature, started to argue for a consideration of 'ecological health' within hospital environments. For Ulrich, artwork, soothing music, spaces for families and, most significantly for this research, the addition of gardens and sounds and views of nature were important. His work has inspired subsequent work collectively known as 'evidence-based design' (EBD).

Evidence-Based Design is the process of basing decisions about the built environment on credible research to achieve the best possible outcomes. (The Centre for Health Design (CHD), 2010)

In America and Europe resources have developed in order to promote high-quality EBD research and bring together the different audiences such as healthcare providers, landscape designers, architects and urban planners (InformeDesign, 2002-5; Research Design Connections, 2009-10; CHD, 2011). EBD has been preoccupied with three categories: stress reduction, safety and ecological health (Zimring & DuBose, 2011).

Since 2000 the Centre for Health Design (CHD) has been documenting exemplary healthcare projects in an initiative known as the 'Pebbles Project' (CHD, 2011; Berry et al, 2004; Ulrich et al., 2004 & 2008). This research has put forward the business case for better buildings and green spaces. The CHD recommends that every healthcare project should 'provide positive distractions for patients and families through appropriate art, restful views and access to nature which relieves unnecessary stress and improves patient satisfaction' (Sadler et al., 2008). Surveys conducted by CHD in 2009 and 2010 of design research in healthcare settings revealed that approximately 33% of respondents indicated they always implemented 'healing gardens' (Taylor, 2009; CHD, 2013).

The Caritas Project (2012) introduced the idea of 'generative space' as a way to integrate both the physical and social environment within the healthcare environment. They have developed a praxis and an annual awards scheme to emphasise the need for quality not just within the physical environment but within leadership too. Generative space is about making 'a place flourish' and it is about a constantly developing mix of environment (space), leadership and community. This emerging concept of healthcare environments is comparable to Gesler's model of healthy places and provides a way to move on from 'therapeutic or healing landscapes'. The name *caritas* derives from the idea of nurturing and giving. The focus is shifted to improving health rather than the healthcare (Ruga & Kirkaldy, 2012) and potentially offers something quite useful to garden research because of the emphasis on improvement over time.

Generative space is an environment, a place — both physical and social — where the experience of participants fulfils the functional requirements of that space *and* it also materially improves the health, healthcare, and quality of life for those participating in that experience in a manner they can articulate in their own terms. By its very nature, a generative space is a place that progressively and tangibly improves over time. (Caritas, 2012)

The current evidence base in the UK is also equally supportive of well-designed green spaces in healthcare environments. Research by the Commission for the Built

Environment (CABE, 2003 & 2009a) identified the need for quality external spaces. Such spaces, they claimed, can provide places of respite for patients and visitors; they also identified how well designed environments contributed to staff retention and performance. The NHS and DOH have also sought to improve the design of healthcare environments through the introduction of various quality evaluation toolkits and assessment methods (DOH, 2008b & 2008c; Breeam Healthcare, 2008).

2.4: The science of healing and place

While EBD has done much to consolidate the evidence base of studies looking at the effects of green nature, advances in neuroscience, immunology and computer science are also leading to a better understanding of how design impacts on human health. With research by Kellert (2008), Heerwagen & Orians (1993 & 2009) and Cooper Marcus (2005 & 2010), the arena of the therapeutic landscape has shifted from the humanities to science and medicine. Computer science, notably virtual-reality technologies are also leading scientists to a better understanding of the impact of both built and green space. Technology being developed by the military to treat post-traumatic stress disorder (PTSD) (Sternberg, 2009: 249) has led to initial results indicating that built space, whether virtual or real, impacts on people's recovery process. As Sternberg (*ibid.*: 230) writes:

Understanding and reducing stress in the hospital environment is to twenty-first century medical care what understanding germ theory and reducing infection were to nineteenth century care. Advances in psychology and neuroscience now provide the scientific basis for taking into account the effects of emotions on disease.

Organisations such as Academy of Neuroscience for Architecture (ANFARCH), established in 2003 in San Diego, USA, aim to bring people together at the forefront of neuroscience and sensory perception research (Nanda, 2008; Edelstein, 2005). ANFARCH are exploring the links between cognitive neuroscience, psychophysiology, environmental psychology and applications to architecture. Current research includes investigation of neural correlates of restorative environment exposure (Martínez-Soto et al., 2012; ANFARCH, 2013) as well physiological and neurological monitoring and ocular tracking using CaLit2 starCAVE, a 3-D visualization VR environment to ask questions such as which conditions are correlated with a healing environment (Zhang et al., 2012).

Scientific studies (Sternberg, 2009) looking into the stress produced by hospitalization (for both patient and staff) is now taking place. Sternberg highlights the fact that visual cues are only one in a wider human sensorium that includes sound, touch, movement, memory and doubt that all operate in relation to the science of place and wellbeing. She cites pioneering research looking at age old issues such as the effects of sunlight, visual green space, music and silence, scent, touch, activities such as walking and meditation, and memory of positive and negative places. Her book, *Healing Spaces: The Science of Place and Well-Being* (2009), is therefore of particular relevance to this thesis.

2.5: Green care and the wellbeing agenda

Beyond the healthcare research context, this thesis must also be set within a broader focus on the restorative effect of green space on human health that has emerged across the world. Attention is being paid to the benefits of green space – at a time when the World Health Organization estimates that depression and depression-related illness will become the greatest source of ill-health by 2020 (WHO, 2011b), (Lau & Yang, 2009; Groenwegen et al., 2006; Outdoor Design Resource, 2010; Gallis, 2007; Pretty et al., 2005). Furthermore, stress is one of the most common work-related health problems; the sectors most at risk are health, social service and education (Grahn et al., 2010: 120). Green care, green exercise, green therapy, adventure therapy, wilderness therapy, animal assisted therapy and ecotherapy (Mind, 2007) are now familiar terms.²⁵

At government and policy level in many countries it is now recognised that people should have access to quality green space (Frost, 2010; Townsend & Weerasuiya, 2010). In the UK initiatives such as the Green Gyms (Hunt, 2011; Yerrell, 2008), the Blue Gym (2011, White et al., 2010), Care Farming (2010) Allotment Regeneration Initiative (ARI, 2013), Ecominds (2013), Our Natural Health Service (2011; Bird, 2007) and the Hospital Grounds Green Space Project (Munoz & Nimegeer, 2012) are evidence that attention is being paid to the restorative effects of nature on health.

OPENspace (2011), CABI, The Forestry Commission and The Economics of Ecosystem and Biodiversity (TEEB) (Mason, 2006; CABI, 2009a & b; CABI, 2010a &

²⁵ Ecotherapy or eco-psychology is a type of therapy explicitly relying on the natural world to achieve therapeutic goals

2010b; Tabbush & O'Brien, 2003; Frost, 2010; O'Brien, 2005; O'Brien & Murray, 2006) have all championed the idea of the therapeutic environment. They have looked at the role of green space in improving people's health and wellbeing, both within healthcare and more generally within urban living. Researchers at the University of Essex (Pretty et al., 2005; Green Care Research, 2013) have looked closely at the mental and physical outcomes of engagement with green space. Initiatives such as the Forest Schools (O'Brien & Murray, 2006), the RHS Campaign for School Gardening (RHS, 2013), the Outdoor Learning Initiative (Nichols, 2009) and research by the Forestry Commission reflect the increasing evidence that children benefit from playing and learning in natural environments (Bird, 2007; Brook, 2010b; Bagot, 2004; Louv, 2005; Tabbush & O'Brien, 2003; Cobb, 1977). From September 2014 horticulture is to become part of the National Curriculum in England (DOE, 2013: 157).

The European Centre for Environment and Human Health (ECEHH) have prioritised research exploring the gains to human health that natural settings can offer. Their 'Beyond Greenspace' research is attempting to deepen understanding of the relationships between nature and human health and to see if different types or qualities of the natural environment (including water and coastal) make a difference (ECEHH, 2013; Wheeler et al., 2012; White et al., 2010, 2013a & b).

At the same time, definitions of human wellbeing and ways to measure it have developed. WHO Quality of Life (2004) group now define wellbeing as 'an individuals' perception of their position in life in the context of the cultural and value systems in which they live and in relation to their goals, expectations, standards and concerns'. Wellbeing is increasingly seen as not just about material and social circumstances, but also to do with life satisfaction and realisation of potential (Bird, 2007: 18). There is evidence of a stronger socio-ecological model of health emerging (Townsend & Weerasuriya, 2010: 4; Wellbeing 2013; Coles & Millman, 2013) and a psychosocial dimension that puts emphasis on the relationship between people and place. Indeed, Rayner & Lang (2012) argue that health is now about four dimensions: the material, bio-physiological, societal and cultural. This new focus on 'ecological public health' has, at its heart, the concept of human activity as integral and interactive with the natural environment (Reis et al., 2013).

In the UK in 2010 the Office for National Statistics (ONS, 2012) launched the new Measuring National Well-being (MNW) Programme (Self et al., 2012). Whereas traditional measures have tended to focus on economics, this includes a self-assessment tool based on subjective feelings (WEMWBS; NHS Scotland, 2006). Within healthcare too, there are increasing attempts to look at quality and satisfaction by measuring subjective domains of health outcomes such as perceived stress and health related quality of life markers (HRQOL). The DOH is also using evidence from the Monitor of Engagement with the Natural Environment survey, which was set up in 2008 by Natural England, Defra and the Forestry Commission to provide data on how people use the natural environment in England (Natural England, 2013).

2.6: Healthcare garden research and cancer care

So far this chapter has mapped the broad parameters of green space research and the current wellbeing agenda. Now it is necessary to focus on recent healthcare garden research to provide stronger context. Ulrich's work in America initiated a branch of research that looked more closely at the impact of gardens within healthcare (Ulrich, 1984 & 1999; Ulrich et al., 2008; Berry et al., 2004; Cooper Marcus & Barnes, 1995, 1999). This research identified evidence that views of nature, so-called 'nature distraction', and exposure to daylight can help reduce stress (especially environmental stressors such as noise) and depression, reduce pain, increase quality of life for chronic and terminally-ill patients and improve way finding.

Such research also identified some evidence that gardens can reduce costs (less pain relief and shorter stays), increase patient mobility and independence, and improve patient and staff satisfaction. Some researchers and designers have gone on to identify key characteristics of gardens that support people in specific health contexts such as elderly care or paediatrics (Mooney and Nicell, 1992; Stoneham & Thoday, 1994; Zeisel, 2009; Kamp, 2009; Heerwagen, 2009; Sherman et al., 2005; Hartig and Cooper- Marcus, 2006; Whitehouse et al., 2001; Van den Berg, 2005).

There is little research into the role of gardens in relation to cancer care, although there has been some work around the visual arts and music (Staricoff, 2004: 6; Macmillan, 2010c: 14). There was also a recent study by Lechtzin et al. (2010) suggesting that exposure to natural views and sounds can help to reduce pain experienced by cancer patients. Researchers in America have undertaken some studies and a number of

American cancer institutions have developed gardens (Cooper Marcus & Sachs, 2013). To date there has been minimal research into the role of the designed environment in relation to cancer care in the UK. While many of the cancer charities acknowledge the importance of environment, very few have undertaken any real research.

In 1994 the American garden designer Colette Parsons identified a garden as playing a major role in her own recovery from cancer (Parsons, 1994). A study by Baird and Bell (1995) examined the importance of a nature window view of a cancer patient, suggesting this experience can reduce patient stress. Block et al. (2004) undertook research into 'optimal healing environments' and identified that it was important to provide access to an outdoor environment to reduce nausea during chemotherapy. The same study also identified problems with certain strong colours that might cause anxiety, depression or nausea. Cooper Marcus (2005: 20; Cooper Marcus & Sachs, 2013) has undertaken some case study work of gardens for cancer patients. Her research highlighted the importance of views of green space, the need for shade, privacy, places to walk with frequent benches. Her research (ibid.) indicated that fragrant flowers and plants should be avoided. Sherman et al. (2005) undertook an extensive evaluation of the gardens at the San Diego Paediatric Cancer Centre in California. Their research revealed different usage patterns according to user category and age. It also suggested that emotional distress and pain are lowered for all groups when in the gardens as compared to being inside the hospital.

In the UK Macmillan Cancer Support (2009 & 2010a & b) have undertaken some research and significantly this included 'Calming Landscape Research' which resulted in their Landscape in Cancer Care Environment Guidance. The Penny Brohn Cancer Centre near Bristol has embraced the importance of gardens within its programme. In 2006 this organisation took over the historic Ham Green Manor estate to create a centre where people attend day and residential courses about 'The Bristol Approach' (Penny Brohn Cancer Care, 2013). The centre focuses on holistic treatment including diet, exercise and lifestyle. The gardens that surround the centre are considered integral to the daily life of the centre and are part of therapeutic work that includes mindfulness and ecotherapy (figure 2.1).

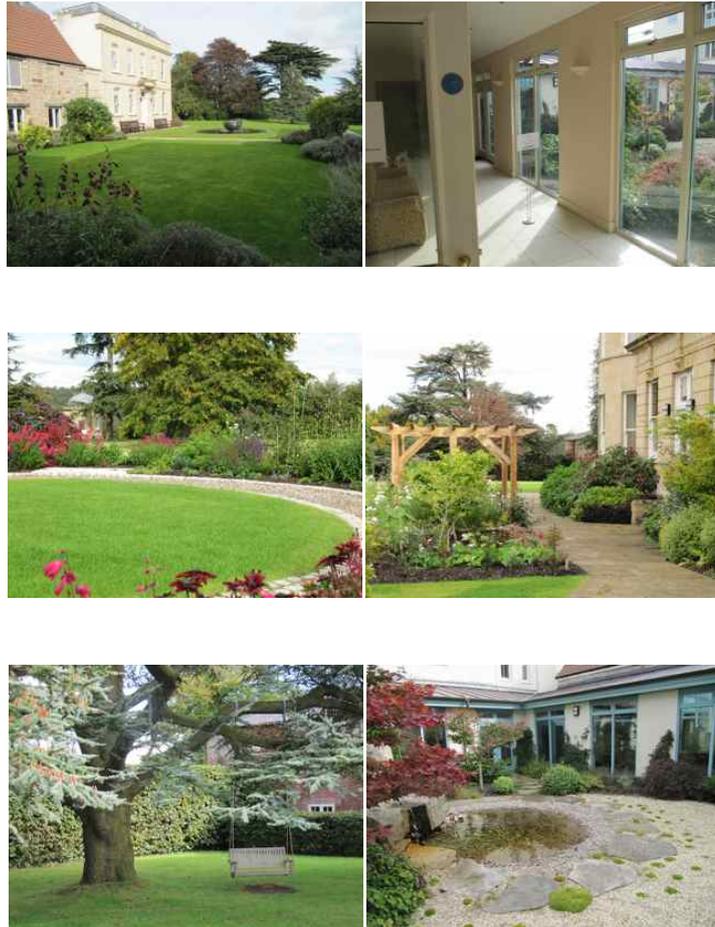


Figure 2.1. Gardens (including an inner courtyard) at the Penny Brohn Cancer Centre, initial work was by Alex Johnson Landscape Design, Bristol (Butterfield, 2012)

Macmillan Cancer Support, likewise, stress the importance of the designed environment. As an organization they place great importance on the quality of their so-called 'cancer environments', which includes art and gardens (Macmillan, 2010b & c). Since the 1970s, when the first specialist palliative care units in the NHS were developed with Macmillan, the organization has expanded to include more than 200 cancer environments in hospitals and the community.²⁶

Macmillan established the Macmillan Quality Environment Mark (MQEM) with the Department of Health and NHS Choices as the first cancer focused design quality tool to raise the standard of cancer care environments (Macmillan, 2010a). Since 2009 more than 100 cancer centres have been awarded the MQEM across the UK. Macmillan's (2010b) landscape guidance states the importance of 'comprehensive and

²⁶ Macmillan, founded in 1911 by Douglas Macmillan as the 'Society for the Prevention and Relief of Cancer Care', has expanded over the years from initially providing practical help to patients and their families to supporting all aspects of cancer care including active treatment, diagnostic, breast care, teenage cancer, outpatient and information and support centres.

early consideration of the external spaces in the development of any scheme' and believe that landscape can contribute to their five principles. In 2009 they undertook an online questionnaire with cancer patients entitled, 'Calming Landscapes' (Macmillan, 2010b: 9) where participants were asked whether views of natural environments and outdoor spaces were important to them and to compare the value placed on ten potential elements of landscape.

Macmillan used this research to identify key elements of a well-designed external environment. These included the importance of natural light, views to the outside, access to outside, the provision of planting, water features and quiet places with opportunities for distraction from clinical processes. They also stressed the importance of landscape's role in way-finding and orientation as well as providing a pleasant working environment for staff. In 2012 Macmillan teamed up with the National Gardening Scheme to promote gardening as a way to help cancer patients beat depression (Macmillan, 2013). Macmillan have collaborated with Fira Landscape Architects to design a series of gardens at some of their more recent centres. Three of these gardens are discussed as contextual case studies within this thesis (see chapter 5 and appendix 2A-C). It should be noted that to date there have been no POEs specifically in relation to the gardens at Macmillan (Marles, 2013)

The findings of the Macmillan research and the other studies cited do correlate with wider research on green space. However, and as Cooper Marcus points out (2010), there are clearly still many questions to ask. For example, if indoor and outdoor gardens can offer the same benefits; whether people find solace even if they don't understand the symbolism; do different garden elements help alleviate different stress-related states; and the impact of gardens on staff health and job satisfaction. These were some of the questions brought to the case study garden research within this thesis.

2.7: Post occupancy and facility evaluation

While EBD has undoubtedly raised the bar in terms of ensuring that the impact of design is carefully considered within any healthcare project there is a danger that it becomes mere embellishment. In a world of private finance initiatives there is a concern that design theory is being reduced to what the artist Grayson Perry (2007) has described as 'upmarketness'. There has been criticism of the so-called 'enhancing

the healing environment' programme, suggesting that it has been more to do with market forces and less to do with quality. Perry criticized the bland anodyne works that have characterized much hospital art and design. A report by Froggett and Little (2008) also argued for more high quality and challenging art.

The recent Forestry Commission research reiterated this concern stating that 'evidence is important but healthcare is an art as well as a science' (Shackell & Walter, 2012: 3). Van den Berg & Wagenaar (2006: 255) point out that EBD in general focuses on primary reactions and feedback rather than mapping people's experiences. Likewise, Adams et al. (2010) note that the symbolic value of architecture has rarely been examined in EBD. Russell et al. (2008) go further suggesting the pursuit of naïve rationalism as a framework within 'evidence-based policy' and the belief that evidence can be context free, has constrained both thinking and practice. Clearly, there is the danger of EBD being design polemic rather than theory and at present there is a lack of a systematic review process (Stankos & Schwarz, 2007).

Furthermore, too little attention has been paid to post-occupancy evaluation (POEs). POEs look at a project once it has been built to see whether the space is producing the desired outcome. POEs focus on the facility's occupants and their needs, and provide insights into the consequences of past design decisions and the resulting performance (Cooper Marcus & Barnes, 1999: 345; Cooper Marcus & Sachs, 2013). While design guidelines and quality assessment tools have developed, the evaluation as to how these places really work on a day-to-day level is still to be collected.

Significant for this research are the few POEs that have looked at the role of certain gardens (Bordass, 2006; Bordass et al., 2006; Cooper Marcus & Francis, 1997; Cooper Marcus & Barnes, 1995 & 1999; Cooper Marcus & Sachs, 2013; Whitehouse et al., 2001; Sherman et al., 2005; Heath and Gifford, 2004; Lafargue, 2004). The fieldwork undertaken at the four case study gardens within this thesis is a form of POE because it includes visual analysis of the physical site, behavioural observation and information gathering through interviews (see chapter 3). However, POEs have tended to focus only on user experience rather than building up any narrative about the design process. Interview and survey questions also tend to be quite closed (Whitehouse et al., 2001). For this thesis, Watkins' (2008) preferred term, 'facility evaluation', seems more appropriate. Ziesel's (2006) research methods, which included observing behaviour and the physical environment, asking questions in interviews and employing

archival records that include data and physical plans, have also been a point of reference.

2.8: Co-design practices and design activism

A discussion of POEs leads to a wider look at user-led design. The research methods for this thesis, discussed in the next chapter, focus on the experiences of the users of the case study gardens in the belief that this will provide insight. Such methods link to various design traditions that have concentrated on ethnographic methods and user needs. They link to practices that maintain knowledge comes from the people who use the designs.

Since the 1980s there has been a gradual move towards co-design, a catch-all term that embraces a range of design approaches (including user-centred, open-sourced, participatory, inclusive and service design) that encourage active participation and, in some cases, a more ethical and philosophical position. There is a renewed interest in ethnography employed as part of multidisciplinary teams in co-design, some of which posit design as problem solving methodology rather than design as producing actual three dimensional products (Design of the Times, 2007 & 2011; Helen Hamlyn Research Institute, 2010; Social Design Network, 2007-8; Sustainable Everyday Project, 2011). As Dankl's (2013: 171) research with elderly people in Vienna recently highlighted, design ethnography as a method allows for design processes 'driven by empathy' to evolve in the context of people's everyday lives. Thus, inclusivity becomes not only a matter of better design but an awareness of individual contexts of usage.

These types of projects link to Behavioural Design and Design Ergonomic practices which bring knowledge of anatomy, physiology and psychology to design processes. The roots were in military work from the First World War and there are many examples of work where taking people's needs and characteristics into account ensured more effective design. They also recall the Design Methods movement associated with work at the Royal College of Art in the 1960s. Led by L. Bruce Archer, this department encouraged students to look at the processes of the design and the needs of users (Sugg Ryan, 2012; Cross, 1980). Archer was influenced by his time at the Hochschule für Gestaltung in Ulm. In the late 1950s the Ulm design school radically redefined the relationship between theory and practice introducing social sciences, such as psychology and sociology, to design teaching (Sparke, 1988; Amphlett, 1985).

One of the most innovative design research projects that came out of Archer's department was the King's Fund Hospital Bed (1960-75); a joint venture between the RCA, the Nuffield Foundation and the Department of Health. This project was the embodiment of ideas about the changing worlds of hospital medicine and industrial design practice in the 1960s (Lawrence, 2001).

The London Ambulance Project (2005-11) echoes this scheme as a more recent co-design project within healthcare where real life research informed the design process. This collaboration between the Helen Hamlyn Centre for Design (HHC) at the RCA and the London Ambulance Service, NHS, Imperial College and University of West of England brought together paramedics, clinicians, patients, academic researchers, designers and engineers. The design process and testing meant designers spent time with ambulance crew before coming up with a re-design of the interior that was easier to clean and re-stock (HHC, 2011).

The interest in ethnography and inclusive design has also evolved out of the growing awareness of the social and environmental impact of design and a renewed interest in craft. Since Victor Papanek (1971) urged designers to 'design for needs, not wants', designers have been looking at different ways to create what writers such as Norman (2004), Walker (2006), Chapman (2005) and Thackara (2006) all describe as 'emotionally durable design', where personal connection with the user ensure longevity. The debates vary but these conversations have been construed as design activism or what Fuad-Luke (2009: 27) defines as:

[D]esign thinking, imagination and practice applied knowingly or unknowingly to create a counter-narrative aimed at generating and balancing positive, social, institutional, environmental and / or economic change.

The idea of counter narrative is important because it implies that design activism voices other possibilities than those that already exist with a view to eliciting societal (and political) change and transformation. Both *The Design Journal* (16 (2), 2013) and *Design and Culture* (5 (2), 2013) recently focused on design activism. And it has been a strong theme in a number of recent conferences such as the 2011 *Design Activism and Social Change* in Barcelona. Re-visiting some of the earlier political movements of the 1970s, it has also highlighted different design practices many of which challenge traditional professionalised notions of design. Julier (2013), for example, re-situated design activism since the recent economic crisis insisting that it can still play a vital role

because it is both 'overtly material in that it grapples with the everyday stuff of life' and it is focused on 'process'.

Tony Fry's work is important to mention here because not only has he consistently argued for a radical re-thinking of design in relation to sustainability but also that design itself can be an agent of change. In his most recent book, *Becoming Human By Design* (2012), Fry insists that the agency of designed objects is under theorized and that there are 'other ways of thinking and acting'. Fry (ibid.: 193-5) argues for a stronger 'relational picture', transforming the relationships between designer, client and user into a 'team' or 'community of interest'. Significant for this thesis is that Fry introduces the idea of an 'environment of care' where care becomes the fundamental driving force in relation to all design and everyday life. He (ibid.: 218) explains:

Care is normally taken to be something human beings exercise physically and emotionally – the craft workers, racing drivers, surgeons take care; likewise, charity workers, nurses, peace protestors and grief counsellors care. Yet a completely different philosophical understanding of care exists. This posits care as vital for being to be. Care, so comprehended, is manifested in our unthinking ability to cross roads, climb ladders, use power tools or cut bread without injury. Against this backdrop, a quality-based economy would need to extend things that increasingly performatively care across every space of everyday life and environments of use.

Fry (Fry & Perolini, 2012) also explores a new definition of home (the domestic) that is more actively connected to the idea of dwelling within the world (as home). For Fry these ideas are to emphasise the unsustainable disjuncture between the restrictive and the general economy, however, because he focuses on the two themes of care and home they have direct relevance to this thesis.

2.9: Sustainability, emotion and slow design

Healthcare initiatives must be situated within these wider debates to do with sustainability, design and emotion, and contemporary theories of design. Over the last fifteen years the social role of the designer has shifted into a much broader sphere. Designers and design thinking are seen to offer practical solutions to major issues such as health, ageing and community cohesion. The role of the individual designer has transformed into an increasingly strategic and collective role through co-design practices as outlined above. A common theme, as the writings of Fry (2012), Chapman (2005) and Fuad-Luke (2009) suggest, is how to re-evaluate and find more meaningful

relationships between environment (ecology) and economy, between consumption and material resources, between design product and user, and between quality (wellbeing) of life and quantity of production.

The role of emotion, which established itself as a branch of design discourse within the latter part of the twentieth century, is adopting an ever more ubiquitous position within contemporary design debates today. The role of emotion, as will be discussed, is important to consider in relation to Maggie's. Not least because co-founder Charles Jencks' explores the idea that Maggie's buildings engender the idea of hope. This point will be discussed in more detail in chapter 4.

Writers such as de Bottom (2006) suggest that we should pay more attention to the psychological consequences of design. That although architecture or garden design may not have the power to enforce an ethical message this does not mean we should treat them as arcane or frivolous specialisms (ibid.: 20). In fact they affect all our lives, our happiness and wellbeing. While the connection between emotion and experience is still not theorised, it is acknowledged that emotions play a key role in engendering resonant user experience. Writers such as Norman (2004: 139) and Chapman (2005: 112) argue that the affective system (emotion) and cognitive system are closely linked and that recognition of this can perhaps lead to the production of more emotionally rich and durable interactions and hence more sustainable design.

Design activism has encouraged radical re-thinking in the ways we engage with the material and natural worlds. It has encouraged, in some parts of the world, a move (albeit small) away from 'product-based well-being' (Fuad-Luke: 2009) towards cyclic rather than linear consumption. Deeply relevant to this thesis are ideas about 'transformational design'. Maggie's ambitions in relation to the designed environment must be seen within these wider debates. But even more pertinent is this concept in relation to gardens. Three key themes embedded within transformational design are relevant: a move away from anthropocentrism; the idea of slowness; and the idea of sacred time and space.

Strategies to slow people down, to create more meaningful, but less energy intense ways of meeting everyday needs and experiences have become important within design practice. Chapman (2005: 112) describes this as the need for more 'durable narrative experiences'. 'Slow design', initially coined as a rhetorical query of the default

'fast design' paradigm has come to be a way to re-frame sustainable design (Fuad-Luke, 2009: 157).²⁷ The Slow Movement that began with Slow Food (2011), founded in the 1980s by Italian activist Carlo Petrini, has expanded across the world with initiatives such as Slow Cities (2011) and Slow Lab (2010). These initiatives are exploring ways to create 'positive slowness' and more 'reflective consumption' and to promote environmental and human wellbeing (Fuad-Luke, 2009; Chapman & Grant, 2007; Meredith & Storm, 2009) (figure 2.2).

The idea of adopting sustainable rather than linear consumption is now sometimes highlighted. Thackara (2006: 33) reminds us of the Greek word 'kairos' to define 'qualitative time' in contrast to 'chronos' or linear time. He embraces the philosopher Bergson's (1921) concept of *lived time*, experienced time, or *duree* (duration) arguing it is key to developing a new approach to time, speed and distance (ibid.: 38). Manzini (2003) talks of the 'crisis of contemplative time' for both the wealthy and poor – that is 'time to do nothing...at a slower pace'. In its place are two complementary phenomena – saturation and acceleration (ibid.).

Walker (2006: 143) talks about the importance of a 'concept of sacred time' for our understanding of sustainability. He explains this as the cycle of time, the cycle of birth, growth, death and renewal, and the acknowledgement of both the physical and metaphysical. Walker (ibid.: 148) points out that although modern Western societies do create 'sacred spaces' (spaces set apart and governed by sacred time), 'the integration of sacred, artistic and poetic expressions with the secular, utilitarian and temporal appears to be problematic'.

Similarly Chapman (2005: 130) talks about creating layers of narrative and designing for 'desirable ageing'. He discusses the need for empathy and argues for 'emotionally durable design' that can deliver 'profound and sophisticated user experiences that penetrate the psyche over time' (ibid.: 18). Chapman also talks about creating a measure of openness or space within design (ibid.: 156). He specifically states that space is used in the Taoist sense, in which space might denote a positive and much valued presence, free from conceptualizations but not empty of meaning, rather than the Western concept of space denoting a negative absence or void-like emptiness.

²⁷ Fuad-Luke (2009: 22) defines slow design as 'an approach that encourages a slower, more considered and reflective process, with the goal of positive well-being for individuals, societies, environments and economies'.

Of course, these theories of design seldom focus on gardens. Yet it is clearly no coincidence that healthcare design (and healthcare more generally) has gradually begun to re-look at green nature as way to slow people down and create a sense of sacred space with the intention to assist, even speed up, the healing process. As outlined in chapter 1, there has been a gradual re-introduction of gardens into healthcare over the last 20 years.

What has also emerged is an increasing sophistication in terms of research and understanding as to the roles a healthcare garden can perform. While there is still more to understand, the practice has moved from designing for 'special needs' to a broader focus on inclusive design. Here again it is worth considering hospice gardens because many of them embrace the ideas that are being discussed. As Porter (2013) states, hospice gardens lend themselves to a slow design methodology where the gardens evolve over time and slowly in response to the needs of their users. Where the gardens can embrace a broad ecology (and hence non-anthropocentric) and where ideas of the sacred (even if secular) are inevitably embraced.

Walpole (2009) may well be right when he suggests that hospice gardens are a new garden type. Perhaps also they provide a model for modern healthcare in general; one that embraces slow design (rather than strong initial design) and one that can be the epitome of permaculture. Later in this thesis, and based on the evidence presented, it will be demonstrated that an effective healthcare garden may be able to embrace many of the philosophical and ethical concepts that preoccupy contemporary design such as slowness, ecology, transformation and wellbeing. Ultimately the significance of a garden may not be so much to do with slowing down, or speeding up, or providing a link with the natural world, but rather in opening up, in the here and now, a "resilient place".²⁸

2.10: Gardens as a way to develop *topophilia*?

As this chapter outlines, extensive published research exists which indicates that contact with nature can have a positive effect on people's wellbeing. Furthermore, there is growing understanding of a psychosocial dimension to the relationship between people and place. Maggie's, as will be demonstrated, draw on this research

²⁸ Thackara (2006) uses the word 'quick'. Quickening literally meant in old English to 'come alive'.

with their belief in the importance of the designed environment and specifically in their emphasis on natural light and green views. There is some evidence that they are looking at their centres as therapeutic landscapes where gardens contribute to stress-reduction. Their designers clearly have knowledge about the theories around green space research and the healthcare garden (see chapter 5).

As Reis et al. (2013) writes, there is 'mounting evidence on the health-nurturing potential of high quality environments'. It is also clear a garden can help people to recover from stress, it can improve their concentration, their self-esteem and their mood. However, there are gaps in the research, and it is also a fact that some people do not like going outside, have little time for gardens and certainly do not like getting their fingers dirty.

Many people do talk of an instinctual belief that the outdoor is good for us – but rather like the biophilia hypothesis, it is not fully understood why this might be.²⁹ Questions arise: Are they anything more than a feel good factor? Can it merely be a placebo effect? Is a so-called healing garden just a way to impress healthcare funders and clients? Are so-called 'healing environments' over-selling what Macmillan or Maggie's are doing? Surely a garden is a luxury and in hard economic times money should go to medical equipment, not gardens?

This thesis, in answer, attempts to grapple with these questions by focusing on the experiences of people who use gardens within a healthcare context. It suggests that the search for evidence is somewhat misguided. It also argues that the wellbeing agenda is in danger of both obscuring and over-simplifying the complexities of design, people and health. The point being that a garden is not like a drug but something far more complex, which cannot be measured in the same way. Likewise, green therapy should only ever be seen as one tool in a healthcare toolkit; spending time in a garden is never going to be restorative for some people. Finally, rather than being 'mere placebo' it is argued later in this thesis that a garden may offer some important and regularly overlooked qualities. A garden may be able to help develop a sense of place or *topophilia* (love of place) (Tuan, 1974) that is important to the healing process.

²⁹ An online discussion on the 'Landscape Research Academic Forum' (13-15 December 2011) highlighted that while there are many suspicions about biophilia ('just too simple, too obvious') there are, as yet, very few substantial critiques of it.

Informing this thesis is social science research that has sought to examine the affective connectedness between people, place and wellbeing. The ecological approach and Gibson's (1979) theory of affordances is the most relevant. Likewise, the therapeutic landscapes framework (Gesler, 2003) provides a guide because it highlights the importance of place to the processes of healthcare. It also highlights, as does the work by Caritas (2012), the importance of symbolic meanings and social activity. Cooper's (2006) work helps to focus on the potency of a restorative garden precisely because it is linked to caregiving. The writings of Chapman (2006) and Fry (2012) and other design activists are important because they insist on the agency of design.

However, critics challenge the supposition that it is 'the planned, the pleasant and the professional' that provide the best backdrops for recovery (Laws, 2009: 1827). It is important to be mindful that healthcare gardens are contested spaces. It could be argued that too much attention has been paid to researching the obvious therapeutic landscapes rather than looking at those spaces 'off the map' or 'dissident *topophilias*' that people identify as their spaces (ibid.). A word of caution is needed here as Laws (ibid.: 1833) warns there appears to be a 'rift in the growing hegemony of 'evidence-base', that only the researched, the mapped and the scheduled roads to recovery can be considered to be what works'.

It should not be assumed that aesthetics of space are valued and that certain design features automatically provide a therapeutic space. It is too often assumed that a 'pleasant' environment is best for recovery.³⁰ With these points in mind, the research methods for this thesis were carefully considered and are outlined in the next chapter.

³⁰ Laws' (2009) research with a self-help 'survivor group' recovering from mental health discovered that it was in fact a run down, vandalised, local park that provided their therapeutic landscape. This space served the purpose of providing a 'space to think' precisely because it was outside the immediate healthcare environment, away from surveillance and provided characteristics that this group could identify with.

CHAPTER THREE

The Experience of Gardens

In this chapter the research methods chosen for this project are discussed. The chapter starts by outlining some of the issues for garden historians and more specifically healthcare garden researchers. This leads to a discussion of the context for the methods chosen for the case study research. A mixed methods approach, primarily qualitative, was developed in an attempt to map and embrace the multisensory aspects of the gardens. The author looked for methods that could convey the range of networks that a garden holds embracing both a phenomenological and an ecological perspective. It was important to consider the special affordances of a healthcare garden and ethnographic tools were adapted in an attempt to capture people's experiences of the gardens. The stages of mapping the case study gardens are outlined and the data sample presented.

3.1: Space and place: Garden as a set of circumstances

What happens when someone steps into a garden? How important is that garden when that person is inside looking out? What about those spaces that are both garden and building? What are the most persistent memories of a garden? What happens to time in a garden? Is a garden connected with healthcare different to other types of garden? What are the qualities of a restorative garden and how do we look for them? Although John Berger (1980: 204) is writing about landscape rather than gardens his point is relevant:

The meaning of a landscape may be the same for those involved with the landscape as for those who look on. But the degree to which this is possible depends on how the landscapes experienced relate back into our individual and everyday lives, to our cultural experiences and other points of reference.

It is only through 'serious' engagement with gardens, as Cooper (2003: 105) writes, that we 'get a handle' on certain experiences.

Gardens are very often designed spaces, following a pre-conceived plan for a client (often the owner) and enjoyed by a particular group of users. In this sense they can be regarded as design objects, similar to architectural projects, and studied for their aesthetic, historic and symbolic value. However, a garden will always involve a much

wider web of connections and evolves over time often with the input of a range of gardeners rather than just one designer. Gardens are always more amorphous and transient, subject to seasonal variation and vulnerable to the whims of their caretakers unlike most built structure. Gardens are normally the first to disappear when a designed space becomes neglected or is no longer used. Gardens are often hidden within the history of an institution. This is one reason why, such as in the history of hospitals, there is much more information on the buildings. For example, it was easier to find information and records on the architecture rather than the gardens of St Cross or St Bartholomew's (see chapter 1).

Hunt (2000), reminds readers that it is precisely because gardens involve a living organic component that they are the 'greater perfection' compared to other art forms.³¹ In his seminal book, Hunt (2000: 9) holds gardens in high esteem because of their privileged position as 'the art of placemaking'. But how do we talk about this art form? What theories can we ascribe to gardens and how does the researcher make sense of their role?

This research considers a garden as a set of circumstances rather than being simply a design object. Creating a web of connections across time and space, embracing geographical, geological, climate, animal, and plant typologies, a garden presents particularly tricky but equally intriguing ideas about authenticity. It is important to address the dynamic way that place and people interact within a garden. Here garden writer Richardson (2005: 132) is helpful:

[P]lace [is] understood not just in terms of location, but also in terms of meaning – its history, use, ecology, appearance, status, reputation, the people who interact with the place, its potential future.

Ethnographer, Pink (2009: 42-43), concurs and writes that places are 'experiential, open and in process' – an 'event' or 'occurrence' and an 'entanglement of persons, things, trajectories, sensations, discourse and more'. The geographer Cresswell (Cresswell & Merriman, 2012) offers a theory of place that emphasises the relational character of landscape that combines both the idea of locatedness (a gathering or assemblage) and a connectedness (of things, representations and practices). Coles &

³¹ Dixon Hunt (2000: 8) was alluding to Francis Bacon's well-known statement that since gardens have always come after buildings they were the 'greater perfection'. Dixon Hunt was also implying that garden theory could also be the 'greater perfection'.

Millman's (2013: 215) recent publication focusing on the theme of landscape and wellbeing emphasises the existence of a process of 'dialogue' between individuals and landscape.

Another geographer, Crouch (2010b: 17), argues the need to conceptualise landscape as dynamic, contingent, sensual and what he terms, 'processual'. Crouch (ibid.: 13) wants to give attention to process rather than category and to how landscape emerges and happens rather than 'is'. Crouch (ibid.) uses the word 'spacing' rather than place to emphasise the 'shuffling, unstable and lively' character of landscape and introduces the evocative character of flirting as a way of re-thinking landscape (and hence gardens). A garden is thus a complex of 'spacing' that requires an analysis that can do justice to the entanglements between location, histories, designs, functions, senses, memories and emotions.

It is also helpful to consider the garden as a network and to regard garden design as a type of connector; a mechanism for energizing or setting a series of interactions in motion. Thackara (2006) argues that the word, 'situation' better encompasses social factors than a simple focus on space. People are too often thought of, by designers, as users or consumers, 'when we really need to think of them as *actors*' (Ibid.: 97, 109 & 221). This leads to a consideration of Actor Network Theory (ANT), as developed by French sociologist Bruno Latour in the 1980s, not as a methodological tool but as a general attitude that can facilitate a new and more dynamic way of thinking about gardens and garden history. ANT uses the metaphor of the network to dismantle the axiomatic distinction between human and non-human actors and to draw attention to materiality, relationality and process (Fallan, 2010: 50). It has also been able to alter thought and research regarding the relationships between those things we think of as 'social' and 'natural' respectively (Castree, 2005: 231).³² ANT not only insists on the objects of design, but also its institutions and different cultures. It can help to reveal how objects and practices co-evolve and to describe the dynamics and hybridity of everyday practices (Shove et al., 2007: 3 & 9).

ANT is useful to this thesis for three reasons. First, it can do justice to the many material dimensions of things (human and non-human) without limiting them in advance to pure material properties or to social symbols. The status of garden and

³² Castree (2005) discusses how the traditional society-nature dualism has been replaced by a range of relational approaches, including ANT, within the discipline of geography.

users are not fixed. With ANT a “relational ontology” (Wylie, 2007: 201) is proposed where people, objects, plants, animals and ideas all ‘jostle against each other’ (Hitchings, 2003: 100). From this vantage point it is easier to see the garden as evolving and ephemeral and that its achievement, both symbolically and materially, is constructed and negotiated through the interaction of different actors (or actants). Second, it offers a fuller view of the active, complex, surprising, counter-intuitive context of any design project. Third, it points out that this context, because it is variable, moving and evolving along with the design objects themselves, impinges at every stage on the development of each garden, and hence, the research described here (Yaneva, 2009: 282). ANT can highlight the layers (the heterogeneous network) and levels of connectivity that need to be examined. It can ‘describe’ – follow, document and “map” (analyze and visualize) the principle actors and debates around a garden (Mapping Architectural Controversies, 2009; Latour, 2005: 144).

Hitchings’ (2003) study of private gardens in London demonstrates the usefulness of an ANT approach. Hitchings demonstrates that by beginning with people and then the plants, how such a relational exercise can attend to the shifting significance of the material and the symbolic in the social world. His diagram of the ‘chains of enrolment in the garden’ shows the shifting enactments of power, performance, people and plants (see table 3.1). He makes the point that such a study does not necessarily preclude a close engagement with the shifting balance of power between actors nor does it exclude an engagement with human emotions and subjectivity (Ibid.: 110-111).

It is therefore necessary to adopt a variety of research methods that can do justice to the particular set of circumstances presented. What is required is a form of mapping that is multidimensional that can explore the topology of a garden from a variety of perspectives and means. Within the initial fieldwork that will be discussed below attention was paid to the non-human aspects of the gardens (such as plants, climate, wildlife and design features) as well as to the human emotions and stories that evolved.

Table 3.1. The 'chains of enrolment in the garden'

Hitchings (2003: 108)

3.2: The multisensory

The research methods for this thesis are informed not just by the need for a multidimensional approach, but one that embraces the senses. Such an approach is particularly important for the study of gardens. Although gardens can be and are visual experiences they also remind us that we experience them through corporeal engagement, not just our vision. For example, through the smell of newly mown grass, the fragrance of a flower, the buzz of a bee, the sound of running water, the feel of the

wind, the shape of a path or the texture of a wall. A garden is approached, looked into, entered, encountered and passed through. It is often not an end in itself but a frame, link, or connector and relates to other spaces and buildings.

Any research on a garden must not only take account of the multisensory experiences of people but should embrace multisensory research practices. Currently there is, within scholarship, the 'sensory turn', with a range of scholars across the social sciences and humanities actively engaged in research on the senses and perception (Pink, 2011; Sensory Studies, 2012). Vision and visual aspects of culture have recently been re-situated in relation to other senses (Pink, 2009 & 2011). A theory of multisensoriality undermines the supposed dominance of the visual (Jay, 1993; Ingold, 2000). Pink (2011) sets out a theory of multisensoriality that emerges from both phenomenological anthropology and neurological studies. It was Merleau-Ponty (1962) who emphasised the interrelatedness of vision and sound, and vision and touch respectively. Similar arguments are now being promoted by scholars working in the neurosciences who state that sensory modalities are not disjointed but can amalgamate, combine, substitute or integrate (Pink, 2011: 6)³³

This thesis takes its lead from architects, such as Pallasmaa (2010a & b), aestheticians, such as Berleant (1992 & 1993) and ethnographers, such as Pink (2009). Pallasmaa (2010a & b; Holl et al., 1994) insists that human existence is fundamentally an embodied condition and designers and researchers should pay more attention to the tactile and auditory senses. Since the Renaissance too much emphasis has been given to vision at the expense of other senses, especially hearing. Pallasmaa (1994: 30) insists that architecture involves seven realms of sensory experience which interact and infuse each other because 'every touching experience of architecture is multi-sensory; qualities of matter, space, and scale are measured equally by the eye, ear, nose, skin, touch, skeleton and muscle'. Whilst Pallasmaa (2005: 16) fully embraces advances in technology and medicine, he is concerned with what he describes as an emerging 'pathology of the senses' within certain built environments.

A recent paper published in *Landscape Research* calls for a more multi-functional approach to research and policy on landscape that draws on people's experiences and interactions with local landscape (Scott et al., 2009: 398). It clearly seems important for

³³ Pink refers to recent research by neurobiologists

a garden researcher to also recognize the importance of the symbolism and memories evoked by sensory experience. The way people “sense” the world affects the way they live and recollect lived experience. Likewise, their childhood sensory experiences of green space will probably affect their responses later in life (Olds, 1989). Though, this is not to suggest *a priori* assumptions about ‘the sensorium’ – people’s sensory categories may be individual, gender specific, generational, culturally, historically or politically specific. Furthermore, their individual *sense of* “wellbeing” may also be multisensory and deeply personal. Mason and Davies (2009: 13-15) point out it is precisely because senses are part of people’s everyday lives that ‘sensory methodology should involve attuning ourselves to the complex ways in which the sensory is tangled with other forms of experience and ways of knowing’. This perhaps includes acknowledging that illness can be a defining moment for many people.

Berleant’s (1993: 239) ‘aesthetics of engagement’ emphasises sensory perception and bodily engagement with the world and pays attention to the context or situation of the appreciator. He talks (ibid.: 236) about the ‘qualitative sense of unity’ and that environment becomes ‘nature as we live it’. Although criticized for his emphasis on culture, suggesting an overly-human view of environment (Brady 2003: 107; Brook, 1998: 67), Berleant’s (1993: 236) refusal to draw up separate frameworks for nature and art, as well as his view that humans are not separate from their environments is useful. Sensory perception is as lived participants, not observers. This is about attending to connections between phenomena and about using sensory and emotional awareness to experience phenomena as fully as possible (Brook, 1998). This is not dissimilar to the idea of affordances where ‘affordances are properties of the environment that are both objectively real *and* psychologically significant’ (Heft, 2010: 19). In a similar way, ethnographer Pink (2008b: 3) has argued for an acknowledgement that our way of ‘being in the world’ is inevitably and unavoidably ‘emplaced’, and placemaking involves multiple processes.

A consequence of Merleau-Ponty’s (1962) explorations into the phenomenology of perception was to draw conclusions about the interrelated nature of human existence and the spaces in which it is played out. An understanding of phenomenology with its emphasis on engaged experience seems essential to a researcher looking at gardens and healthcare. It is precisely because phenomenology grapples with issues around subjectivity, knowledge and perception that it is helpful. For instance, phenomenology shows how the Cartesian perspective fails to describe lived, human experience of the

garden. Abram's book, *The Spell of the Sensuous* (1996), in which he discusses the subtle dependence of human cognition on the natural environment as well as the character of perception and the sensual foundations of language is also a guide for this research.

It should be made clear that throughout this thesis no attempt is made to define perception or to delve into the science of perception. It simply acknowledges the importance of a multisensory approach to garden studies and takes its lead from humanities researchers as outlined above. It also acknowledges both evolutionary science and recent neurobiological research that insist on the 'dethronement of the conscious mind' (Eagleman, 2011). At the same time it suggests that scientific reductionism cannot explain human wellbeing or satisfactorily define subjective experience. And here a healthcare garden presents a really interesting case. What is argued in chapters 5-11, based on the research findings, is that that healthcare gardens can play a role in "fine-tuning" humans, offering opportunities which are different from day-to-day sense perception, thereby revealing the complexities of perception and the complexities of the relationship between the brain and mind.

3.3: Ethnography and everyday life

This research insists on the need to attend to the ways in which people create and experience a 'sense of place' in relation to material localities (Pink, 2012). It is informed by cultural theories that value everyday life as an arena for research (Highmore, 2002a & b). Mapping everyday experiences of the world can provide insights that have social and political resonance. As Highmore (2002b: 2) argues, looking at the ordinary and the everyday can make the invisible visible. This research is also informed by practices that emphasise ethnographic protocols to map and reveal the dynamics and materialities of everyday life (Miller, 2001 & 2008; Pink, 2012; Shove et al., 2007). As discussed in the last chapter, current ideas about design and emotion are important (Chapman, 2005). The methods of sensory ethnography and emotion-centred design have informed the case study research and have helped to shape the interview process (McDonagh et al., 2004; Design and Emotion, 2006).

Sensory ethnography, as discussed above, offers ways to engage with a designed environment and valuable routes to other people's experiences, knowledge and values. It draws attention to the links between sensory perception and emotional responses to

artefacts and to specific features of design. It also offers a method where the researcher attempts a reflexive and emplaced methodology by becoming an 'apprentice' and participating and learning through their own multisensory observation, fieldwork and experience (Pink, 2009: 130-131).

In practical terms this led to a rethinking of the interviews in this thesis as a multisensory event. By being attentive to the place and sensorial, emotive and social encounter the aim has been to gain more nuanced accounts of people's experiences. Wherever possible interviews took place in or near the gardens. This ensured that both researcher and interviewee were constantly reminded of the material presences of the garden. By allowing research participants to use their whole bodies and senses to communicate what is important to them about a garden, the aim was to gain insight into other people's experiences, knowledge and values. In this way a garden can begin to be understood through the interweaving of material and emotional narratives. Researchers such as Tilley (2006) make the point that people talk differently when walking around a garden as opposed to sitting inside looking out onto it.

Walking as a critical tool, a form of psychogeographical reading as well as an instrument of phenomenological knowledge has its own cultural history (Careri, 2002; Coverley, 2010). De Certeau's (1980: 158) essay, 'Walking the City', becomes a strong point of reference here because of his insistence, albeit in an urban context, of the value of walking to discover the 'immense texturology' of the ground level and the everyday. As a method, the walking tour ensures shared sensory experience of researcher and participant (Adams, 2009: 9; Pink 2007b, 2012). Movement through a space allows people to respond in a different way and perhaps comment on or remember different details (Edvardsson & Street, 2007). Those interviews that took the form of a walking tour were audio recordings that offered a broader sensory record for analysis. The recording almost became a research methodology in itself, encouraging a stronger collaborative and embodied sensory investigation (Pink, 2009: 113-115).

3.4: Affordances

This research is informed by a phenomenological understanding of human experience that is spatial and embodied. Likewise, it is important to be aware of the relationships people have with certain places; different contexts activate different habits (or behaviours) and become part of the way those habits are expressed. This is why the

narratives presented by the subjective experiences of the people who use these places can reveal insights into the role and significance of the designed environment.

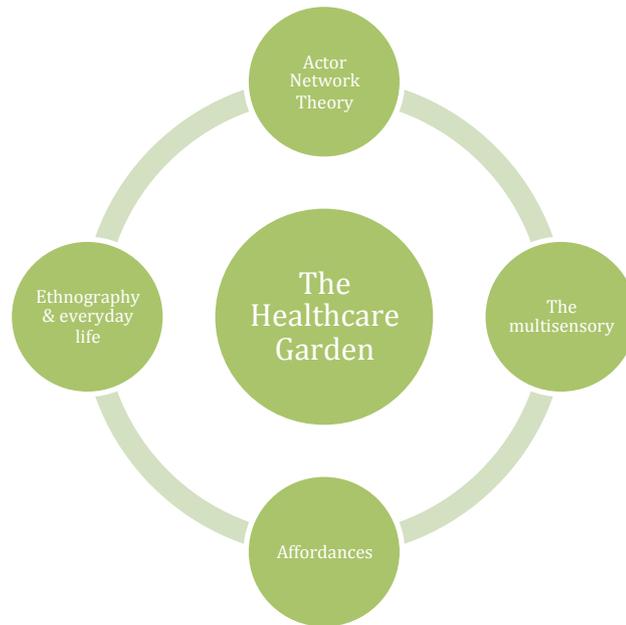
However, this research does not follow a wholesale adoption of phenomenology. It is important to avoid any form of (rural) romanticism in relation to the restorative garden. It is also important to ensure that although there is a focus on human health, when it comes to gardens the human subject should not be the measure of all things. What is key here is the idea of affordance, as discussed in chapter 2 (Gibson 1966: 285), as an ecological approach to describe the relationships between an organism and the environment and the potential opportunities for action. The argument is that affordance considerations can lead researchers to a deeper engagement with the qualities of experiencing the environment. The anthropologist Ingold (2000) describes this as 'active engagement'. An affordance analysis of a garden involves identifying potential affordance properties of the space from the standpoint of prospective users of these settings. Hence the activities and experiences of individuals that were representative of the group could be observed. Such an approach also prompts researchers to emphasise the experience of a garden over time. Furthermore, with an ecological approach, valuing nature comes to the fore while the human role can be put to the back.

By embracing the problems presented by gardens in the way that has been outlined above it is possible to present garden studies in a new way. Table 3.2 illustrates the range of approaches that should be considered to research a healthcare garden. So often the garden is silent within design research and planning. However, if we start to see gardens as "networks" that hold aesthetic, sensory, emotional and social values that can offer specific and unique affordances for people then their political significance becomes apparent. Their role as a contesting space or rather 'spacing' as Crouch (2010b) puts it, is revealed; one that can, for example, contrast or even negate the fragmented de-personalised institutional spaces of much of our contemporary healthcare. A 'spacing' where values and practices can be different and where change can be generated not just on a spatial level but also on the personal and social level.

What is required is vocabulary that will do justice to the idea of gardens as these contested 'spacings'. Within the case studies discussed in this thesis attempts have been made to describe the process of the programming, design and construction of the garden. The role of staff (medical, administrative, maintenance and operational),

visitors and their families in this process is examined. Likewise, the wider context for the operation and maintenance of these gardens is explored. Most sites in question are linked to a larger healthcare campus and hence connections to the wider community are also considered (see appendix 1).

Table 3.2. Diagram illustrating the range of approaches considered appropriate to research a healthcare garden



3.5: The value of case studies

For this investigation into gardens within contemporary healthcare settings, mixed-methods and multisensory research methods were adopted. This approach emerged from an awareness of the methodological challenges involved in researching not just gardens but more broadly the social impact of the arts (Gray, 2006; Galloway, 2009). The aim was to explore the gardens from a number of perspectives and to ground the emergent thesis in evidence gained from a range of sources. Although an observational method was used, it was the qualitative research that provided the main focus for analysis. At the heart of this inquiry is the belief that well-managed qualitative data can offer strong insights and opportunities for in-depth analysis. Qualitative research offers a way to report how people “see” things. Silverman (1999) and Greenhalgh (2001) claim, qualitative research offers the opportunity to find meaning in the words people use to describe their experience. Flick (2002: 7) states:

Qualitative research is not based on a unified theoretical and methodological concept. Various theoretical approaches and their methods characterise the discussions and the research practice. Subjective viewpoints are a first starting point.

The research methods developed were the result of questioning how a researcher might map and gauge gardens associated with health. The complexity of this question led to a focus on case studies in order to engage with the ideologies, practices and criteria that may or may not result in a sense of wellbeing for people.³⁴ The intention was not to measure the gardens' impact on individual wellbeing but to explore the experiences of the people involved with these gardens, which included the designers, gardeners, healthcare staff, patients and their families.

When describing interactions between complex systems, such as the built environment, the patient and staff healthcare environment, landscape design, plant management and private and public funding, it is necessary to draw on nuanced evidence. There is a need for textured, narratives that convey the "experience" behind the relationships. This, it is argued, leads to a deeper analysis of the ways gardens affect people and the need for breadth required by this process has precluded the exhaustive control of variables. As the review in chapter 2 demonstrates, there is already a wealth of evidence to suggest green is good, however, there is far less understanding as to the subtleties of the impact.

This project emphasises the value of case studies. It also takes an innovative approach to exploring the interaction between people, space and place. The impetus for this research has been a close analysis of the role of the designed outdoor spaces at Maggie's. The focus for this thesis is a study of four of these centres: Edinburgh, Dundee, London and Cheltenham. Each case study has been tracked for a period of two years with data collection episodes taking place at key seasonal points. At least thirty interviews from staff and visitors have been conducted at each site to ensure as broad a sample as possible within the constraints of time, resources and the demographic characteristics of each site.

The research offers a method through which the design process as well as the experience of these garden spaces can be examined. The aim was to reveal, not so

³⁴ Cresswell (2007: 73) defines case study research as involving the study of an issue explored through one or more cases within a bounded system.

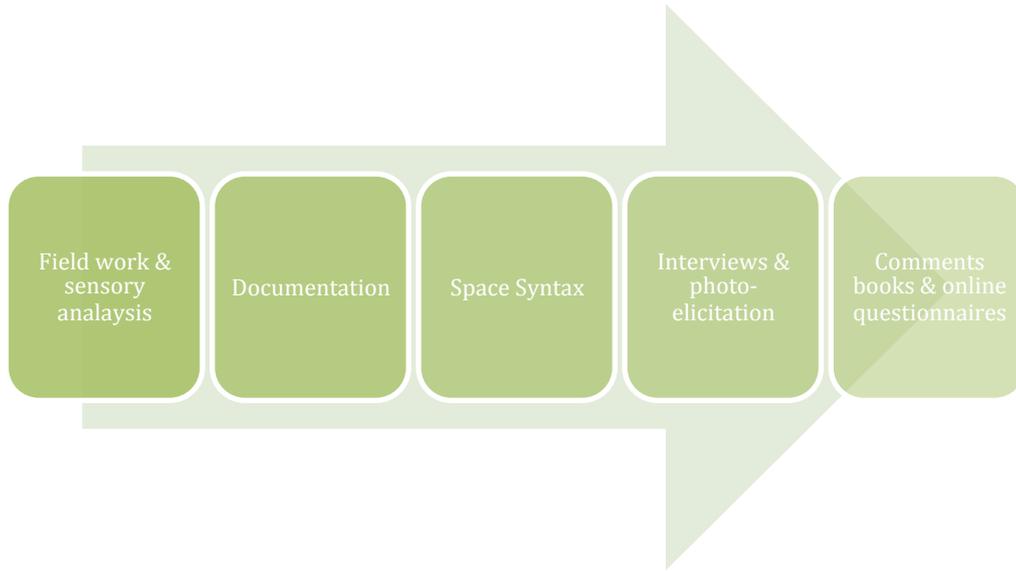
much issues about the designs, but insights into how these gardens may or may not support quality of care and a sense of wellbeing. This mixture of methods has resulted in a set of diverse research materials including written notes, design plans, audio recorded interviews, online questionnaires and photographs (see appendix 1, 2 & 5). However, the core of the research is a collection of photo-elicitation interviews where image and text are juxtaposed (see sample in appendix 5F).

The multi-method approach to the research design has produced layers of material that when brought together ensure a robust investigation. It also allows for both the significance of individual setting and context to be considered as well as ensuring a range of views; it allows for analysis of different perspectives within different case studies. In brief, the advantages of this research method are identified as being the breadth and detail of data gathered from observation and documentation and interviews and the depth of researcher understanding and the *in situ* data collection. Disadvantages include: the possible bias in self-reports; the absence of data for non-users; and the relatively high degree of analytical interpretation. The lack of control of the interview environment (each case study presented a different set of practical issues) and who was available for interview was also a disadvantage. For this reason further interviews were pursued at each site to try and build up stronger samples. The practicalities of tracking seasonal difference at the sites and the changeable weather during site visits also proved a challenge.

3.6: The stages of mapping a garden

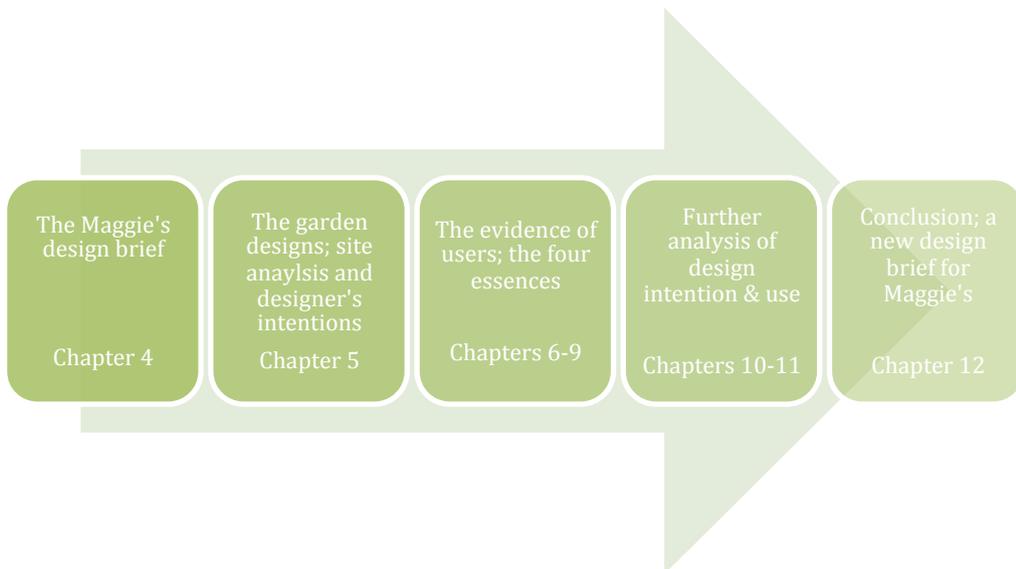
In the following sections the stages of mapping a garden and the methods chosen for this research project are discussed in detail. Table 3.3 illustrates these stages.

Table 3.3. Diagram illustrating the stages of mapping a garden and the methods chosen for this research project



Within this thesis these stages are woven into a broader discussion of the garden design story at Maggie’s. The ensuing chapters ensure a reflection on both design process and outcomes, examining the Maggie’s design brief, the original designer’s intentions and then the evidence of users. Through this process the key findings that eventually become defined at the “garden essences” emerged. This ultimately led to the proposal of a new design brief for Maggie’s. Table 3.4 explains these stages and connections.

Table 3.4. Diagram illustrating how the thesis chapter layout emphasises the connections between the Maggie’s design process and the evidence of users within the research process.



3.6.1: Initial field-based site investigation and sensory analysis

Research began with a site analysis of each garden using field skills to define the limits and parameters of each garden subject in question (Currie, 2005; Lambert et al., 1995; Taylor, C., 1983). Each case study was considered as a 'site of inquiry' (Palmer, 2010). This included a sensory exploration of the site, based on a site visit, informal meetings with staff and visitors, notes and photography (Reid, 2002; see site plans in chapter 5). An assessment of the resource management of the site (similar to conservation reports), flagging up any key strengths (such as climate, location, flora and fauna) or vulnerabilities (such as noise pollution or damaging activities) was also undertaken (Clark, 1999 & 2001; Conservation Evidence, 2010).

Field books for each case study were created and these were then considered 'sites of documentation and critical thinking' in their own right (Palmer, 2010; 16). They became a visual and textural mapping of each garden; an iterative endeavour rather than a product, intended to provoke and probe questions about the sites in question. The sensory analysis included: mapping/noting of the physical, sensory, aesthetic and spatial features; circulation and orientation; views in and out of the garden; observation of plant and animal life; microclimates within the garden; observation of sounds, temperature and smells; sound recordings; and Identifying opportunities for social interaction and for privacy (see fieldwork in appendix 1 & 2).

3.6.2: Collection and documentation of materials relating to each site

An investigation and analysis of the existing data, including the history, documentation and visual records of the site, such as maps, photographs and plans, as well as information on ownership, designers and users was undertaken. It involved e-mail, phone contact and interviews with individual centre staff, the designers and the gathering of existing plans, maps, historic photos, records, press reviews and any previous research. It also included attending any relevant meetings where the design or use of the garden was discussed.

This data provided important context for the final analysis. The mapping of each case study did not simply focus on the post-occupancy experience but looked at how relationships with the garden evolved and continued to develop from the consultation and design process through to the establishment and on-going seasonal development of the garden.

3.6.3: Space syntax study

Observational tools derived from space syntax (2009) methodology were used to track activity and use of the garden spaces. This involved the observation and record of the use, movement and flow within the garden spaces on certain days and over a period of time and included gate counts, snapshots and traces (see samples in appendix 5G). This method generated a layer of quantitative data that revealed patterns of use or non-use of the garden. It was also helpful because, for ethical reasons, it was not possible to take photographs of people using the gardens. The summaries of the space syntax studies for the four case study Maggie's gardens are included in the site analyses in chapter 5.

Space syntax provides a unique, evidence-based approach to the planning and operation of buildings and urban areas. It is a theory and set of tools and techniques for analysis of spatial configurations based on the belief that patterns of movement and space use are fundamentally influenced by the configuration of space and by the location of activity generators and attractors. Through an analysis of the 'configuration', patterns of human activity such as movement, wayfinding, vulnerability, co-presences and communication can be revealed (Hillier, 1996; Hillier & Hanson, 1984).

Space syntax has rarely been applied to landscape design where prospects and vistas are shaped more generously and at a larger scale than in townscapes and where spatial boundaries are less well delineated and change with the seasons. However, there has been a recent study of Milton Keynes looking at how space syntax can be adapted to understand the circumstances under which people feel motivated to explore their local landscape, and the spatial factors that may deter people from incorporating walking into their personal strategy for healthy living (Conroy Dalton & Hanson, 2010). Significantly this study (*ibid.*: 226) argued the need for a synthesis of three types of expertise. Firstly, an ability to quantify natural spaces objectively. Secondly, environmental/ cognitive psychology methods of, for example, verbal protocols and other forms of self-reporting in order to attempt to elicit the types of affordances provided by the natural landscape. Thirdly, knowledge of the landscape itself, which provides structured methods of classification and evaluation.

3.6.4: Interviews: walking tours and photo-elicitation

The core of the research within this thesis is a series of interviews with staff, visitors and their families and the designers. Some interviews were conducted as walking tours of the garden. For practical reasons (the health, mobility and time constraints of participants) a photo-elicitation exercise was developed where participants were given a digital camera and invited to take their own four photographs of the case study gardens. Their photographs were immediately transferred to a laptop and provided the focus for a short oral interview where participants were encouraged to discuss each image, explaining why they took it and what it said about the garden for them (see appendix 6F for an example of photo-elicitation responses).

Photo-elicitation, where photographs are used to elicit verbal commentary, is an established method in social research (Schwartz, 1989; Harper, 2002; Visualising Ethnography, 2010; Adams et al., 2010).³⁵ Within this research it proved a useful tool to gain a deeper understanding of a situation while removing some of the strangeness of the one-to-one interview situation; participants were able to talk through the photographs. By inviting participants to take their own photographs it also ensured that they, rather than the researcher, directed the conversation. It proved to be a quick and unobtrusive way to gain reasonably in-depth responses within the busy healthcare centres. Although it might appear to favour the visual sense, it did in fact ensure that participants went out into the gardens and when they talked about their photographs their responses were multisensory. This is something that Pink (2011) has argued in relation to her own work – that visual media can be understood as part of multi-sensorial place events. The researcher was able, within the interview, to encourage the participant to remember the sights, sounds and feelings that they experienced when they took the photograph. Furthermore, the elicitation seemed to invite engagements with sensory memories and this became an opportunity to tease out more subtle thoughts and feelings about the gardens.

Each photo-elicitation interview took approximately 20 minutes to conduct. The initial focus was on encouraging the participant to explain the significance of each photograph (appendix 5C). Once the four photographs had been discussed, some key issues were probed using further questions (appendix 5C). On some occasions a

³⁵ The best-known photo-elicitation technique is the Zaltman Metaphor Elicitation Technique (ZMET) developed at the Harvard Business School and patented in 1995. This technique has been used in academic research and for marketing purposes. Also comparable is the 'Ladder Interview' another technique used in market research to probe people's responses to a question.

longer conversation developed and comments were recorded as additional commentary. The photo-elicitation interviews provide the core of the data. They represent a controlled study of initially unprompted (because participants chose what photographs they took) responses to the garden. For this reason, within the analysis when reference is made to specific examples of the data it includes the participant's own photograph and their own words unedited from the oral interview (see figure 3.1 an example of photo-elicitation).

Photo-elicitation example

Photo-elicitation



Walking down the path with the fountain – it's coming on a little journey. I always stop and look at that and think about the water going all the way back again. I always follow the curves in my mind. It's a stopping point for me. I instinctively do it. I don't think about it.

Figure 3.1. Maggie's Cheltenham (2012) (MC28 woman with cancer)

Walking tours and interviews with designers took longer, usually between 30 and 80 minutes. Eighteen interviews were conducted in this manner. The same topic guides were used for these interviews to ensure similar issues were addressed and consistency across the data set. Additional questions specific to the different sites were also prepared before the interviews with staff and designers. In addition to the photo-elicitation and walking tours a number of conversations were conducted (some over the phone) with visitors who, for whatever reason, were unable to take part in the main interview process.

3.6.5: Online questionnaires and comments books

The research design included online (written) questionnaires for the four Maggie's case study gardens (appendix 5D). These questionnaires, while broadly addressing the same themes (ensuring effective analysis), were tailored to each site. They were intended to further extend the investigation of the role of the gardens and also capture data from people who were not physically attending the centres. The questionnaires used a mix of questions. Some questions focused on the garden design and features and used a ratings scale. Others were open questions to allow for more in-depth qualitative responses. The questionnaires included questions on participants' use of the specific garden and their views on the impact of the garden on the life and work of the centre. They also included three questions at the end that encouraged them to discuss the idea of the restorative garden (see appendix 5D). The intention was to further extend the breadth of the qualitative material rather than offer a layer of quantitative data.

Garden visitors' books were placed in each of the Maggie's case study centres to encourage comments and discussion beyond the days when fieldwork was undertaken. Three specific questions about the garden spaces were also included in the Maggie's cross-centre audit in 2011 (appendix 5H). These questions directly asked if visitors came to the centre to access the garden. The audit also asked visitors what they thought of the Maggie's gardens and the way they had been planted. The responses to these questions were analysed along with the data generated by the online questionnaire. The aim of all of these approaches, beyond extending the sample, was to capture visitors' views and experiences of the gardens at Maggie's and thereby further understand the roles that they play for the organisation.

Toolkits and checklists assessing the designed environment developed by the health services informed the questionnaires within this research (Macmillan Cancer Support, 2010a; The Centre for Healthcare Design, 1999; DOH 2008b & c). Resources for measuring wellbeing and quality of life were examined (WHO, 2004; EuroQol, 1990; MYMOP2, 1999), as was the literature exploring perceived restorative components, including the Perceived Restorative Scale (PRS) and Restorative Components Scale (RSC) (Hartig et al., 1997; Bagot, 2004).

Attempts to measure the wellbeing of participants were discounted as inappropriate for this study in favour of a focus on what people think and feel about the role of the

gardens. Knowing how people feel about their own personal wellbeing on the day of interview or questionnaire would not have added value or insight within this thesis because it is not a study of the impact of the gardens on individual health. This might have been different if a longitudinal study was being conducted where individual's experience could be tracked over a longer period of time. Significantly what emerged from this research was a considerable amount of data about the wellbeing of the participants. By making the gardens the focus of the conversation it proved a subtle way to find out about people's wellbeing because they inevitably began to talk about themselves.

3.7: The data sample and collection

Research using the methods described above was undertaken at all four case study sites: Maggie's London, Cheltenham, Edinburgh and Dundee. In addition, site visits to all the other established Maggie's Cancer Care Centres were undertaken. The comparative garden sites were: Macmillan Ambulatory Oncology Centre, Leighton Hospital, Crewe; Macmillan Ambulatory Cancer Treatment Unit, Warwick Hospital; The Friends Garden at Great Ormond Street Hospital, London; Trevarna Garden, Cornwall Care, St Austell, Cornwall; and The Sand Rose Project, Marazion, Cornwall. These case studies, all chosen for specific reasons, will be discussed in chapter 5 (see also appendices 1 & 2). Other visits and interviews with key gardeners and designers involved in healthcare gardens were undertaken to develop the breath of the research framework (see appendix 3). Ethical approval was gained for each case study garden and due to the different circumstances at each site this inevitably led to variations in methods of data collection and size of samples.

Fieldwork and space syntax methods were conducted across all four of the Maggie's case studies with strategic visits over a two-year period (see appendix 1). One hundred and twenty five photo-elicitation interviews with staff and centre visitors were conducted across the four sites with at least 24 interviews at each individual site (see table 3.5).

The sample aimed to represent a convenience sample – a snap shot of the range of staff and visitors on any one day. For ethical reasons the research required a delicate approach and was always dependent on who was available and willing to take part in an interview on the day. On the research days, staff offered immediate guidance on

who would be willing to take part. The researcher relied on staff advice only and did not further select the sample.

The aim was to be as inclusive as possible to ensure a range of different experiences was captured in the analysis (the only exclusion was children). The plan was also to interview a mix of staff and visitors, including some first time visitors and newer staff to capture a “fresher” response in comparison to those people who were familiar or who have been directly involved with the gardens over a period of time. Data was captured from participants who did not use or directly engage in the gardens.

No one who was approached declined to take part, but there were both staff and visitors who were, for a variety of reasons, unavailable on the day, which lead to inevitable gaps in the sample. For this reason research was undertaken on different days of the week across a two year period in order to build up a broader sample. All participants received information on the project and signed consent forms.

The research participants included psychologists, therapists, volunteers, first time visitors, regular visitors, visitors who volunteer in the garden, patients with cancer and visitors whose relatives or friends have cancer. It included men and women of different ages and patients with different cancer diagnoses and at different stages of treatment (including terminal prognosis) or recovery. The research relied on building up a cross section of both the staff and visitors on any one day. The sample therefore included a broad range of ages and people of different class and cultural background. Most interviews took place at the kitchen table within each centre, although some did take place in quieter spaces or even parts of the garden.

More women than men were interviewed, mirroring the demographics of visitors and staff – statistics for Maggie’s show a 32% attendance for men in 2011 (see figure 3.6).³⁶ The slightly lower number of men in the sample (30%) is explained by the fact the current male/female ratio of staff across the four sites studied is 1:5 (20%).³⁷ It is also worth noting that each Maggie’s centre reflects its own immediate community both in terms of cancer diagnosis and characteristics of visitor attendance. A commonly held

³⁶ Total male visits to Maggie’s in 2011 was 28382, total female visits to Maggie’s in 2011 was 62017. Information provided by Maggie’s, August 2012.

³⁷ Across the 4 case study sites the total number of female staff is currently 21 and the number of men is 4: that is a ratio of 5 women to 1 man. Information provided by Maggie’s, October 2012.

misconception about Maggie's is that it is only accessible to women and focuses primarily on breast cancer; this is not the case and is clearly borne out by Maggie's own statistics (Maggie's 2012a) (see appendix 6).

Beyond Maggie's, a further 63 photo-elicitation interviews took place at the other case studies sites (see table.3.7). Data collection differed at each of these sites (see appendix 2) and was dependent on the different circumstances available to the author. The research sample also included depth interviews or audio recorded walking tours of the gardens with staff and the designers at the Maggie's sites and some of the other case studies (see table 3.8).

The data sample also included material gathered from the visitor's books and online questionnaires. The online surveys at Maggie's had a disappointingly low response (n = 31) and although the reasons are not clear, timing and lack of clear promotion were factors (see table 3.9). However, people who did complete the surveys at other sites or who wrote comments took time to answer questions and hence showed evidence of a deeper interest in the role of restorative gardens (see table 3.10). Their responses have been helpful in re-defining a healthcare garden as a resilient place.

Table 3.5. Details of the (photo-elicitation) interviews conducted across the four Maggie's sites.

CENTRE	TOTAL NO. INTERVIEWED	MALE	FEMALE	STAFF/ VOLUNTEER	VISITOR/ FAMILY MEMBER	CANCER PATIENT	FIRST VISIT/ NEW STAFF
Cheltenham	33	11	22	14	5	14	3
Dundee	29	9	20	8	4	17	1
Edinburgh	24	6	18	9	2	13	4
London	39	10	29	13	3	23	5
TOTAL	125	36	89	44	14	67	13

Note: while the majority were photo-elicitation interviews some were conducted as simply conversations.

Table 3.6. Gender breakdown for (photo-elicitation) interviews conducted across the four Maggie's sites

	TOTAL NO. INTERVIEWED	MALE	FEMALE	TOTAL
STAFF	44	10 (23%)	34 (77%)	44
VISITOR	81	28 (34%)	53 (66%)	81
TOTAL	125	38	87	125
%		30%	70%	

Table 3.7. Details of the principle (photo-elicitation) interviews conducted across the other case study sites

GARDEN	TOTAL NO. INTERVIEWED	STAFF	RESIDENT/ PATIENT/	FAMILY MEMBER
CS (Trevarna)	17	8		9 (4 community members)
GOSH	19	19		
MACC	6	4	2	
MACW	11	2	9	
SRP	10		10	
TOTAL	63	33	21	9

Table 3.8. Details of the longer interviews and audio recorded walking tours with key members of staff and the designers across all the case studies and other contemporary healthcare gardens

GARDEN SITE		GARDEN DESIGNER	GARDENER	STAFF/MANAGEMENT	
Maggie's	Cheltenham	1		1	
	Edinburgh			1	
	Dundee			1	
	Glasgow	1			
	Gartnavel				
	London	1	1	1	
	Oxford	1			
	South West	1			
	Wales				
Other sites	GHH	1			
	North Devon	1			
	Hospice				
	Sand Rose Project				
	Trevarna	2		1	
	Trinity Hospice		1		
	Westley Designs	1			
TOTAL		11	2	5	18

Table 3.9. The number of responses to the Maggie's online surveys and 2011 Visitor Audit which included questions about the gardens at the Maggie's

CENTRE	ONLINE SURVEY	VISITOR AUDIT 2011
Cheltenham	1	N/A
Dundee	6	188
Edinburgh	10	223
London	1	165
Maggie's Online centre	13	
TOTAL	31	576

Table 3.10. The number of responses to surveys conducted at Great Ormond Street and the Sand Rose Project in 2011-12

GARDEN	SURVEY
FRIENDS' GARDEN, GOSH online	29
SAND ROSE PROJECT online survey	20
SAND ROSE PROJECT visitor feedback	169
TOTAL	218

3.8: Limitations of the data sample

Some of the disadvantages of the multi-method approach have already been discussed. The lack of control of the interview environment and the varying ethical approvals led to inevitable differences in data sampling and the collection process at each case study. Despite this, every effort was made for consistency across the four main Maggie's case study gardens.

Space syntax methods enabled the author to establish basic patterns of movement and activity within the gardens (see site analyses in chapter 5 and Appendix 5G). However, the author found it proved a less useful tool within the analysis of spatial configurations or types of affordances provided by the gardens. On reflection, more extensive studies tracking in detail daily and seasonal change (beyond the scope of this thesis) were needed for this tool to have real impact. This information could then have been analysed more constructively in relation to the qualitative data.

The immediate transference of the photographs to laptop and the ensuing interview aimed to reduce the retrospective nature of the study and reduce the influence of other factors such as memory bias. It must be acknowledged that participants' accounts of their experiences may have been influenced by factors such as the social context of the interview. It may have also been the case that some participants, whether staff or visitors, may not have wished to be seen to be negative while within the healthcare centres. Although there was an attempt to capture data from participants who would consider themselves non-users of the gardens, there is potentially a bias within the research sample towards people already engaged with the gardens.

These limitations, such as the truth-status of a participant's account, are linked to wider issues inherent within qualitative data research. The dangers of drawing generalized findings from a study that explores the views of a relative small number of individuals

with their own unique experiences must be acknowledged. Likewise, the limitations of case study research and the dangers of inferring from a few cases to a larger population are also acknowledged. These considerations were ever present within the analytical journey that is outlined in the chapter 5. First, however, it is necessary to look in detail at the specific context for the Maggie's gardens and the other case studies.

CHAPTER FOUR

The Maggie's Context: Designs of Hope?

In this chapter the history and aims of Maggie's are discussed in order to focus on their ambitions for the designed environment. This includes a discussion of their architectural brief, as well as the interests of their founders, Maggie Keswick and Charles Jencks. An overview of the gardens across all sites is presented and a discussion of how they are portrayed by the organisation, the garden design industry and the media. The Maggie's gardens comprise a set of qualitatively different gardens, located in very different environments in site-specific ways. The chapter finishes with a discussion of the questions developed to probe the roles of these gardens in the ensuing case study research.

4.1: Maggie's and life beyond cancer

Since 1996, when the first centre opened in Edinburgh, Maggie's have pioneered a new approach to cancer support. As stated in the Introduction, each centre is characterised by a distinctive and highly individual design by leading international architects and garden designers.

The name and essential shape of the organization come from its co-founders Maggie Keswick and her husband Charles Jencks. Keswick's concern was to empower the patient by providing support and information within a designed space suitable to their needs and activities so as to not 'lose the joy of living in the fear of dying' (Keswick, 1995: 27).

The Maggie's Centres aim is to provide help, information and support for people affected by cancer to enable them to manage the process of diagnosis and treatment as effectively as possible and to enjoy the best possible quality of life. They help people with non-medical (psychosocial) issues associated with living with cancer and work alongside conventional medical treatment. The core programme at each centre (and they talk about a programme not a service) is based around providing free, open-to-all access, information, emotional and psychological support within an environment, which they claim is designed specifically to contribute to wellbeing. Centres are independent, but work in partnership with local NHS Trusts and are positioned close to

major cancer hospitals so that people can easily drop by. Maggie's see themselves as complementary to NHS cancer services, aiming to present what they describe as a 'face that is welcoming, risk-taking, aesthetic and spiritual' (Jencks & Heathcote, 2010: book jacket).



Figure 4.1. Photograph of the entrance to the garden at Maggie's Cheltenham (Butterfield, 2012)

Cancer, a disease 'encumbered by metaphor', as Susan Sontag (1977: 9) pointed out, can be devastatingly isolating. As the founders of Maggie's state:

Cancer does kill, of course, but fear – compounded by ignorance and false knowledge – is a paralyzing attack in its own right.
(Keswick, reprinted in Lee, 2012: 31)

It's not just a medical problem, it's a social problem too.
(Jencks, 2012b)

The euphemism, 'after a long illness', is still commonly used today reflecting apparent stigma. Beyond the basic dictionary definition of 'a disease caused by uncontrolled division of cells' the word is also defined as 'an evil or destructive practice or phenomenon that is hard to contain or eradicate' (*Oxford Dictionary Online*, 2013). Cancer is often portrayed as the disease of the modern era just as tuberculosis in the nineteenth century was emblematic of another. Yet as Mukberjee's (2011) so-called biography of cancer demonstrates, cancer is in fact one of the oldest diseases. Extended lifespan, improved diagnosis and changes in lifestyle have all meant that

today, worldwide, cancer is the second leading cause of death. In 2008, there were 7.6 million deaths from cancer, alongside 12.7 million new cases (WHO, 2011a).

Approximately 1.8 million people are living with cancer in the UK. This figure is set to reach 3 million by 2030 (DOH, 2011). Cancer survival rates have improved over the last decade and the numbers of survivors are set to increase by over 3% a year (DOH, 2010; Cancer Research UK, 2012). Indeed, today the focus of cancer support is about 'living with cancer' (Macmillan Cancer Support, 2013).³⁸ In the UK there is now a wide variety of cancer support available from a number of different organizations such as Macmillan Cancer Support, Marie Curie Cancer Care, Cancer Backup, CLIC Sargent, Teenage Cancer Trust, Breast Cancer Care and Cancer Research UK. The majority of these organisations provide information and access to support groups, including online communities, as well as undertaking research.

Although fears surrounding cancer are slowly changing, especially as survival rates increase, it has still a pejorative connotation. Within the interviews with cancer patients for this research a regular remark was that nobody really likes to talk about cancer. The idea that it was somehow caused by bad attitude took hold in the 1970s (and an idea excoriated by Sontag). It has persisted in various guises and also led to the more recent belief that somehow positive thinking will increase survivorship. This attitude of 'smile or die' is an issue that writers such as Ehrenreich (2010a & b) and Sulik (2012) have railed against because it too can be extremely unhelpful.

The language that surrounds cancer is also encumbered by metaphor. Hippocrates' (400 BC) word for cancer, *karkinos*, from the Greek word for 'crab', creates a series of strong images, so does another Greek word *onkos* meaning mass or load used to describe tumours. Galen (160 AD) identified cancer with trapped black bile leading to the linking of cancer and depression (melancholia). Thankfully Galen's humoral theory of disease is invalid today but cancer still conjures "dark" images and even with current biological, medical and technological research we are surrounded by a language that is equally frightening: malignant growth, cell invasion, mutation, metastasis, carcinogens, genome sequencing.

Today cancer requires people to do 'battle' and 'fight for survival' against this 'emperor of all maladies' (Mukberjee, 2011). With no single definitive cure in sight, the military

³⁸ This is why the term 'sufferer' should be avoided.

connotations remain with the constant “struggle” to outwit, and learn new strategies in the “war” against cancer. Yet recent research demonstrates that the word ‘survivorship’ is hugely problematic for most people who have experienced cancer (Khan et al., 2012). Most rejected the term because it implied a high risk of death that did not reflect their experience. It also suggested survival from cancer was dependent on personal characteristics or that it meant they were cured despite the possibility of recurrence. Respondents also felt ‘cancer survivor’ was a label that did not describe their identity or that it implied an advocacy role they did not want to take on.

Maggie’s recognise that the emotional state of cancer patients and their families can influence their treatment and recovery. It is often stated that emotional distress is the most under reported yet most common side effect of cancer. As Laura Lee (2012: 7), Chief Executive of Maggie’s states, ‘the people who come to the centres are ordinary people who find themselves in extraordinary and often stressful situations. She argues that her care centres should assist people facing many difficult choices’ (ibid.).

The two key aspects of Maggie’s cancer support are their provision of carefully designed small-scale drop-in centres and the programme of support they have devised. This includes psychological support, activities such art therapy and Tai Chi, as well as financial and nutritional advice and help to navigate the ‘information explosion’ on cancer. Staff are highly trained and many of them have previous experience of clinical cancer services. Of course, this type of support, albeit in a different way, is provided by other organisations too, and direct comparison with Macmillan has already been made in chapter 2.

Maggie’s claim that their programme is evidence-based, as it draws on current medical and psychosocial research in relation to cancer care. They cite specific research such as *Cancer Care for the Whole Patient*, from the Institute of Medicine of the National Academies (2007) (Maggie’s, 2012c; Lee, 2012: 21). They also have a Professional Advisory Board that advises senior management on aspects of the cancer support programme. In 2009 David Spiegel (Stanford University, USA) and Mitch Golant (Wellness Community, USA), experts in the field of psychosocial-oncology, were invited to review the centres. In 2007 the Government’s *Cancer Reform Strategy* emphasised the need to support and empower (DOH, 2007a: 77). This emphasis on quality of life and improving patient experience was reiterated in the Coalition Government’s more recent document, *Improving Outcomes: A Strategy for Cancer*

(DOH, 2011). The British Medical Association also endorsed the importance of well-designed environments with a report from NHS Estates (Maggie's, 2011a).

'Calmness, clarity and a cup of tea' has become the organization's motto (Maggie's 2012a) (figure 4.2). Behind such platitudes is the very serious idea of transformative care, of patients taking an active role in their own therapy. Keswick and the team that developed the Maggie's concept recognised that for many patients the decision to 'fight for life' is not spontaneous but a troubled choice needing time, space and help. Lee (2012: 8) says that Maggie's understand 'the need for people to be people and not patients and to be given time and space'.



Figure 4.2. Details at Maggie's London (Butterfield, 2010)

Maggie's emphasise that research shows many people experience intense anxiety at critical times during their experience of cancer and at such times it can be so overwhelming that it can interfere with people's capacity to hear and retain information, make sense of what they are told and to continue to function in their normal way. They also highlight that one of the key theoretical principles underpinning their programme is that cancer can trigger an existential crisis challenging people's perception of themselves, and their sense of purpose and meaning in life. They (ibid.: 12; Ehrenreich, 2010a & b) acknowledge the problem of the language that surrounds cancer, and with the so-called 'tyranny of the positive' they make the point that 'there can be powerful and positive benefits to having a safe place in which to express strong negative emotions with support from others'.

The impact of cancer goes beyond the individual person, affecting family, friends and work colleagues. Lee (2012: 8-9) states that since inception the organisation has developed their programme particularly in relation to the concept of communities of

people affected by cancer. This in turn recognises the impact of a cancer diagnosis on friends and family. She writes (ibid.):

When we talk about creating Maggie's Centres as communities, it is these aspects of being together with others that we mean. Centres as therapeutic communities, as an expression of being together, going through tough things together, learning together. What we are not referring to or implying is that a Maggie's Centre, as a building, is some sort of community centre or 'resource'. Each of our buildings in its design and purpose is an integral part of creating this living supportive community. Each building has a clear and particular role in amplifying and enabling the therapeutic impact of our programme and in inspiring and maintaining the sense of community.

Maggie's own statistics, audits and external review findings suggest that this sense of community is at the heart of their development. In 2011 there were more than 100,000 visits to the Maggie's Centres (Maggie's, 2012a).

As the organisation has expanded, Maggie's has moved from being a network of centres to a clearly defined national organisation. In 2011 Maggie's undertook a brand refresh, moving from 'Maggie's Cancer Caring Centres' to simply 'Maggie's'. The Development Director (McQuade, 2013), explained that as the organisation became better known:

We saw the opportunity to clearly articulate, at a national level, who we are. The name Maggie's is more human and less institutional. As we have grown it has been important to emphasise the personal so that people affected by cancer continue to feel the warmth and accessibility of Maggie's.

Demographics revealed by the same audit show a higher proportion of women than men attend the centres and that the largest group of visitors is within the 51-65 age range. However, Maggie's have had a 19% increase in male attendance and given that men do not traditionally make use of support services their figures are significant. The audit also revealed a high proportion of return visitors suggesting that the centres provide on-going support for their communities. The audit also revealed that the centres not only support people with cancer but also their families and friends (see appendix).

4.2: Maggie's and the designed environment

It is very striking to anyone visiting the centres that the importance of the designed environment is emphasised at Maggie's. Part of their ethos appears to be the belief that art and design play an important role, supporting the activities of staff, patients and their families. They (Maggie's, 2012b) describe their mission as to 'blend visionary architecture with warm homely spaces'. Maggie's (Lee, 2012: 59) believe that environments matter and that it communicates their value of people. They see their environments as embracing certain fundamental themes – non-institutional, domestic in scale, feel and warmth, whilst being supportive but also stimulating and intriguing. They (Maggie's, 2009b) state:

Our buildings are special and we choose special architects, not for some luxury add-on value, but because they are a critical component of what we do...We ask architects to design buildings where people feel safe and valued and also to create an atmosphere that stimulates their imagination.

Here one can draw direct comparison with Macmillan Cancer Care who also emphasise the importance of designing 'a healing environment' (see chapter 2). However, it is pertinent to point out that Maggie's focus more on the psychosocial model and unlike Macmillan are not involved in clinical care. Macmillan has to work more directly in partnership with other organisations and hence have perhaps less autonomy when it comes to design, especially in relation to the gardens. Maggie's are also noted for their smaller more intimate scale in comparison to Macmillan.

Maggie's have created a name for themselves as leaders in healthcare design and have been extraordinarily clear about their design objectives. Their approach to design is characterized by a focus on commissioning individual designers to respond to a strong architectural brief. They have concentrated on the creation of small iconic buildings and gardens that attempt to encapsulate their ambitions for the designed environment. They have commissioned centres by internationally renowned architects such as Frank Gehry, Zaha Hadid, Richard Rogers, Richard MacCormac, Rem Koolhaas and Piers Gough and landscape architects such as Arabella Lennox-Boyd, Dan Pearson and Kim Wilkie (see figures 4.3-4.9).



Figure 4.3. Maggie's Edinburgh (1996), architect, Richard Murphy; landscape architect, Emma Keswick (© Maggie's)



Figure 4.4. Maggie's Highlands (2005), architect, David Page; landscape architect, Charles Jencks (© Maggie's)



Figure 4.5. Maggie's Fife (2006), architect, Zaha Hadid (© Maggie's)



Figure 4.6. Maggie's Glasgow (Gartnavel) (2011), architect, Rem Koolhaas; landscape architect, Lily Jencks (© Maggie's)



Figure 4.7. Maggie's Nottingham 2011, architect Piers Gough (© Maggie's)



Figure 4.8. Maggie's Oxford in development, architects Chris Wilkinson & Jim Eyre; landscape architect Flora Gathorne-Hardy (© Maggie's)



Figure 4.9. Maggie's Hong Kong, 2013, architect Frank Gehry, landscape architect Lily Jencks (© Maggie's)

Clearly Maggie's want their buildings to communicate a sense of community and their designs to facilitate relationships and also to ensure people do not feel 'processed' (Lee, 2012: 58):³⁹

Maggie's asks a lot of its buildings and hence of its architects. We expect the physical space to do a significant amount of our work for us. A Maggie's Centre sets the scene for people going through a traumatic experience. They are places where people draw on strengths they may not have realised they had in order to maximize their own capacity to cope. We need buildings where people can read themselves differently, as individuals in unusually difficult circumstances, not as patients, let alone cancer victims. (Jencks & Heathcote, 2010: 219)

All the centres have been designed to be non-institutional and welcoming. This is something unique to their immediate physical context; their scale and character operate and gain meaning from their juxtaposition to the vast, sprawling megalithic hospital sites. The buildings stand out and look and feel very different from hospital architecture.

Their architectural brief (Maggie's, 2012b; Jencks & Heathcote, 2010: 219-222) (see appendix 7A) demonstrates how Maggie's want the design of the building to accommodate their programme – as if the design can express their personality or character in some way. The brief also demonstrates how Maggie's focus on the importance of the role of the individual designer (albeit an architectural team) and his/her creative response to the task in hand. This deterministic stance stands out in contrast to many other contemporary healthcare projects where a more collaborative and consultative design process often prevails.

Their brief invites architects to 'rise to the challenge' (ibid.: 219). It is intended to recognize the conflicting needs and emotions of someone with cancer and outlines the idea for a space in which these needs (emotional, practical and informational) can all be met in a way that suits each person (Snoad, 2011). A centre building (approximately 280m square) must include space for information, activities, as well as opportunities to talk one-to-one with staff. The overall site is dependent on the nature of each hospital location; hence the gardens vary in size.

³⁹ Maggie's acknowledge that their architectural brief is still 'not quite right' and they are currently updating it (Lee, 2013)

They state that there should be a sense of continuous flow between the inside and the outside and that the garden should be like the kitchen, 'an easy public space for people to share and feel refreshed by' (Jencks & Heathcote, 2010: 221). Maggie's approach to garden design will be discussed below in section 4.5, however, it is important to point out at this stage that Maggie's take their gardens and art seriously. The organization commissions landscape architects as well as actively pursuing a policy of procuring a permanent collection of art, sculpture and furniture for the centres. Its Arts Advisory Group have the specific remit to advise on the appropriateness of major artworks to 'enhance and compliment the design and environment of Maggie's Centres' (Lee, 2013).

Although the design of each building is very different, they are all characterised by warm, light, open designs centred round a kitchen. There are no formal reception desks, no corridors or waiting rooms and no signs on the toilets. Co-founder, Charles Jencks (Jencks & Heathcote, 2010: 13), describes this design informality as 'kitchenism' (see figures 4.10-4.12).



Figure 4.10. Around the kitchen table at Maggie's (© Maggie's)



Figures 4.11 & 4.12. The kitchen tables at Maggie's Highlands, *left* (2010), and *right*, Maggie's Cheltenham (2011), (Butterfield)

Writing about the first centre in Edinburgh, Jencks (ibid.: 94-5) explains that the architect Richard Murphy, 'combined a mix of informality and domesticity' in order to suggest ideas of intimacy and 'a friendly home-like atmosphere' but 'coupled with a provocative architecture'.



Figures 4.13 & 4.14. Maggie's Edinburgh, external and internal view (Butterfield, 2010)



Figures 4.15 & 4.16. Photographs of the interior of Maggie's Edinburgh (light and colourful) taken at an event celebrating Maggie's 15th Birthday (© Maggie's, 2011)

Subsequent centres have developed this idea of combining striking design within a sense of the domestic. What Maggie's has also attempted to do through their design is dismantle preconceptions and requirements. The argument being that if people see the whole building as some sort of refuge then the need for private spaces becomes less pressing. They want the design of the building to encourage people to feel comfortable and able to express strong feelings openly (Lee, 2012: 17). As Jencks & Heathcote (2010: 222) write:

We want the building to feel like a home people wouldn't have quite dared build themselves, and which makes them feel that there is at least one positive aspect about their visit to the hospital which they may look forward to.

Implicit within the Maggie's description of a 'friendly home-like atmosphere' is a particular notion of home. Here it is necessary to be historically and geographically accurate. This is the so-called modern middle-class home that evolved in Europe and America since the late nineteenth century that embraced certain specific qualities such as privacy, domesticity, intimacy, spaciousness and comfort (Rybzynski, 1998; Crowley, 2001; Isenstadt, 2006; Scott, 2013).

What Maggie's also aspire to is an idea of homely space where the kitchen is at the centre. This links to a fashion that has emerged since the 1980s amidst the urban middle classes to integrate the kitchen and living space to become the main social space of the house. Linked to technological advances and changes in food preparation, younger homeowners rejected the standard suburban model of separate kitchens and dining rooms found in most early twentieth-century housing. It also links to the modernist architectural tradition, epitomized by Frank Lloyd Wright's houses for wealthy clients in the 1930s, where interior space was free-flowing and kitchens became 'objects' within open plan living areas (Jencks, 1983; Nash, 1996; Isenstadt, 2006: 66-69; Freeman, 2004; Hand & Shove, 2004).

Of course, the chimney of the early fireplace was traditionally the dominant feature of the home, and the hearth was its centre until the fifteenth century. But it has not always been that way, and the kitchen as social space has specific class connotations. In eighteenth and nineteenth-century Britain for the wealthy classes, the kitchen was usually a separate room; more a laboratory or service area. In contrast, the working classes continued to conduct all activities in one room (Heathcote, 2012: 56-62).

Today the open plan kitchen and living area has become the main interior space of the house across Western society and where sensory experiences are emphasised. The kitchen today 'is the cockpit of dwelling' and has become 'the default contemporary social space; a place of both intimate family meals and of informal social intercourse' (Heathcote, 2012: 56). It is the most functional of spaces, but also now highly symbolic. The modern kitchen is very much the heart of the home and as both Busch (2004: 50) and Heathcote (2012: 15) write, it is a space of transformation and alchemy as well as warmth, refuge and security.

Jenck's kitchenism relates directly to this reclamation of the open plan kitchen as a respectable and democratic space; a functional and symbolic place both of

nourishment and community. Within Maggie's it is a device to present a community space as both homely but also socially democratic. It is a way to level staff (caregiver) and visitor (patient or family member) and presents a strong contrast to most hospital spaces.

Home is not just a space it is a complex theoretical concept that fuses ideas about comfort and belonging with place. The idea that home is made – that it is a process of caring and creating is important too. These ideas about home will be examined in more detail in chapters 9 & 10. A key purpose of this research is to unpick these ideas and explore how they operate in relation to garden design.

Maggie's are at pains to point out that they demand contradictory things of their architects and designers. On the one hand they need their centres to feel welcoming and safe but on the other hand they should be uplifting, empowering and inspirational. Thus, they stress that their centres should not become formulaic, and what they are looking for in their architects is 'attitude' (ibid.). Although Richard Murphy did set a standard for the architectural design each subsequent centre is noted for its individual character.

4.3: Designs of hope?

Maggie's adhere to a belief that the designed environment can offer healing potential, amplifying the effectiveness of their support. Jencks has since attempted to contextualise the Maggie's design in his book, *The Architecture of Hope* (2010). He describes the importance of providing a peaceful but striking environment 'in which art and gardens play an important role...[they] can raise the spirits and amplify the positive mood and ethos of an institution' (Jencks, 2006: 454). He says the design of the centres is a direct response to the condition of cancer, especially to its myriad causes and bewildering number of therapies. He sees Maggie's as pioneering a new type of healthcare building – a 'strange radical hybrid' or rather a 'kind of non-type'. In effect, a new type of public building that combines a range of historical and symbolic referencing with the latest technologies. Jencks (ibid.) writes:

It is like a house, which is not a home, a collective hospital, which is not an institution, a church, which is not religious, and an art gallery which is not a museum.

This is the idea of a 'third space', somewhere between work, home, church, museum and hospital.⁴⁰ It is an architectural hybrid that draws on Post-Modernist theories of double coding, context and shared social motivation (Jencks, 1996, 2002 & 2007: 131). It aims to be a space away from the world of medicalization – a refuge but with the promise of the world; quite simply a 'place apart'.⁴¹ A comment from a visitor interviewed at Maggie's Nottingham (MN1 female relative, 2012) articulated this idea clearly:

Here it is non clinical. It is one step removed. It is just a little bit of normality. Somewhere very pleasant and relaxing, which has no responsibilities of our own homes. It is a space in between...My Dad can come and read here – this is difficult at home because he is always dealing with phone calls, visitors and well-wishers. He is exhausted and it is great for him to know there is a place where he doesn't have to explain himself – everyone is in the same boat – and he has no responsibilities. Sometimes life can be so task orientated and when things are a bit out of control and you don't know from one day to the next how things are going to go – just this becomes a very attractive option – not having to justify time. Here you are not odd if you want to sit on your own, nobody would think it peculiar.

Jencks proposes the idea of the metaphor of hope being embedded within the programme and design of Maggie's. This claim is deeply problematic precisely because the word 'hope' can engender some mixed reactions and can easily be conflated with belief. Hope is also perhaps not always the most appropriate word when someone receives a cancer diagnosis. It raises the whole problem of the language surrounding cancer once again and implies that Maggie's do in some way buy into the importance of positive attitude in the belief that it will increase survivorship. However, if you take the word hope as Sternberg (2009: 192) has, in its 'most stripped down, scientific sense', as meaning simply expectation then it is more significant.

Jencks' metaphor also sits uncomfortably because it raises the issue of architectural determinism. Whilst it is possible to talk about architectural determinism of a negative kind – that "bad" design, for example, can lead to absenteeism or vandalism. It is less easy to talk about so-called "good" design transforming society because past claims, closely associated with the international modernist style, have been thoroughly

⁴⁰ Jencks explained further what he means by a third space at the Maggie's Architecture and Health Symposium (Maggie's, 2010):

'Domestic house – domestic, bright, welcoming, warm, inviting, homely

Hospital – go to feel better, health professionals

Museum – stimulating, motivating, uplifting, opportunities to learn

Church – able to contemplate and reflect on deeper meanings of life' (Jencks, 2010).

⁴¹ This is a phrase both Jencks and Lee have used in conversation with the author.

discredited. Any claim to offer good, striking or even provocative design needs to be carefully unpicked. Furthermore, as was acknowledged in a King's Fund Report (2003: 17), some people find the idea of a healthcare centre being like a hotel or art gallery intimidating and alienating.

Jencks' work does, however, draw attention to the psychological consequences of design insisting that architecture does affect our lives, our happiness and wellbeing. It is impossible not to draw connections here with de Bottom's (2006), *The Architecture of Happiness*, in which the author insists on the intimate affiliation between visual taste and values. De Bottom's (ibid.: 98) point is that any object of design will give off an impression of the psychological and moral attitudes its supports and that we should pay more attention to this. Furthermore, an object of design will always trigger memories and associations. In a similar way to Jencks, de Bottom (ibid.: 71-3) explores the notion that buildings speak and that the focus of discussion should shift from the visual and aesthetic towards the values (ethics) promoted by buildings.

When it comes to health, things are even more complicated. Jencks revisits the Hawthorne Effect to elucidate his arguments and this is where his writing becomes directly relevant to this research. Although much debated (Mayo, 1949; Jones, 1992; Levitt & List, 2011; Chiesa & Hobbs, 2009; BBC Radio 4, 2009), this sociological experiment is a useful point of reference because it brings to the foreground the complexity of human relations in management, highlighting that wider social and cultural factors are at play too, and that people will often have their own motives and objectives in relation to change. Jencks makes the point that it was not the lighting that affected change but rather the feeling that management cared about its workers in the original 1920s American factory experiment. But this is not an argument for discounting the importance of environment, rather, Jencks (2006) says, that the caring attitude shown by an institution can make a difference and especially if it is perceived through architectural form. Jencks therefore asserts that architecture and the designed environment can make a difference. While sceptical of the idea of architectural determinism *per se*, he points out that architecture and environment matter when supported by an ethos. He (ibid.: 455) proposes the idea of an 'architectural placebo' to draw out the potential of the relationship between buildings and health.

If it is understood that a placebo effect is a therapeutic and healing effect of an inert medicine or ineffective therapy, then such responses indicate that psychosocial

aspects within medical treatment are important. The expectation that something has the capacity to heal is extremely powerful. Although the magnitude of the placebo effect is debated, researchers estimate it accounts for at least 30 per cent of the curative effect of any drug. Research has shown that there are many aspects to the placebo effect. Experts in immunology, psychology, endocrinology and neuroscience have begun to understand how the sense of expectation can lead to healing (Sternberg, 2009: 193-215). There is evidence that placebo has a biological basis that is at least in part due to the brain's own endorphins. There is also evidence that with a placebo the expectation of the body's own cortisone (the hormone cortisol) is produced by the adrenal glands producing change in the immune-cell function (Sternberg: 202-4). Conditioning, social support and cultural factors also have an impact on the effectiveness of the placebo, indicating that healing is a much more complex process than Western biomedicine would have us believe (ibid.: 193-215; Evans, 2004).

A key aspect of the effectiveness of placebo is the relationship between patient and caregiver. Jencks uses the placebo analogy to suggest that one of the most important ideas behind Maggie's is that "good" design works if it inspires both caregiver and patient. He says, therefore, that the metaphor of hope, which can be supported by design, is about empowering the caregiver. It is about combining environment and social support with expectation of healing. He (Jencks, 2006: 454) states:

It is the interaction between the carers and the patients – the ethos between them, the team spirit engendered that has to be supported by architecture. In other words the potency of architecture exists in conjunction with the effective ethos and the team's message, but is not a strong effect in itself. Good architecture can make a difference when it underscores the style and approach of an institution.

Jencks no doubt uses the word placebo because he wishes to find language that can have medical impact. Placebo could be confusing as it often involves a deceptive framework, whereas Jencks' use it more to draw out the indirect impact of design. These considerations aside, the architectural placebo presents an interesting theory and can be compared to both Gesler's (2003) idea of 'healthy places' and Ruga's (Caritas, 2012) idea of 'generative space' discussed in chapter 2. Like Jencks, both Gesler and Ruga emphasise the integration of both physical and social environments to create a dynamic and evolving sense of place within the context of health.

Despite Speigel and Golant's encouraging review in 2008 (Maggie's, 2009a: 16), that expressed approval of the way the physical environment is used to 'enhance the

programme delivery and impact', proving that a cancer care centre has a direct impact on a cancer patient's outcome is a challenge. Scientists want to be convinced that cancer care centres really do make a difference and although some studies indicate that the psychosocial interventions with cancer patients do have a positive effect (Speigel et al., 1989; English et al., 2008) there have been some conflicting results (Speigel et al., 2007; Raingruber, 2011). However, it is now commonly agreed by scientists that stress impairs the immune system. Likewise, it is standard science that transforming behaviour (such as exercise and nutrition) can improve outcomes (Sternberg, 2009).

There is increasing research, as outlined in chapter 2, especially within the area of psychoneuroimmunology, to suggest that places affect our health. It is also fair to say that the placebo effect is generally scientifically accepted and certainly not disputed when it comes to pain reduction, inflammation and psychogenic problems. If, therefore, the placebo response is acknowledged as an essential part of the healthcare environment then Jencks' words seem more significant. Lowering stress levels, providing psychological support, helping patients to navigate information and transform their lifestyles all within a peaceful and striking setting are all things Maggie's claim to address.

4.4: Maggie Keswick and Charles Jencks

As stated in the Introduction, the personal link to one person, Maggie Keswick, not only through name but in detail of design of both environment and programme is always present (figure 4.17). Laura Lee, Chief Executive, has been part of Maggie's since the very beginning when, as she (Lee, 2012: 2) puts it:

Maggie, and me as her then chemotherapy nurse specialist, Charles Jencks her husband, Bob Leonard her oncologist, talked about ways to meet the gap in care for people affected by cancer.



Figure 4.17. Maggie Keswick Jencks (n.d.), (1941-1995), (© Maggie's)

This personal tone and human scale appears to be a key aspect of Maggie's and it is interesting to see how this has evolved as the organisation has grown. The founders' interests as well as their resources and associates have been crucial to the development of Maggie's. From the outset, Keswick and Jencks' knowledge of architecture and garden design informed their thinking. Their creative partnership further heightened their belief in the impact of environment from a social perspective.

Charles Jencks is well-known for his books questioning modern architecture and defining its successors (Jencks, 1996, 2007). He brings to Maggie's enormous influence within a particular generation and strand of contemporary architecture and design. The fact that he has chosen to write and theorise about the architecture at Maggie's has no doubt contributed to Maggie's central position within current debates about design and health. However, it is important to acknowledge that this position is not neutral and brings with it a particular dynamic in relation to the designs that have emerged for individual centres. Notably, and as already stated, Maggie's has focused on working with individual designers to create iconic buildings and gardens. This point will be highlighted again when discussing the individual garden designs.

Jencks' interests have increasingly turned to science, cosmology and the laws of nature. Latterly he has undertaken a number of landscape projects best described as 'content driven landforms' such as *Northumberlandia* (2005-12) and an on-going project at the Super Collider site in Cern in Switzerland. Described recently as the 'cosmic gardener' (*Nature Magazine*, 2012), Jencks (Jencks, 2013) states:

To see the world in a Grain of Sand, the poetic insight of William Blake, is to find relationships between the big and small, science and spirituality, the universe and the landscape. This cosmic setting provides the narrative for my content-driven work, the writing and design. I explore metaphors that underlie both growing nature and

the laws of nature, parallels that root us personally in the cosmos as firmly as a plant, even while our mind escapes this home.

Jencks has also been directly involved with the Maggie's landscapes, designing The Cell and DNA Garden at Maggie's Glasgow Gatehouse (2003-4) and Dividing Cells at Highlands (2003-5) (see figures 4.16-4.20).

In 2012 Jencks was awarded the John Brookes Award for lifetime achievement and an outstanding contribution to landscape and garden design by the Society of Garden Designers. It is clearly of significance that Jencks is now recognised for his interest in bringing architecture and landscape into closer dialogue. Of course, Jencks has critics and his mounds evoke strong responses. Described as the 'plastic surgeon' of landscape architecture he has been criticised for his insistence in looking for the formalistic application of metaphors (Arida, 2003). Garden historians seem ambivalent as to whether his work is provocative or pretentious (Higgins, 2012). However, he must be recognised for ensuring that intellectual inquiry and symbolism have a place in garden design and also for insisting that horticultural has a place within the arts.

Together Keswick and Jencks re-worked the garden at Keswick's family home in Dumfries, Scotland creating The Garden of Cosmic Speculation (1989) (see figure 4.21). In this garden they used the theme of the universe in order to explore, through landforms, sculptures and planting, concepts in astronomy, biology and mathematics. The garden embraces the idea that patterns common to living and non-living matter are found at all levels throughout the universe and attempts have been made to represent the latest knowledge about the structure of the universe.

This garden, which continues to be developed, has become not only a marker of their creative collaboration but also the catalyst for many of Jencks' more recent projects. Jencks currently has a design company *Jencks2* with his daughter Lily who is also a landscape designer. Lily has designed two of the gardens for the Maggie's centres; Maggie's Hong Kong (2013) and Maggie's Glasgow Gartnavel (2011) (see chapter 11).



Figure 4.18: Jencks' DNA sculpture at Maggie's Glasgow Gatehouse (Butterfield, 2010)



Figures 4.19 & 4.20 Jencks' landscaping at Maggie's Highlands, is based on the idea of cells dividing (Butterfield, 2010)



Figure 4.21. The Garden of Cosmic Speculation, Dumfries, Scotland (Butterfield, 2008)

4.5: Maggie's gardens

It would be hard to imagine that the creators of The Garden of Cosmic Speculation would not be interested in the role of gardens at their cancer centres. Indeed, outdoor spaces play an important role across the centres and, significantly a number include designed gardens. All the most recent centres to open include designed gardens: Maggie's London (2008), Cheltenham (2010), Glasgow Gartnavel (2011) and South West Wales (2011) (figures 4.22-4.24). This reflects the founder's interests and beliefs, when she stated that even sitting in a pleasant room with a view out to trees, birds and

the sky could be very positive. It reflects Jencks' interest in landscape and landforms. It also reflects Maggie's awareness of current debates within green space research.



Figure 4.22. Photographs of the garden at Maggie's London (Butterfield, 2011)



Figure 4.23. Photographs of the garden at Maggie's Cheltenham (Butterfield, 2011)



Figure 4.24. Photographs of the garden at Maggie's Glasgow Gartnavel (Butterfield, 2012)

Maggie's do not have a specific landscape brief for their designers; however, their architectural brief, already discussed, emphasises that there should be a sense of continuity between inside and outside. Within the brief (Jencks & Heathcote, 2010: 221) one bullet point refers to the outside as follows:

Outside: garden areas and 10 parking spaces. If this is unlikely on the site, if possible make a drop-off and pick-up area and perhaps a couple of disabled spaces. We like the idea of a continuous flow between house and garden space there should be somewhere to sit, easily accessed from the kitchen. We want the garden, like the kitchen, to be an easy public space for people to share and feel

refreshed by. The relationship between 'inside' and 'outside' is important. A house protects you from the 'outside'. Equally the 'outside' of a garden is a buffer to the real 'outside'. It is a place where you can feel sheltered but enjoy a bit of the kinder sides of nature.

There are practical considerations about privacy, referred to later; we also want to consider how a garden can help invite you in through the door from the street (which is always a key factor) and maybe how to incorporate parking spaces without them being too intrusive.

The architectural brief emphasises the importance of views, openness and light, but also privacy and protection. Here the role of the garden is identified:

Important to be able to look out – and even step out – from as many 'rooms' as possible into something like a garden, a courtyard, or 'nature'. At the same time, the sitting/counselling rooms (8) and (9) should have privacy, i.e. if they do have doors to the outside 'rooms', passers-by shouldn't intrude. (ibid.)

The interior spaces shouldn't be so open to the outside that people feel naked and unprotected. They should feel safe enough inside that they can look out and even go out if they wanted...this describes a state of mind, doesn't it? (ibid.)

The architectural brief also acknowledges the importance of both the approach and entrance to the building but without specifically identifying the function of the garden:

As a user of the building, we want you to approach the building, and see an obvious and enticing door. When you come in, we want the first impression to be welcoming. People may come to 'have a look', the first time.

We want Centre users to feel encouraged and not daunted: they are likely to be feeling frightened and very low anyway. We want them to have an idea of what is going on in the whole building when they come in. (ibid.)

Gardens have always been considered at Maggie's and, as will be discussed, the first centre at Edinburgh included a garden. Some of the first new build centres such as Dundee and Fife did not initially prioritise the outdoor spaces. This has changed with the more recent centres and a stronger integration, from the start, can be seen with centres such as London (2008), Cheltenham (2010) and Glasgow Gartnavel (2011) and South West Wales (2011).

Although each garden was designed according to the architectural brief, there is no formula or common design across the Maggie's sites. While each garden is quite

unique, certain shared ideas can be seen. Each garden includes areas easily accessible from the main kitchen space of the building and it is possible to see how in each case the landscape design attempts to echo or connect with the architectural design. There is also an attempt at many of the sites to embrace both new science and symbolism. This can be seen clearly in Jencks' designs at Glasgow and Highlands and Christine Facer's designs at Cheltenham.

4.6: Do Maggie's gardens matter?

Gardens and views are clearly important at Maggie's. At many of the centres outdoor spaces extend the quality and atmosphere of the building. At Maggie's Edinburgh, tiny intimate courtyards link to the building. At Maggie's London visitors are invited to wander along a woodland path or sit within one of the indoor courtyard spaces. At Dundee an earthwork compliments Frank Gehry's quizzical building allowing visitors to walk a labyrinth. Sculptures, water features, mounds and riddles can be found in the Maggie's gardens along with some sensory and seasonal flower planting. Clearly landscape designers are playing a role, considering carefully what sorts of spaces are appropriate in relation to each centre site and what is important for cancer patients.

Although publicity surrounding the Maggie's designs has focused primarily on the architecture, the gardens have attracted some interest. There was press coverage of Lennox-Boyd's design at Dundee, and when Maggie's London opened in 2008 some articles focused specifically on a discussion of the therapeutic landscape (McEwan, 2008; *The Observer*, 11 May 2008). Press interest in the Maggie's landscapes has gradually developed with articles discussing the 'therapeutic power of green space' (Bull, 2010), 'healing gardens' (*Garden Design Journal*, 2011), and the 'value of landscape' (Farrer, 2011). The Macmillan, *Landscape in Cancer Environments Guidance* (2010b) cited both Maggie's Edinburgh and London as exemplar projects demonstrating the use of landscape in cancer care. The *Garden Design Journal* (de Verteuil, 2013) recently discussed the design excellence of the Maggie's landscapes.

Gardens appear to have become more important for Maggie's. In 2012 the theme of gardens became the focus for a marketing campaign run with *House and Garden Magazine* entitled, 'Garden Parties for Maggie's' (figure 4.25). Interestingly the claim was made that 'key to Maggie's vision was that each centre should have a beautiful

garden and famous designers...have made the most of the delightful and tranquil gardens in whatever outside space is available...'(House and Garden, 2012).



Figure 4.25. Image showing (2012) *House and Garden Magazine* and Maggie's Campaign (© Maggie's)

In a recent interview Jencks (2012a) also highlighted the importance of gardens at Maggie's:

The architecture [at Maggie's London] screens but the gardens focus you right down so you are in a place apart – it is like going into another world. You need to regenerate when you have cancer. You need a garden to do that, a healing garden'.

Jencks has acknowledged the importance of a garden in the process of empowering the caregiver and both he and Lee have indicated that, where possible, Maggie's try to commission a landscape architect alongside the architect now. However, the fact is that whereas the language of the buildings appears to be very clear this is not the case for the gardens. Is it possible that the outdoor designs are primarily about creating 'show gardens' to dress an ideology of flagship buildings? Can the idea of a 'place apart' be carried through to the outside spaces at their centres? Is there a tension between bold architectural design and the need to create softer garden spaces? Is there a tension between plantsmanship and the metaphors of science and health in the Maggie's gardens?

Through the ensuing research there was much reflection on both design process and outcomes, examining the Maggie's design brief, the original designer's intentions and then the evidence of users. Thus, a number of key questions drove the enquiry. What

were the key ideas of the garden designers and how did these connect with the overall site, location, the built spaces, the architectural brief, and the wider aims and objectives of the organization? What roles are the gardens playing at Maggie's? Is this different or the same as the role gardens play more generally within healthcare? Are Maggie's gardens valued by visitors and staff? Are they considered restorative?

In order to answer some of these more complex issues certain key questions became the focus of the interviews and informal discussions with staff and visitors (see appendix 5C). These included asking participants to remember their first impressions of the centre, especially the entrance, and to describe the gardens and to explain how they use them. Whether there were areas or aspects of the garden that were important to them and if there was anything they would like to change. Participants were also asked their views on whether the inclusion of green spaces is important for Maggie's and also what they personally think a restorative garden space is.

As outlined in chapter 3, the initial stages of mapping the case study gardens involved fieldwork and interviews with key members of staff, the designers and gardeners. During this stage the questions outlined above were ever present. Moving now from this overview of Maggie's and their gardens, the next chapter introduces the case study gardens and discusses them in detail drawing on the initial fieldwork.

CHAPTER FIVE

The Case Study Gardens

In this chapter the history of the four Maggie's case study gardens is introduced and discussed. A site analysis of each garden is presented in order to illuminate their individual physical and social context.⁴² A second analysis for each garden is also presented based on space syntax and observations at the gardens during the research period. The aims of the designers, their response to the Maggie's brief and their particular approach to the idea of a healthcare garden are all explored. This chapter also presents the other non-Maggie's case study gardens that were chosen to provide context. Further details on all case studies are included in the appendices.

This initial mapping of the gardens sets the scene for points raised in relation to the research findings discussed in chapters 6 -11. In this way, the chapter offers a reflection on the design process and outcomes. It starts to draw connections between the designers' intentions and the evidence of users. It explains the data analysis process outlining the initial frameworks and how the author eventually established four key qualities identified as the "garden essences".

5.1: The Maggie's case study gardens

For this thesis four of the Maggie's gardens, Edinburgh, Dundee, London and Cheltenham, were chosen for case studies because their history, design and development are very different (see figure 0.2). Put together the four centres can offer a reasonably comprehensive overview of the development of gardens at Maggie's; starting with Edinburgh's small garden, and then moving on to the garden design at Dundee after the initial new-build, through to London and Cheltenham where there were stronger attempts to integrate building and garden design, albeit with different results. Lennox-Boyd's bold landscaping and labyrinth at Dundee contrast to the more sensual and experiential courtyard garden spaces by Dan Pearson in London. These, in turn, contrast with the more traditional cottage garden style of Emma Keswick's Edinburgh garden or the more intellectual metaphors offered by Facer at Cheltenham.

⁴² The site analyses visually aim to set out the physical and social context for each of the four case study sites during the period of research. They are not intended as 'before' and 'after' design plans. All measurements and details are approximate and they are not intended as an accurate concept or design plan for each garden.

The selection of the four centres was developed through discussion with Maggie's research liaison and the Centre Heads who thought that an examination of the experiences of these four gardens would ensure a range of different issues would be covered. The selection provided opportunities to research a well-established garden (Edinburgh) as well as to track the development and maturation of the newer gardens; with Cheltenham there was also the opportunity to visit the site before the initial garden design had been completed. Since this research was started some of the more recent centres, built during the research period, now offer new and potentially different research opportunities. Maggie's Glasgow Gartnavel and Oxford will be discussed in chapter 11.

It should also be noted that site visits were undertaken to all existing Maggie's Centres in the UK during the research period (figure 5.1). These visits included not only observational studies, but also interviews. This research was often able to highlight or clarify a point or issue and reference will be made in subsequent chapters, where appropriate.



Figure 5.1. Maggie's Nottingham site visit (Butterfield, 2012)

5.1.1: Maggie's Edinburgh



Figure 5.2. Maggie's Edinburgh with a view of the front garden between the centre (on right) and the hospital chemotherapy suite (on left) (Butterfield, 2012)

Maggie's Edinburgh, the first centre to open in 1995, is a converted stable block situated close to the chemotherapy suite of the Edinburgh Cancer Centre at the Western General Hospital. The centre serves the community of Edinburgh and the South East Scotland Cancer Network. Maggie Keswick spotted the building when she was receiving treatment at the hospital. Edinburgh based architect, Richard Murphy converted the building to create a kitchen, small sitting room, relaxation room and office. It was soon realised that more space was needed, and in 1999 Murphy developed the design to create a larger kitchen, small one-to-one room and a large sitting room. There are currently plans in progress to undertake a second phase of re-development although no timescale has been set.

The building's scale and design, both inside and out, emphasise a domestic intimate feeling. Murphy (2011) said 'we really squeezed everything in...but I wanted to avoid any circulation space as such'. Because the building faces north they put in a ridge roof-light to ensure that all rooms were as light as possible. Murphy's flexible design and the sense of light and warmth has since become the blueprint for the organization. Murphy (ibid.) describes it as an 'anti-hospital building – not in an aggressive sense but everything that hospitals don't do. A bit like walking into someone's home...'. He (ibid.) continues:

Maggie wanted to have somewhere you can feel you are on your own without feeling part of a group immediately. We contributed our own ideas. There should be spaces that can be divisible. Sliding doors...Lots of corners that get used...where you can hear what's happening, your own little nest. Doing your own thing...People are always attracted to light...Never [the] feeling of things going on behind closed doors. And how to get leaflets displayed which doesn't look like a doctor's surgery or hospital.

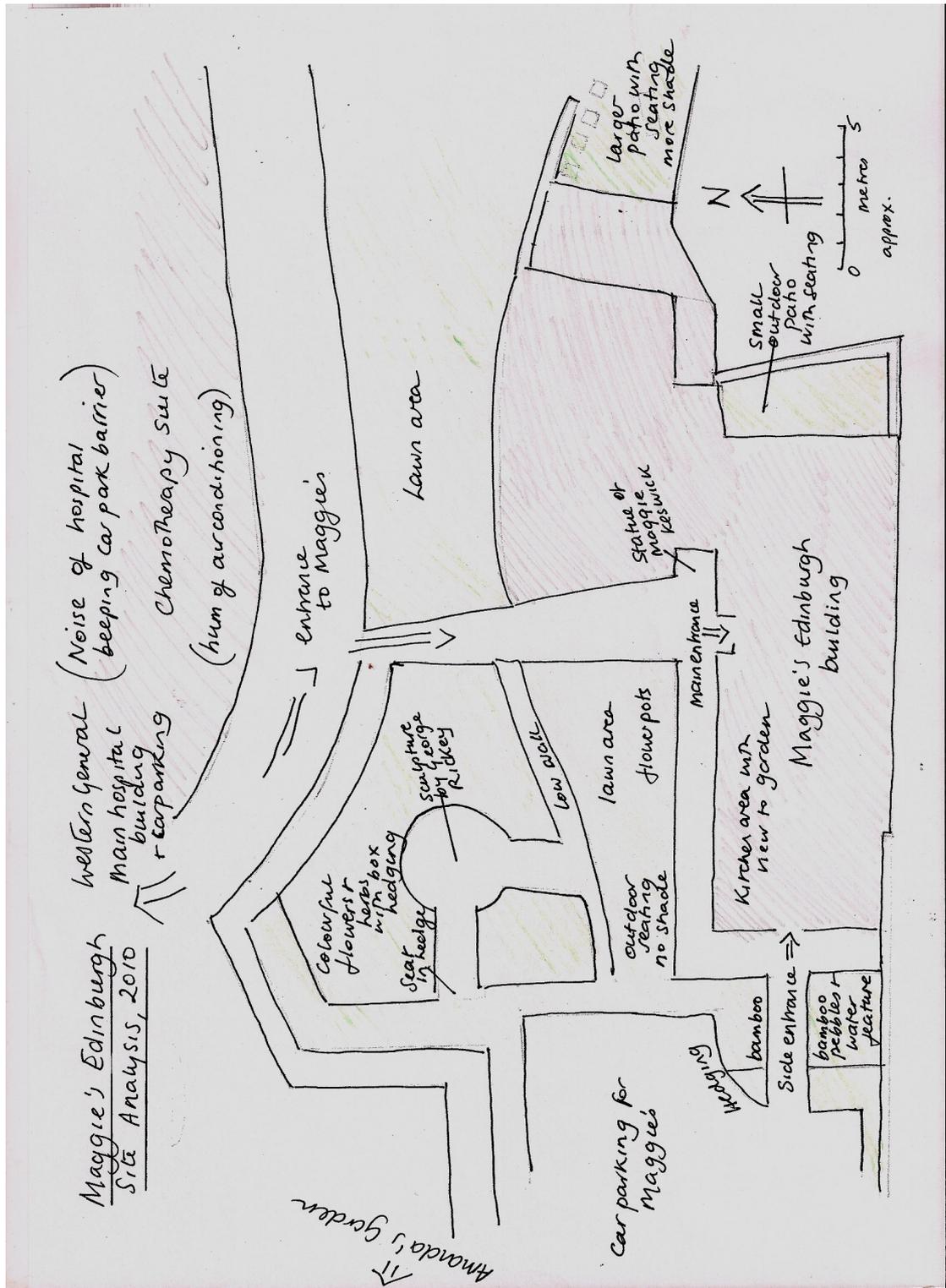


Figure 5.3. Maggie's Edinburgh garden. Site Analysis (2010) showing the physical and social context (Butterfield). Note for all the site analyses measurements are only approximate and there is no attempt to present a comprehensive design plan.

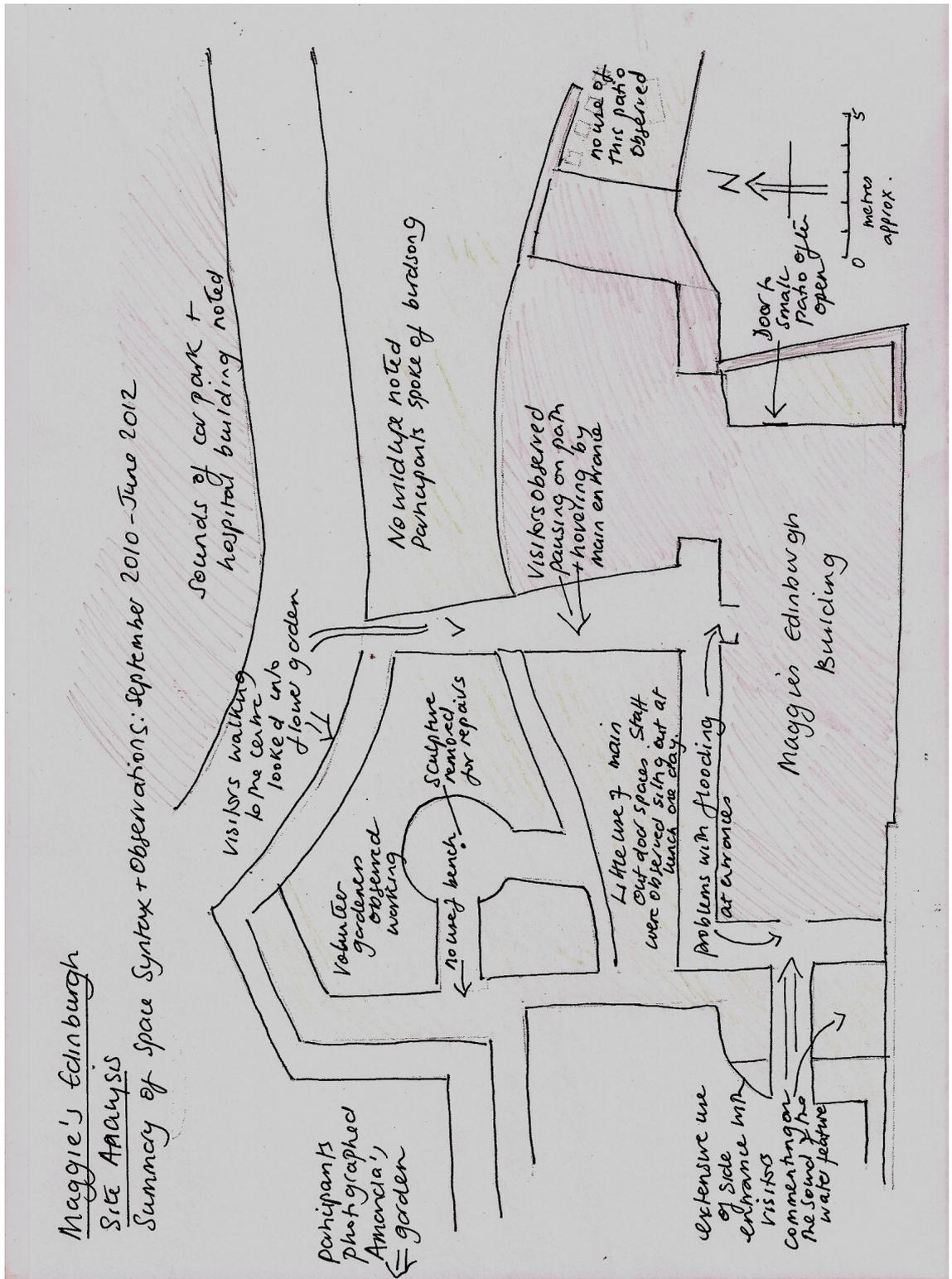


Figure 5.4. Maggie's Edinburgh garden. Site Analysis with summary of space syntax observations and changes (Butterfield, 2010-12)

The interior design is light and bright and there is great attention to detail. Vibrant cut flowers and fresh fruit are displayed on the main kitchen table and one visitor described it as a 'colourful jumble' (ME21 woman with cancer, 2012). Each interior space seems to have its own design and character offering staff and visitors different spaces to use.

The garden areas are small (see figures 5.3 - 5.11). Outside the centre there is an area of lawn, seating and flowerbeds directly in front of the entrance as well as two smaller patio areas off the downstairs rooms. By the main entrance there is a statue of Maggie Keswick (see figure 5.8). The side entrance from the car park has an area of bamboo and a water feature, which can be seen from the small one-to-one room just inside.

The flowerbed area, which is separated from the lawn with a low wall, hints at a partitioned medicinal, kitchen or herb garden with herbaceous perennials enclosed by box hedging and gravel paths leading to a secluded seat in front of which is a kinetic metal sculpture by George Rickey (see figure 5.6). The inclusion of colourful flowering perennials gives this whole area a cottage garden feel.

The garden was designed by Emma Keswick, a cousin of Maggie Keswick. However, despite extensive enquiries, the author was unable to recover any original plans or records for the garden. According to Maggie's, the garden aims to be an 'extension of the kitchen' providing a place for visitors to sit or take a few quiet moment (Maggie's, 2013). This suggests the idea of the garden playing a role as a stress-reducer. It also indicates that the garden is part of the overall aim to create a therapeutic landscape that contrasts with the adjacent hospital site. Keswick's colourful design compliments Murphy's building, suggesting a sense of continuity between the inside and outside. The garden layout shows careful consideration of key aspects of the brief, such as the provision of easily accessible seating and good views. The position of the flowerbeds and sculpture provide a strong contrast to the adjacent hospital site.

However, although the garden was originally designed it is also perhaps the least formally designed Maggie's garden and hence contrasts to the other three case studies. Another interesting factor is that it has an established volunteer maintenance programme. This currently includes three people who regularly tend the garden. Various other volunteers help out as and when they are available. In addition, there have been larger volunteer initiatives such as when employees of Scottish Gas planted the banks either side of the car park of the Maggie's Edinburgh site in 2010. A further

reason for including Edinburgh in the research is the fact that it is the smallest garden. This point was significant in the research findings.

Centre head, Andrew Anderson (2012) appeared conscious of the use of space both within and beyond the building. He talked about the 'environment', not just the building, and expressed interest in how the outdoor spaces might affect visitors walking to the centre and what the relationships are within the building. He commented that 'when the outside is in use it changes the activity inside'. He stated that at times the centre can get very busy and that he was exploring ways that the garden could become more integrated with the work of the building.

Anderson is also currently exploring the idea of a 'summer room' – a sheltered outdoor space large enough for four people possibly to be situated to the left of the sculpture and parallel with the building space. He said (ibid.) that he tries hard to engender the idea that the main outdoor seating area is a communal area for both staff and visitors. On warm days the 'cushion dance', as one staff member described it, takes place when cushions are placed on the seats outside to entice people out (figure 5.10). Anderson actively encourages staff to sit out there at lunchtimes. He seemed aware of staff behaviour and the use of certain spaces impacts on how visitors experience the centre.

The volunteer gardeners explained that although they did have some planting instructions there are no planting plans and that they happily work 'ad hoc' being 'opportunistic rather than conscientious'. One of the volunteers described how he was drawn into working because:

I first saw the garden last August, and was impressed by the overall design, amount of colour, and evidence of care and attention. The impression hasn't changed.
(ME23 male volunteer, 2012)

Edinburgh is the only site to include a statue of Maggie. Interestingly, the site also includes a number of other memorials. For example, one of the main benches has a plaque with an inscription on it. The water feature includes the initials of the donor and there are various plants in the garden that have been donated in memory of someone.

There is a minimal budget for the garden and volunteers use donated plants or their own. They have added, replaced or cut back plants as they have deemed appropriate

and said they look for variety of leaf colour as well as floriferous plants that are easy to grow and care for. They said that they struggle with the poor soil and that ideally they would like to improve the gravel in the flower garden area. Since the fieldwork for this research finished it has been confirmed that Maggie's Edinburgh have now appointed a 'therapeutic gardener' (see chapter 10) who will manage the volunteer team and develop activities linked to the centre programme.



Figure 5.5. Maggie's Edinburgh: photograph taken from the flower garden looking to the centre (Butterfield, 2011)



Figure 5.6. Maggie's Edinburgh: view with George Rickey's sculpture (Butterfield, 2011)



Figure 5.7. View of the adjacent hospital site at Maggie's Edinburgh (Butterfield, 2011)



Figures 5.8-5.11. Maggie's Edinburgh garden (Butterfield, 2011). *Top left*, the sculpture of Maggie Keswick; *top right*, the water feature; *bottom left*, the main seating area; and the internal courtyard accessed from the small sitting room, *bottom right*

5.1.2: Maggie's Dundee



Figure 5.12. Maggie's Dundee garden showing the labyrinth in front of the centre building (Butterfield, 2012)

Maggie's Dundee is situated at Ninewells Hospital in Dundee. The centre serves the community of Dundee and Tayside. Ninewells Hospital is the largest teaching hospital in Europe and is a leading centre for cancer research, including leukaemia and the management of cancer. The building, the first new-build Maggie's Centre, was designed by architect Frank Gehry and opened in September 2003. The three-acre garden was designed by Arabella Lennox-Boyd after the centre had opened and was created in two stages, initially with a labyrinth in 2008 and then with more extensive planting in 2009 (figure 5.12).

First impressions of Maggie's Dundee are overshadowed by the vast, austere Ninewells Hospital that stretches horizontally above the approach road. In contrast, Gehry's modest, but eccentric building sits perched on the bank-side looking out towards the Tay estuary (see figure 5.15). The backdrop of trees between the centre and the estuary give the whole site a sense of drama. Unfortunately, as the trees mature the views from within the centre are now less open, apart from upstairs in the little tower. The centre is positioned opposite the oncology wards of the main hospital with a helipad between (see figure 5.16). Gehry's architectural design intended to reference Orkney Iron Age dwellings known as 'Brochs', although the small tower also suggests the shape of a lighthouse. The stainless steel folds of the roof were apparently inspired by a hat in a painting by the Dutch painter Vermeer. Staff and visitors regularly commented on the building:

It's an iconic building for Ninewells. It looks like a cottage but inside it is like the tardis – all opened up. (MD6 female staff, 2011)

It's is an old fisherman type cottage. I always feel it looks like a face. And then the people are so welcoming – the features around it compliment it so well. (MD9 male relative, 2011)

Form and materials emphasise lightness and dynamism. Gehry describes his intentions to create an optimistic, friendly, 'heimish' and inviting place (Gehry, cited in Jencks & Heathcote, 2010: 120) The interior is organised around the kitchen table, while an external walkway with seating, 'shoots off the kitchen to create a small terrace, and extension of the social space into the landscape' (ibid.) (see figure 5.17).

The contrast to the hospital could not be more striking. Originally Gehry envisaged his building situated in the large open space rather like a traditional Scottish croft set in grassland. Immediately in front he hoped for a small lake or lochan. But health, safety and finance ruled this out and initially Maggie's Dundee made little use of outdoor spaces.

Maggie's Dundee received considerable press coverage when the centre first opened. Gehry's design was named 'Building of the Year' by the Royal Fine Art Commission for Scotland, and was also nominated for the 2004 RIAS Andrew Doolan Award for Architecture. In March 2007 the University of Dundee undertook a post occupancy evaluation of Maggie's Dundee (Stevenson & Humphris, 2007). The research was undertaken before the establishment of the garden and it did not look at the outside spaces. This study did reveal a very high user satisfaction with facilities providing a calm and friendly space, a high level of overall comfort, an appreciation of the views out of the building, user perception of increased health and wellbeing due to visiting the building and low level of maintenance required.

The need for a better path to link the main hospital with the centre prompted staff to look again at the outside spaces and it was at this stage that Arabella Lennox-Boyd became involved. Lennox-Boyd, a landscape designer for over 40 years, has a practice based in London. She has undertaken over 400 commissions for a wide range of international settings and has a series of gold medals from the Chelsea Flower Show. She has been involved in projects relating to healing such as a garden for a Cumbrian hospice, a roof garden for St Thomas' Hospital and the Peace Garden at London's Imperial War Museum (Arabella Lennox-Boyd, 2013).

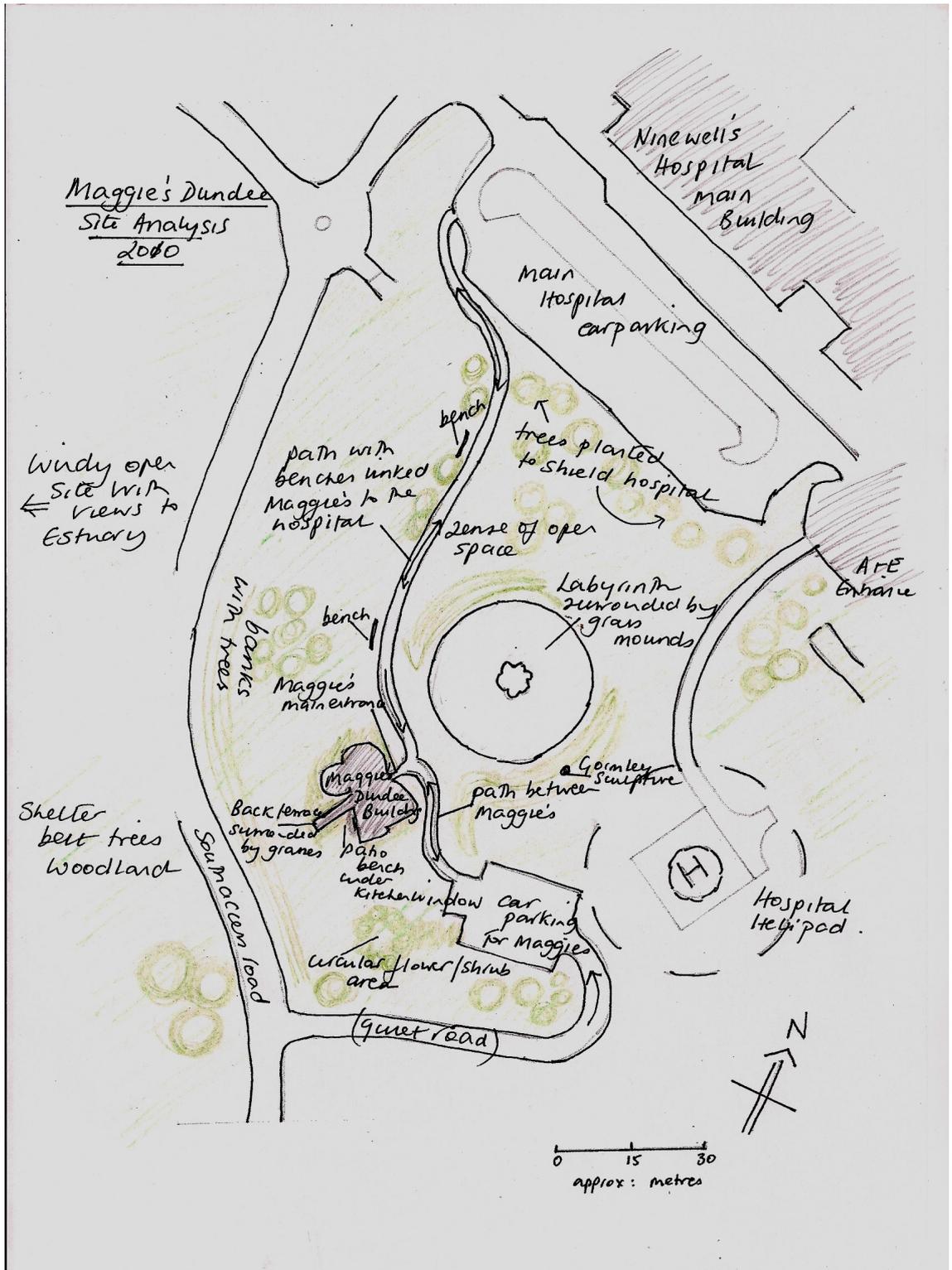


Figure 5.13. Maggie's Dundee garden. Site Analysis (2010) showing the physical and social context (Butterfield)

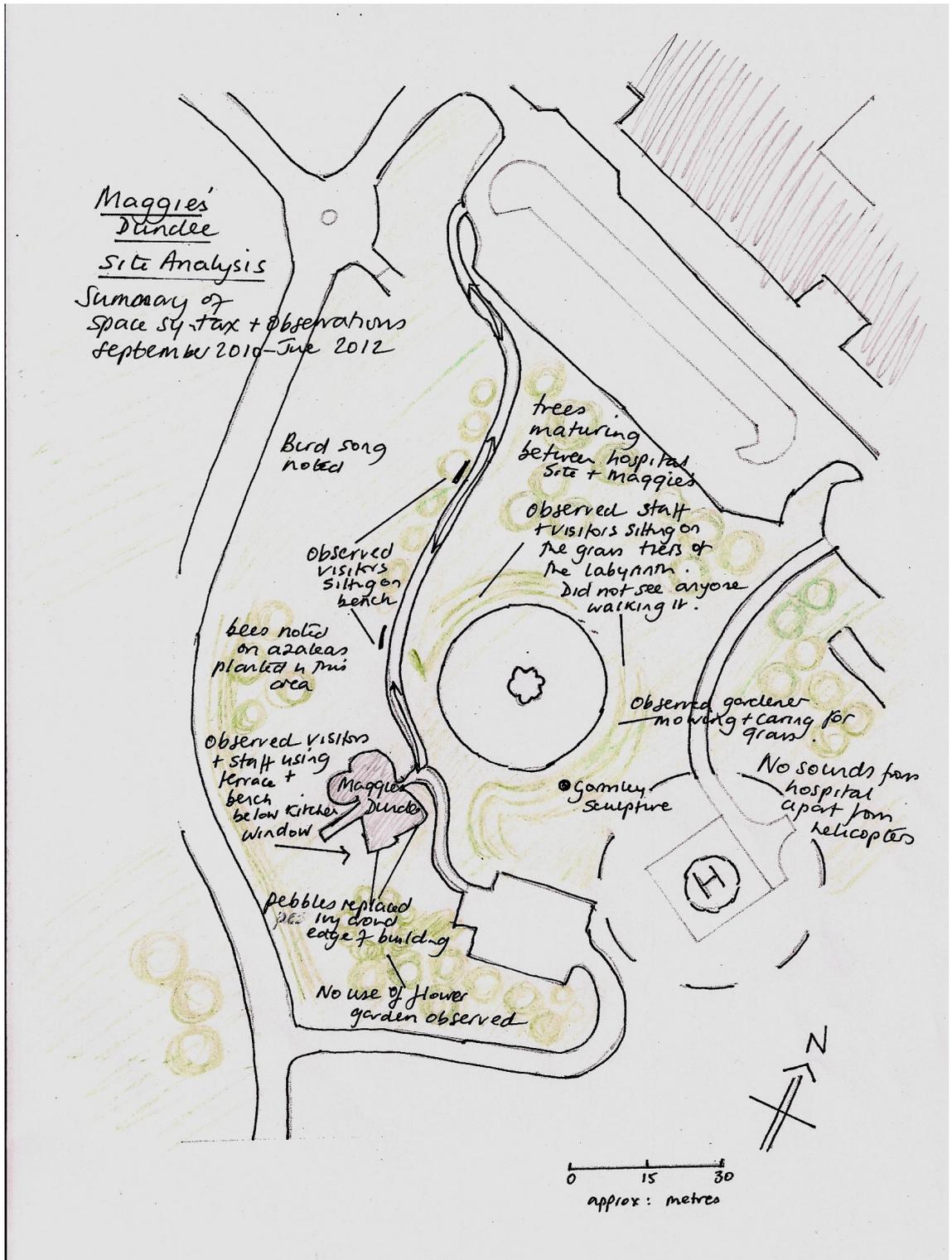


Figure 5.14. Maggie's Dundee garden. Summary of space syntax observations and changes (2010-12, Butterfield)

Lennox-Boyd's design was intended to emphasise links between the buildings suggesting a 'blurring or blending' between the two sites (see site analysis figure 5.13). A new path was created to make access easier for visitors. It also created a strong visual link ensuring visitors could see the centre when coming from the main hospital. Lennox-Boyd replaced Gehry's imagined lake with a 33 metre cobblestone labyrinth surrounded by terraced grass banks that create a circular amphitheatre. A range of trees planted beyond the labyrinth is beginning to screen the hospital building from the centre.

Lennox-Boyd's second stage design included a small petal shaped planted area (echoing the centre of the labyrinth) close to the car park, as well as the planting of grasses at the back of the building and around the small terrace. The garden was officially opened in June 2009 by Maggie's president, the Duchess of Rothesay and this event received press coverage.⁴³

The garden at Maggie's Dundee is the most dramatic and spacious of the four. Lennox-Boyd clearly responded to the brief and the site ensuring a sense of continuity between inside and outside, and attending to the views. She also ensured, in the second stage, that there were places to sit. However, and in sharp contrast to the garden at Edinburgh, Dundee offers a different interpretation of a healthcare garden. Lennox-Boyd's design is much more open; it is more about landscaping rather than creating a garden *per se*. She has focused on landforms, trees and shrubs rather than plants. Furthermore, the inclusion of a labyrinth links this garden to a different tradition, albeit one increasingly explored within a healthcare context.

By definition labyrinths are unicursal designs, having one pathway that leads from entrance to goal (in contrast, a maze is a design with a choice of pathways). Labyrinths date back to ancient times and can be found all over the world. Their function and symbolism have different cultural meanings although generally they are associated with the idea of pilgrimage and are "walked" as part of group ritual or for private meditation. The Medieval labyrinth was developed within a Christian context and became common in manuscripts and in the decoration of church walls and floors throughout Western Europe, the most famous being the one at Chartres Cathedral in

⁴³ *BBC Gardens Illustrated*, 1 June 2009; *The Scotsman*, 3 June 2009; *The Independent on Sunday*, 14 June 2009

France (c.1220). Many newly made labyrinths exist today, in churches and parks and there is interest in the health benefits of walking a labyrinth (Labyrinth Society, 2013).

The labyrinth at Dundee was inspired Chartres both in terms of having a similar number of concentric circuits (11) and a flower shape (with six petals) in the centre. The labyrinth is a carefully handcrafted piece of stone path work (see figures 5.15 - 5.16). It took a craftsman and assistant nearly four months to make and every granite cobblestone was laid with careful precision to deal with a gradient different of 12cm between the inner and outer circles.

The labyrinth physically mediates the journey between hospital and centre whilst symbolically it becomes the journey a cancer patient has to negotiate. Visually it contrasts with the “cross” of the adjacent helipad while the central leaf shape picks up both the surrounding trees and the organic curves of Gehry’s building. Staff at the centre outlined its uses as including a place for visitors or staff to take a problem or issue and ‘walk it through the labyrinth’; a place for children to explore while parents have appointments and even a place for events such as performances and dance. They emphasised the labyrinth as a resource or an ‘offering’ for the wider community and talked about its potential to make social links not just to the hospital but beyond to groups such as the Girl Guides and Dundee University Chaplaincy (Howells, 2010 & 2013). An Anthony Gormley sculpture has been positioned at the edge of the labyrinth looking towards the centre and beyond to the estuary, symbolically and visually linking the two spaces (see figure 5.16).

The labyrinth is a very public space, whilst the area by the small terrace provides more seclusion and some privacy (figure 5.17). Centre head, Lesley Howells (2010), made the point that a functional garden is always going to be a challenge at Dundee due to the climate and exposed site. She feels that the outdoors is really something to be appreciated from within. ‘We are inside outside anyway’, she explained, ‘it’s very easy to access the outdoors here. It is basically just through that door. What we tend to do in the summer we tend to keep the door open. We benefit from the amount of glass’. Howells (ibid.) did point out that they asked specifically for a bench below the kitchen window because although the terrace:

[C]an be gorgeous, but sometimes you want to ‘curry down’ and be cosy and yet still be outside. This is one of the areas we can do that ...it’s like being inside the centre, there are all little pockets, places where we can speak.

Maggie's Dundee has never had a formal volunteer gardening group and maintenance has been sporadic. Since 2011 the craftsman who laid the labyrinth has been employed to cut the grass and oversee garden maintenance. Since the fieldwork for this research finished it has been confirmed that Maggie's Dundee, like Edinburgh, have now appointed a 'therapeutic gardener' (see chapter 10) who will manage the volunteer team and develop activities linked to the centre's programme. There are also plans to create some raised flowerbeds within the garden site.



Figure 5.15. Maggie's Dundee, showing the dramatic setting with the Tay estuary behind (Butterfield, 2011)



Figure 5.16. Maggie's Dundee, with Anthony Gormley's sculpture, the labyrinth and Ninewells Hospital behind (Butterfield, 2011)



Figure 5.17. Maggie's Dundee, view of the back terrace and seating (Butterfield, 2012)

5.1.3: Maggie's London



Figure 5.18. Maggie's London garden showing the area at the end of the woodland path leading to path the open window and the entrance to the centre (Butterfield, 2012)

Maggie's London, the first purpose-built Maggie's Centre in England, was opened in April 2008. The centre serves the North West London Cancer network, which covers a population of 1.85 million people and sees around 6,500 new cancer cases each year. The building was designed by Rogers Stirk Harbour & Partners, while the surrounding garden and internal courtyards were designed by Dan Pearson. Significantly, it had both architecture and garden fully integrated as one design from the outset. This appears to have been a reasonably balanced creative partnership with Pearson being able to influence the overall design with the inclusion of the woodland walkway (Pearson, 2010).

Maggie's London is situated in the grounds of the Charing Cross Hospital at the junction of Fulham Palace Road and St Dunstan's Road. Richard Rogers' described the site as one of the worst, 'it's noisy, with horrific views, and has a very dominating building on one side' (McEwan, 2008: 19). Given the difficulties of the site, the design concept evolved as the embrace of an arm, or enclosure that gradually envelops visitors as they move into the building.

As with all Maggie's Centres, the heart of the building is the kitchen with a series of rooms and more private spaces at the edges. The London building was influenced by Murphy's designs at Edinburgh; Rogers pushing this blueprint to fit a very awkward site in central London. The building stands out from its surroundings, reinforced by the bold shade of orange described as 'somewhere between juicy satsuma and warm Mediterranean terracotta' (Ling, 2008). High external walls protect the internal spaces from the noise and distraction of Fulham Palace Road.

Punctuated within the high wall are floor to ceiling opaque windows that both screen yet reveal the trees and busy street beyond. These windows act like theatrical

backdrops creating strange shadows and looming patterns. A key feature of the building is the so-called floating roof, which oversails the outer wall, limiting views of the neighbouring hospital. The roof, punctuated by unglazed roof-lights, allows natural light, wind and rain into the garden areas below. The building is naturally ventilated and rain water collected on the roof is stored and reused for the irrigation of the garden areas. Each room opens onto an internal garden space. Throughout, the contrast between the orange walls, plain concrete floors, wood panelling and green foliage is striking.

The main features of Pearson's garden are the winding path between the main hospital and the centre (Pearson's specific contribution to the outline design) and the series of courtyard spaces that punctuate the building – the garden literally surrounds and grows through the building (see figures 5.18-5.24). With Maggie's London once again a different approach to a healthcare garden is presented. The idea of sensory planting contributing to a calming environment is emphasised more strongly than at Edinburgh or Dundee. There is also more extensive provision of private outdoor spaces within the site.

Pearson trained at Wisley and Royal Botanic Garden, Kew, and is perhaps best known for his commission for the Diana, Princess of Wales Memorial Garden at Althorpe and his weekly newspaper columns on gardening. He is noted for his plantsmanship and has been compared to Mien Ruys, Beth Chatto and Piet Oudolf. His influences include Thomas Church, Luis Baragan and Isamu Noguchi (Wilson, A. 2002: 52-56). Pearson has progressively reduced the number of plants in his schemes focusing on carefully chosen plant associations. He is also known for his personal views on the therapeutic benefits of gardens and was directly involved in the CABI (2009a) initiative. He designed the roof terrace garden at the Evelina Children's Hospital (2005). Pearson has also continued to work with Rogers and they are currently (2013) working with Guys and St Thomas's Hospital on designs for a new Cancer Treatment Centre. In 2012 he received a Society for Garden Designers Award (SGD) for his work on the Tokachi Millennium Forest in Hokkaido, Japan. He also received a Royal Designer for Industry Award for his 'leading work in therapeutic and gardens and landscape design' (Dan Pearson Studio, 2013). He has recently agreed to design the garden at Maggie's new centre in Manchester.

Maggie's London Garden
 Site Analysis, 2010

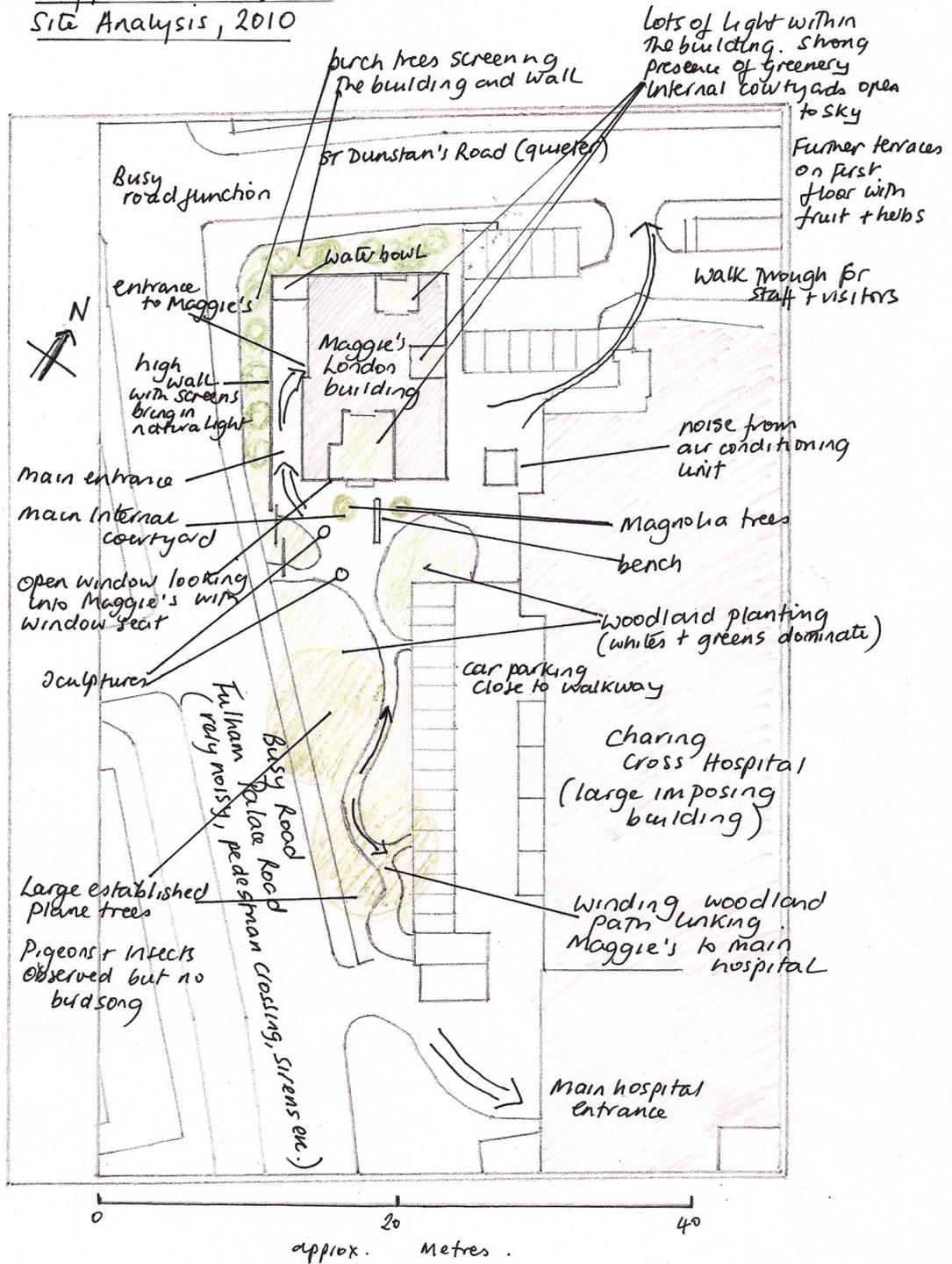


Figure 5.19. Maggie's London garden. Site Analysis (2010) showing the physical and social context (Butterfield).

Maggie's London

Site Analysis

Summary of Space Syntax + Observations: September 2010 - June 2012

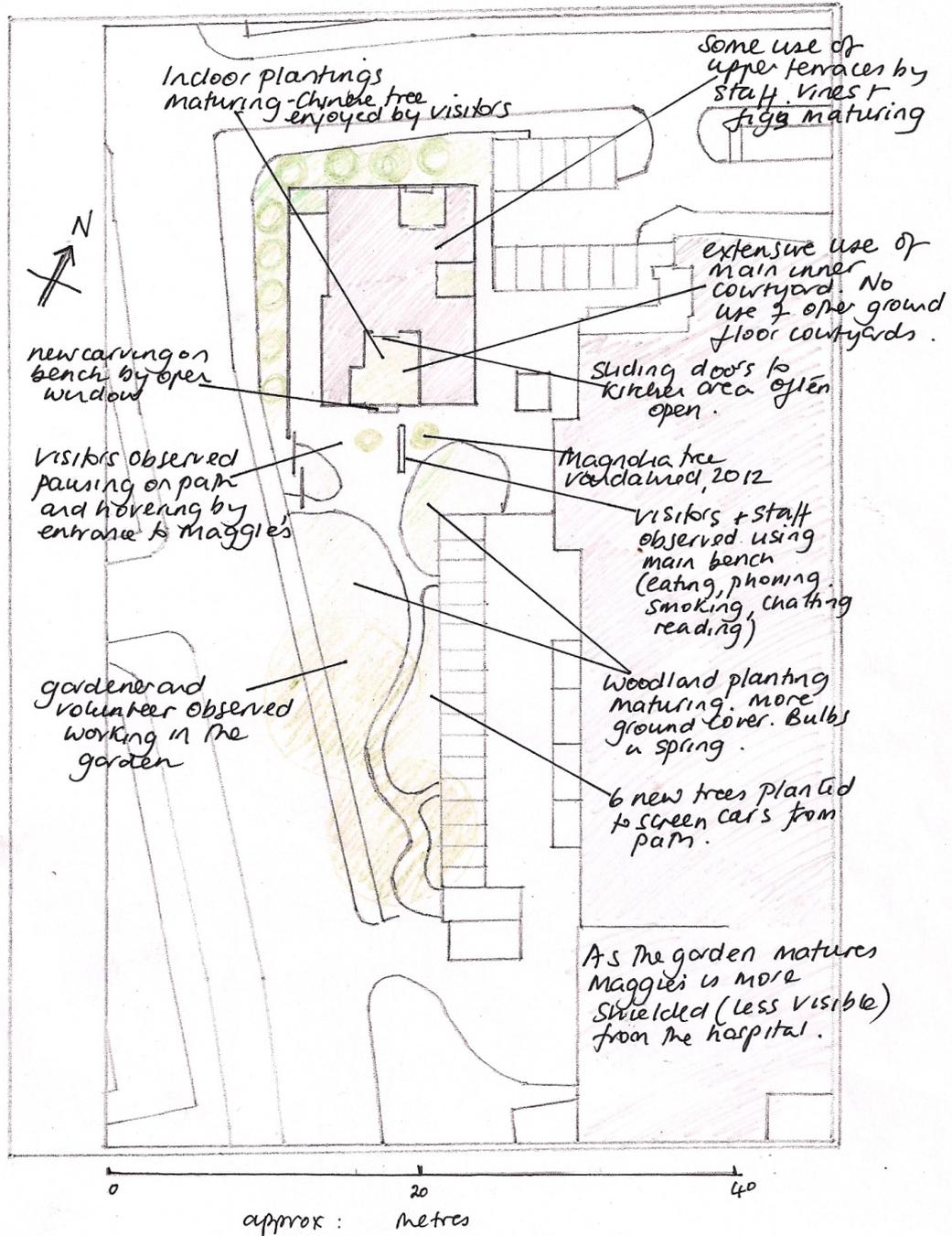


Figure 5.20. Maggie's London garden. Summary of space syntax observations and changes (Butterfield, 2010-12).

With London we see a designer interpreting the brief in a more intense and detailed way. The continuity between inside and outside was integral from the start; likewise, ideas of protection, shelter as well as interesting views are all embraced. Pearson also thought carefully about how the garden could lead visitors to the entrance of Maggie's. Pearson (2010) said he focused on creating a 'sheltered sanctuary wrapped in greenery' within the noise and bustle of a large London hospital site.

A striking feature of the design is the use of natural and lush green planting, something that Pearson is particularly associated with. The designer (ibid.) explained how he tried to create a calm space that would work throughout the year. By stimulating all the senses and providing a connection to nature in an urban environment, he said wanted to provide:

[A]n opportunity for people to interact with natural things and life and living. We design like that anyway. And I have a belief in the spiritual, connective and the sensual. You don't necessary have to connect intellectually. By just making people feel comfortable, they start to see the detail. They start to feel the experience – start to process in a natural way – it is more intuitive. (ibid.)

Maggie's London is perhaps suggestive of Japanese design both in terms of the planting and hard landscaping. A copse of 100 unusual birch trees (*Betula albosinensis* var. *septentrionalis*) planted behind the external walls filter noise and pollution of the main road and enclose and protect the centre on the north and west side.

The winding path with woodland planting leads from the main hospital to the centre through established plane trees. At the entrance to the centre is a group of young magnolia trees (*Magnolia x loebneri* 'Merrill'). Ceramic sculptures by Hannah Bennett punctuate the woodland walk, courtyard and the entrance. There is a large bench near to the magnolias, while the framed open window of the building offers glimpses of interior space. At this point the paving material changes from bound-gravel to paving slabs emphasising this area as a unique space (see figure 5.23). As you reach the main door you face an area of bamboo and a water bowl reminiscent of a hand-washing bowl often found in Japanese gardens. Pearson (2010) said he wanted his design 'to invite people in' and he describes the walkway as a 'special calming passage':

Once you are on the walkway you don't feel part of the road or the car park...I wanted to provide a prologue and an experience before getting to the centre.

Within this garden are three courtyards that are treated as extensions of the internal space and are accessible to all visitors. These spaces connect both levels of the building and bring green spaces into its heart. These design features, especially the use of courtyards and framed views, have been compared to both Japanese and Chinese garden design as well as more contemporary examples such as the Louis-Jeantet Research Institute (1997) in Geneva, designed by landscape architects, Agence TER (figure 5.21). As Baker (2012: 47) writes, the gardens soften the geometric architecture:

Despite the rectilinear shape of the overall plan, the inclusion of garden areas have provided a dialogue with nature throughout, even with relatively small spaces, and has taken the building beyond the simple box.

Figure 5.21. Louis-Jeantet Research Institute (1997) in Geneva by Agence TER (Landzeine). The garden and architectural design of Maggie's London have been compared to this Institute.

The largest space, the southern winter garden (the main courtyard), offers a bright outdoor living space extending from the kitchen (see site analysis figure 5.19). This space is unique amongst the case studies in that it offers an open air space that is reasonably wind protected. The eastern winter courtyard, facing the front door, is a smaller intimate space that includes the chimney of the kitchen wood-burner making it warm in the winter. To the north is another private space with dense foliage and a window seat. Two of the courtyards are planted with rich, textured, scented and tropical plants that are intended to grow and fill the spaces over time. On the upper level, which consists of office space, there are four terraces with larch timber decking, café style seats, aluminium planters and climbing plants that include grapevines. The planters have wheels so that they can be moved around.

The planting has been carefully planned to include seasonal variation or 'layers' and a range of scented plants as well as edible and unusual or exotic plants that can thrive in the warmer internal courtyards (Pearson, 2011). The emphasis is on the sensual and the experiential. Pearson (2010) explained that he deliberately wanted an absence of colourful planting because of the colour of the walls (which was not his choice) but there should always be 'moments' in the garden.

There are different ways to experience time. Shadows, patterns, little moments. It fine tunes, makes us aware.

In spring, the main outdoor space is dominated by the magnolia blossom. By summer, there are scented geraniums and herbs, and productive grapevines in the autumn. For winter there are jasmine and winter-flowering box. The gardener (Creaser, 2010) delighted in saying that there they had planted more than one hundred box (*Sarcococca*) outside:

Imagine, do you know what the scent is? It's a really fantastic sweet scent which is carried on the breeze...often if I am doing maintenance in the garden people will stop me and ask what is that lovely smell. It really helps to lift people spirits. But at the moment it is not in flower. If you were to come back at the beginning of the year then you would get the full effect.

Within the centre there are scented climbers such as *Trachelospermum* as well as scented leaf geraniums (*Pelargonium tomentosum*), tobacco plants (*Nicotiana*), honey spurge (*Euphorbia mellifera*), lemon verbena (*Aloysia citrodora*), and lavender (*Lavandula*). Unusual or surprising plants include a *Tetrapanax* in the north courtyard

(see figure 5.24) and a silk tree (*Albizia julibrissin*) in the main south courtyard. Again the gardener (Creaser, 2010) explains:

The effusiveness and this feeling of exoticism, of being transported somewhere else. And you are definitely not in a hospital. With all those plants you have in a hospital, the Swiss cheese plants... This is as far as you could get from a hospital plant.

Pearson included lighting within his design to ensure that it is both delicate and functional. Low-level lighting guides visitors along the woodland path while subtle up-lighting within internal courtyards emphasises the sculptural forms of the plants.

The opening of Maggie's London attracted much media coverage. In 2009 Richard Rogers won the RIBA Stirling Prize and the landscape garden design was specifically mentioned. The design of Maggie's London has since become internationally known, featuring in many publications and research as an exemplary healthcare building (Macmillan 2010b; CABE 2006). The garden has received attention, partly due to the fact that Pearson has talked about it and emphasised the importance of it within his own work (Pearson, 2010 & 2011). Initially the reactions were mixed with comments such as, 'you would have to be very dedicated to modern garden planting to be refreshed by this' (Rosewell, 2009). Recently the garden was used as an exemplary case study in a Forestry Commission Publication promoting the use of green space within healthcare (Shackell & Walter, 2012: 33-34).

Pearson has continued to take an interest in the garden at London and he is consulted on occasions. He recommended the experienced gardener Rosemary Creaser to oversee the maintenance of the site. Pearson feels strongly about the issue of maintenance within public spaces. He (2010) stated:

Rose is made for the job. It is the little details such as the pruning. Within so many hospital spaces the trees have been hacked off.

Creaser has worked regularly for the centre since it opened and she has also established a regular gardening group for people using the centre. She devised gardening activities, such as planting up containers, working with herbs or Christmas wreaths, in order to offer visitors the opportunity to partake in simple therapeutic activities. One benefit of establishing a group was that some participants then decided to become more involved in the garden by helping Creaser with the maintenance. In addition to these volunteers, Creaser has had voluntary support from one or two other

more experienced gardeners. They usually work with her at least once a month. On various occasions there has been greater volunteer input, usually as part of a corporate initiative, to help with the heavier work such as leaf clearing, mulching, bench refurbishment and bulb planting (see appendix 1C).



Figure 5.22. Maggie's London, the path leading to the centre (Butterfield, 2012)



Figure 5.23. Maggie's London, the path leading from the centre to Charing Cross Hospital (Butterfield, 2012)



Figure 5.24. Maggie's London, view of the north ground floor internal courtyard planting and screens (Butterfield, 2012)

5.1.4: Maggie's Cheltenham



Figure 5.25. Maggie's Cheltenham garden showing the path and undulating water feature that leads visitors' to the centre (Butterfield, 2012)

Maggie's Cheltenham opened in October 2010 and is set in the grounds of Cheltenham General Hospital. Immediately adjacent is a steeply-roofed Victorian lodge onto which the architects MJP-Sir Richard MacCormac have built their extension. Set behind the main hospital in a suburban road, the scale is much more domestic in feel. Although the site presented many challenges for the architects and designers because of the lack of "prospect"; its position down a side road does mean it is not visually overpowered by hospital buildings. MacCormac (cited in Maggie's, 2009e) said he aimed to 'offer refuge from institutional surroundings that is inviting, domestic and refreshing, and can be both sociable and private'. The centre links to the Three Counties Cancer Network and serves the populations of Gloucester, Herefordshire, South Worcestershire and parts of Powys. Within this area there are more than 4,000 new cases of cancer each year.

MacCormac's extension to the Victorian lodge is dominated by a flying roof which allows light into what is a dark awkward corner site. The lodge has a ground floor meeting room with office space upstairs, while the extension is dominated by a single-spine room or living room. At one end is the kitchen where the table extends to a central 'coffee bean' fireplace, and at the other end is a snug room for yoga or mediation. Then there are two pods for more private situations as well as a small decking terrace planted with bamboo. Between the lodge and extension is a small linking space, which is used as a library. There is a great attention to detail in the built design; the bench-type seating, oak cladding and bookshelves have all become part of the integrated interior design. The use of extended horizontal windows set at seated eye level as well as large floor to ceiling windows at certain points emphasises the sense of light and inside outside feel.

The two pods extend out of the building on either side and MacCormac also designed a pergola to screen an enclosed garden and one pod from the road. MacCormac also worked with William Pye to create a stainless steel water sculpture that leads visitors towards the entrance of the building. This water feature was installed in summer 2011.

The garden at Cheltenham is by Dr Christine Facer, a designer local to Cheltenham who argues that science provides the 'new metaphors for the new century' (2010). Facer worked for many years as a scientist. An expert in malaria, she was a reader in tropical haematology at the Royal London Hospital before retraining as a landscape designer in 1999. She has since become known for her radical designs for large country gardens and show gardens. In 2002 Facer designed the Genetic Garden at Westonbirt. Her own garden at Througham Court near Stroud combines an extraordinary historic landscape with a range of modern planting, materials and visual puns. Comparable to the Garden of Cosmic Speculation, Througham Court embraces a whole range of ancient and modern scientific theories such as Fibonacci sequencing, chirality and chaos theory (Donald, 2008).

Facer designed the enclosed garden (known as the sitting garden) and the main area (approximately 40 by 25 metres) directly in front of the centre and surrounding the main path (see figures 5.25-5.30). Facer also landscaped an area on College Bath Roads adjacent to the centre and part of the pathway from the main hospital. The grounds are dominated by a large evergreen conifer *Wellingtonia (Sequoiadendron giganteum)* tree while directly behind the centre is the river Chelt and a footpath.

The garden at Cheltenham clearly builds on some of the design principles presented at the gardens at Edinburgh and London. It links to Maggie's Highland and Dundee in Facer's choice to create a landform, albeit on a smaller scale. It also suggests parallels with Maya Lin's landform *Wavefield* (1995) at the University of Michigan in America (see appendix 1D). Facer is interested in green space research and her design demonstrates understanding of the roles of colour, sound and smell. However, Facer responded to the Maggie's brief in a different way again, taking the idea of a healthcare garden as a way to combine symbolism with softer design elements.

Maggie's Cheltenham
Site Analysis, 2011

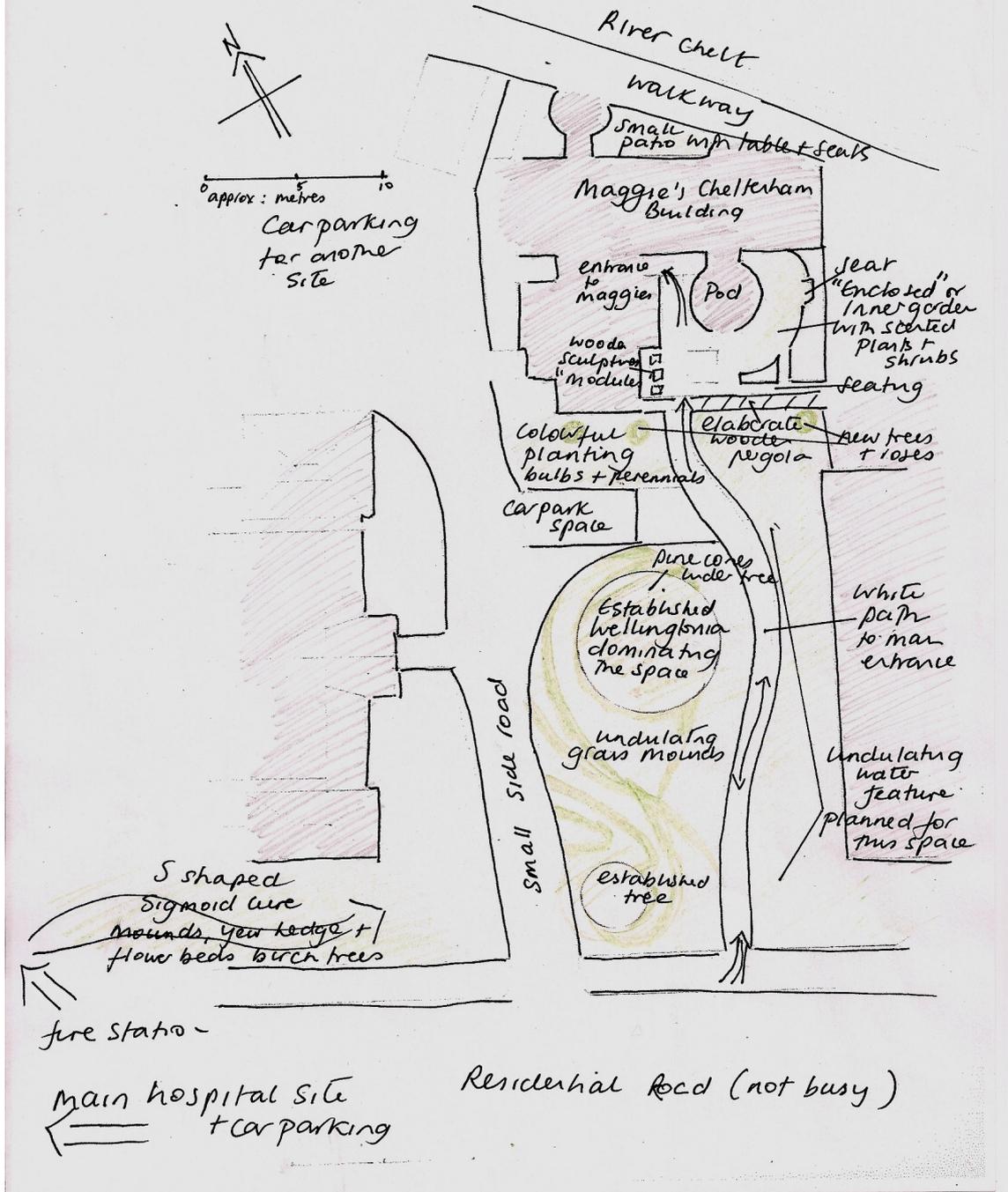


Figure 5.26. Maggie's Cheltenham garden. Site Analysis (2010) showing the physical and social context (Butterfield)

Maggie's Cheltenham

Site Analysis

Summary of Space Syntax + Observations: September 2010 - June 2012

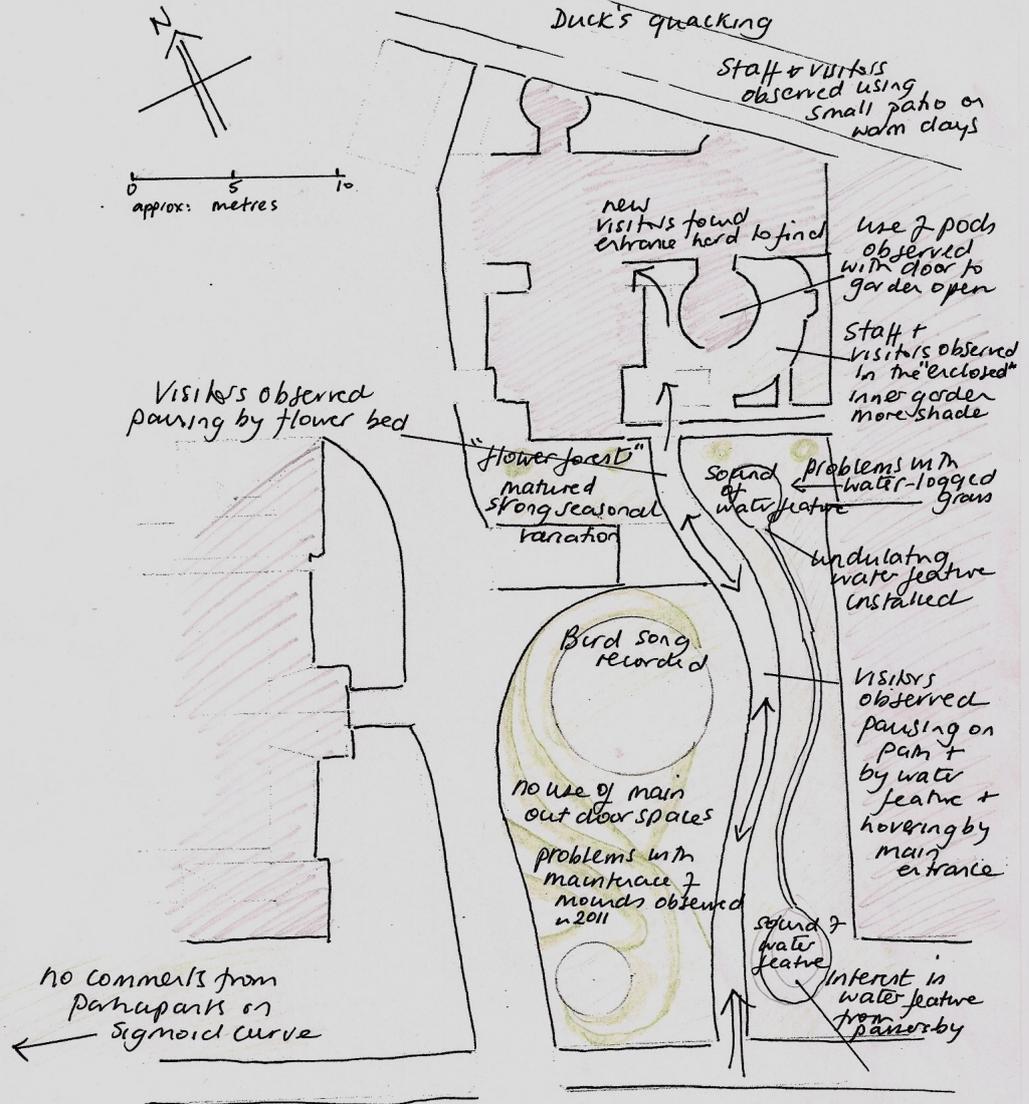


Figure 5.27. Maggie's London garden. Summary of space syntax observations and changes (Butterfield, 2010-12)

Facer states that the garden is intended to be symbolic and metaphorical and the principle motif, the Sigmoid Curve, is used as a visual metaphor within the landscape design as a series of grass mounds (see figures 5.26 & 5.27, also appendix 1D). The sigmoid curve, a mathematically-derived tilted 'S' shaped curve, is intended to symbolise the path of life in a general sense, but its resonance in this context is particularly strong because it is used in the assessment of the dynamics of drug and radiation treatment in cancer.⁴⁴ A series of moundettes around the Wellingtonia create peaks and valleys, symbolic of cancer remissions and relapses. The garden design also embraces a 'paradigm shift', which is a scientific term. Again this is used as metaphor within the garden with the use of two yew brushes shaped as arrow heads. Facer (cited in Jencks & Heathcote, 2010: 152) states:

A path of sigmoid moundettes leads the walker around a symbolic path of ups and downs, like the trajectory of cancer with its remissions and relapses. Then a paradigm shift moundette, representing the old world of cancer and despair, points away from the centre while another mound points towards the centre, a new world of enhanced life. The idea is to create a garden to engage the senses, to use the therapeutic power of landscape and water.

William Pye's undulating water feature called 'Arroyo', sited to the right of the main path, was developed in line with the sigmoid curve concept (see figure 5.30). Pye describes this as two 'water events', one at either end linked by an undulating, S-shaped steel pipe, with the idea to draw people towards the entrance, which also echoes the curves of the path and grass.

The site presented many challenges for Facer and although she worked closely with the architects, her input began when the building shape, design and siting were already fixed. At first she said she found it difficult to respond to the Victorian setting and oak-clad character of the building. The elaborate pergola forms part of the architectural design and is intended to screen the building from the road but it also means that you cannot see the centre within the main garden space. Essentially a non-dig site, due to the roots of the established trees, Facer responded by building up rather than digging down and to enhance existing features where possible. For example, Facer added beds of pine cones and Japanese grasses in rings around the two main trees. She was

⁴⁴ Facer also states that the sigmoid curve links to the work of Charles Handy, the business philosopher, who used it as metaphor for life and living and refers Handy, C., 1995, *The Empty Raincoat: Making Sense of the Future*, Random House Business (Facer, 2010)

given permission to cut back the low branches of the Wellingtonia creating more light and also revealing the cross or lattice pattern of the tree canopy.

Facer (2010) describes how she responded to the Maggie's brief to create a 'stimulating healing garden with spaces for retreat and privacy'. She considered the importance of creating an inviting space that could 'engage all the senses', identifying the sound of water and the Sigmund curve metaphor as key. She argues that her 'metaphorical landscape of hope designed to calm, sooth and inspire' offers new ideas – a talking point or distraction, which can stimulate the mind (ibid.).

Facer also states that scent is important. Within the enclosed and seated area she has chosen a range of predominantly blue and white scented plants such as *Rosa* 'iceberg', *Lavandula augustifolia* 'Hidcote' and *Philadelphus* 'Mexican Jewel' to emphasise tranquillity. She describes the main area with its undulating mounds as a 'green landscape', designed to be calming and relaxing. At the top of this area, to the left of the entrance is an area known as the 'sitting garden', which includes three unseasoned oak 'Module' seats by Alison Crowther. This area is intentionally colourful, energetic and "optimistic" and has been planted with a mixture of orange, yellow and purple perennials as well as alliums and tulips.

Facer has remained involved with the centre holding a place on the board and having a role as an ambassador for the charity, as well as continuing to take an active interest in the development and maintenance of the garden. She continues to make changes and additions to improve the planting schemes for all-year interest. In 2011 she founded a Garden Club with an initial eight volunteers and a donation to purchase garden equipment. However, it was soon realised that the moundettes required specialist attention and the centre currently employs local contractors to cut the grass and hedges and maintain the water feature. The club continues, but in rather sporadic form, and there is, at present, no long-term maintenance plan. Centre Head, Jane Fide (2012) emphasised her concern that the 'gardening is done correctly' and she also expressed misgivings about plans to develop a therapeutic gardening group because the garden is, in her words, such 'a strongly designed space'.⁴⁵

⁴⁵ Fide (2013) recently confirmed in an e-mail to the author that Maggie's Cheltenham had opted out of the 'therapeutic gardener' scheme. Fide also confirmed that since they have established a service contract for the water feature they have encountered fewer problems.



Figure 5.28. Maggie's Cheltenham, view of the Victorian lodge and inner garden (© Norman Hindmarsh, 2012)



Figure 5.29. Maggie's Cheltenham, view within the inner garden (©Norman Hindmarsh, 2012)



Figure 5.30. Maggie's Cheltenham 2012: view of path and water feature (Butterfield, 2012)

5.2: The comparative case studies

In order to provide context for the four Maggie's case studies, various other contemporary, healthcare gardens were investigated for this project. Each of these gardens was chosen to strengthen, through comparison and contrast, the qualitative research approach. These case studies are introduced and described briefly in the next sections of this chapter. These additional case studies provided another layer, helping to clarify certain findings and issues in connection with people and place. They include cancer care gardens, a staff only garden, a project that involved a user-led design process and a garden for the bereaved. The research also included site visits to a range of other healthcare gardens across the UK (see appendices 2 & 3).

5.2.1: Macmillan gardens

Three Macmillan gardens were investigated for this thesis to provide direct comparison with Maggie's. Research was undertaken at the gardens at Leighton Hospital in Crewe, and at Warwick, and Hereford Hospitals. These three gardens were developed in collaboration with Fira Landscape Architects, a design company that has a particular focus on healthcare. The three designs indicate understanding of the value of green views, sensory planting as well as the provision of private outdoor spaces within healthcare.

At Crewe (2006-8) there is a courtyard garden, which was designed to provide views and natural light from the chemotherapy treatment suite and to create different spaces and seating arrangement for both staff and visitors. The garden is not visible or accessible from the reception area of the centre. The garden includes ornamental trees and shrubs to provide year round interest and a range of bespoke carvings and seats by local sculptor Andrew Frost. It also includes sun umbrellas and areas of shade to allow patients to have chemotherapy treatment outside during dry weather (see figure 5.31 & appendix 2A).

At Warwick (2009) the main treatment unit looks directly out onto the garden while the smaller staff and consultation rooms can access a small 'Zen style' courtyard. The main garden, which is not visible or accessible from the reception area, is striking in its use of red fencing and posts, which contrast with the mauve slate, grasses and perennial planting (see figure 5.32 & appendix 2B).

The new Macmillan Renton Unit at Hereford County Hospital (2011) includes a more extensive landscape garden, which is visible and accessible from all areas of the unit. This garden was developed by Fira following consultation with users through focus groups organised by the NHS Trust. The circular building dictated the overall structure of the design with a circle of benches around a central cherry tree. The garden has been designed for good wheelchair access and includes a range of different spaces including more secluded and less formal areas and even an area where 'someone could lie down' (Boston, 2011). Lead designer, Keren Boston (ibid.), acknowledged that the presence of the garden is perhaps more important than its actual use and hence she has worked hard to ensure strong view lines from all windows. The garden includes lighting to ensure that during the winter months there are still good views (see figure 5.33 & appendix 2C).



Figure 5.31. Courtyard garden at Macmillan Crewe (Butterfield, 2011)



Figure 5.32. Garden at Macmillan Warwick (Butterfield, 2011)



Figure 5.33. Garden at Macmillan Hereford (Butterfield, 2011)

5.2.2: The Friends Garden, Great Ormond Street Hospital for Children

The Friends Garden at Great Ormond Street Hospital (2008), London is the only space in this busy children's hospital where the 3000 or more staff can escape from the pressures of the workplace. The Friends Garden was researched specifically because it is an example of a staff only healthcare garden. The hospital was keen to collaborate to understand more about the impact of this designed space.

Described as a 'calm contemporary garden' (rather than specifically a healthcare garden) it is situated on the seventh floor with stunning views across the city of London (GOSH press release, 2008). Designed by landscape designer Andy Sturgeon and Andy Budgen of the architectural firm Spacelab, it was conceived as a versatile space that includes areas where people can sit in private or in small groups, eat their lunch, socialise or simply read a book. It also includes a covered area to enable people to enjoy the garden in all weathers.

Semi-private areas have been created throughout with the placement of planting, seating, lawns and hard landscaped elements. It is surrounded by glass panels as windbreaks. Technically the garden was a challenging project but Sturgeon did not shy away from bold design. Sixteen, 6.5m tall hornbeam trees were anchored to the structure of the building through the planters and underplanted with grasses and aromatic perennials. Two glulam timber arches create a dramatic presence and frame the rooftop views. Attention was paid to all-year interest and the garden takes on a strong sculptural quality in the winter months (see figure 5.43 & appendix 2D).

Following the July 2005 bombings, when two members of staff were killed, it was decided to integrate words describing the victim's personalities as a memorial to their lives. The Friends Garden, taking the name of its funders, received a Building Better Healthcare (BBH) Award for Best External Space in 2008. Andy Sturgeon also won the Landscape Design Excellence Award in 2009 for his design.



Figure 5.34. Friends Garden Great Ormond Street Hospital (Butterfield, 2012)

5.2.3: Trevarna Garden, Cornwall Care (2012), St Austell, Cornwall

The garden at Trevarna House, one of Cornwall's care homes for the elderly in St Austell, was chosen because it offered the opportunity to look at a different healthcare context. By focusing on a different healthcare constituency, in this case dementia care, the case study might be able to clarify if there are particular features important to a cancer care garden. The redevelopment of Trevarna's garden was the focus for a project called Creative Spaces (2009-13), a four year initiative funded by the Big Lottery, creating opportunities for older people with dementia to improve their environments, strengthen their communities and play a more active part in society. Trevarna's garden was thus also chosen because it was an example of a co-design project within healthcare where the garden's users had strong input.

Led by the Sensory Trust with a design concept by landscape architect David Kamp, the project explored ways to reconnect the staff and residents with the community around them in St Austell and their outdoor environment. This was done through a range of inter-generational work, community activities and the redevelopment of the garden at the residential home. The aim of the project was to change the perception of the care home as an isolated facility to a centre of community life. The project used the theme of landscape to bring together the community and was built on contemporary research emphasizing the importance of the designed outdoor environment for older people living with dementia (Cohen & Weisman, 1991; Zeisel et al., 1994; Zeisel et al., 1999; Calkins, 1988; Coons, 1991; Peck, 1998; Moone & Nicell, 1992; Gilliard & Marshall, 2012; Pollock & Marshall, 2012). As Project Manager Wendy Brewin (2013a) explains, Creative Spaces is not a garden project as such but a 'tool to get people together – it is about keeping connections'.

The redesign of Trevarna's garden therefore sat within a larger project tackling issues related to the perception and understanding of dementia within the community. The significance of the project for elderly care in Cornwall was succinctly put by a manager (CS8 female staff) at Cornwall Care when she said, 'we don't use outside spaces and yet most people in Cornwall have an affinity with the outdoors'. The design research process involved extensive consultation with the staff, residents and families at the care home. It also involved training for staff in the use of outdoor spaces and various events and activities where other community groups, such as local school pupils, were encouraged to develop their communication and media skills, learn basic horticultural and interact with the elderly people. Creative Spaces is an example of how community

and inter-generational action can work across the design process, the healthcare community and wider community (figure 5.35 & see appendix 2E).



Figure 5.35. The garden at Trevarna, St Austell (Butterfield, 2012)

5.2.4: The Sand Rose Project, Marazion (2005), Cornwall

The Sand Rose Project is a charity based in Marazion, Cornwall, providing breaks for bereaved families. The project has three cottages and a garden where families can stay for a week or two. Previous research undertaken by the charity indicated that visitors particularly valued the garden (as opposed to the cottages) (Sand Rose Project, 2009). Once again, research on this garden ensured a broader context for the discussion about Maggie's. It is not a memorial garden but a rare example of a garden for the bereaved. Furthermore, the author has had direct and long-term involvement in the development of this garden.

Sand Rose provides the opportunity for families to take a break away from home and all the pressures of daily life. The cottages are set in a striking location looking out to the sea and St Michael's Mount and surrounded by a walled garden. Slowly, and with limited finances, the garden has been developed to provide a suitable outdoor space that can meet the needs of its visitors. Through consultation with those who use this garden it has evolved into a space that includes a variety of spaces and places for different ages, including children (figure 5.36 & see appendix 2F).



Figure 5.36. The Sand Rose Project garden (Butterfield, 2011)

5.3: The case study data analysis and findings

Each case study garden outlined above was researched using methods discussed in chapter 3. The data sample drawn from these case studies was also detailed in that chapter. The analysis of the resulting data involved a number of stages. The field books and documentation combined with the extended interviews and walking tours (audio-recordings and transcribed verbatim) with key members of staff (such as Centre Heads and gardeners) and the designers led to the description and history of each site as discussed above (see also appendices 1 & 2). The space syntax data, observing use and activity within the gardens, was tabulated and summarised for each site (see individual site analyses in this chapter). The photo-elicitation interviews (which were oral) were initially transcribed verbatim as individual PowerPoint presentations (see example in appendix 5F). All data was then analysed using Framework, a qualitative data management tool developed by the National Centre for Social Research (Spencer & Ritchie, 1994; Spencer et al., 2003; NatCen, 2011).

Framework is a matrix based analytic method, which facilitates rigorous and transparent data management so that all stages of the analytical hierarchy can be systematically conducted (Spencer, Ritchie & O'Connor, 2003). This method also allows for movement across levels of coding without losing sight of the raw data. The analytical journey for this research included the coding of interview transcripts and photographs, and the identification of initial patterns. This was followed by further summarizing and synthesizing of the data, eventually leading to the identification of themes and categories. The key themes provided the framework into which data (extracted raw data) was then charted (sample included in appendix 5E). Individual frameworks using the same overarching themes were developed for each case study site. The columns for each framework matrix were broadly similar, varying only where a case study presented either very different designs or functions.

It was important to capture the full range of data in the analysis as well as maintaining the language and voice of the participants, although it is acknowledged that there are multiple potential arrangements of the data. A similar process was completed for the additional case study gardens (appendix 2). Data collection differed at each of these sites and was dependent on the different circumstances and ethical approval available to the researcher (see also Chapter 3).

All analyses were carried out by the author, however, a review session with academic supervisors and Maggie's staff was undertaken after the first draft of the analysis to discuss the research findings. A further peer review of the qualitative data analysis was undertaken before the final draft to ensure systematic and comprehensive analysis.

As a project that generated a large amount of qualitative data, selective rendering was necessary. The mixed method approach, combining fieldwork observations with interviews and questionnaires, went some way to offer validity through triangulation of the data, although the overall aim of this approach was primarily to generate a rich body of qualitative data for analysis. Revisiting case studies over a two-year period also enabled some respondent validation and checking where findings could be taken back and discussed at each site. No participant has been quoted more than twice in relation to anyone one theme within the analysis and no participant is quoted more than four times within the thesis.

Although the additional case studies are not presented within this research in the same depth as the Maggie's gardens, the qualitative data generated from these sites was given similar weight and time within the analysis. The aim was that these additional case studies could provide a wider context for the research and offer some basis for analytic induction. They provided a way to test findings, albeit acknowledging the variables in each case. It was important to try and identify which findings were unique to the individual gardens or to Maggie's as a whole and which might be common to other healthcare gardens. In fact, what emerged were some similar findings across all sites thereby strengthening the overall hypothesis that emerged.

5.3.1: The three frameworks

It became apparent within the coding, charting and analysis that the qualitative material, despite the variables of each centre, fell into three broad but logical frameworks (table 5.1). Three different themes or areas of experience were identified when people talked about the gardens: the garden's features and spaces; their experiences of the garden in relation to the life and work of the centres; and sensory and personal responses (see appendix 5E for sample framework). Significantly, the frameworks coincided with the space syntax observations and help to explain and expand initial observations.

Table 5.1. Diagram showing the three main framework headings with examples of the subtopics below. Each framework was charted in its own matrix where every participant was allocated a row and each column denoted a separated subtopic



The first framework focused on comments concerning the key features and spaces of the gardens. These comments were, for the most part, simply descriptions accompanied by personal interpretations and experiences. Staff and visitors commented on key features, spaces and the practicalities at each garden. They used their photographs and comments to highlight the importance to them of certain areas, or their like or dislike of certain features. Although each garden was characterised by different designs, there were some common patterns to the descriptions. The second frame for analysis focused on comments that explored or observed the relationship of the garden to the work of the healthcare centre and, in the case of Maggie's, to the ethos of the organisation. The third framework identified sensory and personal responses to the garden. These included comments about the light and the presence of plants as well as observations about seasonal changes and sensory contrasts. Some participants responded strongly in symbolic ways to the gardens, and some found certain features and plants evoked strong sensory memories for them.

This framework approach allowed for all data to be managed and charted but ensured that individual participants' nuanced comments and details were not lost. It also provided a way to analyse any common patterns of responses (see appendix 5E). It was striking that when all the photographs were put together there were some connections and repetitions between participants. This was powerful precisely because

it was visual rather than verbal (see figure 5.31). The analysis also revealed some of the more subtle ways that people related to these gardens. The framework process allowed for the phenomenological impact of the gardens on the users to come to the fore. It allowed for understanding, and hence analysis of the affordances presented by the gardens.

5.3.2: An Initial finding and further analysis

The initial key findings from the fieldwork and observational research were that there was limited use of the gardens, even during good weather, by staff and visitors at the Maggie's centres. A similar situation was found at the Macmillan gardens, but not at Trevarna, Great Ormond Street and the Sand Rose Project. At this point it would have been easy to assume that the impact of the gardens at Maggie's and Macmillan was therefore limited. However, the qualitative research revealed a very different picture. The interviews and photo-elicitation indicated quite quickly that lack of use did not necessarily mean lack of importance. Indeed, the interviews revealed that the presence of the gardens was highly valued.

Participants responded to the garden settings and described a range of experiences. Although no two people had identical experiences of the gardens, common patterns of response did emerge. Participants (staff, visitors, patients, residents and family members) expressed how the gardens contributed to their sense of wellbeing; they talked about an awareness of their senses and that space and time took on an elaboration or richness. While negative experiences were unusual within the sample, they were often linked to a specific issue, many of which will be discussed in the following chapters. The data analysis also looked for differences across the sites and across population groups. At various points the analysis focuses in on, for example, the views of only staff or only patients in order to draw out a point. Where differences were spotted they are discussed in the findings. It should be noted there was no evidence of gendered or age-related differences within the sample.

Once all the data was charted in the initial frameworks, a further stage of re-organisation took place where the author looked for patterns across all sites. Within the data there emerged an emphasis on particular types of outdoor spaces, the sensory qualities of the gardens, the opportunities provided by the gardens for a different sense of time and finally the contribution the gardens made to the overall atmosphere within

the healthcare environment. As these themes came forward, the author took time to check for consistency. Initial findings were pre-tested with further visits to the centres and discussions with staff, designers and visitors.

For example, within interviews charted in the initial framework at Maggie's London (see appendix 5E) it became evident that participants had focused on describing the path and entrance as helpful and reassuring (an important threshold). Participants at London appeared to value the sensory details within the design, such as the lush planting and visual contrasts (sensory richness). They also described how the garden could provide opportunities to look, pause or stop (density of time), as well contributing to the peaceful setting. Finally, it was possible to see within the framework a pattern of comments that suggested the gardens helped them to feel 'at home' at Maggie's (homeliness).

In the following chapters, the analysis of data collected will be discussed in detail. What emerged was evidence that the participants highlighted certain qualities or what are described as "essences" that the gardens afforded (with varying degrees of effectiveness). These essences eventually became identified as thresholds, sensory richness, density of time and homeliness are discussed and defined more fully in the following four chapters. Drawing on all four of these essences, chapter 10 explores why the quality of the care that a garden presents appeared to be important within the research. Chapter 11 moves on to draw further conclusions from the findings and attempts to define more precisely, based on the research, the qualities of a healthcare garden as a "resilient place". It also attempts to situate more precisely the role and the potential of garden spaces for Maggie's as an organisation.

Photo-elicitation



I think this one talks about longevity. Just the size. An old tree. Some things are here before and after us. It is big and solid. With this photo I wanted to get the roots and to focus on the trunk.

Photo-elicitation



Magnificent! I like structure. It's been there for many years. It's solid because its been here so long and will be here in the future. It is one thing in the garden that will not change. Consistency! Its one thing you notice. My God! Look at the size of that tree! The fact that it's got a demarcated area puts emphasis on the trunk and shows its strength.

Photo-elicitation



I like the approach to the building. There are different plants at all times such as violets and narcissi. There is real variety without being over cluttered or crowded. No two days are the same. There is a winding country feel – it really allows you to approach metaphorically. This affects people – it slows people down and give them time to 'drink in' the beauty. It helps to give people courage to get in through the door.

Photo-elicitation



I like this view. Again it is the path going round. I like the small Japanese trees. And that is actually two trees – one behind the other but here it looks like one tree. It's all part of it. It's leading up to the centre. Getting the restfulness before you come into the building. When I come to Maggie's I walk down the path. Without any of this it would be a bit bleak.

Figure 5.37. Examples of the photo-elicitation interviews from different participants showing how, when juxtaposed common patterns and themes emerge. *Top to bottom*: Maggie's Cheltenham (2011) (MC18 woman with cancer); Maggie's Cheltenham (2011) (MC7 man with cancer); Maggie's London (2011) (ML22 female staff); Maggie's London (2012) (ML24 woman with cancer)

CHAPTER SIX

The First Garden Essence: Offering Thresholds

The first garden essence to be discussed is encapsulated within the term “threshold”. Whilst it is acknowledged that common use of the word threshold would be to denote a starting point, level or edge, the term is used here to embrace a quality within the garden spaces referred to by participants and which appear to operate in relation to both the physical presence of the centre (the building) as well as the emotions embodied within it (the cancer care programme).

Threshold is the most meaningful term to use as the word can be defined at three different levels. In its narrowest sense a threshold is simply a sill or entrance, a strip of wood or stone forming the bottom of a doorway and crossed on entering a house, room or other place. In its broader context the word can be defined as a point of entry or beginning, and further it can describe ‘a level or point at which something starts or ceases to happen or come into effect’ (*Concise Oxford English Dictionary*, 2004). Etymologically the word relates to the Germanic sense of ‘tread’, and as a noun it embraces the idea of movement or transition. A threshold can therefore operate on a physical level of marking or demarking one space from another or one physical state from another; it also operates at a cognitive level realising an opportunity or point before change or transformation.

Within the research, the idea that the Maggie’s gardens acted as thresholds within this expanded definition, emerged as a key theme. Importantly, it was also a term that participants used to describe their experiences of the gardens. Two key points about thresholds were identified within the data. Firstly, the outside spaces and garden features provide landmarks and way-finding for visitors to a Maggie’s Centre – they helped people get to Maggie’s. Secondly, the garden spaces provide a particular type of sanctuary, taking people away from the hospital into the different world of Maggie’s and conversely preparing them for the real world following a visit. Thus, the gardens provide a buffer zone for entering and leaving the Maggie’s buildings. These points are summarised succinctly by one participant:

Most healthcare environments have a cold/lukewarm atmosphere, no place to linger, no place to revisit, no sense of welcome...Gardens at

entrances begin the process of arriving that engenders pleasant thoughts and feelings where colours and greenery are light and airy. Viewing gardens from inside pleases the viewer and connects them with a wide empathic space. (ME6 male volunteer, 2011)

These findings will be discussed in detail in this chapter and linked back to the Maggie's architectural brief and individual designer's intentions, as well as being related to historical examples. Evidence of the role of the gardens in helping people reach Maggie's will be highlighted as will the idea of the gardens providing a particular type of sanctuary. The findings from other case study sites will also be discussed in order to further explore the role of healthcare gardens in offering thresholds.

6.1: Crossing the threshold

The gardens appear to play various roles in helping people to Maggie's. Within the research three slightly different roles were identified. Firstly, participants described how they offer a space in which people spent time or lingered before they moved inside. They helped people to "cross the threshold" by allowing them to move in slowly and in their own time (figure 6.1).

Photo-elicitation



I like the approach to the building. There are different plants at all times such as violets and narcissi. There is real variety without being over cluttered or crowded. No two days are the same. There is a winding country feel – it really allows you to approach metaphorically. This affects people – it slows people down and give them time to 'drink in' the beauty. It helps to give people courage to get in through the door.

Figure 6.1. Maggie's London (2011) (ML22 female staff)

In the interviews it was noted that visitors often said they found their first visit to Maggie's very difficult and it was apparent that the gardens have a role to play here. Characteristically participants described their first impressions of the centre in broad atmospheric terms such as 'it was light' or 'people were very welcoming'. Few could remember any details and certainly little about the architecture or interior design. In

contrast, visitors were often able to recall aspects of the exterior space. They said that they took time to enter the centre – to actually get through the front door. A woman described how she ‘hovered in the garden by the water bowl’ outside the Maggie’s London (ML18 woman with cancer, 2011). In the space syntax “snapshots”, people who did not come into the centres were observed walking around the outside garden spaces. Visitors also said they sometimes deliberately chose to visit the centres at the weekends when they were closed so that they could just spend time in the gardens. A visitor at Edinburgh described how someone had suggested he visited Maggie’s early in his treatment but that ‘it took me 4-5 visits where I spent time in this garden...before I entered the building’ (ME16 man with cancer, 2012).

The second, identifiable role of thresholds was that the gardens made the centres seem warm and inviting. Participants said they helped to make a good first impression and created a calming atmosphere as you entered the centre. In the interviews, staff seemed acutely aware that the entrances and first impressions were important at Maggie’s. As Maggie’s operates as drop-in centres, staff are trained to be mindful that at any point a first time visitor may appear. They recognise that the decision to visit Maggie’s is not an easy one and they are always looking out for that new visitor who may need help. They saw the garden as important here:

We usually have pots of flowers at the entrance, which are very beautiful. It is important for the entrance. It is a threshold...
(ME7 female staff, 2011)

The actual entrance is very influential on the first impressions of the place as you walk up the path. It feels warm and inviting. The planting, the framing and the archway.
(MC19 female staff, 2011)

Paths and entrances were features highlighted in the photo-interviews with participants. The role of these spaces in leading and preparing both staff and visitors for the centre and the work within it was emphasised (see figure 6.2) with comments such as:

I would always feel lighter when I got here...It is about the entrance. There is a real sense of feeling supported. (ML26 woman with cancer, 2012)

These features also came through during the photo-elicitations:

Photo-elicitation



When you come down from a hospital appointment this is what you see first. And the two tubs gives a nice feel. It sweeps round and you feel you are going to a secure comforting place that is not hospitalized.

Figure 6.2. Maggie's Edinburgh (20110) (ME3 woman with cancer)

The paths were seen as inviting, as they set a different tone or atmosphere that characterises Maggie's. They allowed people to simply take a bit of time, take a few deep breaths, gather their thoughts or muster up courage to enter a centre. The fact that the paths are winding or curved, 'not straight or angular like hospital environments' (MC11 male visitor, 2011), appears to be important, and this, combined with interesting planting, features and places to sit, allows people to calm down. One member of staff at Cheltenham said he observed people coming down the path and had noticed 'it's never a fixed focus on the door. Their heads moved from left to right and they notice things' (MC16 male staff, 2011). Another stated:

I notice that visitors, even as they come up through the garden they will look at the plants and flowers and realise they are coming to a place of relaxation. It is leading them. (MC3 female staff, 2011)

A visitor at Maggie's Dundee described it in a different way again:

Photo-elicitation



That's where my husband and I sit to have a wee talk. On the way going to the hospital and coming back after treatment. It's lovely to sit for 5-10 minutes and then come and have coffee [at the Maggie's Centre] and then head for home. It's definitely that bench. A pause. Before you come or go home.

Figure 6.3. Maggie's Dundee (2011) (MD7 woman with cancer)

A participant at Maggie's Dundee said 'it was just like the Yellow Brick Road that leads to Maggie's (MD3 female staff, 2011). It was inviting'. A volunteer at Cheltenham said the path 'gently leads me towards the centre...it's like the rolling Cotswold Hills' (MC1 female volunteer, 2011). Another said 'it feeds you into Maggie's it is soft and gentle' (MC2 female staff, 2011). A couple said of their first visit to Maggie's Cheltenham:

We first came in the winter and it was difficult to assess the garden.
But walking up the path gave a magical feel to it before we walked in
through the door. (MC29 man with cancer & female relative, 2012)

Participants commented on the colour (white) of the path at Cheltenham which they said immediately hinted that it was not a hospital building. Likewise, participants likened the path at London to a country lane or woodland walk that felt a 'million miles away' (ML31 woman with cancer, 2012) from the adjacent, busy Fulham Palace Road.

Whilst other participants commented on the role of the gardens and paths in creating a sense of warmth and welcome a participant felt the lead-in at Maggie's Edinburgh created confusion (figure 6.4).

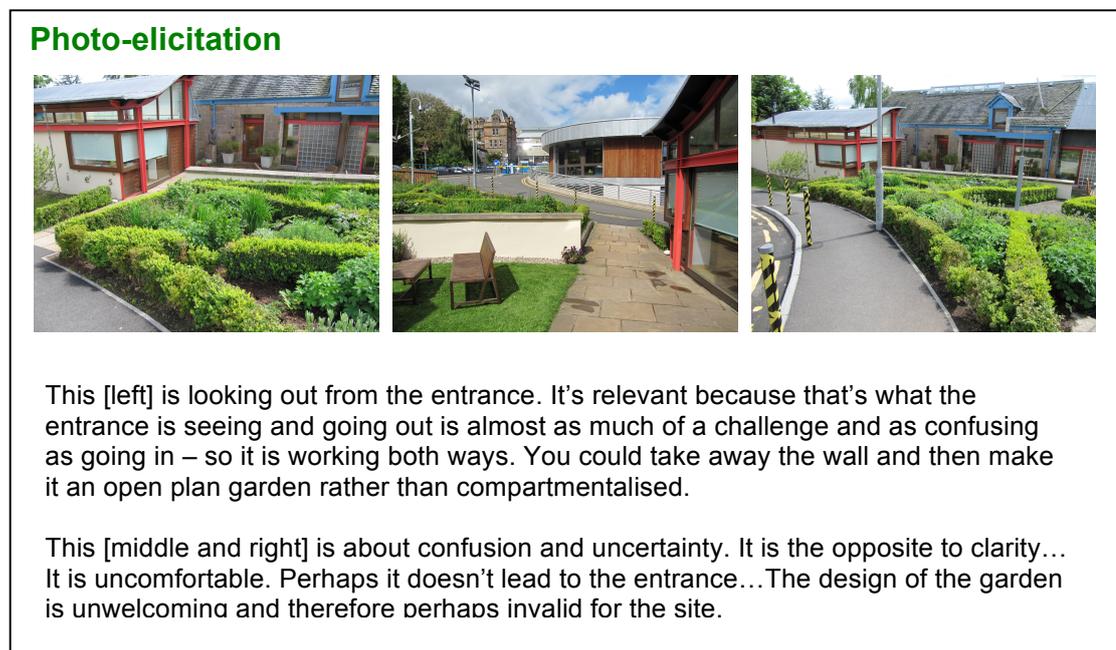


Figure 6.4. Maggie's Edinburgh (2011) (ME6 male volunteer)

This participant was troubled by the sight lines and way-finding to the main entrance. As someone interested in geomancy, he felt that a better path was needed as it would draw energy into the garden and lead people to the entrance. The height of the box hedging, the wall and the main path made the garden too compartmentalised and

hence there was a feeling of ‘uncertainty and confusion’. He wanted the corner of the wall in the garden to be shortened and curved to allow visitors to sweep around to the entrance from the pavement as he explained in his photo-interview.

Comments about the entrances were also conflicted. Visitors at London, Edinburgh and Cheltenham recounted that they had found it difficult to find the entrance on their first visit. This appeared to be partly due to the lack of signage or no clearly visible front door, but also due as one put it to their ‘state of shock’.

The first time I came to Maggie’s I had just been told. I was in a state of shock. I struggled to find my way first – I couldn’t find the entrance. (ML15 woman with cancer, 2010)

However, visitors said they enjoyed the paths on subsequent visits and the fact that there was no signage. The pleasing paths seemed to outweigh the need for direction and visitors generally were appreciative of the lack of signage and markers that are so common within a hospital environment.

The third role identified was that the gardens provide a demarcation or boundary between the cancer centre and the outside world. They helped with the transitions between hospital, home and centre. Participants, both staff and visitors, spoke about the gardens helping with these transitions. Just identifying and knowing there are places where visitors can sit or walk outside was important (this point will be returned to in the next chapter).



Figure 6.5. Maggie’s Edinburgh (2011) (ME3 woman with cancer)

The gardens offered a 'stepping stone' or 'interim space' taking them on a little journey, preparing them for the different places, helping them to feel calmer, 'think straight' or to work through a problem (see figure 6.6). Comments included:

It is very important that there are outdoor spaces. You can't come in without coming through a bit of garden. Almost more important because the building is small. It is like stepping into a different space, there is a transition to a more domestic space, away from the hospital and to normal life. (ME24 woman with cancer, 2012)

I like to look at the plants as I walk out along the path. It's only a short distance but it is quite calming. Especially with the work I do – by the time I reach the end of the path I have done what I need to do. (MC4 woman with cancer, 2011)



Figure 6.6. Maggie's Cheltenham (2012) (MC28 woman with cancer)

Maggie's, as outlined in chapter 4, always operate in juxtaposition to large NHS hospitals. They need to be near hospital cancer units in order for them to be accessible to as many people as possible. This closeness appears to be part of their strength because they offer people a very strong physical and emotional contrast to the experience of the hospital. Visitors immediately move from the large scale, highly mechanised, institutional, built environment to one that is small-scale, domestic and personal. However, as this research highlighted, the relatively short physical journey to a Maggie's Centre is not always that easy. Making the decision to go and find further information or to seek support can be an emotional rollercoaster and here gardens appear to be playing a helpful role.

Interviews from non-Maggie's case studies and wider research of healthcare gardens highlighted and reinforced the role a garden can play in helping people to cross thresholds. For example, Mike Westley (2010) emphasised that landscape designers

need to think about how to break down the stigma or reluctance to go outside and they can do this by thinking carefully about the transition from inside to outside and vice versa. Designers need to find ways within the design to encourage staff to move outdoors, thereby ensuring there is a 'presumption to use' (ibid.). Westley showed how he specifically designed a willow tunnel at the entrance to the Play for Life garden (2010) at the Royal Cornwall Hospital to ensure a strong threshold (see figure 6.7). He felt it was important for children to sense they were entering a different zone a 'check point Charlie', which he described as a 'cleansing experience' (ibid.) (see appendix 3F).



Figure 6.7. Entrance to the Play for Life garden at the Royal Cornwall Hospital, Truro (Butterfield, 2010)

The research on Macmillan gardens demonstrated how important the provision of transition points from inside to outside spaces and clear accesses are. It also indicated that people need to be invited or to feel they have permission before entering a garden space. The garden at Warwick Hospital is an interesting example because the position of the main garden means that it is only accessible from the main chemotherapy unit. It is not accessible or visible from outside the main entrance or from the reception area. The research suggested that the lack of key transition points has reduced the use of the garden. The research on Macmillan gardens at both Crewe and Warwick did, however, highlight the importance of views of the gardens to patients and staff (see figures 6.8 & 6.9). One member of staff at Warwick was quite pragmatic about the role of the gardens stating that their use was always going to be limited because staff, 'want to get away from the unit altogether', while patients are keen to 'just leave after

treatment' (MACW10 female staff, 2011). This did not mean they were not of value.

The interviews included comments such as:

It's nice to look out and see a bit of greenery, I usually sit so I can look at it. No, I haven't been in the garden. It takes your mind off it all...I had an operation at [] It was just a view onto a car park – noisy, horrible I hated it. People snoring and grunting. I pleaded after three days to go home. It wasn't as nice as this. (MACC2 woman with cancer, 2011)

I don't sit in the garden – I don't get a lunch break! ...It's knowing it's there that is important. As a newly diagnosed patient knowing this is a nice environment to look at is important. (MACC3 female staff, 2011)

These types of comments again indicate that the presence of the gardens was often more important than their actual use.

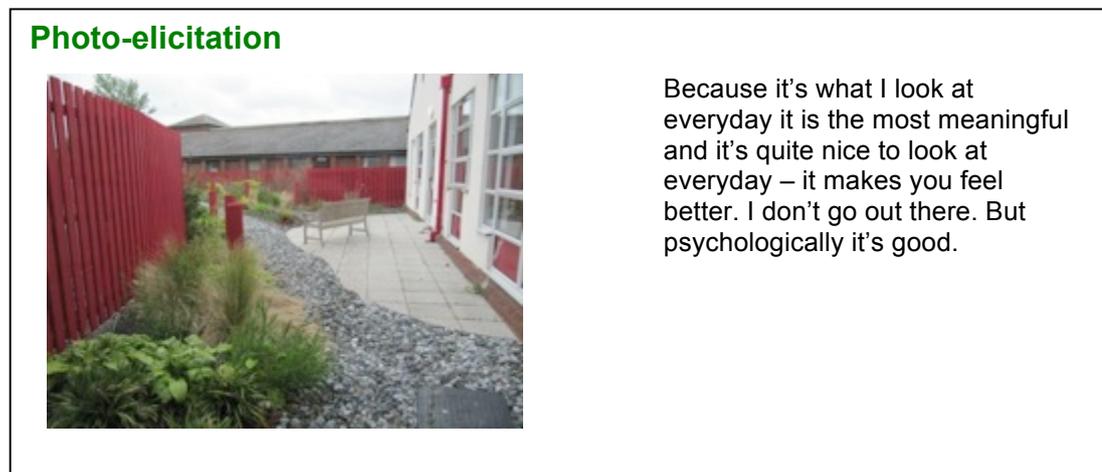


Figure 6.8. Macmillan Ambulatory Cancer Treatment Unit, Warwick Hospital (2011) (MACW11 female staff)

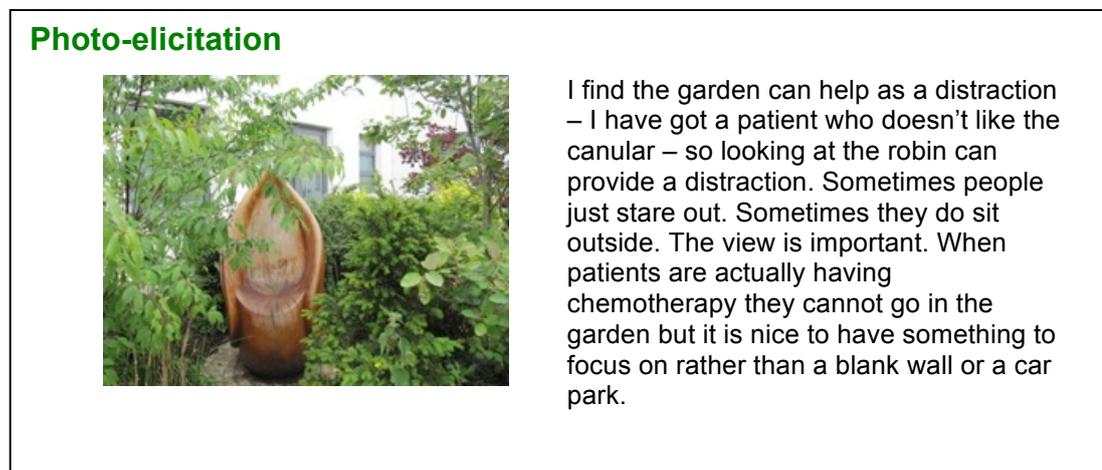


Figure 6.9. Macmillan Ambulatory Oncology Centre, Leighton Hospital, Crewe (2011) (MACC6 female staff)

6.2: Sanctuary

Not only do the gardens help people reach Maggie's, the research suggests they also hold people once they are there. Participants said that the gardens contributed to the sense of containment and privacy. Not in the sense of blocking out or hiding from the outside world, but rather in providing a sense of protection, refuge or sanctuary. There was still a feeling of openness, but the gardens helped to screen or shield the harshness of the overall hospital experience. This suggests a different idea of threshold and one where a garden operates as a holding space between the inner more private or personal and the outer more public domain.

Sometimes between treatments, I have come to the Maggie's Centres only to sit in the garden, when I have felt I haven't enough energy to enter or interact. I have spoken to friends there, read quietly and sometimes I have just sat still. The long wooden seat in the garden has been more of a refuge than anything, when I needed it most. (MC visitors' book comment, 2011-12)

The research at Maggie's revealed that the secluded outdoor spaces intimately connected with the indoor spaces were the most appreciated. Both the interviews and the space syntax revealed that the main or larger outdoor areas were not used extensively by staff or visitors. In contrast, those spaces that appear more connected or integrated to the internal spaces of the building were being used. People gravitated towards areas that were more intimately connected with the workings of the centres.

At London it was the main inner courtyard that was most used. Its design and position, almost as a mirror reflection, of the indoor kitchen area, means it has become integrated into the daily workings of the centre and is used extensively by both staff and visitors. Visitors and staff at Dundee used the small terrace leading off the main kitchen area. Frequently described as a pier or 'like being on a boat' (MD7 woman with cancer, 2011) it seems that this space is used precisely because it still feels part of the building (see figure 6.10). While visitors and staff described the inner garden at Cheltenham as echoing the shape, feel and materials of the main building – an extension or outdoor room which is partitioned off from the main garden making it more private and protected (figure 6.11).

Photo-elicitation



To me it feels like a pier – the suspension of it just going on forever. When I walked in on Monday it was a gorgeous day and recently I have visited Turkey and it reminded me of the outdoor rooms there. It just extends nicely from the building.

Figure 6.10. Maggie's Dundee (2012) (MD11 female staff)

Photo-elicitation



I am not sure this gets over what I felt. It's like looking into protection but not exclusion. It enhances the feeling of safeness inside. It is more the feeling of going in somewhere safe with protection from the outside world.

Figure 6.11. Maggie's Cheltenham (2011) (MC15 man with cancer)

The smaller, more private patios, inward looking and “sanctuary” spaces were most favoured. These spaces were valued precisely because they were away from the hubbub and offered fresh air but remained connected with the centre. This finding correlates with the ‘prospect and refuge theory’ discussed in chapter 2 (Appleton, 1975), where people seek out places that feel protected yet with an outward view. Participants said these spaces helped them feel more comfortable within the indoor spaces and that it was important that these felt connected to the activities within the centres. For example, the little patio off the small sitting room at Edinburgh was appreciated as was the small balcony at the back of Maggie's Cheltenham looking onto the river Chelt (figures 6.12 & 6.13).

Photo-elicitation



This space is a very important space. The room is very intimate. The floor to ceiling window helps to stop feelings of claustrophobia. The patio is another room. A breathing space. Usually the door is open – it's almost a hidden gem. A lot of people talk about that. It's another discovery – very simple, still and beautiful.

Figure 6.12. Maggie's Edinburgh (2012) (ME11 male staff)

Photo-elicitation



I have enjoyed coffee out there in that warm October weather we had. It just speaks of relaxation. You can sit outside and enjoy the blue sky and greenery.

Figure 6.13. Maggie's Edinburgh (2011) (MC18 woman with cancer)

The lack of such spaces at Dundee was noted too. Staff at Dundee also highlighted that although the labyrinth presents a “special facility”, it is also problematic for their work because it is such an exposed site (Howells, 2010) (figure 6.14). Opportunities to walk and talk with people have to be weighed up against potential feelings of intimidation – anyone walking the labyrinth can be seen throughout the hospital. This issue has led to discussions with the University of Dundee Chaplaincy and the idea of staging group events where people may feel more comfortable and less exposed. Evening walks, when the labyrinth was lit by candles, have proved successful. The labyrinth has also been the inspiration for a now well-established creative writing group, known as The Labyrinth Group.



Figure 6.14. The labyrinth at Maggie's Dundee is overlooked by Ninewells Hospital (Butterfield, 2010)

The research also showed that the presence and views of plants within the buildings helped people to feel calmer. The gardens as thresholds contributed directly to making people feel more comfortable. Staff at Maggie's talked about the particular conditions of cancer and how the centres attempt to nurture a sense of openness within an overall feeling of containment or safeness. They describe how both the built and green environment play a role here. If people feel comfortable and safe in their environment then they are more likely to feel able to talk openly. This was expressed very clearly by a member of staff at London:

[I]t is that thing of sharing. Of being open. Not being possessive. Being open about cancer. I feel there is [within the centre] also an openness, although it is contained and closed too. People can see, we can see out without being totally exposed. There is privacy and protection. (ML1 female staff, 2010)

A staff member at Edinburgh described this same point slightly differently:

[The Garden] is a definite therapeutic space and an extension of the centre. We are cocooned by the wall and the plants. The hedge is important in terms of protecting yet at the same time there is a nice sense of coming and going and the continuous interaction with people. (ME1 female staff, 2011)

The gardens appear to offer something that the built environment cannot. Participants said the garden provided opportunities for visitors and staff to develop a different sense of ownership and control of the space. It has already been suggested that people generally identify gardens with a sense of privacy. Within their own homes gardens (or greenery) are transitional places between inside and outside, between home and public space. Most have fronts that are relatively public but most also have back spaces that are more private and free from view. The research suggests that the gardens at Maggie's allowed people to find and take ownership of that "back space".

It was also noted that visitors would use the garden spaces to position themselves on the periphery of activity, still attached but able to observe without having to participate. This finding suggests that when people are unwell or in shock they prefer to take a peripheral (but not isolated) position. This correlates more with the ‘savannah hypothesis’ in nature preference studies, suggesting people like to be at the edge of a larger vista (Orians, 1986; Sullivan, 2005). A situation described very clearly by participants at Maggie’s Dundee, Edinburgh and London (see figures 6.15 & 6.16):

I have only sat outside once but would do more. I still feel that the hospital is very close when sitting outside and I think that is also a reason that being inside Maggie’s feels safer (maybe need more of a plant barrier) – I have also looked onto the plants and feature which you can see from the upstairs meeting room and enjoyed that. It has opened my mind and taken me away from depressive thoughts.
(ME24 woman with cancer, 2012)

Photo-elicitation



My spot. You are out on the front of a boat, head up sailing into stormy seas. But it is still part of the inside of the building. It is still attached. I like the fact that you can see lots of things – the road. It is tranquil, especially with the grasses rustling. You can still see life and people and things going on.

Figure 6.15. Maggie’s Dundee (2011) (MD4 man with cancer)

Photo-elicitation



It was nice to be able to look down into a space, which is also quite inviting. I am happy to be on the upper deck and see what’s going on. You can join or you can observe. You can observe without being part of it – it’s not private and it is a space where something is going on. Sometimes it is nice to just be on the periphery – I am happy that things are going on – like a grandstand seat.

Figure 6.16. Maggie’s London (2012) (ML29 man with cancer)

The open window at Maggie's London was photographed and discussed regularly by participants. Participants recognised that this feature offered a unique threshold (see figures 6.12-6.20). It provided the first glimpse into what the inside of the centre was like; it allowed people a preview without requiring them to engage directly with the centre. The designer Dan Pearson (2010) seemed particularly aware of the role of this window and described it as a 'prologue or opening chapter' and a 'stopping point', allowing people to 'back away or be drawn into the building'.

The fact that it is an open frame and not glass seemed important to participants; it was not a window display or backdrop but a glimpse through space and time. It invited people to look without being totally exposed. Likewise, it was not shutting people in or out. Participants said it brought the garden into the building and vice versa, blurring the distinction between green and built environment. They also indicated that the device worked at both a physical and metaphorical level as a 'threshold between an inner personal and an outer public domain, between self and society' (Daniels 2004: 64). It was no surprise then that the enclosed courtyard beyond the window was the most used outdoor space by participants (see figures 6.17-6.20). Comments included:

The indoor garden is great for when you feel too ill to go anywhere and offers space of escape from the hospital ward without going far. I have been here when I've felt ill and when I've felt well, and have friends and family here to visit, and the indoor space gives us somewhere to sit and laugh without disturbing others. I was here through the spring, so it was still quite cold, but the 'indoor' garden meant that I could sit outside in shelter as chemotherapy can make you very sensitive to the cold. Also the indoor courtyard, when I was feeling vulnerable and ill, was safe and secure and away from all the horrible experiences on the wards, but with the added feeling of being outdoors. (ML visitors' book comment, 2011-12)

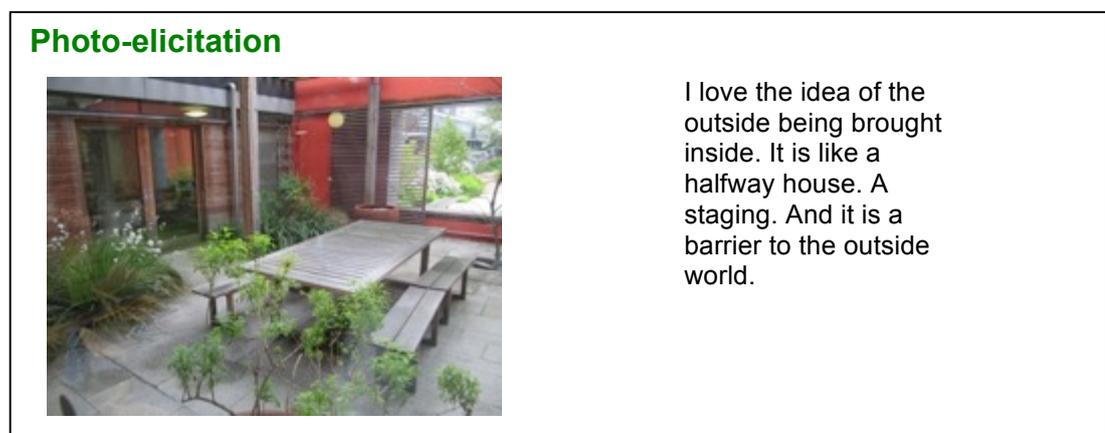


Figure 6.17. Maggie's London (2012) (ML26 woman with cancer)

Photo-elicitation



It makes it feel inviting and takes the greenery indoors. When you see people sitting there you feel 'I can go in there'. It is different to a window space because there are no barriers. There is a very welcoming feel to the whole design because it is open it lets you look in.

Figure 6.18. Maggie's London (2012) (ML31 woman with cancer)

Photo-elicitation



This lovely tree protects the inside but a 'voyeur' from the outside gets a snapshot of what's inside. It invites curiosity. It is inviting – the table, the seat. I feel there is also an openness, although it is contained and closed too.

Figure 6.19. Maggie's London (2010) (ML1 female staff)

Photo-elicitation



This is like being in Kew Gardens with Oxford Circus 50 metres away. You can see how busy it is... It's not hidden or denied. I like that... Hiding is easy... And this is an issue with cancer.

Figure 6.20. Maggie's London (2011) (ML19 woman with cancer)

Baker (2012) states that the 'framed view' goes back to Roman domestic architecture and the peristyle house, which included an interior garden. The *casa patio*, still found in cities such as Cordoba in Southern Spain, follows this tradition (see figure 6.21).

Rogers, Stirk and Partner's, and Pearson's design for Maggie's London is also reminiscent of both the Japanese device whereby sliding 'shoji' screens open out to provide a framed view of a garden and also the Chinese tradition of framing garden entrances (see figures 6.22 & 6.23). More contemporary references might include the giant "old master" picture, framing the view at the entrance to the Waitakere Ranges Regional Park in New Zealand or even Ettore Sottsass' colourful frames within the Wolf House (1987-9) in Colorado, USA.



Figure 6.21. Typical garden patio in Cordoba, Southern Spain, where the *reja* or open grilled gate allows view from the street (Butterfield, 2009)

Figure 6.22. The framed views at Maggie's London can be compared to those at the fifteenth century Nanzen-ji Temple in Kyoto, Japan (Japanese Search)

Figure 6.23. View through the entrance moongate at the Humble Administrator's Garden, Suzhou City, Jiangsu Province, China (1509), (Easy Tour China)

Writing about the enclosed garden, Baker (2012: 4) laments the fact that opportunities for 'framed views' are often wasted because of an emphasis on looking outward:

We have lost the sense of enclosure that buildings and building components can give us. They can create interior external spaces and become an outdoor room – an extension of the house. We have wanted to look outward in favour of any sense we might need for interiority and reflection.

Reviewing the research findings, it is clear participants chose a mixture of prospect and refuge depending perhaps upon their own psychological make-up but also upon how they were feeling on that day. Providing outward views clearly offered participants metaphors for psychological expansion and perspective. At the same time some participants expressed a need for less distraction, for more inward looking space. Ensuring there are a variety of spaces to meet different moods and emotions appeared important.

The main courtyard space at Maggie's London was considered too small by some participants. It is also significant that one of the key requests across the Maggie's sites (and other case studies) was for a sheltered (from sun) and protected (from wind and rain) outdoor space or conservatory where people could sit out in the fresh air all year round. It was also the case that staff asked for a practical but private space where activities such as Tai Chi could be conducted in the fresh air, but without visitors feeling

inhibited.⁴⁶ This is reminiscent of Florence Nightingale's work, who spoke so clearly in 1863 of the need for 'winter-airing grounds' – for well-protected outdoor spaces to ensure space to be alone as well as to undertake activity all year round (see chapter 1 for greater discussion on the historical precedents), (see figure 6.24). It is also interesting to note that the new healthcare garden at Salisbury Spinal Treatment Centre (Horatio's Garden, 2012) includes a summerhouse for patients.

Figure 6.24. The covered walkway at the seventeenth century palace and gardens of Het Loo, Apeldoorn, Netherlands (Garden Share)

Participants requested covered patios and extensions to the kitchens. One visitor described the need for 'outdoor inglenooks' (ML36, visitors' book, 2011-2012), and a member of staff at Maggie's Edinburgh said:

I would struggle in a room without any outside environment. It is a literal and symbolic 'breath of fresh air'. One thing would be good to have a conservatory out in the garden but protected from the wind and out by the benches. (ME18 female staff, 2012)

One of the most recent centres to be built, Maggie's Glasgow Gartnavel (2011) takes this idea of inside-outside a step further. Rem Koolhaas of OMA, Lily Jencks, and Harrison Stevens Ltd have designed a single-level building in the form of a ring of interlocking L-shaped rooms surrounding an internal landscaped courtyard. This centre is discussed in more detail in chapter 11. The Glasgow Homeopathic Hospital, just across the car park from Maggie's Glasgow Gartnavel, provides another example

⁴⁶ Tai Chi classes are offered across the Maggie's Centres as a form of gentle therapeutic exercise for cancer patients. Contrary to the publicity photographs (see chapter 7) Tai Chi rarely takes place outdoors at the Maggie's Centres.

where the thresholds between exterior and interior have been blurred and where inside and outside seem to merge seamlessly. This merging is particularly noticeable with the private rooms where individual wooden terraces lead directly into the garden (figure 6.25). Every patient has direct access, visually and physically, to the garden spaces and care has been given to ensure the garden is sheltered enough to be used through all seasons (see appendix 3D).



Figure 6.25. Photographs of Glasgow Homeopathic Garden, showing the views from the inside and out and demonstrating how the garden seems to merge with the building (© Kelly, c.2004)

At the Sand Rose Project in Cornwall the fact that the garden is physically contained by a wall, extremely private but with open views out to sea, was deemed to be important by research participants (see appendix 2C). The bereaved visitors said the safeness, sense of containment and seclusion was comforting, guaranteeing children could play unsupervised, but also ensuring it was a 'peaceful place to feel alone' (SRPVF 103, 2011). Participants explained that it is only because it feels safe that they are able to 'relax, talk, play and cry':

The peaceful feeling overlooking the sea and watching and playing with the children. The children have played on their own for long periods without needing an adult. It's great to be in an open space feeling safe as it's cut off and private. (SRPVF 96, 2011)

[B]eing enclosed makes you feel at peace and safe, it makes you feel calm and relaxed and because there is so much space you can stretch out and swing round and round without feeling that you are being watched and laughed at but most of all you don't feel like you are being silly – you are free like a bird (SRPVF 48, 2010)

This sense of containment also appeared to help bring families together:

It was great that our 6 year old felt both free enough and safe enough to explore on his own, that was an important step for him, as well as playing, eating and being together in the garden (SRPVF 18, 2010)

The outside space is as important as the internal. It creates space for family members to be apart but remain together. The privacy is paramount. (SRPVF 24, 2010)

At Sand Rose there is a Victorian folly, which appears to have taken on an important role within the project (see figure 6.26). Described as the 'little house at the bottom of the garden' (SRPVF 121, 2011), this building contains a ground floor room for storing garden toys while upstairs there is small room with fire place, books, writing desk and views out to sea. This garden room was discussed by participants who said they read, wrote, drew and painted, while listening to the sound of the sea beyond. The journey to it, winding through the garden was also described as important. The bereaved visitors said they wrote poems and letters about the past, often about or to their lost loved one, but also to those who may come to the folly in the future. Over time a collection of these writings has accumulated and it is seen as a comfort and link to other families that stay.

The research suggests that this space, which was neither house nor garden, performed a restorative role for bereaved families. It can be compared to both the Shelters at Mundesley Hospital (c.1900) and the Garden Room at Barnet Hospital (2010) discussed in chapter 1 (see figures 6.16 & 6.25). It was, in effect, a small (one room – scale is important) contained space within the garden that offered a particular sense of peace and inspiration. It enabled visitors to be in the garden whatever the weather and experience the sounds, sights and smells of the garden too. The folly, it is suggested, has become what Harrison (2008: 42) describes as a 'sanctuary of repose',

offering seclusion rather than occlusion.⁴⁷ This is a particular idea about a “place apart”, which is about retreat rather than distance. For Harrison (ibid.) repose is a state of mind made possible by the structuring of one’s relation to one’s environment. This also links to Bachelard’s (1964: 130) idea of a place of retreat or ‘garden chamber’ for ‘imagining’ which will be discussed in chapter 9.



Figure 6.26. View of the folly at the Sand Rose Project (Butterfield, 2010)

6.3: Offering green space thresholds within healthcare

Gardens have always offered thresholds at a physical, cognitive and symbolic level. They are always points of transition from exterior to interior space and vice versa. But they are also the threshold between the wider landscape and the human or built environment as the *Annunciation* painting by Fra Angelico discussed in the Introduction serves to highlight (see figure 0.1). Likewise, gateways and paths have always provided important physical and psychological transition points (see figures 6.20-6.21).

Throughout history there has been an understanding of gardens as threshold spaces (Otto, 1926; Eliade, 1959; Turner, 2005); that a garden can provide a space between and mediation between architecture and the wider landscape. In Ancient Greece the sacred grove was designed for the purpose of linking the sacred realm of the gods with the profane world of humans (Barnett, 2007; Scully, 1962). In more recent architectural

⁴⁷ Pogue Harrison (2008: 42) makes the clear distinction between sanctuary and shelter – the later being what an animal needs.

studies the role of the garden as both a device and metaphorical concept to frame, mirror and multiply the interior spaces has been highlighted (Teyssot, 2005; Hill, 1998; Vattimo, 1997). The gateways and paths at West Penwith Cemetery provide a contemporary example (figures 6.27 & 6.28).



Figures 6.27 & 6.28. Gateways and paths at West Penwith Pet Cemetery and Natural Burial Ground, Cornwall (Butterfield, 2012)

The research at Maggie's and the other case studies indicate that offering green space thresholds and access to green views throughout the built environment has a positive impact on staff and visitors. This research shows that a garden may be able to offer a range of thresholds that connect to and soften the overall healthcare environment. These thresholds can help people to not just physically go where they need to be, but also to cope emotionally with their situation. Garden thresholds also provide a special type of sanctuary; they offer refuge. They also help staff to deal with the daily pressures of their work.

A further example from the case study research, Trevarna Garden, serves to clarify why offering green thresholds may be important within healthcare. Here the fact that this garden was used by a different constituent group is important because it was able to emphasise that the individual context of cancer care or dementia care made no difference.

A key theme that emerged from the research at Trevarna was this idea that the garden offered a threshold both physically and emotionally for staff, residents and their families (see appendix 2E). Staff talked about the value of the garden not just as the provision of 'somewhere else to take clients' (CS11 female staff, 2012), but much more precisely about the functions of the new garden, offering a different type of space that made their work easier. They described the garden as providing 'talking points' which increased

communication between staff and residents and also between residents and their families. They saw the garden as an opportunity to break down some of the barriers about dementia. A family member said that the garden provided a focus for conversation and enabled him to engage more with his mother:

Before when I came in it was quite difficult to engage [my mother] in conversation...we would sit in almost silence. Since we started doing activities and she's become involved in the outdoors she does engage more. It is less of a chore coming in now as we have something to talk about. (CS18 male relative, 2012)

Another said that a garden is friendlier and less frightening for her grandchildren to visit thereby enabling younger members of her family to cross that threshold and visit the care home:

It has made a difference to my Mum. It is somewhere for her and me to go. I look forward to coming to take her in the garden. It is better than a stuffy sitting room. (CS14 female relative, 2012)

Even for residents who had lost the ability to communicate verbally, staff and family members recognised the importance of engaging them with the outdoor space. They also recognised that within the daily life of the care home it is important to encourage residents and families to move beyond the private rooms and communal sitting room to a space that offers something different. Participants described how they could perceive subtle or more nuanced changes in movement or mood. This might be a smile or a change in posture and stance:

[My wife] doesn't react very much now. But outside when we moved from the hard slabs to the soft ground her reaction changed. Also she heard the water. I felt that she was aware...when we walked onto the grass she stopped and she obviously felt the change. She was more careful. (CS18 male relative, 2012)

The main garden at Trevarna is a courtyard space within the centre of the building, so the question of a path or entrance was not possible to explore. However, in the photo-elicitation interviews participants talked about a particular bench that was positioned close to the entrances to the garden. Unlike all other furniture in the garden this bench is covered and so offers extra privacy as well as some shade and rain cover. In a similar way to some of the more secluded (but not isolated) spaces at Maggie's, this bench offered people "sanctuary" (figures 6.29 & 6.30). Comments included:

The covered seat. It is nice to sit on with a resident. It is a nice private, intimate space and you can see all of the garden. It is good for 1:1 conversations. (CS29 female staff, 2012)



Figure 6.29. Trevarna Garden, Cornwall (2012) (CS13 female staff)

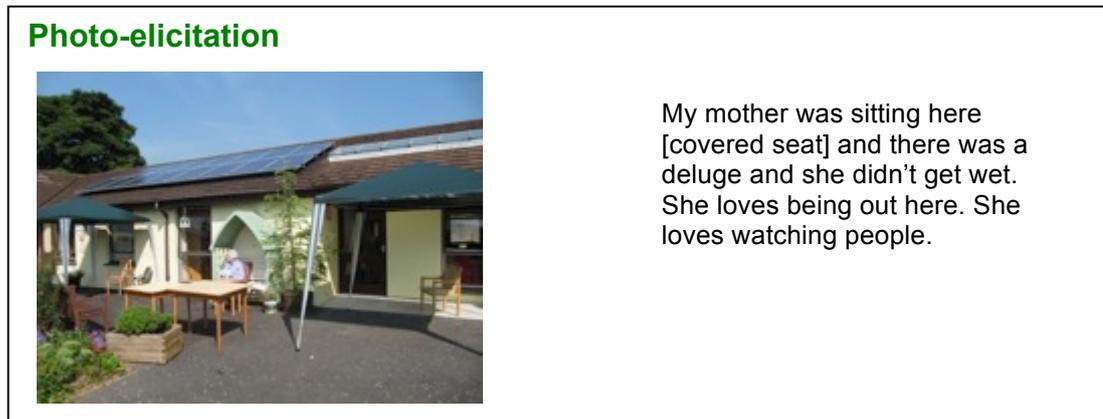


Figure 6.30. Trevarna Garden, Cornwall (2012) (CS14 female relative)

When asked how the garden could be further improved, participants requested more shade, and comfortable and appropriate furniture. They also asked for a conservatory or outdoor sitting room so that residents could 'sit out and look out' all year round. Ironically such a space, described as a 'porch', was part of the original plan but was put on hold due to budget restrictions. The designer who developed the concept for the garden, David Kamp (2013), articulated his concern stating that the porch was really needed for the space to succeed:

The porch is a key element of the garden, serving as the main transition space between interior and exterior with views across the entire garden. It also gives residence *choice* – to engage with the garden at whatever level they wish – directly or indirectly. Choice is a powerful gift. Gardens in general – porches in particular – offer such a gift.

6.4: A re-focus on natural landscape within the healthcare environment

There is now considerable research on way-finding (orientating and navigating) within architecture and there is also increased understanding about how memory, including spatial and sensory navigation, is affected when we are ill (Sternberg, 2009: 125-168). There is awareness of the importance of transitional zones and spatial negotiation between interior and exterior. Designers such as Zeisel (2006), who specialise in healthcare, are beginning to take into account issues of navigation and ways to reduce anxiety within hospitals and facilities for people with dementia. However, there has been less research into the role green space can play in issues of way-finding and spatial transition.

This study identified that patients, staff and visitors prefer the smaller enclosed and protected places intimately linked to the building spaces. Further, that these spaces should retain an element of privacy but not be cut off – contained yet open. They also like garden spaces where they can observe activity. These link with historical examples of healthcare gardens where enclosed spaces were integrated into the daily life of, for example, St Bartholomew's Hospital (see chapter 1). These findings, as already stated, concur with some restorative theories around green space (Appleton, 1975; Orians, 1986; Sullivan, 2005). They also favourably compare to findings by Grahn et al. (2010; 156), who identified the need to make more small garden rooms with the dimension of refuge at the experimental therapeutic garden at Alnarp in Sweden.

Designers of Maggie's gardens, such as Dan Pearson, Christine Facer, Lily Jencks and Kim Wilkie, understand this need for gardens to provide places of refuge and also for the overall landscaping to be intimately connected with the built healthcare environment. The evidence from users suggests that the gardens designs at London, Edinburgh and Cheltenham afford some areas of sanctuary. Wilkie's involvement at Maggie's South West Wales led to the building being re-sited to ensure it made better use of the views. Wilkie (2012a) is critical of architects who allow a building to dominate the design process. He insists on landscape and architecture unfolding together within the opportunities offered by the site. Lily Jencks' work at Maggie's Glasgow Gartnavel engages with this concept and is discussed in chapter 11.

There has been a tendency, as Wilkie points out, to think of architecture as a 3-D envelope and of landscape design as the shaping of the earth on which it sits. This

attitude, as Baker (2012: 2) writes, 'has been at the expense and exclusion of the land and encourages architects to avoid working effectively with the living landscape'. Despite being a nation of gardeners, there is historically and culturally a bias toward the built environment in the UK. As noted in chapter 1, modernist traditions and much post Second World War urban planning divorced architecture from site (Birksted, 1999). This may have something to do with the local climate, but it extends to all key social environments such as schools and hospitals. It may also have something to do with the traditional bias within art education to value architecture as a key art form and it is engrained in design language with, for example, landscape architecture or garden rooms.

Gardening and garden design was traditionally a skill developed through apprenticeships and horticultural training. The professionalization of landscape architecture has done much to elevate the importance of overall site design (Landscape Institute, 2013a). However, the theoretical terrain of landscape design is contested space (Swaffield, 2002) and garden design has remained a specialised branch tending to deal with the private and small scale (SGD, 2013). In contrast, landscape architecture has focused on the design of outdoor public spaces and urban planning with less focus on the "living landscape". Of course, there are notable exceptions, but even today the Landscape Institute describes their profession as primarily about 'knowledge of natural sciences, environmental law and policy planning' (Landscape Institute, 2013a).

Thompson (2013) offers the term 'coded mutualism' to explore the relationship between the interior and exterior environment of schools. The word coded refers to the meanings (which are often contested) given to a school landscape. The idea of mutualism is borrowed from ecology where the relationship between two species is defined by beneficial co-existence. That is where two species can survive independently but not in an optimal existence. Thompson's point being that the school would operate more effectively as a whole rather than considering its interior and exterior as separate. She (ibid.) explains:

The school interior and school exterior are akin to the two species (the building the shark and the outside the pilot fish). The interior and exterior can exist independently but, no matter what quality of education is delivered indoors, an ill-thought out, unplanned, neglected or underutilised outdoor space diminishes the educational experience for the pupil.

This idea of coded mutualism within a school environment could equally be applied to a healthcare environment suggesting that no matter what quality of service is provided inside, non-restorative outside spaces diminish the quality of overall care.

In antiquity, as the Sanctuary at Epidaurus demonstrates, careful attention was paid to the positioning of site and buildings (see figure 1.1). Even more recently designers, as exemplified at Finsbury Health Centre, have understood the role of gardens in helping to make that transition into a health centre from the urban street (see figure 1.17). There are also examples where gardens take precedent over the built environment with places such as Pishwanton in Scotland or Penjerrick in Cornwall. In the medieval period cloisters were used to connect architecture and garden and thereby link the different activities of the monastery and hospital. Even the suburban front garden gate and path provides a buffer zone between public and private space and enables both visitors and inhabitants to move comfortably from one to the other.

This art of siting buildings auspiciously, or geomancy, has particular relevance when talking about healthy places. It links to the ancient Chinese tradition of *Feng Shui* which is used to orient buildings determined by reference to local features such as bodies of water, stars and the compass. It also links to the ancient Indian system of aesthetics known as *Vastu Shashtra* and *Vastu Vidya* used to position and harmonise a building with local energies (Bryden, 2004).⁴⁸ This idea of siting in a way to maximise health has disappeared from modern healthcare. While there is no suggestion that the more esoteric forms of geomancy and divination should be embraced it is suggested that more attention should be paid to the overall site and the relationship between built and green environment. It is interesting to note that the Landscape Institute (2013b) is currently developing a Health and Wellbeing research strand.

If there was more focus on the role of landscape and specifically gardens from the start, it is more likely that the local setting (energies) and context will be understood. As Kamp (2013) states, landscape and architecture should always develop collaboratively to ensure that the site becomes 'not a building on a landscape, but a building in a landscape'. It is about a healthcare setting acknowledging its own locale and creating its own "landscape sanctuary". Here the role of a garden in creating this setting is vital,

⁴⁸ *Vastu Shashtra* emphasises the relationships between the five basic elements of earth, water, air, fire and space.

especially as we are mostly dealing with urban environments. Perhaps the best way to describe this is to consider the harmonising role that gardens can play.

The importance of landscape and architecture unfolding together was stressed by Jane Kelly at Glasgow Homeopathic Hospital. Kelly (2012) describes the garden as 'sculpture that can be walked' and she maintains that the garden functions as a restorative space because:

It is a garden not done by a landscape architect. Because it is gardened and I am a gardener. Because the hospital witnessed it being built and that inspired people to go and do their own gardens. Because you can't disconnect it from the building. When I first walked onto the building site it was just a concrete shell but you saw out, then it was solid. It was like breathing, a rhythm. And you don't have to walk far to see the garden. It is not a backdrop...My continued involvement and close working relationship with them [the staff] is quite unique. It's nice to be trusted.

By focusing on the landscape from the start, the healthcare garden and its thresholds should lead the design. This re-focus brings about a stronger fusion between ecology and technology, as advocated by Marras (1999), in ensuring that the built environment emerges out of, and with a care, for nature. In the next chapter the participants' responses to the sensory rather than spatial dimensions of the gardens are discussed, however, the idea of threshold spaces and the liminal will be returned to in chapter 11.

CHAPTER SEVEN

The Second Garden Essence: Sensory Richness

The second garden essence to be discussed is “sensory richness”. A garden offers a sensory richness that is quite different to the built environment and the author was interested to discover if this was significant for a healthcare context. In the sections that follow the different sensory experiences described by the participants will be discussed in detail. These include visual contrasts (7.1); fragrance (7.2); colour (7.3); sound (7.4); and touch (7.5); as well as the role of sensory memories (7.6) within the gardens.

This chapter will focus on the five traditional senses, although reference will be made to a sense of balance and temperature too. It is also acknowledged that there are many other senses and emotional responses involved in the experience of gardens and these will be touched upon at the relevant points. The evidence of the participants will be discussed in detail and linked back to Maggie’s architectural brief, the individual designer’s intentions, as well as historical examples. Finally, and by way of summing up the findings in relation to the sensory designs, the idea of a sense of belonging will be considered.

All the hospitals near the case studies’ Maggie’s Centres are characterised by large buildings with busy entrances and large car parks. Walking into any one of these hospitals involves negotiating a lot of other signs, lifts, moving people, corridors and information desks as well as a range of sounds and smells. The mix of smells from cooked food to fresh coffee combined with cleaning products and the sound of voices, talking lift doors, mobile phones, beeping machines and traffic can produce an extraordinary feeling of cacophony.



Figures 7.1 & 7.2. The entrances to two general hospitals: *Left*: Leighton Hospital Crewe, And *right*: Western General Hospital Edinburgh, (Butterfield, 2012 & 2011)



Figure 7.3. Inside the Western General Hospital, Edinburgh (Butterfield, 2011)

The experience of the hospital environment has an effect on both patient and family members. Indeed, family members may be more affected because the patient is often more focused on pain or treatment. Cancer patients will experience a range of treatments in hospital, some more gruelling than others. Generally, therapies will inevitably involve an assault on the senses. Colette Parsons (1994: 304) described this powerfully when she wrote:

During my month long hospital stay I had weakened, I had lost weight and my legs had atrophied. I had not eaten because of the high doses of chemotherapy, I had lost my sense of taste and smell, as well as all my hair. I'd been on intravenous food and various other drugs hooked up twenty four a day to a machine that constantly ticked and hummed like a metronome. My ability to concentrate and remember was poor and I had been in a very confined and sterile environment.

It is known that when people are extremely stressed or exhausted their capacity, for example, to listen to music or to stand a strong smell can be limited (Grahm et al., 2010: 123). Furthermore, creating a garden for cancer patients and their families may require special consideration of the various side-effects of cancer treatment. As Macmillan (2010b: 12) advise:

Space needs to be designed carefully and be conscious of the various side effects of cancer treatment. This may alter people's perceptions and they may become very sensitive to odours, light and shade and shapes, especially abstract forms. People become more sensitive to the elements, particularly wind and sunlight. Even glare can cause serious burns.

As already discussed in chapter 2, there has been limited research on sensory design in relation to cancer treatment, although there is some evidence that cancer patients have a heightened sensitivity to colours and smells, especially if receiving chemotherapy. What emerged from this research was that cancer affects a person's senses in different ways and at different points during treatment. Participants recounted how they were over sensitive to certain sensations and also that they experienced the temporary loss of one or more senses. Participants did highlight their sensitivity to strong sunlight and the desire to be sheltered from the cold and the wind. One participant, a gardener who used the outdoor spaces regularly at Maggie's London, said that during her treatment she was unable to be outside because she felt cold, she lost her finger nails and she found the fresh air caused her eyes and nose to stream (ML15 woman with cancer, 2010). However, no pattern of preference emerged from the research. What was more striking was that participants expressed the enjoyment they got from the gentle sensory experiences of the gardens. Gardens offered relief from the relentless experience of treatment as this participant explained:

When people are having treatment for cancer they feel 'people invaded' people are always doing something to you...Gardens offer free form. (ML13 woman with cancer, 2010)

There were no comments about special sensitivity to abstract forms as identified by the Macmillan research (see above, Macmillan, 2010b: 12).

The sensory presence of plants and different materials and the importance of visual, textural, colour and seasonal variation within and around the Maggie's Centres appears to be important. There were numerous comments focusing on details, patterns, contrasts and unusual juxtapositions and textures within the sensory designs. The interviews revealed that participants valued the contrasts of colour, texture, scale, fragrance and season within the gardens. They spoke about their enjoyment of the 'smooth and prickly – the sensory stuff' (ML 26 woman with cancer 2012). They noticed quite subtle seasonal changes; how some days there is strong scent while on others a 'tiny bud is about to come into bloom', a 'burst of pristine colour', 'dew drops' (MD7 woman with cancer, 2011) or the 'jewel in the greenery of that peony rose' (ME18 female staff, 2012). For example:

On every visit I always look at the plants. Marvellous. Last year the large leaves were all dead, I think they needed watering and then I came in one day and they were all OK. (ML9 man with cancer, 2010)

They also commented if there was evidence of insects or wildlife. For example:

We just like the bumble bees. They go into the flowers so quickly – in and out. We remember visiting the Eden Project and there were all these bees on the sunflowers – a garden in action. (MD9 woman with cancer & male relative, 2011)

Participants were negative about those gardens with less “sensory moments”, as was the case at Maggie’s Dundee:

I think the garden lacks the changes of the season. Once the azaleas are over there is not much else (MD6 female staff, 2011)

In the woodland area it would be nice to see bulbs – daffs and tulips. There is not a lot of colour (MD7 woman with cancer, 2011)

In winter the garden looks drab and into December, January and February there is little of interest. Where are the snowdrops and crocus to give brightness and hope for the forthcoming year? Where are the daffodils followed by tulips to reinforce the feeling of renewed life? That is what cancer patients wish to experience, hope for the future. (MD14 man with cancer, 2012)

The Centre Head at Dundee (Howells, 2013) said that the predominance of slow-growing shrubs and the lack of bulbs and flowering perennials had meant she felt she was still waiting, even into the fourth year, for the garden to mature. She said (ibid.) Dundee needed a garden that could have been established more quickly to avoid the sense of disappointment when people see ‘things are not taking off’ or ‘nothing seems to be happening’.

7.1: Visual contrasts

In emotional states research has shown that sense stimuli shift from the so-called refined senses (vision and intellect) to the more archaic (touch and smell) (Sternberg, 2009). Participants in this research were asked to describe their memory of their first visit to both the hospital and the Maggie’s Centre. A common response was to say they could remember little visually suggesting that when people are under stress their visual senses are reduced. For example:

When I first came here I saw nothing. (ML33 woman with cancer, 2012)

Another common response was to mention a detail about the garden:

I came here first in the spring. The magnolias were set against the orange. It was a sigh of relief that this was a place for me. It was the second time I had cancer and this was harder for me. But this place was a little haven for me. (ML27 woman with cancer, 2012)

The research indicated that the gardens, because they engage the senses in a different way to the built environment and medical processes, could offer relief and a different focus.

Research participants spoke about some of the more unusual plants that had caught their eye and they expressed enjoyment and curiosity at interesting visual juxtapositions or rhythms (see figures 7.4-7.9). At Cheltenham participants commented on the use of wood for its 'warmth' and 'natural feel' both inside and out (see figure 7.6). At London the unusual and tropical plants were valued, especially the silk tree in the main courtyard (see figures 7.8 & 7.9).



Figure 7.4. Maggie's London (2010) (ML2 female staff)

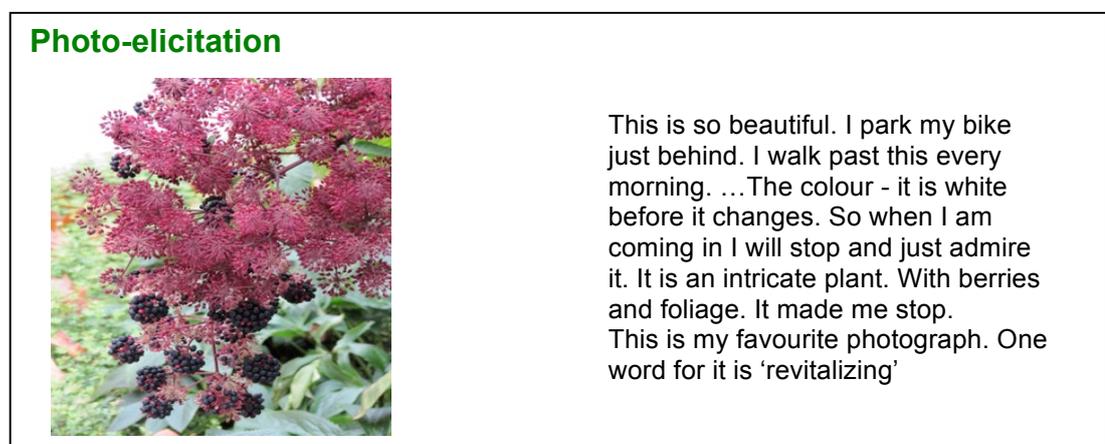


Figure 7.5. Maggie's London (2010) (ML7 female staff)

Photo-elicitation



I've tried to get in amongst the flowers and then get the building in the background. This area ... is mainly about smell and scent, more so than colour. When I was entering the scent hit me at the point and the wood further emphasises the senses. The whole building or experience of the building works on all the senses. The touch of the wood is very warm, not sharp. At the entrance you have flowers, colours and sound.

Figure 7.6. Maggie's Cheltenham (2011) (MC11 male visitor)

Photo-elicitation



That's my favourite plant. I really like that courtyard. It is like a tropical rain forest. It is quite dark. I like the tree canopy – love the leaves, especially the light coming through them. And where else would you find it in London. I think people gaze at it. People always ask what it is. People will ask what plants are and people comment, especially in spring.

Figure 7.7. Maggie's London (2012) (ML34 male volunteer)

Photo-elicitation



I love this tree. In spring. It is very rare. It is so beautiful. I eye it up all over the building. I love this view. This is my favourite photograph.

Figure 7.8. Maggie's London (2011) (ML4 female staff)

Participants commented on the use of pebbles around the edges of the buildings at Edinburgh, Dundee and Cheltenham. The contrast of texture, colour and shape seemed to be appreciated - some talked about a river or moat effect created by the pebbles (figure 7.9).

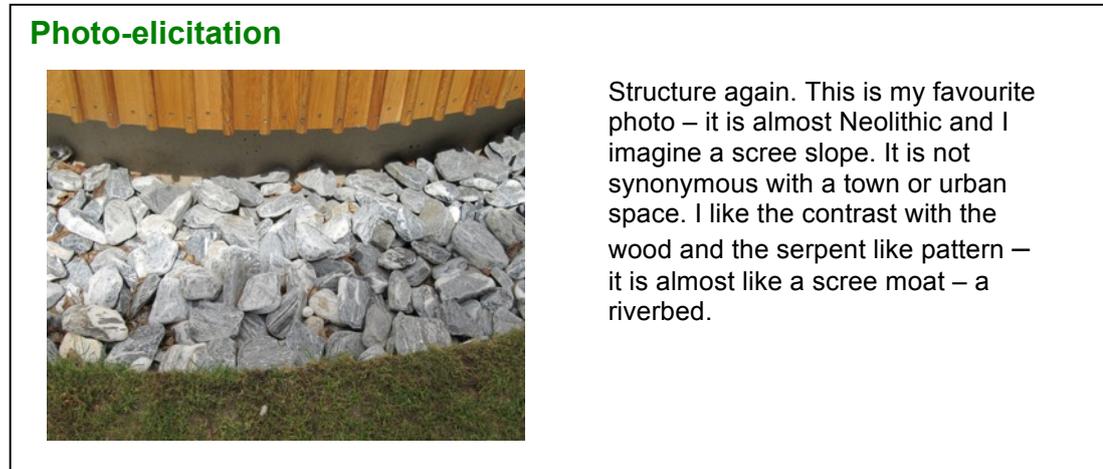


Figure 7.9. Maggie's Cheltenham (2011) (MC7 man with cancer)

Participants also valued the play of light in the gardens and talked about the effects of light and shade in relation to the design, trees and planting. They acknowledged the importance of natural light within the centres too and how the gardens could reinforce or contribute to a special visual quality. Participants commented on the light airy feeling and how different this was to their experience of other hospital buildings. Even on dull or dark winter days, visitors said the buildings felt full of light and warmth and that this was uplifting and positive. For example:

My first impression of the centre was the light...it was not how I expected a building by a hospital to be (ME13 female volunteer, 2012)

And the light. Even in winter it is still OK. (ME4 woman with cancer, 2011)

The presence of greenery within and round the buildings was considered soothing. It was described as that 'inside outside feel':

Plants make a place feel alive. (ML14 man with cancer, 2010)

I can't imagine the centre without greenery. It wouldn't work. (ML8 female staff, 2010)

It is so bright. This is a great idea. There are no grim corners. I can't imagine it without plants. (ML9 man with cancer, 2010)

Participants at London commented upon how the light from the internal courtyards affected the different spaces. They talked about the play of light and shadow created with the large screening windows with the birch trees behinds (figure 7.10)



Figure 7.10. Maggie's London (2012) (ML25 female staff)

Participants at Cheltenham expressed surprise that such a small building could feel so comfortable and open and the high horizontal windows were often noted.

And the views are important. That first visit I also really noticed the water [the river Chelt] because the door was open to the balcony. I could feel the breeze. It is an inside outside effect. The green is important. (MC1 female volunteer, 2011)

The research shows that having an interesting view to scrutinize or simply observing the play of light can be helpful within a healthcare centre. It is important to remember that when people or relatives are ill there can be a lot of time to sit and stare. Previous research has already demonstrated that people who are unwell can benefit from views of greenery (Moore, 1981; Ulrich, 1984; Heerwagen & Orians, 1993; Tennesen & Cimprich, 1995; Kaplan, 2001; Kuo & Sullivan, 2001). There is also considerable research on how sunlight can boost moods and physiological responses, whilst that a dearth of sunlight can lower them.⁴⁹

Research has begun to show that besides changing our moods and behaviour, light can also affect our immune systems, thereby changing the way we heal. Sternberg (2009: 45-52) discusses recent work on how mood responds to different wavelengths,

⁴⁹ For example, there is a form of depression called 'seasonal affective disorder (SAD) which is brought on by lack of sunlight.

intensities and rhythms of light. Our bodies are in tune with the rhythms of the sun and our inner body clocks respond to natural light. This process is called circadian rhythm, a term derived from the Latin for 'about a day'. Patients and relatives may well have had to spend time in hospital, around the clock, with little access to natural light. Ensuring there is access to natural light and green space can therefore help people to re-balance their own body clocks.

7.2: Fragrant and edible plants

The research revealed the importance of fragrant plants for many of the gardens' users. While people had personal preferences for certain types of fragrant plants there were no negative comments about smell. Participants talked about the pleasure of sniffing a particular bud, brushing past a herb or simply enjoying the smell of outdoors (figures 7.11-7.13).

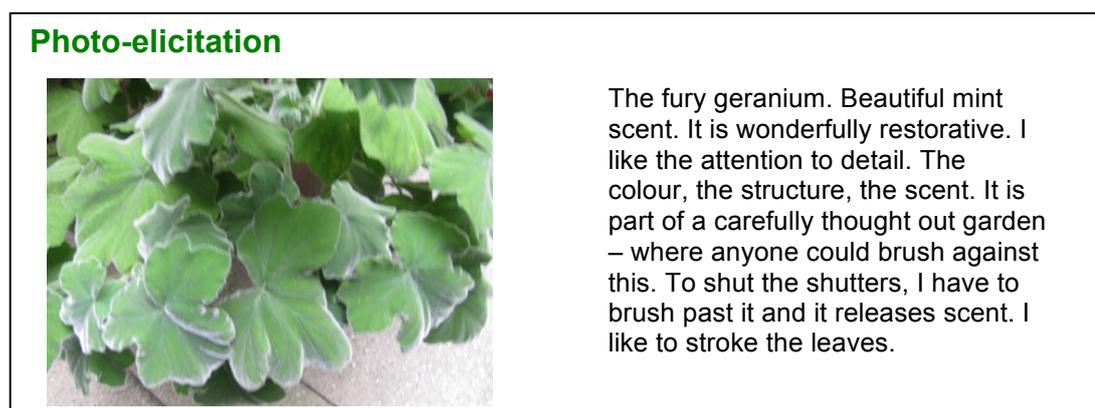


Figure 7.11. Maggie's London (2011) (ML22 female staff)

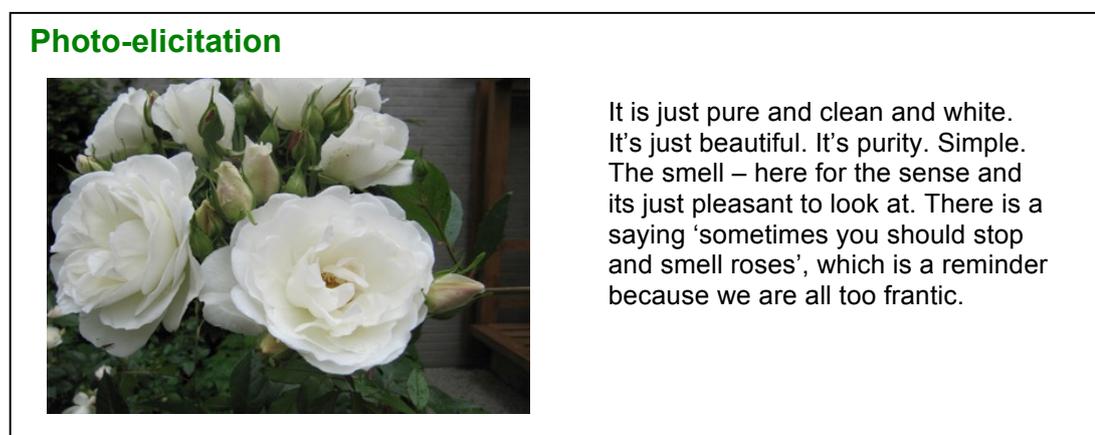
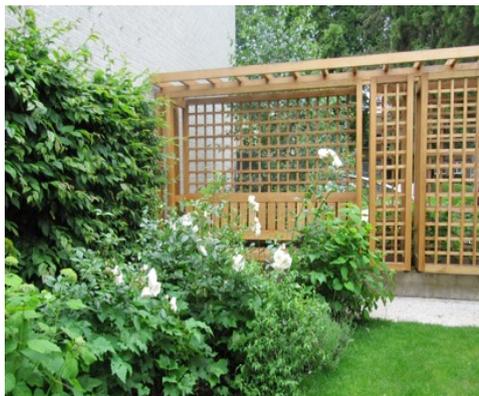


Figure 7.12. Maggie's Cheltenham (2012) (MC23 female staff)

Photo-elicitation



This is more for the flowers than the seating area. It is amazing how some plants look mature. I remember when the centre first started they were so small. I love the fact that the plants are scented. The garden tickles all your senses. And it's nice to be able to smell as I can't taste anything at the moment.

Figure 7.13. Maggie's Cheltenham (2012) (MC26 woman with cancer)

The research suggested that participants found fragrant plants calming and soothing. The use of aromatic herbs and plants for medicinal purposes dates back to the early Egyptian era. Romans and Greeks also constructed aromatic gardens. As outlined in chapter 1, during the medieval period gardens were intimately connected to the practice of medicine and the modern herb or healing garden has its origins in the 'garden of physik' of which the Chelsea Physic Garden is perhaps the most famous (Minter, 2000 & 2005).⁵⁰

The twentieth century saw the promotion of herbalism with the establishment of the Society of Herbalists (1927) but also its decline following the Pharmacy Act of 1941, the establishment of the National Health Service in 1948, and the increasing focus on prescription drugs. The Medicines Act of 1968 lifted the veil from herbalism again and there has been a persistent strand of interest in this area. Gardeners and writers from Maude Grieve (1931) to Geoffrey Grigson (1955), and Rosemary Verey (2001; Verey & Lees-Milne, 1980) to Richard Mabey (1996) have continued to pursue an understanding of herbs and their healing and culinary properties (Minter, 2005; Brown, 1999: 191-220).

In recent years there has been a general increase in interest in herbal medicine and other holistic therapies, such as aromatherapy and homeopathy in the West (Chevalier, 2000; Stuart, 2004; Minter, 2005; Living Medicine, 2013). One reason for this may be increased understanding of stress related illnesses and the fact that such therapies

⁵⁰ It is noted that a herb is defined as any plant that has an actual (proven) or legendary quality beneficial to mankind.

tend to take a more holistic approach where attention is given to the physical and emotional make up of a person.

The Kew Foundation (2013) is currently researching medicinal uses of British flora. The study began with species traditionally used to treat certain conditions, but has now extended to identify compounds associated with the medicinal use of over 350 British species. Kew is also studying traditional uses of medicinal plants with a project called Ethnomedica (2013).⁵¹

About 80 per cent of the global population relies on herbalism for basic healthcare (Stuart, 2004; Minter 2005). Plants and herbs such as lavender (*Lavandula*), jasmine (*Jasminum*), chamomile (*Anthemis*), basil (*Ocimum basilicum*) and rose (*Rosa*) all believed to elevate mood. Likewise thyme (*Thymus*), rosemary (*Rosmarinus*), mint (*Mentha*), geranium, hyacinth (*Hyacinthus*) and lilac (*Syringa vulgaris*) are all enjoyed for their particular fragrances. Traditional aromatherapy knowledge has shown that certain plants can relieve specific symptoms such as anxiety, insomnia and headaches.⁵² It is also understood that essential oils may affect a number of biological factors including heart rate, blood pressure, breathing and immune function. Plant extracts and plant properties are also a key ingredient in many modern drugs, including those that treat cancer (Sumner, 2000). Forty per cent of all modern pharmaceuticals are derived from natural plant material (Stuart, 2005).

Not all herbal remedies are proven to be effective and not all plant remedies are gentle and harmless – some toxic poisons are plant extracts. Medicinal plant remedies continue to be negatively associated with myth and folklore. There remains a basic conflict between the theory that supports herbalism and one that backs orthodox medicine (Minter, 2005: 23). There also remains deep suspicion about the healing properties of plants as the Medicinal Garden of the Royal College of Physicians (2013) in London attempts to demonstrate, stating that ‘many plants are of no medical use at all’ (Oakley, 2009: 2). However, this does not mean that all plants are of no medical value. Herbal medicine regulation is a topical debate with the government currently

⁵¹ This project is co-ordinated with the help of the National Institute of Medical Herbalists, Chelsea Physic Garden, Natural History Museum, Royal Botanic Garden Edinburgh, National Botanic Garden, Wales and the Eden Project.

⁵² Aromatherapy is defined as the practice where essential oils, extracted from plants, are used for therapeutic benefit through aerial diffusion, massage, baths and skin care, for example.

working to establish a statutory register for herbal practitioners (Consumers for Health, 2013).

Despite some studies that demonstrates that fragrances such as jasmine (*Jasminum*) can calm the mind (*The Telegraph*, 2010) there is still little medical research into the efficacy of plant aromas. Other studies highlight the importance of scent in the association and triggering of memories (Sternberg, 2009: 88-89). Whether this is more about the process of conditioning or a placebo effect, the role of fragrant plants and the idea that a plant has a healing property appears to be important within healthcare gardens.⁵³ Indeed, Stuart (2004: 9) makes the point that the placebo effect of plants has played a role in all ancient medical systems.

The strongest memory of a space is often its odour and if you ask people what their memory of a hospital experience was, they will often say 'that hospital smell'. A garden, this research suggests, can offer a powerful contrast to the smells of a hospital. A garden can hold and protect certain fragrances while shielding or restraining smells that are part of the city or wider landscape. A garden's role as a 'space of scent', as described by Pallasmaa (1994: 32), should not be underestimated. In the seventeenth century, Burton (1638: 261) wrote about the common practice of improving the air quality and hence state of mind with fragrant flowers in window boxes or vases to create 'delightful perfume'.

Within this research no pattern of preference for aromatic plants emerged (lavender (*Lavandula*) appears to be a plant people love or hate). What the research did show, however, was that generally people attached importance to fragrance in the gardens. Participants also requested more systematic inclusion of aromatic and medicinal plants and herbs. This was not a request for a real, practical physic garden but for interest and sensory delight. Participants were interested in the links between plants and health. They know, for example, that there is a connection between plants and some cancer drugs; that aromatherapy is used in palliative care and that some herbal products can help with sleep disorders. Clearly there is potential here to explore this subject further without having to actually endorse or put into practice any form of herbal medicine. One participant at Dundee said Maggie's should create themed gardens

⁵³ This is a Pavlovian process of conditioning.

using medicinal plants such as an 'insomnia garden' and an 'anti-stress garden' (MD17 female visitor, 2012).

At North Devon Hospice a *physik* garden has been developed precisely within this context (see appendix 3C and figure 7.14). This area of the garden was planted in 2010 by the gardener, Colin Porter, and with the support of Liz Williamson of Reading University, a leading expert in the medicinal value plants. The aim with the *physik* garden is not to grow medicinal plants for use but rather to enable therapists who work at the hospice to explain to patients what benefits certain plants may bring. The kitchen garden produces food for the café, as well as offering opportunity for patients to undertake a little horticultural therapy, with raised beds accessible to patients in wheelchairs. The garden provides a context for the situation people find themselves in. Today most medicines people receive are in the form of injections and pills. Many of the treatments they receive involve large white machines and being surrounded by people in masks and gowns. Seeing plants may perhaps have some medicinal role in humanising these medical processes.

The GHH garden (see appendix 3D) includes many plants that are a source of herbal medicinal remedies, not for use but for interest. Lavender (*Lavandula*) and *Eucalyptus* (are planted with various mints (*Mentha*), fennels (*Foeniculum*) and yarrow (*Achillea*), for example. There is an area where plants have been chosen specifically for their links to homeopathy, such as black bamboo (*Phyllustachys nigra*), birch (*Betula*), fox glove (*Digitalis*) and lady's mantle (*Alchemilla*) (see figure 7.15).



Figure 7.14. Photographs of the Physic Garden at North Devon Hospice (Butterfield, 2010)



Figure 7.15. Photographs of the planting at the GHH (c.2005)

It was noted that participants found considerable enjoyment from having edible plants such as vines and wild strawberries on site in Maggie’s London (figure 7.16).

Photo-elicitation



It’s the grapes. It’s changed. I was shocked to think we had grape. They taste almost like blackberries. The leaves started to go last week so you can actually see the grapes. I often pick them as I go past. I sit and have lunch [here] quite often. It’s a place for a break for the staff. If it’s a nice day it is haven.

Figure 7.16. Maggie’s London (2011) (ML22 female staff)

The gardener Rosemary Creaser (2010), also talked of how the edible plants provided a way to encourage people to explore and experience the garden spaces:

One of the things I am always trying to do is to encourage people to investigate different spaces. For example, on one of the roof terraces we have a couple of planters with alpine strawberries and at certain times of the year centre users are encouraged to come and pick them.

A regular request articulated across the case studies was for more “practical” and edible plants. For example:

Can we have an edible garden – plant things we can eat, medicine, herbs such as nettle, mint, camomile, nasturtiums, lavender and rosemary. (ME visitors’ book comment 2012-12)

The new centre in Swansea, Maggie’s South West Wales, will include an extensive vegetable garden. Designer Kim Wilkie said he had wanted to ensure that fresh food

could be grown for the centre, but also as a catalyst for volunteer involvement (Wilkie, 2012a). Wilkie sees the vegetable garden as a positive element that will encourage interaction between family members and the wider community.

Culm Valley Integrated Centre for Health, Devon includes both a small physic garden and a vegetable garden (see figure 7.17 & appendix 3). While the vegetables do have practical application, being used both in the café and the wider community, the physic garden is about presenting the idea that plants are connected to health. Another project, the Incredible Edible Todmorden in Yorkshire, is also interesting here, although it is not directly connected to health (Graff, 2011; Incredible Edible, 2013). It provides just one example, where a small initiative to plant herbs around the town has slowly grown into an extraordinary community initiative to include the cultivation of large vegetable plots and even several orchards.



Figure 7.17. Photographs of Culm Valley Integrated Centre for Health, Devon (2010)

7.3: Restorative colour

Within the Maggie's research there were many comments about colour in the gardens. Participants appreciated certain colour combinations and noted the calming or uplifting effect of colours. Their responses were personal and, when questioned further, their preferences often related to their own associations with certain colours or plants thereby suggesting, as with scent, that colour appreciation has a lot to do with conditioning. Participants also commented on the lack of colour, especially in relation to Maggie's Dundee and London. For example:

I don't think of anything of the garden, it's not that special really, just green things growing. So what! Big deal! (ML visitors' book comment 2011-2012)

Designer, Dan Pearson's choice of planting at Maggie's London and his decision to exclude colourful planting in preference for a more subtle focus on blue and green

texture and variety was criticised by participants. However, as the garden has matured his planting choices appears to have become better appreciated:

The more I see it develop the more I see what Dan Pearson is getting at. He has a visionary capacity. There is a thing about blue and green and the healing qualities of blue and green. (ML18 woman with cancer, 2011).

At Maggie's Cheltenham the designer, Christine Facer, chose to provide two different colour experiences (see appendix 1D). Blues and whites dominate the enclosed inner garden while the main flowerbed leading to the centre is a riot of yellows, oranges, purples and red. The research showed a preference for the more colourful planting (figures 7.18-7.20).

Photo-elicitation



The colours – I love purple and oranges. The flowers are poking through. There are splashes of colours within the green. I am a gardener and I tend to mix colours in my own garden. I don't like colour schemes. It makes them look more wild.

Figure 7.18. Maggie's Cheltenham (2012) (MC24 male staff)

Photo-elicitation



I just love these flowers. They seem wild, not regimented. Natural. Colourful, joyful. They bring a smile to my face. They last. There is a sense of permanence. I would like some seeds. This is a patch of living, breathing, wild, abandoned excitement and permanence.

Figure 7.19. Maggie's Cheltenham (2011) (MC22 female volunteer)

Photo-elicitation



I am impressed with the colours. I love the profusion of colour and am naturally drawn to that. It jumps out at you walking up the path.

Figure 7.20. Maggie's Cheltenham (2011) (MC18 woman with cancer)

There are numerous theories about colour in relation to healthcare gardens but there is little consensus and virtually no evidence-based research. One study in relation to cancer care identified problems with certain strong colours for cancer patients (Block et al., 2004).⁵⁴ At the therapeutic garden at Alnarp in Sweden, they have toned down their colours following reactions from participants in the programme. They have increased the blue and white flowers and reduced the red, yellow and orange because people found it 'difficult to deal with these intense colours' (Grahn et al.: 2010, 156). It is generally accepted that colour affects our moods and that certain colours such as blue and green are considered calming, whereas others such as red and yellow are considered energising.⁵⁵

Colour theories, as Blaszczyk (2012) or Gage (1993 & 1999) demonstrate, are culturally and historically conditioned. Here, scientific research (Sternberg, 2009) suggests that both evolution and learnt behaviour play a part. Blaszczyk recounts that hospitals were among the first institutions to understand how colour affected human psychology. She charts how 'functional colour' and 'mood conditioning' led to improvements in safety and comfort initially across institutions and then within the home in mid-century America (ibid: 215-241). Colourists such as Faber Birren developed the DuPont Safety Colour Code for industry establishing a set of standard

⁵⁴ Although this study was not specifically talking about plants the advice was to avoid using very bright, warm colour tones (such as red) that may provoke anxiety, dull or grey colour tones that may cause feelings of depression, and avocado or yellow-green tones associated with nausea in chemotherapy, surgery or radiation units.

⁵⁵ Burton wrote in, *Anatomy of Melancholy* (1638: 261), 'Of colours it is good to behold greene, red, yellow and white, and by all meanes to have light enough, with windows in the day, wax candles in the night...'

colours in relation to health and safety (figure 7.21). This standard has, it can be argued, a permanent place in popular culture.

Figure 7.21. A Safety Colour Code for Industry, DuPont Company (Hagley Museum and Library, 1944)

Within garden history the value of plant colour is poorly documented. Twentieth-century gardeners such as Vita Sackville West at Sissinghurst, Christopher Lloyd at Great Dixter, or the Dutch plantsman, Piet Oudolf, encouraged popular interest in plant colours and combinations (especially the use of swathes of long-lasting colourful perennials). In his Oxfordshire garden, known as The Grove, David Hicks (1999) created a series of ten outdoor “green rooms” with hornbeam walls, linked by corridors. Flower shows, such as Chelsea and Hampton Court, have also provided opportunity for designers to take plant colour design to new dimensions. Yet the research and understanding of the therapeutic benefits of certain colours remains thin.

The positive effects of the colour green have long been noted (see chapter 1). The association of green with calm has filtered through into many aspects of life including, for example, the use of green in the operating theatre or the so-called green room where nervous actors congregate before going on stage. However, with both these examples differing theories as to role of the colour green abound. The green of operating scrubs may have more to do with cost of laundering blood-stained fabrics and less to do with easing the eye of the surgeon. There are accounts from the time of Shakespeare that actors would prepare for their performances in a room filled with plants and shrubs in the belief that the moisture would benefit their voices. Southern (1953) suggests that the term ‘green room’ may originate from the central space known as ‘The Green’ in the medieval period where actors performed, and which was often grass covered rather than relating to an area where actors waited. The suggestion is that green has more to do with grass and less to do with calmness than subsequent history implies.

Evolutionary scientists use the evidence of DNA to indicate why we find green so relaxing (Sternberg 2009). Geneticists have shown that the photoreceptor pigment gene that emerged first in evolutionary history is the one most sensitive to the spectral distribution of sunlight and to the wavelengths of light reflected from green plants (the yellow-green range). The other two emerged much later – the ability to respond to shorter waves of light (the blue range), and to longer wavelengths (the orange-red range). This suggests that perhaps ‘green is the default mode for our brains. It was the background we were weaned on in primordial times, the background told us we were safe, the background that lulled us to sleep against a darkening sky’ (ibid.: 39-40).

Plant colour associations have strong historical, cultural and religious associations that vary across the world. The extensive use of orange marigolds (*Tagetes*) for contemporary Mexican Day of the Dead celebrations, for example, relates to the ancient Aztec belief that the dead most easily recognise orange. Scientists (Sternberg, 2009) understand that activity in the brain reward pathways, which can get attached to colours (and scents) through a form of learning called ‘Pavlovian conditioning’ as already discussed. It is likely too, that there are effects around the proportions and mixtures of colours. However, little is known about the underlying cognitive mechanisms responsible for such effects.

There has been some business and marketing research suggesting that blue is calming, and red and yellow stimulating (Sternberg 2009: 4). Painting accident and emergency department walls blue has been found to calm aggressive patients, for example (Mazuch, 2005: 50). Only very recently a new (and first) study has shown that the colour green has a contributory effect towards the positive exercise outcomes of physical and psychological wellbeing (Akers et al., 2012). In this visual sensation study the effects of green were contrasted to grey and red. Current research at ECEHH (2013) includes a review of the restorative potential of blue and green space and this work will no doubt lead to deeper understanding of the effects of colour (as well as the therapeutic use of different types of landscape and waterscapes) on human health.

The colour planting designs at Maggie’s London and Cheltenham demonstrate how careful consideration by a designer does have impact on the garden’s users. However, research across the case studies revealed that there were conflicting views about the use of colour. What is clear is that a healthcare garden does not need to focus simply

on so-called calming colours. Participants clearly enjoyed strong accents of bold colourful planting, which they saw as dynamic and joyful (figures 7.18-7.20). There are some strong and contrasting theories about the use of red in restorative gardens. For example, the Combat Stress Therapeutic Garden showcased at Hampton Court in 2010 (see appendix 3E) emphasised the importance of not using red plants in the garden because it could symbolise danger to its occupants who were suffering from post-traumatic stress (Wolfe Murray, 2010). A volunteer gardener at Maggie's Edinburgh was emphatic that a restorative garden should not include any reds or blacks. The extensive use of red in the design of the garden at the Macmillan site in Warwick evoked a mixed response suggesting that it might be one reason for its lack of use. There was no consensus and a member of staff stated:

We decided we didn't want royal blue [which was the initial colour offered]. Red has been a good choice. The garden holds the colour and gives extra interest throughout the year. People call it the fire station – it is a landmark. (MACW10 female staff, 2011)

Likewise, at the North Devon Hospice the gardener, Colin Porter, said he had developed an area at the bottom of the garden using reds precisely because he wanted the area to feel dynamic and vibrant (appendix 3C).

At GHH (see appendix 3D) careful attention was paid to the colour scheme for planting, linking it not only to the interior design but also inspired by the principles of homeopathy. This garden perhaps provides an exemplary model, partly because care has been taken to ensure that the integrity of the initial colour design has been maintained. So often, as will be discussed in chapter 10, well thought-out, original colour schemes are lost in healthcare due to haphazard maintenance programmes.

At GHH there is an extraordinary richness in the colours (and textures) yet the colours are very soft and gradually progress from whites, greys and yellows through to pinks and deeper reds at the bottom of the garden. In particular, white plants are used through the season starting with white tulip (*Tulipa*) and early flowering trees such as *Magnolia stellata* and silver birch (*Betula pendula*) moving to white *Verbascum* and foxgloves (*Digitalis*) and finally to summer-flowering white *Cimicifuga simplex* and *Crambe cordifolia*. These 'calming' whites dominate the main areas of the garden while stronger colours such as the reds and pinks of *Monarda*, *Ecinnacea* and *Lavatera* come through in some borders towards the bottom edge (Galbraith, 2004). Lead artist and

gardener at GHH, Jane Kelly, states that it has been important for her to continue to work in the garden to maintain the colour balances (Stevenson, 2003).

7.4: Sound and silence

The Maggie's sites, as is the case with many healthcare gardens, face particular challenges where sound is concerned because they are so often in urban environments surrounded by the noises of the city and busy hospital, including the relentless din of traffic and sirens. The most common sound recorded during the site visits to a range of healthcare gardens around the UK was the hum of air conditioning units. Yet participants highlighted the importance of the sounds specific to the gardens, such as birdsong, insects, rustling grasses or trickling water. There was a general acceptance of the urban background noises at Maggie's London, but still appreciation that thought had been given to protecting the centre from the busy street (figure 7.22). Comments included:

I love the walk. It's right in the middle of London. The noise of the traffic is somehow ameliorated. That's what that garden is – it's a reassurance. (ML16 woman with cancer, 2010)



Figure 7.22. Maggie's London (2012) (ML32 female volunteer)

The sound of water was also commented upon (see figures 7.23 & 7.24). The water features at Maggie's Edinburgh and Cheltenham were appreciated and a consistent request at Dundee, London and at other case studies too, including the Sand Rose Project.

Photo-elicitation



The calming sound of water as you walk to the centre. This is a new feature. It is rather lovely. I love the sound going onto the pebbles.

Figure 7.23. Maggie's Cheltenham (2011) (MC20 female volunteer)

Photo-elicitation



Water – the sound of water. It is always tranquil. The ducks are fun. It is a sun trap. Sunshine. Tranquillity. I have stood out there – I would spend more time there if I had time.

Figure 7.24. Maggie's Cheltenham (2011) (MC22 female volunteer)

Of course, there is a long history of association between healing places and water – one only has to think of places such as Lourdes and Bath. The role of water within a healthcare garden has long been considered important and was recently highlighted again in the Forestry Commission Report (Shackell & Walter, 2012). What the research for this thesis suggests is that participants valued the sound of water more than any other sensory experience of it. Participants indicated the sound of water can take people's attention away from other sounds or distractions. They said the sound of water was calming:

The bamboo and water feature give a calm, zen-like aura which settles the mind as you enter Maggie's – a connection with nature is a connection with life. (ME24 woman with cancer, 2012)

I would love a water feature. Down by the bench there [below the terrace]. You would also hear it on the terrace. Something simple with the noise and the effect of running water. That's the thing missing... (MD6 female staff, 2011)

Participants indicated that what the gardens offered was a chance to hear silence; not in the sense of noiselessness but rather wordlessness. The impact of the sounds (and silence) within the garden was strongly expressed by the families at the Sand Rose Project. This garden, perhaps more than any other of the case studies, is able to shut out all extraneous noise. Participants referred repeatedly to the fact that this garden was completely shielded from traffic noise. The range of birdsong, the sound of plants and leaves in the wind and the ever-present sound of the sea were appreciated.

The great thing about the garden at Sand Rose is that there is no traffic noise, just the sound of the sea and any birds attracted into the garden. So you cannot help but feel extremely close to nature, which is calming and soothing and takes all your stress away. (SRPOS 10, 2010)

Henry David Thoreau (1853) wrote, 'I wish to hear the silence of the night, for the silence is something positive and to be heard...The silence rings. It is a musical and thrills me'. At Sand Rose the silence was commented upon. Because people stay at this site over a period of a week, participants recounted stories of wandering through the garden at night listening to the 'sound of silence' (SRPOS 31, 2011).

Research has established the restorative effects of natural sounds for people suffering from stress (Sternberg, 2009; Winterman, 2013). Birdsong is of particular interest because it has been identified as both relaxing people physically, but at the same time stimulating them cognitively. Evolutionary scientists (ibid.) argue that people find birdsong relaxing and reassuring because over thousands of years they have learnt when the birds sing they are safe. Birdsong such as the dawn chorus is also a signal, a natural alarm clock. A study into the effect of birdsong on our brains and how it may improve mood and attention is being carried out at University of Surrey (Ratcliffe, 2013). In contrast, Turner (2012) recently charted the 'power of silence' across the world's religions. It is increasingly understood that sound and silence have profound effects on the nervous system, on our emotional responses to the world around us, and on nerve chemicals and hormones which affect the immune system.

Surely sound must affect the way we heal. Although there are few conclusive studies, there has been considerable research on the effects of music on pain and there is

some evidence that listening to music can reduce medication for pain relief (Sternberg, 2009: 72). There are also studies suggesting that loud sounds within a hospital environment increase stress response and hence impede healing. Conversely, hospitals, airports and service stations have been experimenting with the use of the recorded sound of birds to reduce patient or passenger stress and create a calming atmosphere (Winterman, 2013; The Sound Agency, 2013; World Sound Project, 2013).

The research for this thesis suggests that a garden can offer what Pallasmaa (1994: 30-31) describes as 'acoustic intimacy'; the idea of a space conveying a sense of welcome, tranquillity and intimacy through its auditory experience. The opposite would be to convey a sense of monumentality, freneticism or even hostility. A Maggie's participant described her experience of seeking out Kew Gardens in London after her operations. She said:

I would go there often. It was a 'sensory quietness'. I was drawn to the outside. I went back and back to Kew. It was restorative for me. (ML18 woman with cancer, 2011)

The findings suggested that even within an urban and busy hospital environment a garden has the ability to generate acoustic intimacy. A garden, if carefully designed, can develop its own characteristic sounds while at the same time soften or shield against other sounds. Nowhere is this made more explicit than in the some of the city community gardens around the world such as the Liz Christy Garden in New York City (figure 7.25).

Figure 7.25. The Liz Christy Garden, the first community garden founded in New York City (1973), (© David Loggins, 2007)

7.5: The shape of touch

Our skin reads texture, weight, density and temperature. A place with plants and trees provides experiences of temperature, moisture, weight, density and light that people are able to sense. This is the “the shape of touch” – our haptic sense. As people move through a garden their bodies respond proprioceptively to changes in sensory experience that include changes in scale, balance and proportion.⁵⁶

Research participants frequently used the words ‘calm’ and ‘soft’ to describe the gardens (MEOS 4, 2011; MCOS 1, 2011; MLOS1, 2011; MDOS5, 2011). They also looked for spaces that were protected and conveyed a sense of warmth or shade. Participants commented on the importance of strong tactile contrasts and opportunities to wander through the gardens, and of having a variety of places within a garden to assist with their moods. Comments ranged from describing the textures to the sense of comfort generated by a huge leaf (figure 7.26).

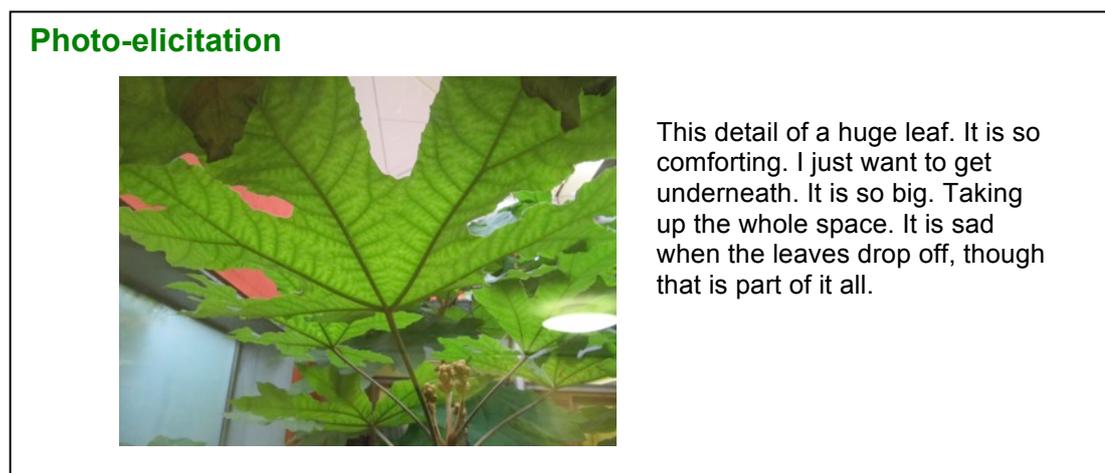


Figure 7.26. Maggie’s London (2010 (ML5 female staff)

Participants explained that as a patient they often underwent unpleasant physical experiences, some of which were quite harsh. In contrast, the gardens offered opportunities to regain or rebalance their sense of touch through a range of gentler tactile experiences. This was described in a variety of ways such as feeling a smooth leaf, touching the bark of a tree, enjoying the warmth of a sunny bench or the cool shade of a tree.

⁵⁶ Proprioception is defined as the internal cues, including sensation, from the inner ear and from the muscles and joints. The haptic sense is the ability to form an image or object through the sense of touch.

The research showed that the tactile qualities of the gardens can play a role in helping people to identify a place as homely or not. As Pallasmaa (1994: 33) writes:

There is a strong identity between the skin and the sensation of home. The experience of home is essentially an experience of warmth. The space of warmth around a fireplace is the space of ultimate intimacy and comfort.

More generally the research highlighted the importance of a variety of tactile opportunities. As one participant put it:

A restorative garden should have beautiful flowers and plenty of places to sit and shade. (MC30 female visitor, 2012)

Participants said the gardens offered powerful sensory experiences in relation to touch, which were often connected with a softness or gentleness. This correlates with research (cited in Mazuch, 2005) that suggests that touch is much stronger than verbal and emotional contact and that this is significant within a healthcare environment where people are often coping with pain. It also relates to current work looking at the value of touch and object handling through a collaborative project at University College London Hospital using museum loan boxes (Noble & Chatterjee, 2008).

7.6: Sensory memories

Participants at all case study sites spoke of how certain details or features of the gardens reminded them of other times and places. Their memories would be triggered by something as small as a flower bud or the texture of a leaf. Memories ranged from childhood experiences, holidays abroad or life at home (figures 7.27-7.29).

Photo-elicitation



I took this photograph because of the colour – the rhododendrons. We had 4-5 when I was growing up. It is the connection to my childhood. A good memory – carefree, running about, it never rained, a simpler life in the mid 60s.

Figure 7.27. Maggie's Dunee (2011) (MD2)

woman with cancer)

Photo-elicitation



This is very personal. When my youngest son was four years we went on holiday to the Greek Islands. On a walk half way across he got tired. I told him the pine cones had energy and it worked! It is lovely to see them here it was the first thing I noticed. They are a source of energy.

Figure 7.28. Maggie's Cheltenham (2011) (MC15 man with cancer)

Photo-elicitation



This is personal to me. I have a big fig tree at home. This is somewhere I can drift into and out of during my working day. I notice the environment all day.

Figure 7.29. Maggie's London (2010) (ML4 female staff)

While it has already been noted that the gardens provided a different focus for participants, the specific ability to evoke another time and place appears to be key. Participants said the gardens took them away from the hospital environment and reminded them of better situations. A tiny sensory detail would often present a metaphor to participants to transport them to a lost past or an imaginary future where they said they felt more at ease (see figures 7.30 & 7.31). As the gardener (Creaser, 2010) at Maggie's London stated:

Even though this area isn't actually used for people to sit in the planting here is really appreciated. The effusiveness and this feeling of exoticism, of being transported somewhere else. And you are definitely not in a hospital. With all those plants you have in a hospital, the Swiss cheese plants...This is as far as you could get from a hospital plant.

Photo-elicitation



I love the snug...You can see through the leaves of the climbers too. The light comes in. There is privacy and protection. The jasmine reminds me of Tunisia when one night it rained and the scent of the jasmine was very strong. I have that memory. It is very sensory. In summer you can smell the jasmine in the courtyard.

Figure 7.30. Maggie's London (2010) (ML1 female staff)

Photo-elicitation



I just want to sit there and touch it! It is something you'd like to have in your own garden.

Figure 7.31. Maggie's Cheltenham (2011) (MC10 man with cancer)

Participants across all sites spoke of these sensory memories including those at the more cramped urban sites. For example participants at Great Ormond Street Hospital stated that the Friends Garden reminded them of:

The garden in my grandparent's summerhouse. (GOSHOS 17, 2012)

The sense of being in the garden at home. (GOSHOS 19, 2012)

Being on holiday somewhere in Europe. (GOSHOS 14, 2012)

Sitting on my brother-in-law's balcony in Buenos Aires. (GOSHOS 2, 2012)

The garden as a repository for sensory memories also came across strongly in the research for Trevarna Garden in Cornwall. The research highlighted how different sensory experiences of a garden had a positive impact on the wellbeing of people with dementia precisely because they triggered sensory memories. Many of the residents had direct experience of gardening and valued walking around the garden looking and identifying the different plants and watching the birds. A resident explained:

I have a garden and I love gardening. My husband still lives at Gorran Haven. I love seeing things start from nothing. Look at those daisies now! My garden at home is beautiful. It has lots of ferns and water. I think the sound of water is glorious. (CS40 female resident, 2012)

Staff said residents enjoyed telling them the plant names or reminiscing about their own gardens:

[The garden] brings back memories and is a conversation breaker. It is normalising. (CS27 female staff, 2012)

We like to make afternoon teas and have cake outside, and offer crisps and popcorn to residents. It makes a positive difference to [my colleagues'] work. The clients tell you about the names of flowers and reminisce. The new garden is nice as you can walk around it properly. It is especially nice when the blossom is out on the tree. (CS37 female staff, 2012)

A key finding of this research is the role of gardens in evoking sensory memories. The evidence suggests that a fundamental role for a healthcare garden is to hold opportunities for sensory memories; to present opportunity for private and personal affordances. As Tilley (2009: 188) writes, gardens can be both 'deep memory groves', but also future looking as there is always the potential to be surprised by the 'growth and agency of the garden itself'. The finding corresponds with research at the therapeutic garden at Alnarp in Sweden (Grahm et al., 2010). They found that the garden triggered memories through the activation of the senses:

Every sensory impression we have – of trees, stones, berries or beaches – occurs in relation to a personal background that is both spatial and temporal. Our experiences are interwoven with our entire life history. (ibid: 142).

One point to consider is that it is not always necessary to concentrate on pleasant sensory experiences to contrast with the harsh medical environment. At Alnarp (ibid.: 156) they are developing an 'unpleasant garden room' because participants have

asked for more 'malicious symbols' such as poisonous and thorny plants, nettles, thistles and dead trees.

These findings seem particularly pertinent to healthcare, where, on the whole you are dealing with cramped built and urban sites. In these circumstances even the smallest green space, if considered carefully, can hold a variety of sensory memories for people, which may provide a 'nucleus of calm' to echo the words of Pearson (2012: 135):

I learnt early on that a garden provides an escape. It is a special place that transports and transcends, running to its own rhythms and helping to ground us. Even the smallest patch of green can provide a nucleus of calm and this counts when we are surrounded by the man-made.

7.7: Sense of belonging

The research suggests that within a hospital environment where there is generally a bombardment of negative sensory experiences, a garden can offer a soothing, calming, but also lively, contrast. A garden can provide multiple opportunities with sensory moments, and this can bring both relief and joy. Some of the case study gardens had the effect of intensifying the atmosphere and indulging the senses of the participants, drawing attention to the passage of time, light, shadow, colour, texture, material details, smell and sound.

The positivity of the place and the beauty all around – lifts spirits even in the darkest moments. (SRPOS 12, 2010)

Participants described how the gardens could enhance their sensibilities and thereby eliminate other distractions such as the urban soundscape or the smell of disinfectant. They described how the gardens could capture an atmosphere. They described how, by filling the gardens with other sensory experiences, they offered a different sense of place.

The findings also indicate that rather than developing specific sensory designs for cancer patients or for some other constituent group, it is more important to provide sensory richness and a garden that is "in action" in all seasons. And here sensory richness includes, for example, access to the sensory experience of insects and wildlife. These findings correlate with historical examples; one only has to recall St

Bernard's (1090-1153) famous description, or Thomas Hill's (1577: 55 & 90) remedy of 'delectable sightes' within the 'odiferous' garden (see chapter 1 and appendix 4A).

A key finding from the previous chapter was that people want more sheltered outdoor spaces at the Maggie's Centres so that they can experience the outdoors all year round. This point is perhaps more generally about people who are unwell and have increased sensitivity to the elements rather than something specific to cancer (figure 7.32).

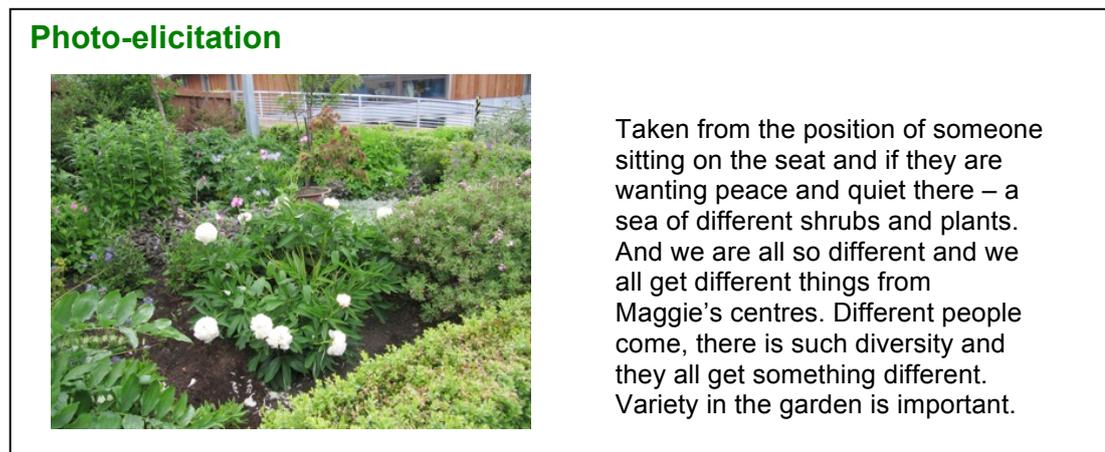


Figure 7.32. Maggie's Edinburgh (2012) (ME15 female volunteer)

Instead of setting down a set of sensory guidelines for a cancer care, dementia care or a bereavement garden, it appears to be more important to address the general issue of sensory richness. A participant at Sand Rose said a restorative garden should be about:

Order and tidy but not over controlled – not geometric! Somewhere birds and butterflies come, somewhere full of nature but enhanced by human touch. I like little passages and views into corners. (SRPOS 17, 2010)

If you are creating a garden for people who may be dying the need to celebrate the moment seems uppermost. In the words of designer Christine Facer (2010), it appears important to create a 'stimulating healing garden that engages all the senses'. This is something that the landscape architect David Kamp, articulates very clearly. Kamp (2009: 111) argues for inclusive design considerations, stating that the task is to balance the very specific needs of the people who are the primary users of his gardens with the 'simple pleasures of being in nature'. He makes the point (ibid.) that 'it may help to look at health and ill health as a continuum':

When we design for those with disabilities, we are, of course, designing for ourselves – or who we may become. In this context, it may be easier to project what we *want* to provide rather than what we *can't* provide.

Kamp (2012) also stated in an interview with the author that it was always best, budget permitting, to plant 'heavier' at the start and cut back later, to ensure some immediate sensory impact for users. The landscape architect Mike Westley (2010) discussed this in a slightly different way when he said that rather than seeing a restorative garden holding key design elements it is about taking the responsibility to a particular clinical performance specification and combining it with the need to offer different things for different people. Of course, consider the clinical issues and how they can be supported by the garden, but then make them part of the design as to be invisible so that the garden can be used and enjoyed by anyone. Westley's (ibid.) point is that there is a:

[D]ifference between mere 'prettification' and an intentionally restorative design. But these spaces also need to be beautiful because they have to be multifunctional and mean different things for different people.

Throughout this chapter the specific sensory qualities important to a healthcare garden to do with these five senses have been elaborated upon. These sensory qualities all contribute to a particular feeling or sense of place. Concentrating on just the five traditional senses of sight, sound, smell, taste and touch does not do justice to the sensory richness of a garden. As Wendy Brewin (2012), project manager of the Creative Spaces project, stated:

[W]hen most people think of gardens they just think of the five senses whereas I tend to include how I feel. A garden should include a sense of security, a sense of peace and a sense of fun.

Staff and relatives at Trevarna garden described how spending time in the garden was not only calming but also joyful for many residents.

Two or three of our clients calm down if they are taken outside when they are agitated. It does have a general calming effect on others too, as they are not so closed in (CS20 female staff, 2012)

Yes, it is better than my Mum sitting in her room. Because of the dementia she doesn't know much emotion but she does smile when I take her to the garden. You can see her relaxing and watching the birds. It is soothing for her. (CS32 female relative, 2012)

[I am] happy and cheerful to be outside. (CS40 female resident, 2012)

Gardens resonate with a capacity to engender a sense of belonging or disruption. The suggestion here, based on the findings, is that a healthcare garden is able to generate a sense of optimism. Because a garden insists on an embodied sensory engagement where a sense of touch or body movement has as much resonance as the visual presence of a tree or wall, it has the ability to bring people face-to-face with the world. This is what David Crouch (2010b) calls the 'gentle politics of landscape', or rather of thinking about landscape relationally. Crouch (2003) also relates the activities within a garden to a deeply felt sense of self, landscape and nature. By the same token, a garden also has the ability to bring about a shift in consciousness too. The experience of being in a garden with its subtleties of sensory experience can help to articulate an emergent feeling about space that is also a way of making sense of life. Gardens can sooth, can calm, can uplift, but can also bring clarity. If sensory experiences focus on gentleness and intimacy then the space will resonate with a sense of belonging.

This is partly about a healthcare garden space allowing a person to just be. By experiencing nature with all our senses we are offered moments or glimpses of a special integrity, of being part of something much bigger and maybe a sense of unfathomable comprehension. Sensing what Mabey (2012) describes as the 'mutability' and 'mercurial mobile adaption of landscape' – that extraordinary sense of change and recovery from change that a garden presents reminded participants about what it is to be a living being. This experience, this sense of recognising the reality of experiencing a "resilient place", appears to be therapeutic and transformative allowing people to acknowledge and accept change in their own lives. Further discussion of this idea of a "resilient place" will take place in chapter 11. First it is necessary to consider experiences of time in the gardens in more detail.

CHAPTER EIGHT

The Third Garden Essence: Density of Time

In this chapter the subject of time in the garden is explored. The case studies highlighted the role of the gardens in providing participants with opportunities to experience time in different ways. This included opportunities to pause or slow down and occasion to move in different ways through the gardens. Participants valued the seasonal changes and took comfort from evidence of the gardens' cycles of life.

The research also highlighted how participants drew symbolism from the gardens, which they related to their own state of being or more specifically to their experiences of cancer and the so-called 'cancer journey'. There was less clarity on how individual memorials function within a healthcare garden, although some of the case studies presented some potential solutions to this challenging problem. This chapter will explore these issues in more detail making links back to the Maggie's architectural brief and individual designer's intentions as well as historical examples.

Nothing is more obvious in a garden than change, yet designers and visitors do not always 'exploit the capabilities of gardens for exploring time and its various modes of significance in our lives' (Miller, 2010: 190). Whatever the style or cultural context, gardens always offer different structures of time which visitors feel and experience. Gardens show evidence of the passage of time; they may also present evidence of a gardener's attempts to resist the changes brought on by time. Gardens draw our attention to time, highlighting both its fleetingness but also its inexorability. This appears to be helpful to people who are unwell or in crisis.

Gardens are in a constant process of change and they always highlight different notions of time. In gardens we are, as Barwell & Powell (2010: 146) write, 'both spectators and participants. We observe and we dance in the garden of time'. Hunt (2000: 15) states that time makes a 'fundamental contribution' to the 'being of a garden' and a garden 'not only exists but also takes its special character from four dimensions'. By noticing changes that take place in gardens we are made aware of time.

Gardens address time in different ways depending on their design and structure. They embrace some profoundly different notions of time such as scientific time, subjective time, and cyclical time. They remind us immediately of the two contrasting notions of time that the ancient Greeks called *chronos* and *kairos*. *Chronos*, most familiar to us and perhaps best equated with scientific or chronological time, is measurable, linear, sequential, and quantifiable (seconds, minutes, hours, days). *Kairos*, in contrast, is about the appropriateness of a time and an event – the right moment or opportunity. The distinction between *chronos* and *kairos* is crucial in the garden; it is literally a matter of life and death when it comes to planting seeds or picking fruit, for example.

The passage of chronological time is evident in gardens in a number of ways. This includes the time of geology and geomorphology, but also the biological time of plants and animals that live, reproduce, and die within a garden. The speed of change varies greatly between different plants according to their individual biological life-spans. There are also diurnal and seasonal cycles and a garden is always reminding us of ‘the eternal recurrence’ (Eliade, 1954), as well as the life cycles of plants, humans and animals. Further layers, such as astrologist’s time and meteorologist’s time, can be added. For gardens in the UK the climate, the interaction between time (the seasons) and place (local topography and larger geology) is perhaps the single most defining characteristic.

As humans we respond to a garden’s rhythms and this can be interesting, evocative and resonant. Gardeners and designers can use the passage of chronological time as material in order to create their own complex arrangements, rhythms and patterns, and thereby offer visitors opportunities to think about the implications of time and its passage. As Dan Pearson (2010) states, ‘there are different ways to experience time. Shadows, pattern, little moments. [A garden] fine-tunes, makes us aware’. Our experiences depend on our memories (what has preceded but also our memories of other times and places) but also our expectations of what may follow.

Gardens also facilitate for visitors different experiences of subjective time – that is time as it “feels” to us. This could also be described as experiential time. This will vary for each individual, although there may be particular structures or triggers within a garden that purposely intend to evoke a shared experience of time (a dramatic water feature or a carefully positioned seat, for example).

Through history gardens have had culturally specific ways of facilitating experiences of subjective time as well as evoking historical time. In Italian Renaissance gardens or eighteenth-century English gardens, for example, the use of historical quotations and allusions helped to make the past present. In England the tradition goes back further where the design of gardens would include *momento mori* principally in the form of sundials that were often inscribed with pithy epigrams (Coffin 1994: 8) (figure 8.1). This reference to time can be seen in more recent gardens such as Hamilton Finlay's, Little Sparta, or in the Garden of Cosmic Speculation in Scotland (see figures 8.2 & 8.3). It is also a regular theme in poetry typified by E.E. Cummings (1894-1962), *This is the Garden* (see appendix 4C).

Figure 8.1. In the popular emblem book of Francis Quarles (1635) the depiction of a garden sundial illustrates a text from 'Job' (reproduced in Coffin, 1994:10)



Figures 8.2. References to time in Ian Hamilton Finlay's garden, Little Sparta, Scotland (Butterfield, 2010)



Figure 8.3. Lily Jencks' Time Garden within the Garden of Cosmic Speculation, Dumfries, Scotland. Exploring cyclical, linear and subjective time (Lily Jencks, 2011)

8.1: Opportunities to pause or slow down

Participants at Maggie's and the other sites highlighted the value of the gardens as a space in which to pause or slow down. This was articulated in different ways ranging from simply slowing to look at a flower as they entered a centre, to the gardens presenting opportunities to take 'time out'. Participants highlighted how the experience of being in hospital can be overwhelming. As one participant said, 'the experience is engulfing; every minute is taken over' (ME5 woman with cancer, 2011). Participants described how time in hospital can be an exhausting mix of endless waiting combined with the sense of having no time to oneself. They stated that the gardens offered them different and often more soothing experiences of time.

The gardens were valued because they offered respite from the exhaustion of diagnosis, appointments and treatment. While participants at Maggie's highlighted the particular experiences of time by cancer patients and may link to how a cancer diagnosis, prognosis and treatment is often given time limits, similar experiences were recorded at the case studies:

When I come here, typically it's about getting bad news and sometimes Maggie's is about just allowing time to pass before going home. It's important that this space is very nice. It is a buffer zone because you don't want to take that straight home. (MD22 man with cancer, 2012)

Participants identified the gardens as places where they could ‘think’ or ‘decompress’.

It shines up the whole garden. I like when I am able to make a coffee in Maggie’s, come outside, sit on the bright coloured cushions and just ‘think’. (ME visitors’ book comment, 2011-12)

It made us slow down...A place to enjoy your children – to watch them being happy makes you happy. A place you want to sit without other distractions (TV etc.) and can talk to other families. (SRPVF 139, 2012)

The gardens were valued by participants because they offer respite from challenging moments (figure 8.4). Another point made was that the garden provided time for relatives when their loved one died:

It is important for relatives when a loved one passes on – they sit outside to compose themselves (CS20 female staff, 2012)

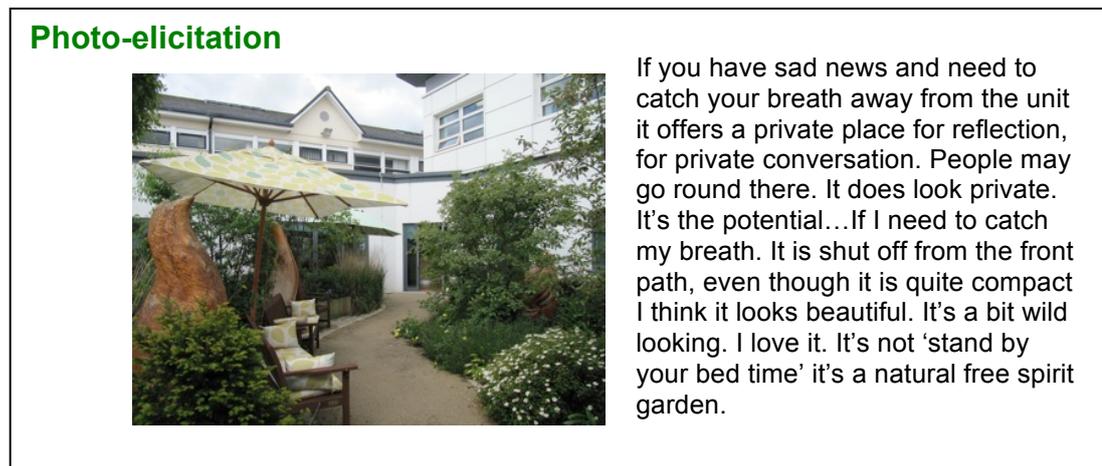


Figure 8.4. Macmillan Ambulatory Oncology Centre, Leighton Hospital, Crewe (2011) (MACC4 female staff)

The gardens were valued because they offered respite not just for visitors but also for staff within a busy working day. For example, participants at Great Ormond Street Hospital talked about the value of the Friends’ Garden as a space for a quick breath of fresh air away from their immediate working environment. Comments included the garden providing a ‘chance to breathe’, a place where ‘I can go and not be bothered’ and ‘time to not think’ (GOSHOS 6, 11, 18, 2012). A staff participant made the point that it was not just relatives who suffer and she said that at challenging moments ‘I would tend to come outside’ (MF1 female staff, 2011).

The gardens were also valued because they offer particular opportunities to spend time with friends, family and loved ones. They provided opportunities for “together time” and

to enjoy special moments. This ranged from sitting quietly together to talking in privacy – but with an openness not afforded in other places.

How calming it is to be able to sit in the garden with a cup of tea after an appointment with the consultant. Time to chat with my husband about what was said with the opportunity to ‘anchor’ before going out again to the big wide world. (ME visitors’ book comment, 2011-12)

Yes it is very calming. It allows time for thought and reflection. It allows ‘together’ time, whether conversation or playing together, looking at and talking about things. Fresh air and the sound of the sea makes you feel better too. (SRPVF 22, 2010)

[B]ecause we were all so relaxed, no stress and found that we could all talk to each other. Something that we have not been able to do at home. (SRPVF 82, 2011)

Participants at Trevarna garden in Cornwall described the garden as providing, for both residents and their families, opportunities to just sit and look. It offered a different focus and an escape from the communal spaces and routines inside. The garden was valued for its role as an “aide memoire”, “memory jogger” and calendar to assist residents, many of whom have dementia, in connecting with time and place. Residents recognised certain plants and trees and were then able to talk about their memories and associations. Not only did this encourage conversations but helped both staff and residents to make connections with the world beyond the care home. Relatives and staff were keen to point out that their loved ones were experiencing devastating loss – the loss of their own home and daily lives. They described how the garden helped to restore a person’s sense of control and connection with the world (figures 8.5 & 8.6).



Figure 8.5. Trevarna Garden, Cornwall (2012) (CS10 male staff)



Figure 8.6. Trevarna Garden, Cornwall (2012) (CS5 male community member)

Trevarna staff also described how spending time in the garden with the residents could improve and develop their relationships.

Yes, I do see benefits. More of a feel for happiness. We can relate to residents more as it is more what they're used to. You can see more happiness and a general improvement in mood. When the weather is bad the mood swings down. The garden offers more one-to-one personal time compared to a lounge setting. (CS36 male staff, 2012)

I just feel if you can have intimacy and a sense of normality, which is what a garden offers. Something they would do at home. It gives them more freedom – like they used to have access to a garden at home. (CS13 female staff, 2012)

Significantly, when participants were asked more generally what a restorative garden meant to them the most frequent answers were a peaceful and serene place (see appendix 4B). A typical comment was:

Somewhere quiet and beautiful where you can be still and feel open and able to express anything. To feel free from stress and heavy weight. (SRPOS 3, 2010)

8.2: Movement and time

Participants across the sites highlighted the value of the gardens in providing places to walk. Comments ranged from describing their experience of moving through the garden observing seasonal changes, to walking as a therapeutic or conversational activity. Comments also showed that activities such as walking or reading in the gardens was a way of creating privacy and personal space. For example:

I like the seasonal changes. I really like walking through...and the changes - the wild areas. We sit outside. It is great to walk through – the variety. It is Japanese. I like walking through the garden and the various stages. It is therapeutic.
(ML27 woman with cancer, 2012)

We encourage people to see [the garden] as an extension of the inside of the centre. Sometimes, whenever it is warm enough, I prefer to go walking and talking rather than being in my room. Sometimes it is too claustrophobic being inside. Some people can't - they don't have the energy to walk around, but when there is an opportunity. It keeps you alert. Also when you are walking with somebody you are not necessarily looking at them directly, and so a lot of conversations can happen in the garden that wouldn't necessarily happen internally...most definitely you can often get a really good conversation going with somebody when you are walking along side them or walking with them rather than opposite them.
(Howells, 2010, talking about Maggie's Dundee)

Movement through a garden allowed participants to pause, change speed or direction, to look at or smell a plant and to sit in different places. Participants valued those gardens that included winding paths (figure 8.7).



Figure 8.7. Maggie's Cheltenham (2012) (MC28 woman with cancer)

The health benefits of gentle walking for people in distress or physically unwell are well recognised. Coffin (1994) demonstrates the long tradition in England of walking in gardens for health. Since the fifteenth century a garden has been seen not just as a desirable retreat for meditation but also for mental relaxation from the so-called 'Elizabethan malady' of melancholy (Ibid.: 59). Burton (1638: 266) advocated the importance of walking, especially in gardens, to 'abate the effect of melancholy and comfort the sick man'. More recently, Coles & Millman (2013; 217) highlighted research

exploring the idea of rhythm associated with landscape; focusing on the value of walking and seasonal change in relation to human wellbeing.

Something as simple as a slight change in materials underfoot or direction can have a subtle impact. This makes people more aware of the placement of their bodies in space. This can, in turn, bring someone to focus on the moment, a mindfulness of the present. This has long been recognised in the design of Japanese gardens where irregularly spaced stepping-stones might require the walker to pay attention to every step enforcing a sort of mindfulness meditation. Japanese Zen gardens embrace a belief in the meditation of natural phenomena. The stripping of a garden down to rock is a way to evoke a quality of timelessness (Borja, 1999; Miller, 1999). There is also the ability to perceive a change in scale – so a single rock in a patch of gravel can become an island in a sea, or a mountain rising from a plain. Interpretation is aided by removing obvious visual cues as to the size of the rock.

At Maggie's London, Pearson thought carefully about the path leading into the centre. He said he was thinking about how Japanese gardens dictate the footfall with different paths and stepping-stones. By introducing the slabs as one nears the main entrance Pearson (2010) said he hoped it would 'change the rhythm and slow you down' and the research indicated that participants did pause as they walked to the centre (see figure 8.8).



Figure 8.8. The path leading to the entrance at Maggie's London (Butterfield, 2012)

Recent research by the NHS and Forestry Commission around the UK (Shackell & Walter, 2012) highlighted the range of initiatives increasing access to green walks within healthcare. Gardens are considered helpful here because they provide something more fascinating and pleasurable than walking the perimeter of the hospital building.

Moving through an environment has a different impact on us. Walking a labyrinth, for example, makes you breathe slowly in rhythm with your pace and concentrate on the path ahead. Slow steady breathing is an effective way to manage a stress response. Walking meditation and Tai Chi are known by cardiologists to be beneficial to health (Sternberg, 2009: 108-116). Likewise, there are many studies that have shown that gentle exercise can affect immune response and improve mood (ibid.). Walking the labyrinth is becoming an accepted practice in complementary and alternative medicine. The use of a portable labyrinth has also now become commonplace in North America in hospitals, clinic and churches (ibid.: 121; Labyrinth Society, 2013; Shackell & Walter, 2012).

Participants at Maggie's Dundee explained how the labyrinth provided particular opportunity for staff and visitors to use the act of walking outdoors for therapeutic purposes (figure 8.9).

Photo-elicitation



What I like are the curves of the labyrinth. When I go into it I like the idea of physically turning – I just like the idea of turning a corner. In life we are turning corners and going in new directions – that just struck me at that moment. Again, I suppose you can expand on that. Just hope a new and better path. This particular aspect of the labyrinth – looking at the image now I am struck by the beauty of the detail in such a small section of stone.

Figure 8.9. Maggie's Dundee (2011) (MD5 female staff, Maggie's Dundee)

However, participants' comments revealed little regular use of the labyrinth. Clearly the labyrinth at Maggie's Dundee presents various challenges some of which have been already discussed in chapter 6. The key issue appears to be one of privacy.

Participants indicated that their preference is to walk within a garden that is sheltered and where they are not “on display”. This links to a wider problem for all outdoor activities at Maggie’s. Despite the publicity photographs that show Tai Chi being practiced outdoors, in reality this rarely happens (figure 8.10). Therapists, at the different sites, said they would like to take classes outdoors but that there were no suitably private outdoor places for this to happen.



Figure 8.10. Publicity photographs for Maggie’s Dundee (© Maggie’s, c. 2010)

8.3: Seasonal variation and entropy: Death in the garden

The research highlighted the importance of seasonal change and variation. This was something noted by patients and families as well as staff. Those who raised its importance emphasised that winter in the garden was as enjoyable as summer. This was because the “flow” of seasonal change emphasised the passing of time, the transience of all life and reaffirmed a key essence of living – constant change and growth. Comments ranged from noting the growth of a particular plant, discussing the symbolism of certain plants to contemplating the cycle of life and death (see figures 8.11 & 8.12). For example:

I love the garden, its permanence. It is very special. It reminds me that we are the transient ones! Its natural flow reminds me how truly beautiful the seasons are expressed. And I really value the fact that wherever I am inside Maggie’s I can see sky and green stuff – all the time. (ML visitors’ book comment, 2011-12)

And even when it’s too cold to go outside it is nice to sit in the warm with a cup of tea and look at something beautiful and green, instead of the hustle and bustle and greyness of Fulham Palace Road. Without getting too prosaic it is also nice to look at something living, and the season changing around you when you are trying to focus on surviving. (ML visitors’ book comment, 2011-12)

Participants found the gardens inspirational and hopeful, especially when there was clear evidence of plants being cared for. They valued the idea of a 'garden in action' as one visiting couple put it (MD9 woman with cancer & male relative, 2011). A participant described her enjoyment of a pot of pansies (figure 8.13).

Photo-elicitation



I love this plant ... Close up, the flowers are so delicate looking, so pretty. It is the sort of plant that on a gloomy day brings a smile. I smile when I see it and on either path you pass it. The garden is quite thoughtfully design like that.

Figure 8.11. Maggie's London (2012) (ML32 female volunteer)

Photo-elicitation



I think this one talks about longevity. Just the size. An old tree. Some things are here before and after us. It is big and solid. With this photo I wanted to get the roots and to focus on the trunk.

Figure 8.12. Maggie's Cheltenham (2011) (MC18 woman with cancer)

Photo-elicitation



It's loud. The sun is willing them. It's life. It's important. These tubs are so well cared for. They are really pretty and vibrant. Happy smiley faces.

Figure 8.13. Maggie's Edinburgh (2011) (ME2 woman with cancer)

Participants highlighted how the gardens provided opportunities to contemplate time's passing. They also indicated that the garden could provide places for solitude. The analysis of the interviews suggested that the sight of death in the garden is not negative. In fact, the research identified comments suggesting that it is not only positive, but also comforting. A participant at Maggie's London explained how her experience of the garden reminded her of the calmness she had felt when visiting the Hindu Temple in Neasden:

There is something about that here. The greenery – "it all fits". It lifts – it's not overwhelming, it's calming. I can't imagine it without the greenery. Look at that majestic tree. Look how it's moving. The greenery is the closest I get to God – it's not the people, its nature, cycles, birds, purpose, never dead. (ML17 woman with cancer, 2010)

This was something highlighted by the research at Sand Rose where visitors are all bereaved families. Participants talked positively about dealing with sad thoughts and how the garden helped feelings to ebb and flow. The garden provided a space to deal with strong emotions – a place to cry. Comments included:

Part of my time in the garden was spent feeling sad and thinking about the children we have lost. Other times in the garden were spent with my family watching my other children play, listening to their laughter, talking together... the time spent has made me think about the future and moving forward with the wonderful family and children I have here still. (SRPVF 147)

Yes I felt very close with xxx being able to just sit, think and cry. I think because it is such a lovely wide open space – my head often feels like it's going to explode with all the pain and emotion. It sounds strange but maybe the garden seemed big enough to take some of the load. (SRPVF 142)

Gardens have always offered opportunities to observe and experience time's passing. This could be about the symbolism of something living and growing or it could be more about the contemplation of the cycle of life and death. The ancient Greek garden of Epicurus embraced the importance of meditation on mortality. In the seventeenth century John Melton (1620) wrote about the pleasures of a visit to a friend's garden, 'plants were not the onely Emblemes of Man's mortalitie, but the true Type of his Death and Resurrection; of his Death, in their decay; of his Resurrection in their growth and flourishing'.

Some gardens of the Renaissance had a bower dedicated to Saturn, the Roman god identified with melancholy. Here a person experiencing loss, grief or depression could

withdraw to a remote, shaded place without fear of being disturbed. The garden as *momento mori*, where it is intended to remind visitors of their inevitable physical end, is a strong feature in literature, poetry and visual arts. The garden in Samuel Palmer's nineteenth-century watercolour is often seen as the quintessential image of melancholy (see figure 8.14). Derek Jarman's garden at Dungeness, created in the years before he died, became memorialised through photography and is regarded as a symbol of life in a bleak landscape (see figure 8.15). As Barwell and Powell (2010: 146) write:

In gardens we see birth, senescence, and death; we see slow and fast cyclical changes, and we see 'offspring' and 'parents'. These experiences enable reflections on the human condition, its permanence or transience, stability or instability, on mortality or regeneration, growth or decay, health or sickness. They allow us to reflect on the vagaries of human as well as plant life.

Figures 8.14 & 8.15. *Left*: Samuel Palmer *In a Shoreham Garden* (c.1829), (Victoria and Albert Museum), and *right*: Derek Jarman in his garden at Prospect Cottage (*The Guardian*, ©Geriant Lewis, 1992)

8.4: The symbolism of science and health

Some of the designers of the Maggie's gardens have deliberately developed symbolic designs in the belief that they have relevance to cancer care. This includes Jencks' designs for Maggie's Highlands and Facer's design at Cheltenham (see chapters 4 & 5). In both cases, the gardens embrace scientific ideas that have direct relevance to cancer. In both cases these gardens also embrace landforms. Facer (2010) explained that she sees Maggie's as pioneering a new form of landscape design for a very specific context and she links her work directly to both Jencks and Lennox-Boyd. The role and use of specific science and health metaphors at Maggie's was something the

case studies explored. How do people respond to these design features? What potential do they offer in a healthcare garden?

When reflecting on the symbolism in the gardens at Maggie's, participants described three types of symbolism. The first of these was the symbolising of the self, where participants related design or plant features to their own personality traits or mental states. The gardens allowed them, in different ways, to reflect on their own state of being. The gardens also offered opportunities to contemplate, through symbolism, desired mental states, health or vitality (see figures 8.16-8.18).

Photo-elicitation



I have always loved peonies. The size and that fact that it is out is brilliant. They are loud – I am a loud person. When you have cancer you go more introvert – gardens are a way to remind me who I am. As soon as you turn the corner you are affected by the woodland feel, the tranquillity, peace and no noise of the city. Everything is so green. Its like a different planet here – it has always been such a pleasure to come here – the building is fantastic, relaxing.

Figure 8.16. Maggie's Edinburgh (2011) (ME2 woman with cancer)

Photo-elicitation



This has sadness that I love. It's the gesture of the plant. It's very beautiful - it have a lovely quality a sadness. It's the plant and its position just outside the interior space. It terribly important to have reflections on what's happening inside – to have something that is already connecting to our feelings. It's important. The detail is just beginning.

Figure 8.17. Maggie's Cheltenham (2011) (MC15 man with cancer)

Photo-elicitation



I was trying to capture the bit of the water feature that I like. I am not so keen on the other end which feels a bit industrial to me. Whereas this bit is more soothing (I tried not to get the parked van in the background!). It is nice the way the water flows – it reminds me of being carefree – easy flow. Whereas the other end is more jagged, drip drip. Here its soothing and visually easier on the eye and is more about the sound for me.

Figure 8.18. Maggie's Cheltenham (2012) (MC26 woman with cancer)

The second type of symbolism expressed by the participants was the “cancer journey”. This was described in experiences of the garden reflecting in some way the visitor’s own experience as a cancer patient. Here the gardens’ physical relationship to both the hospital and the centre and the physical journey visitors made through it was important. This type of symbolism was also described in pathways, curves, and specific features such as the labyrinth or Gormley’s sculpture at Dundee (figure 8.19).

Photo-elicitation



This is the person/ man with cancer. The fact that he is covered with rust – the cancer is the corrosion and that person looks towards the centre for help. The hospital behind offers treatment for the body while the Maggie’s Centre provides treatment for the mind. I was very surprised when I first saw it. But I really loved it. I feel it fulfils the idea and is an integrated part of the whole project. He is the man who walks from the path from diagnosis to treatment and somewhere on the way is the Maggie’s Centre.

Figure 8.19. Maggie's Dundee (2011) (MD1 male volunteer)

Visitors were able to relate to the role of the labyrinth at Dundee (even if they do not walk it) and how this could connect with the experience of a cancer diagnosis and

taking those “first step’s” along the “winding path” with “ups and downs” to the heart of the labyrinth.

The third type of symbolism participants described was in relation to understanding cancer; wondering about root causes, health, growth and mutations. Here participants drew on the symbolism of plants and their historical and cultural associations (see figures 8.20 & 8.21).

Photo-elicitation



It's such a nice plant. We watch it grow. What is the root cause of cancer? People who have led healthy lives think why did it happen to them. The plant has branches coming out and its family [of baby shoots] has grown but then again the root grows problems. And you can't change anything because of the root. People talk about the spread of cancer. And they don't see the end. This plant is very symbolic – it's the life cycle. People say if I look at the roots it's all OK, yet why aren't things working.

Figure 8.20. Maggie's London (2010) (ML3 male staff)

Photo-elicitation



The fig tree on the balcony. “It's contained”. This I identify with someone's diagnosis. It is symbolic. I don't know why...I look at it from my desk. The roots are contained yet the leaves are not. Compare this to a diagnosis.

Figure 8.21. Maggie's London (2010) (ML2 female staff)

The research made it very clear that while participants responded to symbolism, the specific metaphors offered by Jencks and Facer, for example, were not highlighted. Participants at Cheltenham commented on the symbolism of the water feature and the winding path but did not make direct references to understanding the Sigmoid Curve. No participants took photographs of the arrow-heads and very few chose to focus on

the mounds. A participant said of the Cheltenham garden overall, 'it's a journey to but it lacks 'please use me' (MC9 female volunteer, 2012). Another commented:

I don't understand the waves. I think you could use the space for more seating with more benches and seats – perhaps a circular bench around the tree. It seems a wasted patch. (MC2 female staff, 2011)

Although no detailed research was undertaken at Maggie's Highlands, during a site visit in 2010 it was clear that this garden was problematic and underused (figure 8.22). A staff member said that the Jencks' specific reference to the theme of human cells dividing (mitosis) and communicating with each other within the design of the garden puzzled visitors, 'they think they are just mounds but when I tell them it brings a smile to their face' (MH1 female staff, 2010). Another staff member stated emphatically, 'there is no garden here. Highlanders are very down to earth and that [symbolism] is fancy stuff' (MH2 female staff, 2010). Staff and visitors expressed the need for more usable outdoor space at Maggie's Highland. As the same member of staff explained:

It would be wonderful to use the garden more. The reason it is not used is because it is more like the back garden field. For my individual work I need private spaces but also a nice garden for meditation. At the moment it doesn't feel right. We need to create spaces so that it feels secluded, safer, less open, private corners – so that it doesn't feel so close to the road. Different areas where people can choose. Different places to sit and more general spaces. I can see people using that if there are flowers, colour, water. So that it is more an extension of the inside. (MH2 female staff, 2010)

Maggie's themselves are aware of the problems with the garden at Highlands and there are currently plans to re-develop various areas, including a more secluded space around the side.



Figure 8.22. The landscape at Maggie's Highland based on the theme of cells dividing (Butterfield, 2010)

What the research hinted at was a tension between the metaphors of science and health and plantsmanship; a tension also between individual designer's intentions and

ownership of the gardens by staff and visitors. Thereby suggesting a mismatch between designers and users about the understanding and expectations for the outdoor spaces for the centres. The outdoor spaces at Maggie's Highlands and Maggie's Dundee (and aspects of Maggie's Cheltenham too) are more about "landscaping" than gardens and could be better termed as outdoor metaphorical sculptures. As the Centre Head at Cheltenham (Fide, 2011a) indicated:

I think people sometimes realize they are coming up to a Maggie's because of the actual landscaping of that bit of the garden. Which is good. The staff recognise it's part of Maggie's but I don't think visitors do. I suppose if you are a regular user the curves of the grass would make them realize it is part of Maggie's... I think most people think it is the rolling hills of the Cotswolds not the sigmoid curve.

A key research finding was that participants interpret the symbols in the garden in very different ways. The implication is that over determined design undermines participants' ability to feel ownership or derive their own personal symbolism from the gardens. This, in turn, suggests that designers of healthcare gardens need to consider carefully how the design and plantsmanship will enable people to find their own symbolism and meanings. The danger of strongly themed gardens is that they do not offer enough flexibility; they do not allow for the garden to change and evolve with its users. The research suggests that while it is interesting to offer other layers of meaning and metaphors that can help describe how people are feeling, it is far more important to embrace sensory richness and opportunities to experience time in different ways. If there is a richness of design and planting, people will find their own symbols and this appears to have more positive impact than pursuing a particular intellectual theme.

8.5: The problem with memorials

As already discussed, participants highlighted how the garden provided opportunities to remember loved ones, but also time to forget and perhaps think about the future. This might be about forgetting a very recent unpleasant experience or finding a way to live with loss. The gardens provided a place where participants were able to create new memories that they hoped would sustain them back home. For example, comments at the Sand Rose Project included:

Yes – there is room to play, explore, relax, think, reflect, cry, talk, hug, consider plan, and begin to hope. (SRPVF 36, 2010)

We, as a family, will never forget our stay at the cottage, we have the memories etched in our minds and visit those memories often, especially when we feel low. (SRPOS 8, 2010)

Memorials to individuals were a subject where findings conflicted. While personal memorials were sometimes seen as desirable, their presence could be problematic. Staff described these difficulties and highlighted a need to respond to requests sensitively and sympathetically to all current and future garden users.

At Maggie's, staff said they generally tried to avoid memorials although family members often make donations to the gardens in memory of their loved one. This is sometimes money towards the garden but more often it is for a specific plant, tree or memory plaque. The site where participants highlighted the problem with memorials was Maggie's Edinburgh. Over the years this garden has incorporated both unobtrusive commemorations and more overt memorials (see appendix 1). Participants' comments revealed contrasting views on these memorials (see figure 8.23):

I need to say that I/we find the bronze statue of Maggie a bit disturbing and memorials in general in a place where people are trying hard to relate to 'life' either on a short or longer term basis. No doubt there is a right place for these memorials but I do not feel it is here. Birdsong, water, natural materials, plants, seats in sun and shade – but no memorials to the dead – please. (ME28 visitors' book comment, 2011-12)

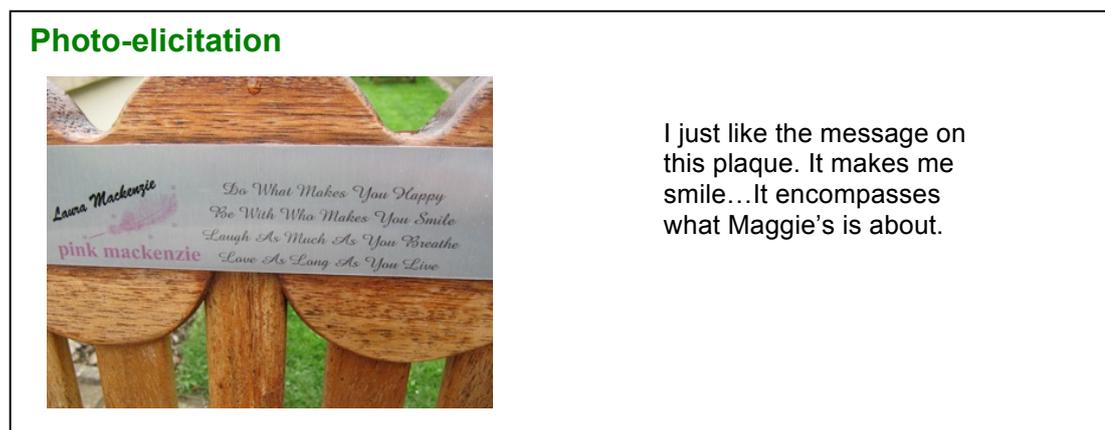


Figure 8.23. Maggie's Edinburgh (2012) (ME14 male volunteer)

At other case study gardens, where there was no clear policy on memorials, within the garden there was evidence of confusion among participants. For example, at Trevarna garden the Creative Spaces team said they were keen to avoid memorials insisting it

was a 'garden for everyone'; instead they instigated a garden book and also encouraged families to donate plants rather than plaques (Brewin, 2013c). However, no policy was developed with the Cornwall Care management and the garden book was relegated to a shelf in one of the sitting rooms. Memorials to residents, including a bird bath and bench plaques, have appeared with mixed reactions. When a resident who had been heavily involved with the garden project died in spring 2012 the initial plan was to just plant some of his beloved chrysanthemums, but his family also donated a bench with inscription (figure 8.24).



Figure 8.24. Trevarna Garden, Cornwall (2012) (CS16 female staff)

In contrast, where a clear policy or focus for memorials was articulated, participants were clearer why they did or did not like individual memorials. For example, at Sand Rose the charity has resisted individual memorials in the garden in the belief that it must not become a mausoleum and participants valued this fact. Instead, visitors are encouraged to use the folly as a place to write and leave messages (see chapter 6).

Some examples of memorials in the study offer potential solutions to this challenging issue. For example, The Friends Garden at Great Ormond Street Hospital remembers two hospital staff; Nazy Mozakka and Mala Trivedi, who lost their lives in the terrorist attacks in London in July 2005. In consultation with the families, friends and staff, words were chosen that best represented the personalities of Nazy and Mala. These appear throughout the garden on planters, glazing and paving as well as appearing as a large feature wall in the garden (see figure 8.25).



Figure 8.25. Photographs of the words commemorating Nazy Mozakka and Mala Trivedi at the Friends Garden, Great Ormond Street Hospital, London (*top row: @ Dave Williams, 2011 and Butterfield, 2012*)

Comments by participants at Great Ormond Street highlighted how staff valued the memorial aspect of the Friends' Garden. Comments suggested that the memorial aspect had been sensitively considered. Participants said the memorial combined both a sense of respect and celebration without dominating the garden, which merely reinforced rather than detracted from the overall restorative impact of the garden.

The choice of the artwork – it is very sensitive. It makes the most of the material it's on. So the fact that it's on the glazing doesn't stop you looking through. And if anything it adds to the spaces so people have generally loved the idea that we have been able to do that. (GOSHOS 8, 2012)

The fact that the garden means something to people too – that's important for those families and for them to know that staff are enjoying the garden. (GOSHOS 11, 2012)

The research at Great Ormond Street suggests that the garden had successfully embraced poignant and personal memorials, but without the whole garden becoming a "memorial field". Of course, the advantage here was the memories of these two women were built into the design from the beginning rather than being added later, however, it is clear that careful thought was given as to the future use of the garden. Participants described how it is both a place where people can come to remember but it is also where staff who never met the women will not feel excluded. The words are all very positive and it is perfectly possible to take them out of context and still find them meaningful.

I like the memorial aspect. It is nice to remember in a non-traditional way. It's about people and their characteristics but also it can be personal to you. It is not overpowering. (GOSHOS 1, 2011)

I find the words really touching. I knew Mala and the words are very meaningful. (GOSH4, 2012)

Beyond the case studies, research for this thesis highlighted memorial issues but also demonstrated some other thoughtful ways to deal with the problem. For example, at the Penny Bron Cancer Centre memorials are confined to slabs for a memorial path that is slowly being created by the donors who pay for both slab and inscription.

Memorials have always been a problem across healthcare sites. The German writer Christian Cay Lorenz Hirschfeld (1777-1785) wrote about the issue back in the eighteenth century:

Sad conifers should not be used, but trees with light and coloured leaves and flowering and fragrant shrubs and flowers. A hospital garden should have everything to encourage the enjoyment of nature and to promote a healthy life. It should help forget weakness and worries and encourage a positive outlook; everything in it should be serene and happy. No scene of melancholy, no memorial of mortality should be permitted to intrude.

There is a long tradition of gardens holding memories to loved ones, but memorial gardens and mausoleums are not to be conflated with healthcare gardens (Coffin, 1996). The research suggests there is a place and need for memorials within a healthcare site, especially within a hospital or hospice where death is ever present. A healthcare garden needs to focus on the dynamism of the garden and memorials can play havoc here. The mixed reactions within the data sample suggest that the issue needs to be sensitively handled. Can a garden remain a resilient place as well as holding individual memorials? More thought is needed at the design stage and then a clear policy of memorials articulated so that staff members are not left to make decisions on an ad hoc basis.

8.6: Healthcare gardens and the density of time

A key finding of this research is that the gardens offered people different and perhaps more calming or soothing experiences of time. Participants described the experience of the gardens as a direct and pleasant contrast to their experiences of time in hospital or the work place. This finding is not just about the different experiences of time afforded by gardens in contrast to a busy hospital, but explicitly the different experience of time spent outdoors compared to time spent indoors. This finding may seem obvious but it is a point often overlooked by healthcare professionals.

The research suggests healthcare gardens need to provide opportunities for movement, opportunities to slow down or speed up, and opportunities to contemplate life and death. Plants, trees, water, sculptures and other design features can all offer symbols that can trigger thought patterns and memories that are biographical and personal.

A garden provides both aesthetic and symbolic value. This is because it will always have been created or designed in some way and could be in juxtaposition to a very different environment. This is especially true of a healthcare garden because there is likely to be less value on its utilitarian use. These gardens provide opportunities, as just discussed, for people to immerse themselves in the garden's "times" and this can be very powerful.

A healthcare garden as a resilient place can also offer symbolism where the metaphorical and figurative significance of nature are presented. This can provide opportunities to develop understanding of one's own circumstances. One only has to recall Henry Percy reposing in his garden or John Evelyn reading in one of his garden 'cabinetts' to remember that this knowledge was understood in the past (see figure 1.8). At least since the Elizabethan period there was a tradition of the garden as a place for solitary contemplation and wellbeing (see discussion in chapter 1).

The point is, and it is borne out by the research, that gardens as both space and material objects play a role in the experiences of grief, mourning and memorialising. Gardens afford opportunities to trigger memories, develop personal associations and thus provide comfort and solace. Other researchers have highlighted the role of gardens as material culture in relation to death and memory both within and beyond Western societies (Hallam & Hockey, 2001; Forty & Kuchler, 1999). At the same time the research indicates that designing symbols or memories within a garden is problematic. As writers such as Proust (1913-27), Bachelard (1969: 13) and Michel de Certeau (1984: 87) all warned, the process and power of material objects to trigger memory is always haphazard. Objects or designs can never be relied upon to deliver memories to consciousness and as Forty & Kuchler (1999: 16) state it is more important to think of the 'art of forgetting'.

A healthcare garden should focus on providing a space rather than explicit symbols for people to experience the "density of time". Conceptualising "a time for everything"

appears to be important to the healing process and a garden offers many access routes. Furthermore, in a garden we exist in time, we are present; experiencing these moments of temporal existence can also be moments of recuperation.

Gardens more than any other art form (though comparable perhaps to theatre) offers the opportunity to step out of our own time, to release ourselves from human time and escape temporarily to a realm where time appears to stand still. This is a distinctive quality. It is the “density of time” where someone finds themselves immersed in the moment. This may be triggered by a sensory or symbolic detail in the garden or it may be due to the elimination of loud noises, fast movements or screening from the built environment. ‘We notice ourselves noticing’, as Miller writes (2010: 188). This is a sense of being part of something bigger, of being enmeshed or of our rhythms connecting.

The suggestion is that a healthcare garden can bring about a transformation of perception, a fundamental change in one’s way of seeing the world.⁵⁷ They can provide the facility to “hold” people, allow them to simply “be”, whatever their mood or emotion. What is being suggested is that a healthcare garden, as an art form, is able to encompass and contain time in a unique way. It is able to offer an intimacy (and a sensory richness, as discussed in the chapter 7) by allowing people to just be. This capacity of a healthcare garden to stretch or alter subjective time or provide a “density of time” is one of its key affordances.

In Maggie’s case it is worth noting that over 50 per cent of visitors are repeat visitors indicating that they will be able to experience the gardens across a period of time. There is great potential here to provide “time markers” for visitors and to further exploit the fact that a garden evolves over time. As already intimated the suggestion is to celebrate the “slow design” of the gardens as they evolve over time.

To draw conclusions, it is suggested that fundamental to understanding the role of a healthcare garden is the fact that time spent outdoors is qualitatively different from time spent indoors; as one participant said, ‘outdoor spaces often make people very different’ (SRPVF 70, 2011). Thus, the opportunities to experience time in different ways afforded by a garden should not be overlooked. Here, reference is made to the

⁵⁷ Harrison (2008: 30) describes this as a ‘phenomenological conversion’.

phenomenological view that the 'conventional distinction between time and space is untenable' (Abrams, 1996: 210). It is suggested that in a healthcare garden time and space can be interwoven with a sensory richness in a different way to the experience of being indoors. Waiting or staring indoors, for example, can be transformed into inhabiting, listening, touching and just being. When people or relatives are ill time can feel compressed but also very stretched out – there can be a lot of time to sit and stare. This can be a very different experience of time to our normal busy lives where we are used to hurrying things along. A garden has its own rhythms and reminds us that taking a pause from our own work or home life does not mean losing time.

Also fundamental is the understanding that healing requires different experiences of time. Zarren (2000) makes the point that time is the single most essential aspect of healing yet somehow we have decided to live with less time for healing. He writes, 'we must continue to call sick and needy people 'patients'. We must be patient with them. We must give them time to tell their stories'. The idea that a healthcare garden must also have its own narrative will be discussed in detail in chapter 11. First, however, it is necessary to look at two more ingredients that emerged from the research: a sense of homeliness (chapter 9) and a sense of care (chapter 10).

CHAPTER NINE

The Fourth Garden Essence: Homeliness

The fourth garden essence to be discussed is “homeliness”. This quality is connected to, but distinguished from, the idea of threshold discussed in chapter 6. Across the case study sites, the role of the gardens in providing intimate, “homely” places for participants whether staff, patients or family members, was highlighted. In this chapter these findings will be discussed and explored specifically in relation to Maggie’s design intentions as well as in connection to the wider healthcare garden context. Based on these findings, it is suggested that a garden affords opportunities to extend a particular definition of homeliness within a healthcare community. First, however, it is necessary to clarify what is meant by the term “home”.

9.1: Defining “home” and being “at home”

In chapter 4 Maggie’s aspiration to a notion of “home” was discussed. It is a key concept that the organisation embraces, and as such, it is necessary to examine in more detail the complexity of “home” as a theoretical concept not only in order to pinpoint the idea more exactly, but also to consider what a garden may contribute. Blunt and Dowling (2006) emphasise that despite the growth in academic research across the disciplines on “home” there is still considerable confusion around the term. This confusion extends to legal definitions with, for example, the distinction between residence and domicile.⁵⁸ What is relevant for this research is that home can be experienced beyond a house and can have meaning both within a garden and within a healthcare context.

It is important to acknowledge the fragility of the home, or what Lasch (1977) describes as ‘a haven in a heartless world’. For a place that is supposedly so familiar it is peculiarly difficult to define. This is because home is generally conceptualised in the abstract, and not just by social scientists. Views of this place affect social expectations and experiences. ‘There is no place like home’, as Chapman (2001) writes, because people construct it primarily in memory and imagination. Home can be imagined on a number of levels. It can be a place, a space, a location with fabric, decoration,

⁵⁸ *Merriam-Webster Dictionary* (2013) distinguish residence as living in a particular locality whereas domicile means living in that locality with the intent to make it a fixed and permanent home.

furnishing and amenity. It can also be defined by the kinds of relationships and constructed by the way others appear to see it; it can be emotional as well as physical. At a deeper level it can be a representation of cultural identity; a collective sense of social security and permanence.

As a starting point home should be contrasted with its antonyms, which include foreign, industrial and institutional (*Roget's 21st Century Thesaurus*, 2013). It is associated with the domestic both in terms of scale and materials, but also in terms of activities and emotion. Likewise, the term 'homely' is associated with the informal, the ordinary and the familiar. Ideas of home are both deeply symbolic and intimately linked with our 'selves' (Heathcote, 2012: 7). When talking about a physical place the term 'home' implies some kind of psychological mould that can match or legitimate a helpful vision of ourselves. As de Bottom (2006: 107) writes, 'our homes do not have to offer permanent occupancy or store our clothes to merit the name. To speak of home in relation to building is simply to recognise its harmony with our own prized internal song'. He (*ibid.*: 123) continues:

What we call home is merely any place that succeeds in making more consistently available to us the important truths which the wider world ignores, or which our distracted and irresolute selves have trouble holding on to.

De Bottom suggests that we can be "at home" in a range of places depending on how they speak to us.

Rybczynski (1988) reminds us that home is always an intersection of materialities and imaginaries, and meanings of home are always geographically and historically conditioned. Blunt & Dowling (2006: 2) describe this as a 'spatial imaginary':

Home is thus a spatial imaginary; a set of intersecting and variable ideas and feelings, which are related to context and which construct places, extend across spaces and scales and connect places.

While Massey (1992) writes of home as a 'place of intersecting social relations – open and porous – embodied and affective'. Home as a place (site and materials), and home as an idea (imaginary and emotional) are thus intertwined. Furthermore, home as a concept, metaphor and experience is fluid. There are many different lived experiences of home precisely because socio-spatial relations are bound up with personal identities and emotions as well as wider political and power relations.

The idea of comfort is often linked to home, although it is acknowledged that for many people home is not comfortable, nor secure and rarely a haven. However, comfort is a word that is much used in relation to healthcare environments. But what is comfort and how does it relate to wellbeing? Ideas of comfort seldom converge and people will always disagree on what gives them comfort.

Busch (2004:17) points out the 'comforts of home are inextricably linked with history'. Comfort is a cultural artifice, it is both subjective and objective and very difficult to explain or measure. It is also often defined in negative terms as the absence of discomfort. Most scientific research has focused on workspaces where comfort is examined in relation to ways to increase the productivity of the workers. Comfort embraces qualities that are emotional as well as intellectual. Comfort involves a sense of physical ease and privacy – a balance between isolation and publicness. Rybczynski (1988: 20) points out the word 'comfortable' did not originally refer to enjoyment or contentment. Its Latin roots were *comfortare*, which means to strengthen or console (early legal meanings of a comforter also referred to someone who aided and abetted a crime). It is only in more recent times that comfort acquired its modern meaning of a sense of wellbeing and enjoyment.

Linking comfort with home and domesticity is a specifically European connotation that evolved initially in seventeenth-century Holland and gradually spread across Europe. Rybczynski (ibid.) again points out that this is a particular idea of domesticity:

To speak of domesticity is to describe a set of felt emotions, not a single attribute. Domesticity has to do with family, intimacy and a devotion to the home, as well as with a sense of the house as embodying, not only harbouring, these sentiments.

This atmosphere of domesticity and individual privacy of the home is perhaps best expressed by paintings by Dutch artists such as Vermeer and De Hooch (figure 9.1).

Figure 9.1. Pieter de Hooch (1629-1684), *The Courtyard of a House in Delft* (1658), (Bridgeman Education)

Within English culture and society too, a particular ideal of home and community evolved with the onset of industrial capitalism and urbanisation. Crowley's (2001) study of architectural designs for the comforts of light and warmth in early modern British and American domestic environments charts the changing values given to the idea of domestic comfort. He also shows how landscape architecture and the picturesque aesthetic refined these values ensuring the country cottage became the archetypal comfortable house for the middle classes.

By the nineteenth century writers began to conflate ideas of home, domesticity and the rural idyll. This ideal, which was also susceptible to a romantic nostalgia, has persisted in English literature, art, politics and physical planning with, for example, the Garden City Movement or Centre Parcs UK. For Davidoff et al., (1976) this ideal of home equated traditional authoritarian and patriarchal structures. They (ibid.) challenge its claim to the "natural" suggesting instead it thinly veiled sexual and political ideology. Indeed, feminist analysis has asserted that the home was the principle site of women's oppression and it is important to acknowledge that the words "home" and "domesticity" must always be qualified and clarified (Domosh, 1998).

Maggie's, as already stated, seek a particular ideal of home that Jencks (Jencks & Heathcote, 2010: 13) defines as 'kitchenism'. Without doubt they are connecting to this very English tradition of the rural idyll and vernacular architecture and design where the kitchen becomes the epitome of homeliness and communal living. As Freeman (2004: 1) points out, 'the "idea" of the kitchen exerts a powerful hold on the English imagination, evoking images and thoughts of hearth and home, family and domesticity'. The Maggie's 'Architectural Brief' (Jencks & Heathcote, 2010: 221) refers specifically to a 'country kitchen' (see chapter 4 & appendix 7A). Maggie's also connect with modernist design traditions of open plan houses where kitchens become the most important social space (Freeman, 2004; Hand & Shove, 2004).

Maggie's cannot avoid some of the stereotypically feminine associations with domesticity concerned with nurture and care-giving. As Meah (2013) points out, gendered subjectivities and power relations within the kitchen today are complex. Within this research there were some encounters with perceptions of gendered space at Maggie's primarily from people beyond the centres; that Maggie's was a place run by women for women. However, the research findings, beyond reflecting the real demographics of the centres, did not reveal any evidence of gendered responses to the gardens.

Maggie's clearly aspire to some very specific concepts about domesticity, intimacy and comfort, which they link to promoting or contributing to people's sense of wellbeing. They (Lee, 2012: 60) state:

An important component of our approach to design and architecture is the domestic and homely. This does not, as we have already noted, mean that our buildings represent any one type of 'home' but are accessible and are places where people can feel 'at home'... People coming into a centre can have a sense that the space is open for them. There are no secrets.

To probe further it is possible to argue that Maggie's embraces two key ideas. Firstly, they identify themselves as very special places. In this sense they are homes because they provide real physical spaces that are 'irreplaceable centres of significance' which offer refuge, freedom, shelter and security. They offer what human geographers, such as Relph (1976) or Dovey (1985), would consider to be a special relationship between people and their environment – an anchoring point through which human beings can literally be "centred". Secondly, they offer an emotional or imaginary idea of home that is more to do with engendering a set of feelings and developing identity, community

and memory. Maggie's want their visitors to develop a sense of belonging or intimacy because they believe this will enable them to better cope with their cancer diagnosis. This is perhaps what de Bottom (2006: 119-120) describes as the ability of design to enable a 'return home' or to 'recover the lost significant part of ourselves'.

Notwithstanding the fact that these meanings of home will vary for staff and visitors and across social divisions such as gender, class and race, there is, within this second idea of home, a suggestion that environment and ethos can evoke a sense of warmth, friendliness and kindness – openness, but also intimacy. Here intimacy is defined as a personal, private, warm, loving and caring relationship, but one that allows for space and personal growth; intimacy in the sense of allowing people to “be and do” in order to heal. The Welsh word ‘cwtch’ was recently used to describe this quality of intimacy at Maggie's (Martin, 2013). This word does not have an exact translation in English. The closest equivalent would be an embrace or hug, although that does not perhaps adequately capture the degree of intimacy and affective quality of a ‘cwtch’ (ibid.).

Bachelard's (1964) reflections on the imaginative resonance of the intimate spaces of the house provide a reference here. Bachelard's idea of intimate immensity where home becomes an essential and embodied place for human creativity, but which is always linked and in direct relationship with the wider world is useful. Bachelard's (ibid.: 132) point is that through refuge the imagination is freed up, he writes, ‘whenever life seeks to shelter, protect cover or hide itself, the imagination sympathises with the being that inhabits the protected space’. Thus, home is also the space of the poet's imagination that can conjure or “daydream” the immensity of being in the world (ibid.: 183).

This thesis suggests that by defining home as a fusion of a feeling of being “at home” with a sense of comfort and belonging to a particular place, it is possible to probe more deeply the contribution of the Maggie's gardens to a sense of homeliness. It is also argued that home is made, and it is a process of caring and creating. It is an evolution of material and imaginative elements as well as social and emotional relationships. This is an important point because it places emphasis on the stories that evolve within the daily lives of a healthcare centre.

9.2: Gardens of intimacy and interconnectedness

The idea of homeliness was expressed by research participants. Maggie's was 'like the home we all want – clean, tidy and homely', was a participant's response (ML31 woman with cancer, 2012). Once this finding was defined, further analysis was undertaken to probe if participants were articulating ideas about homeliness that could suggest the gardens might play a role in developing Maggie's aspirations.

Within the research data it was possible to identify a sense of intimacy. Participants described their experiences providing clear examples of the gardens enhancing a sense of calmness, privacy and containment. As discussed in chapter 6, participants emphasised how the gardens softened and shielded the centres. Participants talked about the experience of arriving at the centres and feeling like they were entering someone's house. As they reached Maggie's they felt a sense of care, 'like someone bringing you a cup of tea in bed' (see figures 9.2 & 9.3). Comments included:

I find most NHS hospitals very depressing, drab and gloomy. Not conducive to health and wellbeing. Maggie's is the opposite. It makes me smile (ME21 woman with cancer, 2012)

I love that it is so different. It's like going into someone's house. Whereas going into hospital is not caring, nurturing or natural. (ME4 woman with cancer, 2011)

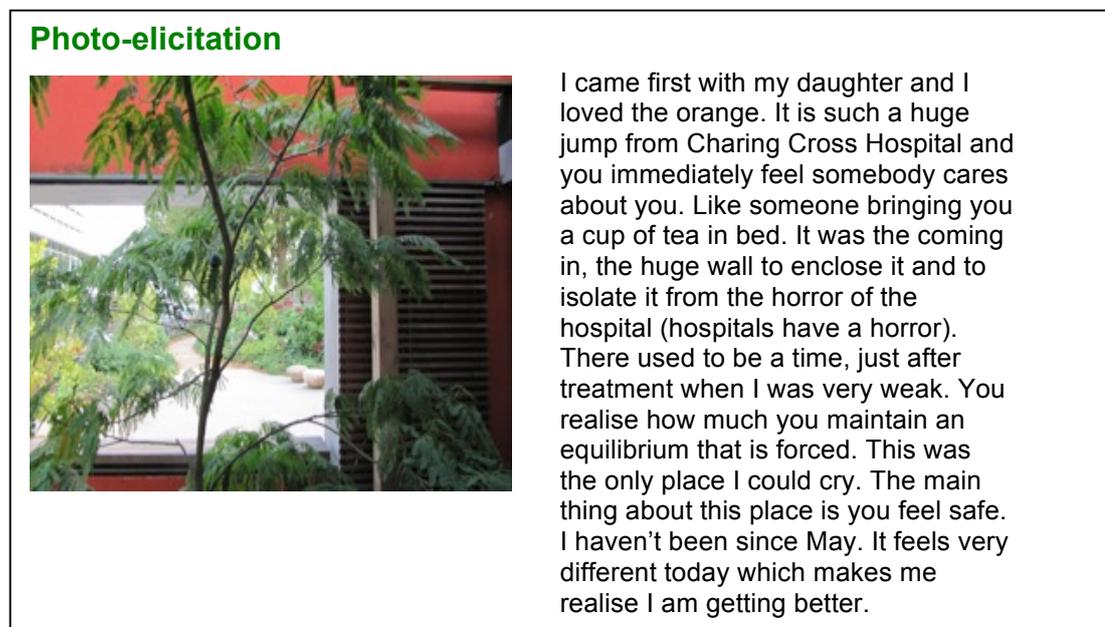


Figure 9.2. Maggie's London (2011) (ML19 woman with cancer)

Photo-elicitation



One of the things I like most there is this section that partitions it off and makes it private, other worldly. It doesn't feel like Cheltenham. It's a corner to sit quietly and to be in one's own world. I haven't sat there but I have seen people enjoying it and people comment on it.

Figure 9.3. Maggie's Cheltenham (2012) (MC25, male staff)

It was also possible to identify expressions of interconnectedness where participants articulated a sense of community, even on their first visit. They described Maggie's as full of laughter and a place where people feel so 'at home' they want to do the washing up. For example:

It's revolutionary the Maggie's concept. So different to clinical environments. This is holistic, from the heart, whereas in hospital you are being put onto. There is a lot of laughter here, of course there are tears as well but there is laughter. It is reconnecting people to who they are. It bring you out of yourself. Also to have somewhere to go, to be able to sit in a garden... I am excited about how the garden will develop – the growth, the garden enhances and provides an outdoor living room. (MC1 female staff)

I remember my first visit ...it was lovely, friendly and welcoming. You walk in and instantly you feel like you don't have to go to the reception. There is someone to welcome you. At the hospital you are told to take and seat and you sit in a corridor. Straightaway here you can have a tea, coffee or cake. You don't have to explain why you are here. It's the atmosphere of the place which is calming. And a laugh too. It's normal, I just wanted to do the washing up. (ME20 woman with cancer, 2012)

Participants described the way the gardens contribute to the workings of the centre and add to the sense of community and interconnectedness. A key point here is that those outdoor spaces most connected with the indoor spaces were highly valued (as discussed in chapter 6). Maggie's London was described by a participant as the perfect combination of books and trees (see figure 9.4).

Participants also noted, in a range of ways, the physical contrast between the domestic scale of the centres and the adjacent larger hospital environments. Here the gardens were cited as one factor that contributed to the calm, light and refreshing feel of the centres (see figure 9.5).

Photo-elicitation



The chair – it's inside. I have sat on it many times. I go and get books or when I am upset. This is an environment where people are caring. Here you are not on display but you are also not cut off. There are books and trees – perfection. It is the end of a corridor – private but not isolated.

Figure 9.4. Maggie's London (2011) (ML19 woman with cancer)

Photo-elicitation



The contrast of the nice green. It is open plan with that horrendous building next to it. Maggie's that's what it's about. I have heard many people laugh and smile here. It is the contrast. It highlights them even more. My first impression of Maggie's was that it was positive, light, happy, refreshing and I still feel this. I remember the colours and the helpfulness and friendliness. It's the people that make the place. The open space and light.

Figure 9.5 Maggie's Edinburgh (2012) (ME14 male volunteer)

Within the data there was evidence that the gardens across the Maggie's sites enhanced feelings of homeliness for both staff and visitors. However, participants' views were conflicting suggesting some gardens were more homely than others. References to homeliness were seen predominantly in the interviews at Maggie's London and Edinburgh. The data suggested that having key staff engaged with the garden also makes a difference. Maggie's Edinburgh provides a good example here

because, although the garden is small, the staff appeared to understand and use it (figure 9.6).

Photo-elicitation



When the weather is nice, when I come in the first thing I normally do is put out the cushions to enable them to be outside – to have coffee, to talk or to just be at peace. It's very nice, very friendly. Also it is lovely to be able to watch people from inside. When I get home my first thought is to get into my garden because I have seen people enjoying the garden here. Some people need permission to go outside. I like to 'mother' the staff too and encourage them to take a break and sit outside. It is almost as good for staff as well as users.

Figure 9.6. Maggie's Edinburgh (2012) (ME15 female volunteer)

There was evidence of a tension between the designers' intentions and staff ownership at Maggie's. Where the design of the garden was less understood by staff, they felt less "at home" in the garden. There was evidence of less developed narratives about the garden. "At home" was defined by staff as their ability to identify with and use the gardens on a day-to-day basis. Participants described the impracticality of some gardens as well as what they saw as the inappropriateness of some features. For example, the garden at Maggie's Dundee presents a bold design statement and one that, to all intents and purposes, fits the Maggie's brief well. It makes a good link to the main hospital and it does provide some easy public space for people to share. Visitors and staff understand the role of the garden at Dundee, including the labyrinth, but the comments from research participants indicated that they find it less easy to engage with it on a day-to-day level. Examples included:

We feel the front is lovely but the back is under utilised. It lacks imagination. We feel it could have both herbs and fragrant plants... We have used the terrace once or twice but the temperature is an issue. An outdoor room where the kitchen is extended would be good. (MD20 woman with cancer & male relative, 2012)

Have not used the garden much, partly because of the Scottish weather. I have sat out on the terrace last summer. I have never walked the labyrinth, which is weather dependent. I would like to

perhaps with my support group. After seeing the sculpture I went to see Gormley's work at the sea. It does seem a fairly odd place to have it. Lots of people, especially older people, would be taken aback by a big naked man. It's not normally what you might see. People might go more quickly. I don't know why it is here. (MD26 woman with cancer, 2012)

This, it is suggested, is because the design does not immediately offer a sense of intimacy and interconnectedness. Of course, an organised activity such as a night time walk of the labyrinth does, as does the scent of the azaleas (*Rhododendron*) or the sound of the grasses in the wind. These moments are few and far between within the daily life of the centre. The garden at Dundee offers far less intimacy than Edinburgh or London and this cannot be put down entirely to climate. Ironically, one member of staff at Dundee (Howells, 2013) said that she found it easier to tell the story of the garden before Lennox-Boyd's design. She said (ibid.), 'before the garden it was easier to talk about the centre being this solid white secure place – this lighthouse or beacon set in the midst of the Scottish *machair* or wildflower meadow' (figure 9.7).



Figure 9.7. Maggie's Dundee (Butterfield, 2011)

Maggie's Cheltenham provides a different example again because in many ways the garden did appear to offer a sense of homeliness. Visitors and staff valued the range of sensory planting and materials (see chapter 7). However, the research showed a disparity between the story of the interior and exterior. It is interesting to note that the architect, Richard Murphy (cited in Jencks and Heathcote, 2010: 152-156), sees his work in the tradition of Frank Lloyd Wright where the building evolves like a piece of furniture offering 'cabinets within cabinets'. Murphy (ibid.) also refers directly to

Bachelard's idea of 'nests' as a way to engender a sense of homeliness within architecture.

In the interviews staff explained with confidence the architect's vision, but they did not speak about Facer's design concept. Staff and visitors also made it clear that they found the garden impractical for some of their needs. A garden party fundraising event at the centre on a warm summer's day in May 2012 further highlighted how some areas of the garden were not intimate or homely; there were few spaces where people could sit or enjoy the shade (figure 9.8).

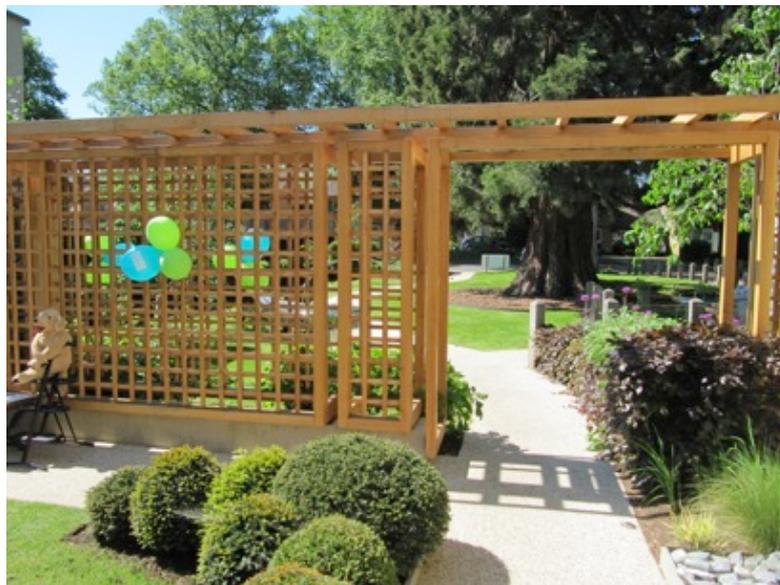


Figure 9.8. Maggie's Cheltenham Open Day (Butterfield, 26 May 2012)

This suggests that some aspects of the gardens at both Maggie's Dundee and Cheltenham did not offer a fuller sense of intimacy and interconnectedness. Reviewing the findings of the previous chapters, the suggestion is that these gardens do not fully embrace the garden essences. That it is the combination of creating thresholds, sensory richness and the density of time that creates a sense of homeliness within a healthcare garden.

9.3: The comfort of gardens

The garden designer Dan Pearson (2010), offered an interesting insight into his approach to designing for healthcare when he stated:

You don't necessary have to connect intellectually. By just making people feel comfortable, they start to see the detail. They start to feel the experience – start to process in a natural way – it is more intuitive.

Moving from the themes of intimacy and interconnectedness the findings also showed evidence of how the gardens contribute to feelings of comfort in the sense of making people feel at ease. The opportunity to make people feel comfortable afforded by the gardens was cited by participants. This was about spaces where people felt comfortable, but also the gardens contributing to the sense that the place was about comfort and help. A staff member at the Macmillan Crewe centre explained this succinctly in her photo-elicitation (figure 9.9).

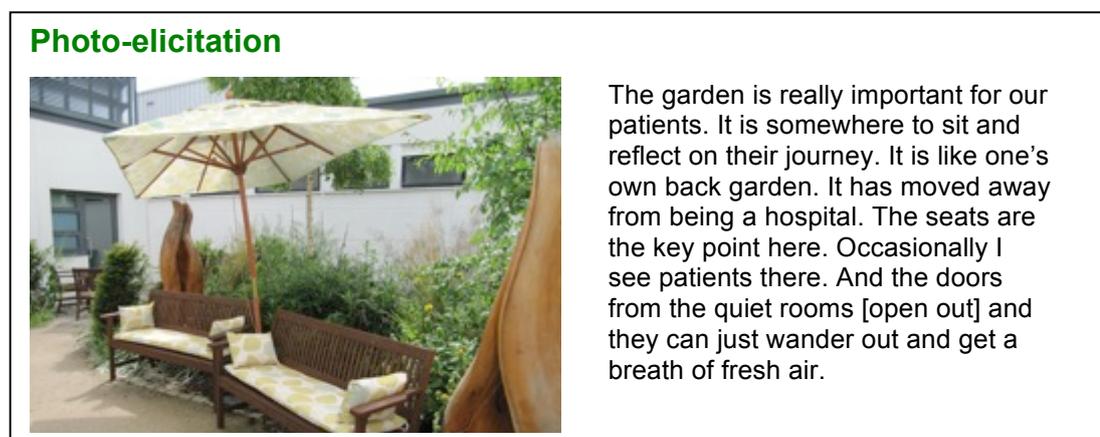


Figure 9.9. Macmillan Ambulatory Oncology Centre, Leighton Hospital, Crewe (2011) (MACC3 female staff)

Put a different way, a participant at Great Ormond Street described the idea of a restorative garden as 'a place I know I can go to that I will be welcomed and where I will want to stay' (GOSH9, 2012). That a garden must speak directly to the person came across strongly in the research. Sanctuary, security and personal meaning were the key findings of the questionnaire research into restorative gardens and the photo-elicitation interviews across all sites. Indeed, the qualitative research revealed a range of definitions of wellbeing in relation to gardens that embrace ideas about home (appendix 4B).

What also became evident is that people generally identified a garden as a place that offers solace and has potential for restoration. The very fact that gardens within everyday life are so often attached to our homes and hence tightly bound with our own identities of home and privacy is important. Also, gardens are often now regarded as ways to strengthen communities as exemplified by initiatives such as Gardening

Against the Odds discussed in chapter 1. These can be taken advantage of in healthcare where a garden can further enhance a sense of intimacy and interconnectedness.

Of course, at Maggie's the domestic scale of each centre is one of their core strengths. The domestic scale is matched by a relatively small team of staff and volunteers on each site and this in turn encourages a sense of familiarity for regular visitors to the centres.⁵⁹ However, the suggestion from this research is that a garden can enhance feelings of homeliness even within a large-scale healthcare environment. A garden can set a tone and assist people (staff, patients and family members) in feeling more comfortable and "at home" (in the sense of being themselves) even in an environment that is essentially institutional and public. This links back to historical precedents such as the York Retreat (1794-1796), where green space, including gardens and a farm, contributed to the 'vernacular of equality' (see chapter 1). It also connects to more recent examples within the hospice movement where gardens are part of their way of expressing a non-institutional feel.

The research suggests that the case study gardens contributed to what anthropologist Miller (2009: 295) calls the 'aesthetic' of an environment. Miller is not talking about the arts but rather a pattern or integrity. Miller suggests that this aesthetic provides comfort to people through its repetitions and familiarities. Miller's research focuses on individual people in their homes in one street in London. However, his idea of the 'comfort of things' can be transposed to a community setting (including healthcare) where an aesthetic is created through both material culture (objects, buildings and gardens) and social relations (behaviour, atmosphere, community and ethos). For Miller (*ibid.*: 287) and other writers, such as Cooper Marcus (1995), the centrality of material culture is uppermost because 'objects create subjects much more than the other way round'.

9.4: Extending the definition of homeliness with a healthcare garden

Gardens are always entanglements of nature and culture (as discussed in chapter 3). The gardens studied for this thesis must be seen as part of a network, operating in relation to their immediate internal spaces as well as to the wider hospital social, medical and cultural environment (the healthcare community). Conradson (2005)

⁵⁹ This is something Daryl Martin (2013) is currently researching at Maggie's.

argues that the 'therapeutic landscape experience' is best approached as a relational outcome as something that emerges through a complex set of transactions between an individual and their broader socio-environmental setting.

Can a garden associated with healthcare be a domestic space? Can any garden ever be homely? Or is perhaps the small private garden the epitome of home? Why does home even have to be "inside" a building at all? Interestingly, there have been few studies considering the role of gardens within social science and housing studies that explore ideas of homeliness. Studies that do exist, hint at the idea of the garden as a space both of quiet liberation and political potential as well as signalling the health of home and family. For example, Preston's (2009) research of private gardens in nineteenth and early twentieth-century Britain identifies the garden as an integral but discrete area of home which was formative to the construction of new social and political identities for women.

Bhatti & Church (2004) argue that the study of gardens can significantly enhance the current understanding of the meanings of home today. They state that because a garden offers a distinctive embodied engagement with nature compared to other domestic spaces it performs an important and distinct role. They argue (*ibid.*: 49) that the garden is an important site for privacy, sociability and a sensual connection to nature, and that these activities can be understood as negotiations and practices to address the social and environmental paradoxes of life today. Significantly Bhatti & Church (*ibid.*) identify the restorative role of the garden within domestic space. Something they discuss in relation to the 'anxiety of late modern life', but one that surely can be compared to the anxiety of illness.

To return to Davidoff et al., (1976: 160), they state that it was in the symbolism of the garden that the rural and domestic idyll merged in the nineteenth century. However, unlike within the interior home, the garden was the (only) space where both sexes (and children too) enjoyed some form of equity. Rather than the walled garden being personified as the stifling of female sexuality, it offered a space for 'nurturing relations and organic community' (*ibid.*). Within the garden, domesticity was defined by a sense of privacy, security and protection where walls, entrances, drives, gates and hedges all contributed to this sanctification.

It is interesting to note that when people have been asked what home means to them most sociology studies (in the Western world) have come up with three key points (Blunt & Dowling 2006: 9-10). Home provides shelter; a setting in which people feel secure and centred; and finally, people's sense of self are expressed through home. It is also interesting to note that notions of the contemporary ideal home across the world usually includes a place close to or enveloped in nature (Blunt & Dowling, 2006: 244-6; Dovey, 1999: 149). Private outdoor space was one of eight key features that people need and want from their homes today as revealed by a recent RIBA/Ipsos MORI report (2012).⁶⁰

Here it is necessary to return once again to a phenomenological perspective. Merleau-Ponty (1962) drew on Heidegger's notion of 'dwelling' as a mode of being in the world. Heidegger proposed that the building of a house and the idea of dwelling on the earth were fundamentally connected. Writers and researchers have looked closely at Heidegger's text, *Building, Dwelling, Thinking* (1964, 1993 edition) to explain the rich intimate connections (togetherness) of humans and things that make up places (Wylie, 2007: 157; Sharr, 2007). Notwithstanding critiques of the "dwelling perspective" that argue undue emphasis is placed on valuing (romanticising) rural and pre-modern ways of life (Wylie, 2007: 181), such a perspective breaks down the subject-object model of life and throws into light the complexity of space and place. Dwelling is both place and process.

This is something that Fry and Perolini (Fry and Perolini, 2012) have recently written about in relation to sustainability. Fry and Perolini argue that we need to go to Heidegger's idea of dwelling to reconfigure how the home can be thought and positioned. They write, 'we humans dwell in our inner selves – and this condition is indivisible from how we live and act in the world. At the same time, the "external" world is the home of our "home"' (ibid.). It is only by understanding dwelling, which is relational, temporal and subjective, that a fuller understanding of place is reached. This is well rehearsed within architectural and sustainable design practices but less so within garden studies. A garden can offer a particular way of dwelling, a unique sense of homeliness and compassion. To follow Fry's (2012) thinking, gardens can perhaps lead to a new way of 'becoming human by design'. The suggestion is that the refuge

⁶⁰ This ethnographic research report stated that private outdoor spaces or access to urban green spaces is considered essential to wellbeing, regardless of age, household type or location (RIBA/Ipsos MORI, 2012: 54).

and sanctuary offered by a healthcare garden presents a particular type of dwelling that can conjure infinite possibilities.

9.5: The garden sanctuary as a form of energy

By defining “home” and “homeliness” a garden embraces a range of historical and contemporary cultural associations that may be useful. As has already been noted, the idea of paradise and the walled garden have often been linked historically and culturally. It was highlighted in chapter 1 that the sense of privacy and containment of the *hortus conclusus* was used within monastic and early modern hospitals.

The depiction of a human being, room and garden in Fra Angelico’s painting of the *Annunciation* (c.1442, Museo di San Marco, Florence) was discussed in the introduction as an ideal image of home (see figure 0.1). Fra Angelico’s painting encapsulates the relationship between humans, architecture and green space emphasising their interconnectedness but also their intimacy. It is these qualities and how they were articulated and commented upon that is highlighted within the research because they throw light on what specifically a garden may be able to offer healthcare.

The annunciation painting is an image of safety and sanctuary. Such characteristics are associated with ideas of home. In the Christian story the garden becomes an expression of earthly paradise. As a closed and private space it also becomes specifically associated with the Virgin Mary (‘Song of Solomon 4’, *Old Testament*). The enclosed garden is symbolic of a womb and Mary’s virginal state. Paintings of the annunciation often depict Mary in a colonnaded space located between home and garden (figures 9.10 & 9.11). The colonnade mediates between the two spaces giving equal importance to both. The garden plays a role ensuring that Mary is protected and contained – thereby providing a safe location for her to encounter the Angel Gabriel.

Figure 9.10. Fra Angelico (1387-1455), *The Annunciation* (c.1430-32), tempera on gold panel (Bridgeman Education)

Figures 9.11. Leonardo, da Vinci (1452-15-19), *Annunciation* (c.1472-5), oil on wood (©ARTstore)

Removing the Christian context, these paintings can still emphasise the idea of a garden as a uniquely protective space. An outside space so private yet still connected to (not isolated from) the internal spaces. A space that is safe enough for an encounter; for someone to access their memories and emotions, confront their fears, share a secret or perhaps express their sense of loss.

In garden history the enclosed garden has taken on this special role of ensuring privacy and protection, whether it is for climate, pleasure or memories. As Baker (2012: 165) writes:

A separate [garden] space has always seemed fitting for personal memories, a place where we can concentrate and reflect on our lives, the human condition and the cosmos.

The *hortus conclusus* has taken on different guises from the visionary *Partheneia Sacra* (1633) of Henry Hawkin's book, to very real *giardino segreti* or hidden gardens (see figure 9.12). Perhaps most famous is the *giardino segreto* at the Renaissance *Villa Lante* gardens near Rome, or more recently the small walled seaside garden in St Ives, Cornwall that belonged to the sculptor Barbara Hepworth (see figure 0.3).

The Arabic word *al-jannah* means both 'garden' and 'concealment' suggesting that there is a secret 'garden of the heart' (Pogue Harrison 2008: 197). But there is also the secret garden immortalised by writer Frances Hogson Burnett (1911). *The Secret Garden* remains the quintessential encapsulation of the magic of a garden in childhood. That a garden holds a link to childhood memories and imagination is something that many adults, who have probably never read Hogson Burnett's book, connect to. Indeed, as it was suggested at the beginning of this thesis, the very idea of a garden for many people today is one that carries these associations of sanctuary, privacy and memory.

Figure 9.12. Henry Hawkins, *Partheneia Sacra* (1633), book illustration (reproduced in Coffin, 1994: 62)

It is not the idea of enclosure that is paramount. In fact, and as the research has demonstrated, a sense of openness is also important within an overall feeling of containment. Far more important is the idea that the protected space that a garden offers can be a space for transference or transformation, as is the case with the visit from the Angel Gabriel.

The historical origins of the word 'garden' refers to an 'enclosed cultivated ground'; both the English 'garden' and French *jardin* originate from the Old German *gard* or *gart*, an enclosure or compound. Likewise, the words yard and court and the Latin *hortus* all refer to an enclosed space (*Oxford Dictionary of English Etymology*, 1996). Historians and designers have perhaps overly emphasised the idea of the garden as only this separate enclosed world. It is helpful to re-look at the idea of enclosure as both a holding space, but also an in-between space; a space you move through from outside to inside and vice versa or a 'reversed imagery' to use Aalto's words (cited in Pallasmaa & Sato, 2007: 30).

A garden holds or offers many thresholds; from "wild" nature to "cultivated" nature, from public space to private space, and from street to domesticity. It is a space that is intimately interdependent upon what it encloses itself from or is leading to. The demarcations and boundaries are always relative and a garden is intrinsically linked to the world it is removed from. As Harrison (2008: 56-7) writes, the stillness of a garden is 'relative, dynamic and unabstracted from the environment...the stillness *draws its energy* from the whirl around its energy. For stillness is a form of energy'. The calmness offered by an effective healthcare garden presents a particular type of sanctuary. This calmness is better defined as dynamic stillness; for a garden that embraces the essences is in fact intensely vibrant. This, it is suggested, offers a particular contribution to a sense of homeliness.

9.6: Intimate gardens and infinite space

This research underscores the reality that the gardens are valued at Maggie's. This is not to say they always do add to the Maggie's ethos. Indeed, there is evidence that at times the gardens sit uncomfortably within the overall aims of the organisation. What this research does is demonstrate how the gardens can contribute to Maggie's desire to 'create calm, friendly spaces' (Jencks & Heathcote: 2010, 221). The study also

underlines that their gardens are underused and that their role could be greater. Site and landscape need to be valued and cared for as much as the architecture.

Both at Maggie's and the other case studies it is clear that the gardens perform a role as mediators linking public and private, and connecting the natural, social and cultural environment. They can further engender a sense of homeliness and they can also offer a poetic space. This, it is proposed, is about providing comfort in the more traditional sense of consoling and strengthening. It is also about providing a different type of space – a place of refuge that allows it to be a place to daydream.

To return to Bachelard (1964: 183-5), the suggestion is that by making a garden homely and intimate you give people infinite space. One only has to read Andrew Marvell's poem, *The Garden* (1688-9), to get a sense of just how "expansive" the journey in a garden can be (reprinted in appendix 4C). By giving people a garden not just for memories but also for contemplation, you give people immensity. Bachelard (1964) conjures, through his literary musing, the 'intimate forest' or 'tranquil foliage'. He also refers to Rilke's, *Poeme* (1924), where the poet demonstrates how, in the presence of a familiar garden object, it is possible to 'experience an extension of our immense space' (ibid.: 199):

Space outside ourselves, invades and ravishes things:
If you want to achieve the existence of a tree,
Invest it with the inner space, this space
That has its being in you. Surround it with compulsions,
It knows no bounds, and only really becomes a tree
If it takes its place in the heart of your renunciation.
(Rilke [1924] *Poeme* [extract], cited in Bachelard,
1964: 200)

This is not just about poetic imagination, it is also about expansive social interaction too. As has been demonstrated, gardens can help to negotiate both the space and the culture of the interior. They can perform the same role that the kitchen table does within Maggie's. They can further enhance the sense of home as opposed to an institution and can augment the domestic scale and sense of privacy. They can also advance a sense of care and the handcrafted (the gardened). Maggie's need to think more carefully what their brief (Jencks & Heathcote, 2010: 221) defines as 'easy public space for people to share and feel refreshed by', because a garden, even more so than an open plan kitchen, lends itself to democratic comfort. What is needed is a re-interpretation of Jencks' 'kitchenism' within the garden. Perhaps a new definition of the

kitchen garden would work, but one, as chapter 7 suggests, that still includes fruit and vegetables. As a participant stated emphatically:

The garden space is more important than the building, right from the start – because I didn't have to do anything. I could stop and look. (ML 16 woman with cancer, 2010)

The research shows that it is only with the provision of garden spaces intimately connected with indoor spaces that a fuller sense of homeliness is achieved. The findings indicate that healthcare gardens should be valued as interstitial spaces allowing “dwellers” to be simultaneously at home and yet out of doors. Interstitial is used here in the sense of providing calm spaces of dynamic stillness rather than being empty or void. Thus, comfortable, in the sense of helping people to feel at ease, but also contributing to the overall sense of care and help. Homeliness then becomes better defined as the dialectic between inside and outside, between permanence and change, individual and the world, and isolation and publicness – between home and away. This is about a mutual relationship where each benefits the other; it is about compassion. The argument is that if you get the garden right then everything else works better too. If the garden essences are considered, then the overall healthcare outcomes may be enhanced. Care is the subject of the next chapter because for these four essences to be effective the garden will always need to be cared for.

CHAPTER TEN

Gardens of Care

In the last chapter the ways in which the case study gardens provide comfort for both staff and visitors was discussed. The ways in which the gardens helped individual people to feel at ease were highlighted as well as how the gardens set the scene for an overall sense of comfort. This led to a clearer understanding of what a garden can contribute to a sense of homeliness. This chapter looks at the value placed on the maintenance and care of the case study gardens. It discusses evidence suggesting that where the gardens were cared for by one gardener, there was greater user engagement. It also looks more closely at the role of gardens for staff within healthcare. It is argued that caring and compassion are essential qualities of any well-maintained garden and that healthcare should take more notice of the so-called garden virtues.

10.1: The garden's need to feel loved

The research analysis so far has identified four qualities that were valued within the gardens. These essences defined as thresholds, sensory richness, density of time and homeliness were discussed in the previous chapters. Moving beyond the original brief and designers' intentions, the research also revealed a correlation between visitor engagement with the gardens and the care those gardens were receiving. It appears that it is only when a garden feels loved that people are able to engage and "experience it" suggesting that the sense of care conveyed by a well-maintained garden is powerful.

A garden always needs to be cared for. Even the most basic garden requires attention and care at some point during the year. The problem is that healthcare gardens are often designed for low maintenance or rather lack of care. The research participants discussed this issue. A participant observed that many healthcare gardens are 'half hearted – one tree in the middle of a patch' (MACC1 man with cancer). Others emphasised the value of 'having healthy plants and grass' as immeasurable (GOSHOS22). Another participant stated:

All gardens, not neglected, are beneficial, subject to them being within the capacities of their carers. Actively participating in maintaining a garden enhances the benefits. (ME23 male volunteer, 2011)

Macmillan's landscape guidance document (2010b: 36) identified that the method of maintenance is key to the success of a healthcare landscape and that this should be discussed at the time that the design is conceived. This is what the King's Fund evaluation (2003: 27) identified as 'therapeutic impact', where time and attention is paid not just to initial design but also to on-going maintenance. Places that encourage patients to feel looked after and cared for, and for staff to feel valued have a therapeutic impact that goes beyond the physical environment.

This is an important point because the reverse of this argument can have disastrous consequences. Too often gardens are installed and then forgotten, and yet it is assumed that these spaces continue to offer healing environments. If a garden is not developed and cared for, however outstanding the original design was, it quickly deteriorates into a negative space. This happens regularly within healthcare in the UK, usually because the on-going practicalities and cost of maintenance have not been factored in or managed. It links to a historic problem that emerged last century with both the decline of cohesive management of healthcare sites and the decline in value that was placed on green space (see chapter 1).

The research for this thesis found many examples of neglected healthcare gardens (figures 10.1-10.5). Dead hedges, poorly maintained paths, lack of watering and overflowing rubbish bins were just some of the problems encountered. Sometimes problems had arisen as the consequence of changes in building use (common within healthcare), where an outdoor space had then become less accessible or redundant. This happened with the Grenville Ward Courtyard garden (2002-5) at Truro Hospital (figures 10.6 & 10.7). This temporary garden was developed in consultation with staff and patients and included raised beds and climbing arbours to create a series of intimate spaces, as well as areas for walking and exercise (Westley Design, 2008). Two years after the completion of this project the ward for which it was designed moved. This garden provides a good example where a change in the use of the building space meant the garden was no longer cared for.



Figures 10.1 & 10.2. Photographs of Evelina's Children's Hospital, St Thomas' Hospital, showing evidence of poor garden maintenance (Butterfield, 2010)



Figures 10.3 -10.5. *Left to right*: Dead hedging at the Friends Garden, Great Ormond Street Hospital (2011). Poor maintenance of the labyrinth path at Maggie's Dundee (2011). Rubbish and leaves at Maggie's London (2012), (Butterfield)



Figures 10.6 & 10.7. *Left*, Grenville Ward Courtyard at Truro Hospital, Royal Cornwall Hospital Trust by Westley Designs, shortly after completion in 2004. The same garden (*right*) in 2010 (Butterfield)

Hosking and Haggard (1999: 25) point out the nature and extent of a hospital's land will depend on its past history and current situation, and the quality and imagination of its care will depend upon the management in charge. This research highlighted a lack of clarity regarding on-going maintenance is the norm across healthcare gardens. In many cases the original design team hold a contract for a period of time, usually a year or eighteen months. However, there is rarely consideration of the longer-term

maintenance and often confusion as to who (or which department) is responsible, especially when it comes to budget.

Managers spoke about the beneficial role of a volunteer programme at the gardens visited, but this is only achieved in a few instances. The role of volunteering is topical, and was the subject of a recent King's Fund report (Naylor et al., 2013). The Macmillan guidance document (2010b) discusses the pros and cons of using volunteers. Notwithstanding the health and safety issues, the potential lack of expertise and the danger of the original design being diluted or lost, they highlighted the fact that use of volunteers can develop ownership of a site. If a focused and supported group of volunteers can be developed it presents a good way to increase the link between garden and wider community. However, to date there are few examples where this has been successfully achieved (Maggie's Edinburgh is one). It was noted that none of the Macmillan NHS Trusts sites had been successful at organising volunteers to care for the gardens (Bostin, 2011).

Volunteering has been more successful within hospices, where gardens are often supported by family members of people who died at the hospice (Worpole, 2009; Porter, 2010). Here volunteering performs three important roles: it can be therapeutic for the grieving family; it ensures development of the garden (volunteers provide free labour and often plant material); but most importantly it ensures longer-term links or integration with the community. In this way a garden reinforces the fact that the hospice movement is just as much about the people who survive as about those who die. A garden presents a tool to ensure the hospice strengthens its links with the community but at the same time it ensures its financial survival.

Participants at Maggie's valued the fact that the gardens 'felt loved'. Participants also made the point that the Maggie's gardens were different to so many hospital gardens because they did not feature a 'low maintenance style' (see figures 10.8 & 10.9).

Comments included:

[The garden] is always well cared for and nice and attractive. If it was neglected it wouldn't give the right vibes. I think the outside space is very important to Maggie's. (ME3 woman with cancer, 2011)

Participants at Maggie's also pointed out areas they felt were unloved and some of the problems at Dundee have already been highlighted in the last chapter (figure 10.10).

Photo-elicitation



This is what you see when you sit down. I focus right in. It's really strong in my vision. I don't look beyond. It's hugely important. It's non-regimented and not 'low maintenance'. It's creative. It's like my garden. Somebody likes the garden. I have a front garden and I get great pleasure from people looking at it. To see things continuously dying off and blossoming – it's inspirational and hopeful.

Figure 10.8. Maggie's Edinburgh (2011) (ME4 woman with cancer)

Photo-elicitation



I like a wild garden. I don't like organised gardens. Throw seeds and see what happens. This has a 'wantonness' about it – it just the planting, everything is there. It may be organised but it doesn't look it. I love the alliums. This is the most important photograph for me – although it looks slightly messy and untidy it's relaxing for me – like a country garden and very different from the hospital.

Figure 10.9. Maggie's Cheltenham (2011) (MC14 female staff)

Photo-elicitation



The pot. It needs to be slightly smaller. More pots in that corner. It needs to be more colourful. It's occupying more area but not actually producing much.

Figure 10.10. Maggie's London (2012) (ML23 male relative)

Trevarna Garden in Cornwall provided an example where the lack of clarity regarding the on-going maintenance and care of the garden had a detrimental impact. The

research suggested that this lack of clarity led to feelings of disempowerment by its users as well as reducing opportunities to develop the story of the garden.

Within a few months of opening, relatives were expressing concern about the care of the new garden and also frustration as to the lack of clarity as to who was responsible for it:

Been done beautifully but I am frustrated at the lack of upkeep of the garden. It was all so tidy and nice at the garden opening. Maintenance is an issue as I am a keen gardener and can't stop walking round and pulling weeds out myself. (CS28 female relative, 2012)

The lack of garden maintenance and growth of weeds is an issue. It is disappointing after all that effort for a new garden and then to see no aftercare. (CS23 male relative, 2012)

Staff and relatives talked about the need for a gardening club, for regular gardening activities, as well as more opportunities to grow favourite flowers, fruit and vegetables. Staff also expressed confusion about their role and as to whether they could initiate new planting. Some said they would have liked to have information or labels on the new plants. This participant highlighted the disconnection between the design team and on-going users:

I don't have any comments on the plants. We don't know what they are. It would have helped staff to know the plants or perhaps to have lollipop sticks. Or even a guided tour when first planted. There is a disconnection with the planting. There had been so much consultation about what plants and then it was taken out of our hands. Maybe in the future we will be able to do our own planting, especially with the big trough. (CS16 female staff, 2012)

The example of Trevarna highlights how easy it is, despite a strong consultation process, to lose the connection between initial design plans and the on-going care of a garden. The research across the different sites suggests that generally healthcare garden design needs to focus more strongly on what user-engagement really means and with on-going care and sustainability. These points will be returned to again in chapter 11.

10.2: The need for a 'constant gardener'

Maggie's Edinburgh provides a good example where a healthcare garden has been able to flourish with very little on-going cost and where most of the maintenance is done by a small team of committed volunteers, with occasional input from larger teams

generated through corporate sponsorship. However, the research across all the case studies revealed that where the garden has some consistent care, primarily through the role of one lead gardener, the level of engagement is stronger. Here Maggie's London was a role model because the gardener Rosemary Creaser has provided continuity, linking the original design to the evolving workings of the centre. As Creaser (2012) states herself the important thing is:

It's the on-going relationship. The fact that one person has that continuity... 'My time here'. Also I am often chatting to people. I am connected to the centre. I know what needs doing, I know where the weeds are.

The fact that Creaser has also developed activities for visitors based around simple horticultural activities has strengthened the connection of the garden to the day-to-day life of the centre (see appendix 1C). It has also enabled her to attract volunteer support to help her keep on top of maintenance. The point being that relationships are evolving and changing, but always interconnected, and ensure that the garden's original design aesthetic as set out by Dan Pearson is not lost.

Maggie's Dundee is another example where the role of one gardener appeared to have an impact. Initial site visits were noted for the lack of engagement by visitors and staff with the garden and comments focused on requests for more variety of planting. The comments changed after Andrezej Bogdan became the regular gardener at Dundee in 2011. For example:

For so long it wasn't nice. Now the minute I get out of the car I look at the garden.
(MD2 woman with cancer, 2011)

The gardener is making a great job – it has made such a different.
(MD24 woman with cancer, 2012)

Participants commented on the fact that Bogdan was seen to be working hard; people noted and valued the quality of the care. Comments included, 'Andrezej works very hard, makes good cakes and never takes a break!' (MD25 female relative, 2012) and:

The gardener makes a lovely job. It's just so lovely, especially the labyrinth. When doing Thai Chi I like looking at the labyrinth. It seems to add to it. The gardener seems a perfectionist. Nothing ever needs doing. This just adds to the whole atmosphere. The landscaping is very important in creating the atmosphere here. (MD23 man with cancer, 2012)

The importance of having one regular gardener who is connected to the centre was evident at other case studies too. It is clearly a role that goes beyond weeding and one where the gardener has a special role within the healthcare community. This is perhaps most easy to articulate in relation to hospice care and was something that gardeners, Colin Porter (2010) at North Devon and Mike Halman (2010) at Trinity Hospice, both spoke about. Porter talked of his special role in making the garden contribute to the overall sense of vibrancy within the hospice. He (ibid.) acknowledged that making that decision to come to a hospice is very hard yet he said people are often surprised when they get there to find it is so lively:

My job as a landscape designer is to come up with the type of garden that people want. That's my job. But here because of the sensitivity and dynamics with the people who are working here – that kind of thing is expressed in random conversation I have with people all the time and also the recognition of the spiritual connection with place is part of what people sense here. So I have been able to actively work on that here and do lots of things here – it is an expression of a universal understanding...I want [the garden] to be dynamic and vibrant. A lot of what goes on here is strong and vibrant. This is not an ecclesiastical cloister. People are here to enjoy it.

Porter (2013) also made the point that a hospice garden is a perfect example of slow design or permaculture where the garden design and narrative evolves over time in response to the needs of the hospice and the wider community through volunteers. He is critical of 'top heavy design' advocating an evolving design methodology that listens to the voices of its users (ibid.).

Jane Kelly's continued involvement and close working relationship with the staff at the GHH appears a key part of the success of this garden. As someone who has worked on a number of healthcare projects she recognises this situation as quite unique but vitally important. Kelly has been able to oversee the maintenance and develop the garden through the years. This has been important to maintain the colour balances and overall design, to nurture some plants and control others, but also to ensure that the garden is always 'bulging with life':

If patients can see things growing and changing and getting bigger, it sends a positive message. The patients come out and talk to me, and are always asking me for the names of plants. (Kelly, cited in Galbraith, 2004)

Participants at Trevarna garden indicated that uncertainty as to on-going responsibility for maintenance of the new garden had reduced their sense of ownership. A key aim of

the new garden was for it to become completely integrated within the daily life of the care home as well as providing regular opportunities to connect with the wider community. While the research showed evidence of increased use, it also showed that the garden had not become fully integrated.⁶¹ This appears to be partly due to the scaling back of the original design (see chapter 6). It is also perhaps due to practicalities such as the lack of suitable seating for elderly people and no outdoor lighting for evening use. Participants also suggested Cornwall Care management had not taken the initiative to develop their own gardening activities and events or provided clarity over (and money for) the maintenance. A range of comments from both staff and family members highlighted these issues (figures 10.11 & 10.12). For example:

When the project first started there was a lot of hype. But at the end of the day it is just a garden. Unless families come in it is sometimes difficult for us to make full use of the garden because we would be neglecting others. Although many of our clients are generally able to go out on their own they still wait for staff. There was also a lot of hype about the community being brought into the home. It hasn't happened. As staff we have enough to deal with. I did think it was going to change things so I am disappointed. (CS16 female staff, 2012)

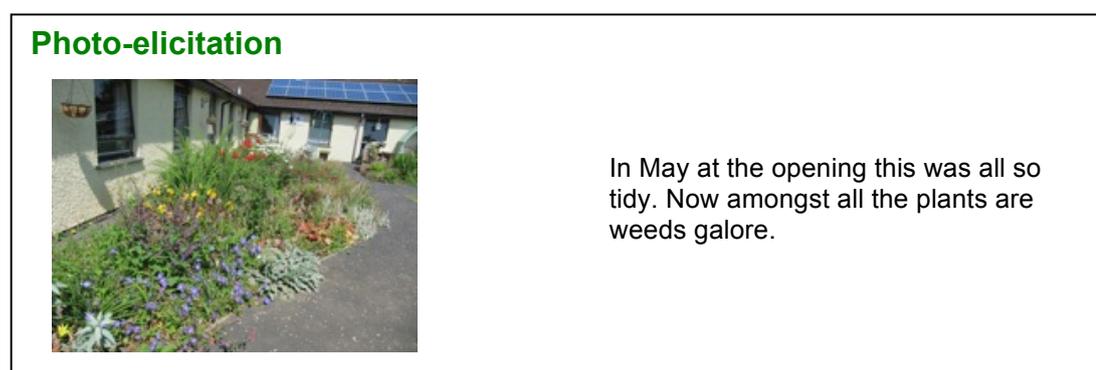


Figure 10.11. Trevarna Garden, Cornwall (2012) (CS12 female relative)

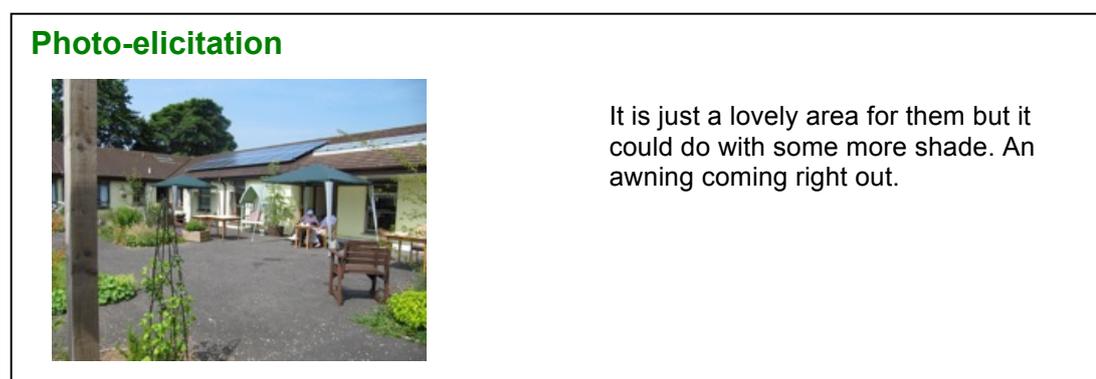


Figure 10.12. Trevarna Garden, Cornwall (2012) (CS11 female staff)

⁶¹ Note: the author undertook field research both before and after the redevelopment of the garden 2010-12.

If, as was discussed in chapter 3, a garden is understood as a set of circumstances or network it is easier to understand how fragile its existence is. A garden only exists as long as its keepers work it and love it. It may seem obvious but a garden is its gardener's energy and dynamism. As Harrison (2008: 7) writes:

A humanly created garden comes into being in and through time. It is planned by the gardener in advance, then it is seeded or cultivated accordingly, and in due time it yields its fruits or intended gratifications. Meanwhile the gardener is beset by new cares day in and day out. For like a story, a garden has its own developing plot, as it were, whose intrigues keep the caretaker under more or less constant pressure. The true gardener is always 'the constant gardener'.

Healthcare design appears to sometimes forget the basic point that a regular gardener is important. If this is deemed too costly then why not recruit a member of staff who could also work part time as the centre gardener (the research showed that many staff would consider themselves at least amateur gardeners). The research suggests that there is too much emphasis on the bigger scale and overall landscape design and far too little on nurturing the intimacy and symbolism offered by a well-cared for garden. This is perhaps a problem with the landscape design industry as a whole, a point that has already been raised in chapter 6.

Maggie's appear to have learnt by their own experience. They are currently working in partnership with the organisation Thrive, to identify 'therapeutic gardeners' who have the right skills to look after the gardens at the Maggie's Centres across the UK (Lee, 2013). These people will be qualified horticultural therapists and able to deliver a therapeutic gardening programme. They could be described as 'engagement gardeners' or 'garden facilitators' bringing the outdoor spaces and the activities within them into the centre programmes. They will also reinforce the importance of the on-going care and development of the gardens.

The posts will supervise the overall maintenance of the centre gardens, working, wherever possible, alongside the vision of the original designer. They will also oversee work undertaken by volunteer groups. At Dundee, the new gardener's activities with a volunteer group has become part of the therapeutic physical programme. It will be interesting to see how this new partnership works and how they become part of the day-to-day lives of the centres. It will also be fascinating to discover if their knowledge and experiences will feed into the design process for future centres.

10.3: Care for the caregivers

Ensuring a garden provides care for staff within healthcare is an important, but often overlooked point. Ensuring staff feel comfortable will undoubtedly increase the overall sense of homeliness. This works at a number of levels. The research revealed that gardens supported the staff by making their working environment more pleasant and providing places of retreat or refuge for them. Staff participants also described how the gardens directly assisted in their work.

Staff participants at Maggie's, even those not interested or engaged with the outdoor spaces, talked about being aware of the gardens and plants in the background. A staff member articulated clearly the ways the garden could help her (figure 10.13).

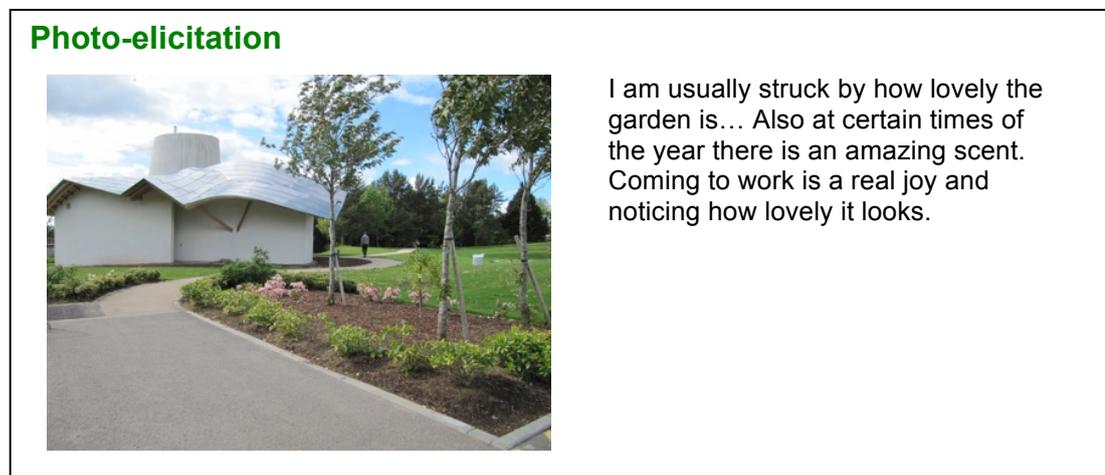


Figure 10.13. Maggie's Dundee (2011) (MD5 female staff)

The research revealed how the gardens provided quick, accessible respite for staff within a busy working day. Staff photographed places where they would take 'a few moments away' or a place for a 'quiet exchange between colleagues'. This was expressed by some of the staff at the Macmillan sites too (figures 10.14 & 10.15).

Photo-elicitation



I like this chair. I like where it is situated. You can go and sit and hide away. I call it the 'contemplation chair' It is beautiful and an integral part of the garden. It is private – you step through the trees and hide away. It is a bit like a God or Buddha's head. It is important to staff and patients. I have sat in it. It can be a hard going environment here – sometimes it is overwhelming and you need to take some time out. Sometimes to take a deep breath and watch the robins – there is a nest and there are a pair of blackbirds and sparrows.

Figure 10.14. Macmillan Ambulatory Oncology Centre, Leighton Hospital, Crewe (2011) (MACC6 female staff)

Photo-elicitation



A view from the staff coffee room and even on a dull day there are elements of interest in the garden. It is pleasant. On a warm day staff sit out. They are shielded from view of patients – privacy on both sides. Staff are very mindful of patients being in the vicinity. Conscious it's a work area. They do appreciate this.

Figure 10.15. Macmillan Ambulatory Cancer Treatment Unit, Warwick Hospital (2011) (MACW10 female staff)

The research indicated a downside to the open plan arrangement within the Maggie's buildings. Staff intimated that sometimes they feel they have no personal space, as illustrated by this comment from a member of staff at Maggie's Fife:

It is an open and fluid building. At a functional level it is fluid and enmeshed. There is a mutual sense of belonging. But I find it challenging as a worker. I have no personal space. Visitors use the space as their own – that is a wonderful thing but I think the openness and perception of privacy here is detrimental to staff.
(MF2 female staff, 2010)

Across the sites, Maggie's staff spoke about how the gardens could help with this problem. Staff participants said that if they needed a break the garden was often the place they would seek out (figures 10.16 & 10.17).

Photo-elicitation



This is from the balcony upstairs. I will often go and out and have a break or eat my lunch here. I personally love the fig tree. I want to get one. I like being outside, away from the centre when I have a break. I can detach. It is 'time for me' outside. By sitting on the balcony exposed to the sunshine and air and there are plants there. I face out away from the building and the hospital. The plants create a different space for me – a protected space. With being outside a barrier is created because our centre is so open and work is so intense – I make my time. When away from the building it is about me. I nourish myself.

Figure 10.16. Maggie's London (2010) (ML7 female staff)

Photo-elicitation



This is a place of recreation for me. I have lunch here. The centre users can use it too. It's restorative. I love green – If I don't get out in green I feel peculiar and sick. It de-stresses me. Ideally I would like to walk in the countryside. But this gives me a mini top up. I need it to feed me.

Figure 10.17. Maggie's London (2010) (ML3 male staff)

In the interviews, staff would contrast Maggie's to previous working places which were, for example, 'offices with a lift' or 'dingy' hospital environments, often with little access to natural light. Comments included:

After working in a hospital I have become more aware of the natural light and sense of space and sky – which I didn't get in the hospital. It has made it easier for me. Sometimes you can be working on a ward and not be aware of the time of day. Here you see the change of season. You don't feel stressed here. May be it is also to do with the nature of the work as well. A non-clinical setting is very different. (ML20 female staff, 2011)

The research also revealed that gardens can support the work of staff by offering a focus for conversation for therapeutic work. The gardens helped to soften the

experience for visitors and made them feel more comfortable. As one staff member commented:

So much thought has been put into this. It does make a difference to my work. I look forward to Thursdays and coming to work here. People appear to be immediately relaxed – like a home from home.
(MC2 female staff, 2011)

The garden spaces could also offer opportunities to create different dynamics (figure 10.18).

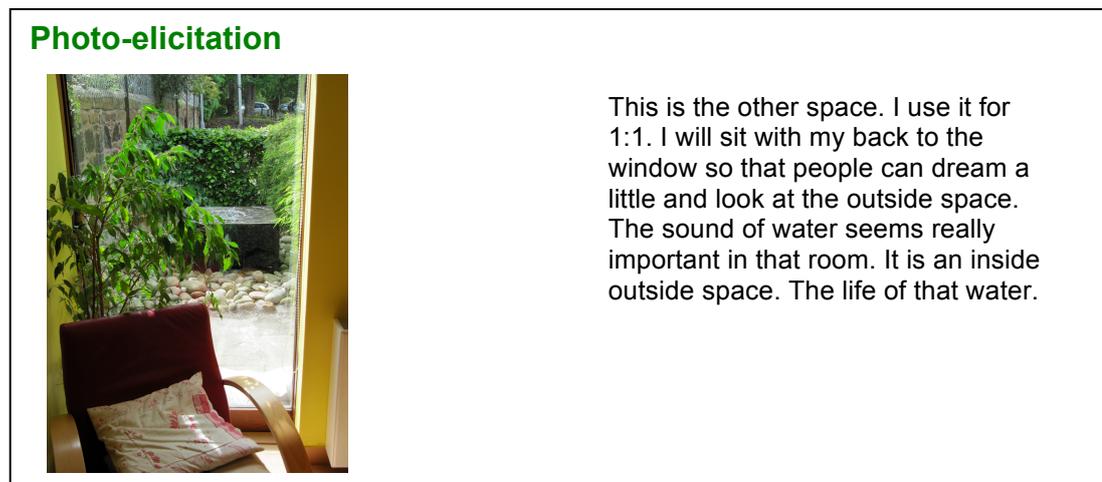


Figure 10.18. Maggie's Edinburgh (2011) (ME7 female staff)

The Friends Garden at Great Ormond Street Hospital (see appendix 2D) was researched specifically because it is a rare example of a garden space just for staff within a high pressure, urban healthcare environment. The research undertaken, which included site visits, interviews with staff and an online survey, clearly emphasised the importance of this garden. Initial site visits left it unclear whether there was extensive use of this garden, however, the final visit, on a sunny day in May 2012, revealed higher usage during the lunch period (more than 35 people). This was reinforced by the survey (n = 29) where 49% said they used the garden more than twice a month year round.

The Friends Garden is used primarily as an area for staff to have lunch, a quiet place to meet a colleague or simply for a quick breath of fresh air. The design of the garden appears to be valued as a 'funky', 'modern green space'; the views and sense of space are particularly appreciated. The staff use all of the spaces, especially the far end and the grass areas. There were some comments about the 'starkness' and 'angularity' of

the design and the lack of shade and colour. Requests were also made for the seats to be cleaned, bins to be emptied more regularly and for heating within the covered area for all year usage. There are some way-finding and access issues (see chapter 11) and not all staff appear to know about the garden. When the garden first opened it included a café but this has since closed. This is greatly missed by staff and appears to be a factor in lower usage.



Figure 10.19. Friends Garden, Great Ormond Street Hospital, London
(© Dave Williams, 2012)

The most significant finding of the research at this site was the importance of the garden as a calm and much treasured space for staff separate from the children they are caring for. It was described as ‘sacred’, a ‘haven’, a ‘bolt hole’ and the hospital’s ‘best kept secret’. A participant said it was unique because ‘it has no elements to do with the hospital. It is dedicated to being a garden’ (GOSH1, 2011). Other participants said:

I’ve come up here to read. On those days you can’t think straight it’s better to come up here than lose your job!
(GOSH7, 2012)

The Friends Garden enables me to feel that I have left the site even if I have just popped up for lunch; it enables me to get some sunshine (when it isn’t raining) and some fresh air
(GOSHOS7, 2012)

There was a comment stating it was a waste of space, especially when space on wards was at such a premium. Another commented that beyond its importance as a memorial site, the garden was an extravagance:

This garden was to commemorate the bombings and staff that passed away so from that point of view it is lovely. However, we have many parks near us and the money that was spent on this garden (which was considerable) could have been used in aid of more staff e.g. nurses so that our children were better cared for.
(GOSHOS12, 2012)

Although staff were prepared to entertain the idea of the garden being accessible to children and their families at some times, within the online survey 89 per cent said that it was important that the garden was exclusively for staff. The fact that it was a 'child free zone' within a busy children's hospital, appears to be valued. Comments included:

Being able to take my shoes off and walk on the grass is a wonderful thing to do in the middle of the work day. For a short time you can really have a break. The grass and plants make it feel like a natural space outside the concrete jungle. One day a colleague and I went up to the garden for some fresh air and just danced in the rain for a little release.
(GOSHOS8, 2012)

It is important to have a space where you can vent your feelings and not worry about being overheard by a member of the public. When you are in the canteen you are still at work. Up here you are separate. Having times when parents/children visit could possibly work so long as it is managed. But staff need to know it is their space....The personal stuff for staff is always put to one side. This is nice that it is a place for staff without fear of parents/patients taking it over.
(GOSH1, 2011)

I would be totally gutted if it became open to public / families at all times as I do appreciate the privacy away from desk to help deal with some of the things we see / deal with.
(GOSHOS9, 2012)

This study indicates that the impact of the gardens on staff should not be underestimated. To echo Jencks' (2006) words, but this time in relation to the garden design rather than architecture, it appears that they can empower the caregiver. If much of the staff's work is intense and emotionally hard then the provision of a 'nice view' or a 'quick breath of fresh air' or even just 'a better place to smoke' is important.

At the Trevarna garden in Cornwall, the Creative Spaces Manager (Brewin, 2010), stated she had to constantly remind staff to think about their own needs too – something carers don't perhaps do naturally.

They themselves can have a space to go to when they are having a bad day. It's better than sitting in the toilet or in the car in the car park.

During the design consultation process, staff for this garden did express the need for a 'place to stamp their feet' and to eat their lunch in privacy (Sensory Trust, 2010). The research at Great Ormond Street Hospital suggests that the provision of garden spaces just for staff is valued and implies that this could be something considered in other healthcare venues. Not necessarily on the scale of providing a specific garden for staff, but certainly outdoor areas where staff can experience seclusion without being approached by patients.

10.4: Gardens of care

Throughout world cultures and across the centuries human happiness has often been conceived in its perfected state as a garden existence. One only has to remember the Chinese proverb, 'If you would be happy for a week, take a wife; if you would be happy for a month, kill your pig; but if you would be happy all your life, plant a garden', or Dorothy Frances Gurney's well-known poem:

The Kiss of the sun for pardon,
The song of the birds for mirth,
One is nearer to God's heart in a garden
Than anywhere else on earth
(*God's Garden*, lines 13-18, Gurney, 1913),
(see appendix 4C)

More specifically, the gardener's vocation of care is something that has been written about at various points in Western philosophy and literature. Francis Bacon (1596-1625) declared a garden the 'purest of human pleasures', while Voltaire's, *Candide* (1759) concluded with the supplication, 'we must cultivate our gardens'. Karel Capek's short book, *The Gardener's Year* (1929) is another example where the gardener is presented as the embodiment of the care-dominated nature of human beings. Harrison (2008) examines the many ways gardens evoke the human condition and the desire to 'cultivate'. He points out that through history, from the gardens of the ancient philosophers to the community gardens of contemporary New Yorkers, people have always sought sanctuary in a garden; he also points out the correlation between gardens and care.

Within the context of current debates on landscape, architecture and ethics, the gardener also has a special resonance. Over the last two decades there has emerged some serious writing on gardens, and attempts to bring gardens and horticulture into the realm of intelligent public discourse over our relationship with our environment.

Writers, philosophers and geographers (Norfolk, 2000; Brook, 2010a & b; Cooper, 2006 & 2012; Cooper & James, 2005; Fox, 2000; McShane, 2007; Rose, 2006) have picked up and pursued this ethical tradition that persists for the garden as a place that invites the exercise of care and humility, a regard for the good of plants and creatures, and an appreciation of nature's workings. Planting seeds, nurturing plants and maintaining a garden requires certain fundamental qualities that cannot be rushed or overlooked. The so-called 'virtues of gardening', usually identified as patience, humility and care, can help people to live 'the good life' while at the same time improve the land.

These virtues of gardens and gardening have long been recognised and utilised to good effect within healthcare. The tradition of horticultural therapy and the access and provision of gardens within mental health facilities, for example, are proof of this. There has been considerable research and understanding as to the therapeutic value of gardening precisely because such activity enables people to develop these virtues (Relf, 1999; Lewis, 1995; Linden & Grut, 2002, Sempik et al., 2002 & 2005).

As this thesis is concerned more with the space of gardens rather than the activities of gardening, it is necessary to emphasise how gardens can also develop social virtues, such as sharing and caretaking. This might include respecting the surrounding landscape or buildings, growing native plants where possible and keeping established trees for example. It might be providing spaces for different activities as well as social spaces for people to share in the work and the pleasure of the garden. It could also be providing support for both people being cared for and for the caregivers.

This research highlights that specifically within a healthcare context a garden provides opportunities to emphasise and fine-tune the quality of caretaking within the place. A well-loved and cared for garden with places for staff as well as patients offers caretaking at a deeper level.

This study suggests that the virtue of care associated with gardens generally can be redefined for the healthcare garden as the virtue of "compassion". This word is chosen because it conveys more strongly the social activity of caring; compassion, as the etymology of the word suggests, demands co-suffering and focuses attention on both patient and caregiver. 'Compassion' derives from the Latin, 'to suffer with', and here is defined as 'a feeling of distress and pity for the suffering or misfortune of another and

the wish to alleviate it' (*The Free Online Dictionary*, 2013). This is not simply about creating a comfortable place or about offering sympathy for people who are unwell; it is about providing an environment where compassion can be experienced in a much deeper way.

People who are dying or in crisis need to know they are loved and cared for. People who are dying are also more likely to obtain a peaceful death in comfortable surroundings.⁶² It is also the case that when people are in shock their sense of care, or rather their understanding of compassion can be heightened. To feel the full force of your mortality can allow an all-encompassing fearless compassion to grow. Thus, it is an important and opportune time; where the experience of compassion in the care a patient receives, as well as growth in their own understanding, can become a source of healing.

There are many ways to express this compassion and a garden is one important way. In this context it is the evolution and care of the garden that is more important than the designed 'Edenic garden'. In fact, a healthcare garden should be defined through the care or attention it receives beyond the initial design. The designer Mike Westley (2010) articulated this in his interview:

A restorative garden is about the care that is put into it and when that goes the restorative qualities go. Gardens are about the fourth dimension full of living things that need nurturing and this is a reciprocal relationship. It's not about a stage or stasis – it's about evolution and change. You wouldn't open a hospital ward without a maintenance budget.

As discussed in chapter 4, Maggie's place importance on the environment because they believe it reflects the value they give to people and influences people's sense of self (Lee, 2012). They believe people feel better in a place where care and attention to detail are evident in the surroundings and recent research has described their environments (both inside and out) as the 'silent carers' (Martin, 2013). However, this sense of value has been written about primarily in relation to their buildings and was strongly articulated in the recent exhibition at the Victoria and Albert Museum. As the co-curator Matthew Storey wrote:

⁶² Most people, if asked, express the wish to die at home. This is where the Hospice Movement has worked hard to ensure people are in as homely environment as possible in their last days.

I think in the case of Maggie's the quality of the design, and the beauty of the buildings, can make people feel valued. People visit these buildings when they are facing terrible difficulties and uncertainty, when they may even feel a sense of personal failure because of illness. I've heard about a visitor to a centre who looked at it and said 'All this for us?' with tears in her eyes. Having an inspiring building that is open for you to walk into, without an appointment, really can counteract those feelings. (Snoad, 2011)

It has not been articulated in relation to the outdoor spaces. The possibility that their gardens also make a huge contribution to the feeling of care has not, as yet, been fully explored. This is the case at other organisations too. The survey undertaken at the Sand Rose Project identified the garden as the most important aspect of the project and this came as a surprise to staff (see appendix 2F). Significantly, 70% of participants within the visitor survey (n = 169) said their strongest memory of their visit was the garden, while 15% said it was sea and only 8% said it was the cottages.

A garden affords unique opportunities for compassion, as the research demonstrates, and this is powerful within a healthcare context. What this thesis argues is that the gardens can support the work of a healthcare centre, even amplify an ethos, facilitate relationships and communications and assist in developing a sense of ownership and community. A sense of homeliness is primarily developed through the care (the cultivating) that takes place within the centre – this is constantly evolving and shifting and is dependent on the on-going social and emotional relationships that develop within the material and imaginative environment of the centre. Here again it is the anthropologist Daniel Miller (2001 & 2008) who reminds us that this process of 'homemaking' comes out of the everyday practices of the centres. The next chapter explores how the gardens fit into these everyday practices.

CHAPTER ELEVEN

The Narrative of Resilience

In the previous chapter the importance of maintenance and care was discussed. The research indicates that a healthcare garden needs to embrace a strong sense of compassion and this includes ensuring that staff are supported by and engaged with the garden. It appears that if staff understand the differing roles the garden can play they are more likely to make better use of it for themselves and for their patients. This in turn helps to develop the narrative of the garden and ensure it is cared for. These findings emerged from a close reading of the stories that emerged from the case studies and it is these stories that are the focus of the final chapter of this thesis.

This chapter explores the data again, pushing the hypothesis of the healthcare garden as resilient place further. It introduces the idea of the “narrative of resilience” and attempts to clarify and sharpen an understanding of the roles of a healthcare garden. This chapter also explores ideas about the garden as a liminal space in order to refine the potential for transformation within healthcare. Finally, it refers to two recent garden projects at Maggie’s as evidence of a new approach.

11.1: Developing the story of a healthcare garden

Maggie’s staff recognised the importance of the gardens’ evolutions. Some were also able to recognise the value of different or unexpected uses of the gardens, such as members of the public or hospital staff spending time in them. As the Centre Head (Byrne, 2010) at Maggie’s London said during a walking tour, ‘I love seeing people not connected to Maggie’s using the space – such as the nursery children and workmen who often sit on the benches. It is nice that they feel comfortable here’.

However, it was noted that staff at Maggie’s generally, across all sites, felt more comfortable discussing the use of the indoor spaces rather than the outdoor spaces. Staff were more confident about the narrative of the interior, even if they did not personally like the interior design. In contrast, they were less comfortable or clear about the exterior. Another Centre Head (Howells, 2013) explained this was because the interior design has the ‘Maggie’s brand’ which is familiar and encountered daily, whereas ‘a garden grows and changes and there is much more fluidity’.

There also appeared to be the perception that it is perhaps an indulgence to take a break outside. As one volunteer said:

[S]ome people need permission to go outside. I like to 'mother' the staff too and encourage them to take a break and sit outside. It is almost as good for staff. (ME15 female volunteer, 2012)

This perception may well be one reason why the space syntax studies revealed little use of the main outdoor spaces (see appendix 1E). The fieldwork across all case studies also highlighted how small things, such as ensuring there are comfortable, clean, dry seats, can make a huge difference in term of engagement (figure 11.1).



Figure 11.1. Wet seating at the Friends Garden, Great Ormond Street Hospital (Butterfield, 2011)

The research suggested that staff at Maggie's could be more engaged in the dynamics of the gardens and that it would be helpful for all staff to have more of an introduction with the designers as well as informal updates from the gardeners. If a more explicit formulation of the centrality of gardens as part of the Maggie's design was provided for staff they would be more likely to make better use of them for themselves and for their visitors. This in turn would help to develop the narrative of the gardens and ensure they are cared for.

Evidence from the wider research demonstrated that a design and consultation process, with staff involvement, was invaluable in terms of future ownership. This was also something that designers such as Kamp (2012) and Westley (2010) emphasised within their interviews. Maggie's staff need to know what to expect from the gardens;

they need to learn how to narrate them. This would ensure the gardens are more strongly integrated with the daily workings of the centres. It would guarantee the gardens, not just the architecture, have a strong story and can more fully become part of Maggie's ethos.

Lack of staff engagement with the gardens can have a negative impact. This was observed at the Macmillan garden at Warwick. Here interviews with staff and patients demonstrated a lack of interest in the gardens. There were few "garden stories" at this site. In contrast, at the Macmillan garden at Crewe participants were keen to share their comments and experiences. As already noted (see chapter 6) there is a problem with access and visibility to the garden at Warwick. Patients coming into the unit were not immediately aware of the garden. It is only once they are in the chemotherapy unit receiving treatment that they were able to see the gardens. However, many of the chairs and beds were positioned away from the garden and patients were not encouraged to go outside. Furthermore, the garden was only basically maintained and cared for (see figure 11.2).

There was also evidence at Warwick that management did not value the role of the gardens and that there was no discussion amongst staff as to how the garden might function within the unit. For example, patients were usually shown round the unit before they received treatment, but that this did not include a visit to the garden. This seemed a missed opportunity to discuss the garden and connect it to the visitor's experience at the unit.



Figure 11.2. Photographs of the garden at the Macmillan Ambulatory Cancer Treatment Centre, Warwick Hospital (Butterfield, 2011)

When the Friends' Garden at Great Ormond Street Hospital first opened, a range of events were organised including lunchtime music. It was also used for a number of evening events both public and private; the garden is equipped with special night-time lighting. When it first opened it also included a café. The café and events ensured the

garden quickly developed a narrative, drawing staff to the space. Unfortunately the café closed and the new hospital restaurant was sited some distance from the garden, making lunch time visits for staff less practical. Participants regularly requested the provision of café facilities to be reinstated.

Likewise, the lack of clarity over departmental responsibility for events and maintenance has meant that the story of the Friends' Garden has perhaps not developed as much as it could. While those staff interviewed articulated the value of the garden and they expressed pride in the space, they also described their concern for the care and maintenance of the space. The interviewees were concerned as to how to get the best out of the garden. For example, a participant said people needed reminding because it is 'a forgotten space' (GOSH6, 2012). Another expressed her concern through her photograph (figure 11.3).

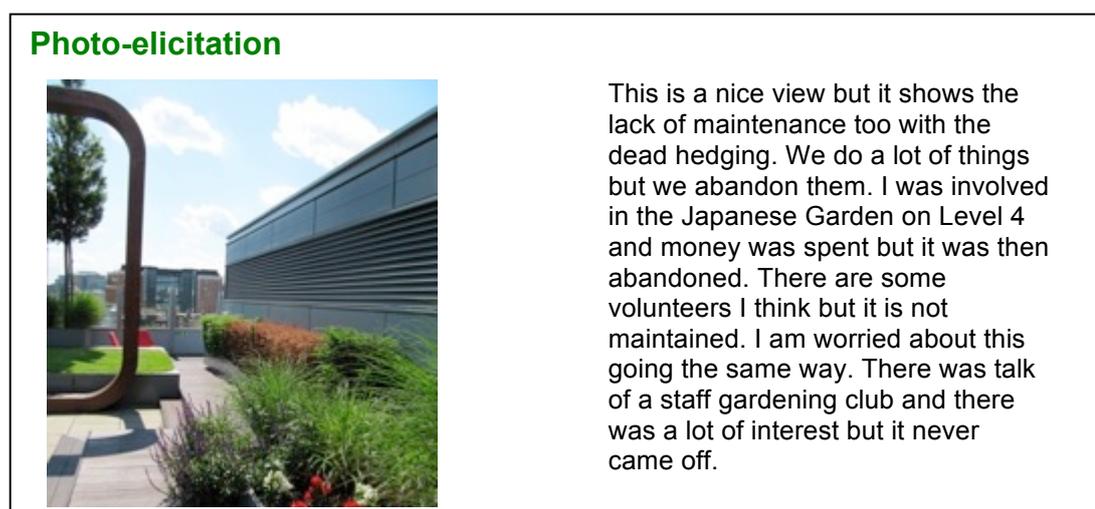


Figure 11.3. The Friends Garden, Great Ormond Street Hospital, London (2012) (GOSH4 female staff)

At Trevarna garden, The Creative Spaces project manager emphasised the importance of training care staff in the use of outdoor space (Brewin, 2013c). And one of the main achievements of the project is that all new employees at Cornwall Care now receive training in the use of outdoor spaces and nature-based activities. However, this project, which focused on dementia and elderly care, also demonstrated how fragile the development of the story of the garden can be. Clearly Trevarna garden has provided opportunities to 'get people together' and 'develop connections' and in some cases rebuild conversational and social skills (Brewin, 2013c). Interviews with family members reiterated the fact that since their relatives have been involved in the

activities they had found it easier to engage them in conversation and find things to talk about.

Many stories have emerged at Trevarna. During one of the Creative Spaces' activities based at the Eden Project, one visually impaired resident breathed in a bank of lavender (*Lavandula*) and then recounted how the smell reminded him of 'getting off the landing craft in Sicily' during World War II (CSa male resident, 2010). Another resident responded to the different planting schemes, saying she felt that her generation had neglected the importance of native plants (CSb female resident, 2010). This led to a wider discussion about seed banks. Back at the care home, planting bulbs in the garden led another gentleman into a lengthy conversation about his interest in digging and collecting old glass bottles (CSc male resident, 2010). One of the strongest stories to emerge was the friendship developed between one of the residents and a local secondary school pupil. The resident's love of gardening provided opportunities for a developing conversation with the pupil that was eventually documented in a short film (Sensory Trust, 2012). Another story that evolved was a series of short films and poems entitled, *Dementia Uncovered* (Harvey, et al., 2012). This was as a result of conversations about the garden between residents and the poet Karen Hayes.

What the research at Trevarna revealed was that increasing the connections between people with dementia and the wider community and the outdoor environment can have a positive effect on all involved. The role of gardens and horticultural therapy in fostering a sense of self-worth has been well documented (Sempik et al., 2002 & 2005). What is perhaps less well noted is this idea that gardens provide an easy and accessible-to-all point of communication; that they can provide a gateway to breaking down social isolation. As one of the managers at Trevarna stated:

[The garden is] opening up the care home and bringing it into the community. The young people are seeing the life in here and the clients are feeling part of the community and we hope this continues once the project is complete (cited in Chick, 2010).

As a result of the Creative Spaces project the Sensory Trust is now working with the ECEHH on a systematic review of 'Outdoor Space and Dementia'.

The research at Trevarna also highlighted some of the problems and barriers to the development of these garden stories and views from participants were conflicted. Brewin (Brewin, 2013c) stated that one of the biggest challenges of the project has

been changing attitudes and working practices within the home. It is one thing to recognise the importance of being outdoors (and providing training too), it is another to break out of routines that are already compounded by shift work patterns and staff shortages. This same issue is flagged up by other research that shows that the use of outdoor space depends primarily on both staff and family initiated activities (as well as comfortable seating and protection from the elements) (Bite & Lovering, 1984 & 1985; Carstens, 1985 & 1998; Regnier, 1985; Cooper Marcus and Barnes, 1999: 442).

11.2: The narrative of resilience

A garden has always been a place for stories. In a range of ancient and modern literary texts gardens frequently appear as sites of conversation, dialogue, friendship and storytelling. Indeed, they are associated with the very “ideal” of conversation in Epicurus’ garden in Ancient Greece or Boccaccio’s *Decameron* (1350). Within the *Decameron*, the analogy of garden and storytelling are bound together as Boccaccio’s narrative weaves the structure of a Renaissance garden. A garden is also a story in itself, or as Harrison (2008: 89) writes, ‘a story, after all...is like a garden’. The materialities and participants (actants) are always active in the unfolding life of a garden. In this way a garden becomes an on-going practice and process of ‘dwelling’ (Heidegger, 1964). A garden has its own biography and history and it is only through the act of storytelling that its role and impact become evident. As Tilley (2009: 174) writes:

Every garden...has its significant stories, memories and its biographical association. Gardens change as people and their circumstances change. Each is entwined and one cannot make sense of the garden without knowing the person and vice versa. Both gardens and persons have their lifecycles, and gardens are often powerful material metaphors for this...What is appropriate or possible at one time is not at another.

Although Tilley’s research was focused on small private and individual gardens there is no reason why this point cannot be expanded to relate to an organisation. Maggie’s gardens are part of their identity and can tell the narratives that Maggie’s wants to tell.

This idea of storytelling works in different ways. There are the stories about the garden that help to develop engagement with the garden and hence the care of the garden. This in turn ensures that people feel cared for. There are the stories that each person with their own autobiography and experiences brings to the garden. There are also the

stories that the garden brings to bear; this might be a private meditation or memory triggered by some sensory or symbolic aspect of the garden or it might be conversations between staff, patients, family and friends that the garden has “allowed” to happen.

There is also the wider story of the garden, located within broader historical and cultural narratives. Where the garden is entwined with understandings of human health and wellbeing and the history of medicine, is one example. The narrative of a healthcare garden is inextricably bound up with forms of medical practice and care giving. Historical healthcare gardens reflect past medical understandings, just as hospital buildings have changed directly in relation to the social history of medicine (Prior, 1988, 1992).⁶³

Finally, there are the stories (which combine and layer many of the above narratives) the garden narrates itself; this is the story of an individual healthcare garden in relation to its immediate setting and community. It is the stories that evolve and that visitors and staff develop together in and about a garden that becomes important. This is what Gesler (2003: 80-81) identifies as the ‘the spirit of the *communitas*’, arguing that this can transform a space into something more profound, even sacred.⁶⁴ It is also what Chapman (2005: 112) describes as ‘durable narrative experiences’ that evolve slowly over time ‘reflecting traces of the users’ invested care and attention’ (see chapter 2).

For Gesler (2003) a therapeutic landscape always involves four dimensions – the natural, the built, the symbolic and the social (see table 2.1). It is only when these four ingredients operate together effectively that a truly therapeutic landscape is achieved. Gesler (*ibid.*) states that architecture and landscape operate in relation to the social activities that take place. Within a healthcare environment many actors come together. Healing is a social activity. The quality of social relationships such as mutual trust and respect are important. It is also the symbols, both abstract and concrete, that connects or mediates between the biophysical and sociocultural worlds (*ibid.*: 12). These symbols can be objects such as water, furniture or machines, but they are also rituals, ceremonies and the stories (both the telling and the listening) of people’s illnesses.

⁶³ These larger narratives were addressed in chapter 1 and 2 of this thesis.

⁶⁴ Gesler (2003: 80-81) gives the example of Lourdes in France

At Maggie's, participants articulated how the gardens contributed to this overall idea of a therapeutic landscape. Comments by both staff and visitors ranged from seeing the gardens as helpful to insisting they were an essential part of the organisation (see figure 11.4). For example:

All the features add an ambience and it all fits well with the building. The garden is important. It wouldn't be the same without it. It is a touch of freedom, of wellbeing. (MD14 man with cancer, 2012)

For me Maggie's isn't the building it is the whole surroundings. The colours are so vibrant – that is mirrored outdoors. Even if something has been difficult it just gives you a wee lift to look out at the garden. It helps nurture and sustain me personally...It is a literally and symbolic 'breath of fresh air'. There is a spiritual side to the work you do here. You can't do that without the support of this place. The building doesn't make it what it is but it creates/enables an environment for a lot of growth and the garden symbolises a lot – a promise. The garden definitely enhances the way we do the work. (ME18 female staff, 2012)

Without its gardens an essential quality of the Maggie's Centres would be lost; they are intrinsic to the wellbeing of all the patients in an unconscious way they provide a feeling of freedom and cheerfulness and distraction from all our personal sense of woes. (ML27 woman with cancer, 2012)

Photo-elicitation



This is what you see as you are coming down here. Part of my job is meeting and greeting. Patients may have just been told they have cancer or maybe they have just been told it is terminal. They are stunned. Hospitals are very clinical with lots of corridors – they are not very conducive to peace and quiet. They see the garden before me. There is a welcome – it is so completely opposite to the hospital. I think the garden is tremendously important. There is a welcome but also a peacefulness. So for somebody whose mind is in turmoil the garden is so helpful.

Figure 11.4. Maggie's Edinburgh (2012) (ME15 female volunteer)

A healthcare environment is always dealing with stories. These stories might be patients commenting on their experiences or hospital staff recounting their work. Illness and health always have to be narrated. Individual stories of illness have to connect with medical explanations. Patients and caregivers develop narratives within the course of treatment and recovery. Medical anthropologists talk of the so-called 'explanatory model' to explain the behaviour of medical personnel and patients and there is a theory

that if a patient and his/her doctor have similar explanatory narratives this may aid the healing process.⁶⁵

Wagenaar (2010) points out that within healthcare the actors (the medical staff and those in need of care) are fundamentally incompatible and that their encounter is always problematic because the situation bears no relation to normal everyday life. In recent years there has been increasing interest in the idea of narrative medicine as a way to improve patient care and outcomes. Narrative medicine is a term that refers to clinical practice fortified by 'narrative competence' which is defined as 'the capacity to recognize, absorb, metabolize, interpret, and be moved by stories of illness. It is medicine practised by someone who knows what to do with stories' (Charon, 2007: 1265). The idea of narrative medicine has now gathered international momentum and Kings College London (2013) recently hosted a conference entitled, 'A Narrative Future for Health Care'. A key point being asserted by this initiative is that the care of the sick is an art form and that illness unfolds in stories.

The relevance here is to insist that the capacity of a garden to develop a "narrative of resilience" may also have an impact on patient care. The word resilience is used here specifically to emphasise the dynamic qualities (thresholds, sensory richness, density of time and homeliness) of a healthcare garden; resilience implies elasticity and energy. Resilience also suggests an ecological strengthening that takes place at a number of levels both individual and social; and both biological and psychosocial. Resilience implies something that can accumulate and develop, and over time increase the community's ability to recover from difficult conditions.

The words restorative and resilient were discussed and defined in the Introduction to this thesis. Throughout, the distinction between restorative as repairing or making better, and resilient as something more dynamic and strengthening to withstand or recover difficult conditions (*Concise Oxford English Dictionary*, 2004) is emphasised. This thesis asserts that a healthcare garden, redefined as a resilient place, presents one such (but important) art form that can develop narrative competence. A participant in the Maggie's research articulated this point in the following way:

⁶⁵ This is often referred to Kleinman's Explanatory Model of Illness (Kleinman et al., 1978)

Art and great gardening are still art and great gardening even if it is attached to a cancer centre. If more people could be drawn in by the garden they would realize it's more about living. People are still reticent and don't want to talk about cancer. The garden brightens it up, gives it a normality. (MD4 man with cancer, 2011)

The suggestion is that a resilient place can draw people in and give a healthcare centre a stronger identity. Its role as a transitional space should not be underestimated.

11.3: Third space: The garden and the liminal

In the first century BC, Cicero (*De Natura Deorum*, 45 BC) named wilderness 'First Nature', distinguishing it from agricultural land such as farms and orchards, which he designated as a 'Second Nature'. Hunt (2000) describes the sixteenth century addition of 'Third Nature', which he offers as a useful definition for a garden seen as 'nature improved by art'. Even a cursory study of garden and art history reveals that these 'third natures' offer insights and alternative ways of being precisely because they tend to operate in relation to other natures; offering thresholds and opportunities for transformation.

A couple of examples serve to illustrate this point. The courtyard space of the Mesquita in Cordoba was designed to take worshippers calmly from street to inside space (the Mesquita) (see figure 11.5). Porches, courtyards, patios, cloisters and garden paths all operated as intermediaries, pauses and buffer zones. Their social function was as important as their architectural definition. They are the interface between inside and outside – places that negotiate the public and the private, the viewer and viewed, the sacred and the profane, the spiritual and the worldly, and the individual and society. More recently the architect Peter Zumthor and landscape designer Piet Oudolf interpreted this in a different way with their design at the Serpentine pavilion (see figure 11.6) Zumthor (2011) explained:

A garden is the most intimate landscape ensemble I know of. It is close to us. There we cultivate the plants we need. A garden requires care and protection. And so we encircle it, we defend it and fend for it. We give it shelter. The garden turns into a place... Every time I imagine a garden in an architectural setting, it turns into a magical place. I think of gardens that I have seen, that I believe I have seen, that I long to see, surrounded by simple walls, columns, arcades or the façades of buildings - sheltered places of great intimacy where I want to stay for a long time.



Figure 11.5. The courtyard with trees to provide cool shade at the Mesquita in Cordoba, Spain (Butterfield, 2008)

Figure 11.6. The Annual Pavilion (2011) at the Serpentine was an enclosed garden, *Hortus Conclusus* designed by architect, Peter Zumthor & landscape designer, Piet Oudolf (© Offenbach, 2011)

However, it is another painting that illustrates clearly how a garden can operate as a resilient place (see figure 11.7). Giovanni Bellini's, *St Francis of Assisi in the Desert* (c.1480) depicts the saint in the foreground next to his makeshift garden while the middle and background lead the viewer first to agricultural land and buildings and then to the hillside and forest beyond. Hunt (2000: 72) cites this painting as a perfect example of the 'three natures'; that is wilderness or untouched land (first nature), cultivated land (second nature) and the pergola and trelliswork of St Francis's garden (third nature). Bellini's painting is focused on symbolic details, but it also displays a subtle grasp of the different typographies and different scales of the relationships between human beings, animals and the land. The point being that Bellini is demonstrating the links between the three natures and that St Francis finds solace in seeing and experiencing not only these connections, but also the sense of time passing (the vine, the skull). St Francis' garden offers a sensory exercise in place making – the sound of water, the need for shade, the taste of grapes, the scent of the flowers.

Figure 11.7. Giovanni Bellini, *St. Francis of Assisi in the Desert* (c.1480), tempera and oil on wood (Bridgeman Education)

Jencks (Jencks & Heathcote, 2010) suggests that Maggie's are developing a new type of healthcare building; a hybrid that is part hospital, part museum and part home. This third space, through its hybridity, must be distinguished from spaces at home, work or leisure. It is neither public nor private, or rather it is both because it offers a type of public space; accessible, but essentially domestic. Jencks puts forward the idea of the architectural placebo to argue for the importance of the designed environment within a healthcare setting. Is it possible that the very real essences offered by a garden could be more effective if they operate within the context of this idea of the design placebo, where the narrative of the garden reinforces the ethos of the institution? Is it possible that the garden placebo could be a new way to look at the role of healthcare gardens?

Furthermore, if the third nature of a garden works in tandem with this new 'third space' then the impact will be greater. The suggestion being, that Maggie's sites, with their open plan kitchens and 'kitchen gardens' (see chapter 9), offer a new type of public domestic space. Maggie's make two key points in relation to the experience of a cancer diagnosis: they point out that anxiety interferes with people's ability to hear and retain information and to function as normal, and they also know that a cancer diagnosis can bring on an existential crisis for many people.

What is proposed here is that a healthcare garden, functioning as a resilient place, would be helpful for people experiencing such a crisis. It could help people re-acquire their senses. It would provide a space and an opportunity to deal with negative thoughts, and there are many benefits to having a safe place in which to express negative emotions. It offers a particular experience of time that allowed people to explore the freedom and responsibilities for the decisions they make, to explore issues to do with mortality and death, and aloneness and relationships, thereby helping them to create or recreate purpose and meaning in their life.

A healthcare garden occupies a liminal territory between healthcare building and community. Here liminal is used to further elucidate this idea of transformation or transference as liminality is derived from the Latin word *limen* meaning threshold (*Concise Oxford Dictionary*, 2004). A garden offers a particularly open and fluid space (even when enclosed) but also one where many boundaries are blurred. Chapter 6 discussed the value of these thresholds. A garden literally offers “another way of being”. The idea of liminality is helpful because it carries both its traditional anthropological context associated with transitional states or identities (Van Gennep, 1960), as well as more recent cultural and philosophical concepts to do with people and spatial environments (Hill, 1998; Vattimo, 1997). A liminal site is often an ambiguous space sitting between traditional definitions of public and private but it is also a state of physical or experiential transition.

Jencks' (2011: 27) recent additions of 'zero' and 'fourth' categories of nature are also of interest to a healthcare context. He (ibid.) explains:

I propose that we add another one at each end. Today we cannot escape the knowledge of a level below the growing variety of nature (what most people understand by the word 'nature' is something alive), that is, the laws of nature – gravity, electromagnetism, the strong and the weak forces, etc. This is what I have termed 'Zero Nature'. Also, and just as inescapable, there is the waste that we now mass-produce.

What is suggested here is the idea that zero nature, performed within the four essences, can operate within a healthcare garden providing clues or cues for people to contemplate these so-called laws of nature (the cosmos). Furthermore, such a garden can draw strength from the contrast with the fourth nature; the latter being defined here not as waste or industrial landscape, but as the built, technological, institutional or medical environment (the hospital).

11.4: A garden's contribution to milieu

Maggie's Chief Executive (Lee, 2012: 26) claims they have coined the term 'milieu management' to encapsulate the spaces of the Maggie's buildings; the way these and the staff facilitate the establishment and maintenance of real community; and the processes and nature of the activity of the professionals who staff the programme.⁶⁶ This term seems comparable to Gesler's definition of the therapeutic landscape by linking space, ethos and activity in the belief that this can nurture a robust sense of community (note Lee talks of "real" community). It is worth exploring the idea of 'milieu' because it expresses more effectively the complexity of "sense of place" than, for example, the words such as (therapeutic) landscape, environment or setting.

The opposite or 'non-lieux' could apply to those places that have little sense of community. This is the word that anthropologist, Augé (1995) uses to describe 'homogenised non-places'. Augé is writing about the conditions of urban living and so-called supermodernity. He refers to places, such as motorways, hotel rooms and supermarkets as non-places but, as has already been suggested, hospitals might also be included. These non-places are transient, where people pass through; they are primarily about circulation and consumption.⁶⁷ They are places where people are never "at home".

Milieu is more than physical backdrop or surroundings, it connotes social and cultural context. As its French and Latin origins imply, it is about that "middle place" and conjures the synonyms ambience, atmosphere and contexture (*Merriam Webster Dictionary*, 2013). Milieu takes us to the centre, to the heart, and this is helpful because it can embrace more easily the qualities of homeliness already identified as intimacy and interconnectedness. Milieu is also useful because it can better explain the role of a garden too. In ecological terms milieu implies connection between organisms and their environment. Could milieu take us to the heart of a garden and combine habitat (place or type of place where a person or thing is most likely to be found) with affordance in some way? Within a healthcare garden this is about the milieu of engagement and involvement. It is about a garden offering the four essences, which in turn allows for a rich variety of interactions, which in turn allows the story of the garden to unfold and

⁶⁶ This idea of 'milieu management' is not to be confused with 'milieu therapy', a specific form of psychotherapy that involves the use of so-called therapeutic communities.

⁶⁷ In contrast, Augé (1995) says anthropological spaces are much more strongly symbolic – places where relationships develop and social structures and ties are evident.

evolve. This is the healthcare garden's narrative of resilience against dis-ease and non-place.

The Maggie's Centres become communities and their buildings provide permanent accessible and secure places where people feel an affinity and a sense of ownership. The research findings show that the gardens also contribute to the social relationships and symbolic functions of the centres. Through the activities and stories that the gardens generate an even stronger narrative and sense of community can be developed.

11.5: Making landscape active at Maggie's

Maggie's are already addressing some of the issues identified by this research. Their new initiative to appoint therapeutic gardeners for each centre is an example of this. There is also evidence that they are taking a more integrated approach to landscape and building within their newest centres. It is therefore appropriate to discuss two examples, Maggie's Glasgow Gartnavel and Maggie's Oxford, within this chapter because they point towards some new directions.

In a recent interview, Lily Jencks said that Maggie's gardens have a key role to play for the organisation (Jencks, L., 2012). She acknowledged that within many design projects landscape gets pushed aside as something passive. As a designer she sees her job as being to make the landscape active. Lily Jencks emphasises the agency of landscape and that artists, architects and designers need to address head on how 'to represent a wide and shifting perception, the route through a building, the walk or drive over a hill' (Jencks, C & L, 2013: 37).

For Lily Jencks, the Maggie's gardens should 'allow people to think'. Her approach at Maggie's Glasgow Gartnavel is interesting in relation to this research because the garden design is as strongly articulated as the architecture. Careful attention has been given to the impact of the views from all areas within the building; and opportunities to walk, pause and reflect are also incorporated into the design. Significantly, Lily Jencks worked on the building with the architects OMA, as well as leading the landscape design. Lily Jencks is trained in architecture and landscape design and emphasises, within her practice, that the two professions should have equal status; ideally she likes to work on projects where she can do the 'whole thing' (Jencks, L., 2012).

At Gartnavel it is possible to argue that Maggie's have created a hub around the landscape rather than just the building (see figure 11.8). The presence of the outdoors is everywhere within this building; it is impossible to ignore the landscape. Attention has been paid to the views both inward, to the courtyard, and outward, to the hospital site. The topography was changed to raise the banks at the "back" of the building to ensure that there were some rooms that felt more protected or shielded by the landscape. This contrasts with the more open views from the main kitchen area. Lily Jencks (ibid.) explains:

With this building you always feel you are in a landscape. It's not a corridor or rather it is a completely circular corridor! I wanted to get a sense of continuity inside and outside, flowing in and around the building. I didn't want the idea of the courtyard as a precious jewel but rather the inside and outside to be continuous. The topography [of the curving mounds] continues into the courtyard.

Attention has also been paid to the routes through the building and beyond. At the back of the building Jencks has created a private area for walking. Working with existing trees, she developed zig zag paths. These paths echo the L-shapes within the buildings but also reference Chinese gardens where the zig zags are often used in small gardens to give the effect of a greater sense of space. The paths lead in a loop to an area called the 'reflection dome' (see figure 11.9). Here Lily Jencks (ibid.) has arranged black painted tree stumps with reflective tops in various numbered groupings amidst some natural wooden seating stating:

I wanted to create something you would arrive at. It is about creating another room. Almost a childish idea of finding something in the wood. And the seats are about creating a very nice place to be.

Initially the tree stumps were painted white but Jencks (ibid.) said they looked too ghostly and too like a memorial. The effect of the black stumps with their reflective tops capturing the sky above is to create a strange, quite magical enclosed space. Jencks says she had the idea of cloister and the rhythm of the columns; there is also the link to Chinese gardens again with the use of reflective surfaces (usually through water) to create a sense of space.

The landscaping at Gartnavel has considered how people will walk into, through and around the site. At the entrance there is a collection of stones indicating, quite subtly, a threshold or gateway. The paths and the reflection dome offer visitors and staff somewhere to walk and sit. They also work at a more metaphorical level too. Each zig

and zag becomes a stage of life or perhaps the different directions taken during cancer treatment. The dome becomes a meditative space to reflect on the world. However, these metaphors are not explicit. They are, as Lily Jencks (*ibid.*) says, just 'reference points'.

Clearly Lily Jencks' own biography, as daughter of the founders of Maggie's, is important. She draws on her mother's interest in Chinese gardens but also her father's more symbolic use of landforms. The landscaping at Gartnavel also has echoes of Maggie's London with the way it informs all areas of the building. Likewise, the zig zag paths remind one of Facer's sigmoid curve at Maggie's Cheltenham. Lily Jencks also builds on her own interest in the symbolism of time with her experiments at the Garden of Cosmic Speculation in Scotland (see figure 8.3). At Gartnavel, it is as if the 'Maggie's garden' has come of age (see appendix 1E for further photographs).



Figure 11.8. Maggie's Glasgow Gartnavel (Butterfield, 2012)



Figure 11.9. Lily Jencks' Reflection Dome at Maggie's Glasgow Gartnavel (Butterfield, 2012)

It would be quite wrong to suggest that with Gartnavel Maggie's had developed a garden design blueprint suitable for all centres. Rather, the organisation has begun to demonstrate deeper understanding of the qualities required to create suitable outdoor spaces and that these will vary with each site. This understanding is further demonstrated with the plans at Maggie's Oxford, which is currently in development, due to open in 2014. The centre is situated adjacent to the Churchill Hospital Oncology Unit and Warneford Meadows, now part of the Boundary Brook Nature Reserve. The building has been designed by the architect Chris Wilkinson of Wilkinson Eyre with garden design by Flora Gathorne-Hardy of Topio. Careful thought has been given to the site and the fact that it is close to woodland with a diverse range of native flora and fauna. As a consequence Wilkinson's design is a timber tree house, which aims to maximise relationships between the internal spaces and external landscape.

It is Gathorne-Hardy's work that is most interesting. She has been working with Maggie's for three years now. As a geographer, landscape architect and artist, Gathorne-Hardy (2013b) describes her practice as 'an ecological approach to place and community'. Her actual designing for the project has been limited to a small area beneath the building (undercroft) where she is working with Wilkinson to create an area of interest using 'ripples of stones' and the planting of mosses and lichens (Gathorne-Hardy, 2013a). Beyond this, her work is more about understanding and developing the

natural ecology of the adjacent woodland and water-edge plants. In order to do this she has engaged with a range of local community groups and has also developed conversations at public events such as the Oxford Flower and Garden Festival (see figures 11.10 & 11.11).

Gathorne-Hardy's aim is to develop, over time, suitable planting and management of the site that will support the ecology of the land but also enhance the centre. The time scale is significant here, because she will continue to work with Maggie's for at least two more years. During this time she aims to undertake tree and shrub planting and wildflower seeding, which will be developed with local groups and the community that emerges at the centre itself. She plans to extend the range of medicinal and culinary plants, but only in careful relationship to what species are already there (see appendix 1F). Gathorne-Hardy (2013a) explains:

The woodland plants [will be] chosen primarily for their ecological connections to the nature reserve setting, but some are well known medicinal plants. We are aware that the site has nettles, white nettles, violets, foxgloves, cow parsley, willow, dog roses, and goose grass as examples of forage-able and healing plants.

The approach taken at Maggie's Oxford is a response to the very particular site presented. The area was already noted as a special but contested landscape and Maggie's recognised the need to work with existing communities who are already engaged with it. These include Oxford Urban Wildlife Group and the Oxford Nature Conservation Forum, as well as the Friends of Warneford Meadow who have campaigned to protect the area from development by the hospital.

By taking a longer term view, and one that is 'tender and unfolding' (ibid.), Maggie's are ensuring that any future garden will be fully embedded within the community, as well as ensuring that there will be people there to manage it. Gathorne-Hardy's (ibid.) insistence on developing what she calls 'the ecology of relationships', working with people as well as plants, will hopefully ensure that a narrative of resilience will emerge. She is planning various events such as community tree planting and seed scattering; each one an opportunity to develop the story of the garden.



Figures 11.10 & 11.11. Photographs taken at the Oxford Garden and Flower Festival where the Maggie's Oxford landscape scheme was presented in different ways. *Top*: Friends of Warneford Meadow stall and, *bottom*: an installation designed to communicate the scheme to local people (© Flora Gathorne-Hardy, 2011)

With both Gartnavel and Oxford it is significant that the stories of the gardens are being more effectively articulated. With Oxford, in particular, they show the organisation taking a 'slow design' approach to their gardens. They indicate that Maggie's is beginning to understand that their gardens are, in fact, a way to strengthen community. They suggest Maggie's is developing a different and more collaborative design process and a deeper understanding of the interconnectedness of design (both built and green),

people, place and activities. They hint at what could happen if Maggie's rebalanced their architectural brief (this point was raised in chapter 6 and is revisited in the Conclusion) and looked to a stronger fusion of ecology with both architecture (and technology) and community (Marras, 1999).

These newer Maggie's gardens situate their designers in a broader and more collaborative process of design that has taken shape over the last fifteen years (as discussed in chapter 2 and further explored in the Conclusion). Maggie's are connecting to a wider cultural trend, discussed in chapter 1, where gardens are seen as a way to build communities. Here, also, is the connection to a new and more ecological approach to health and wellbeing (discussed in chapter 2). Ecological in the sense of understanding the affordances of the garden (Gibson, 1979), but also more broadly, ecological in terms of where human activity in all its social economic and cultural complexity is seen as integral to and interactive with the natural environment (Reis et al., 2013). Where the idea of community, and hence a sense of homeliness, evolves out of the interconnectedness of people and place. Where the agency of the garden is understood; where environment (both built and green) evolves in response to the voices of its users; and where the narrative becomes integral to the making of the place. This narrative of resilience is a slow and forever developing process. As the designer Dieter Kienast (1998) writes:

Designing gardens means experiencing stories. Stories usually have an end, while gardens are never completed. In this sense, our garden stories – at least the good ones – don't have an end but new chapters are always being added to them.

It is about the layers of experiences, encounters and memories that evolve within a healthcare garden working as a resilient place. It is also about acknowledging what Potteiger & Purinton (1998) describe as the 'untold possibilities when landscape and narrative are seen as intertwined through lived experience'.

CONCLUSION

This thesis has looked closely at the design process at Maggie's, exploring both the design brief and the designers' intentions, before examining the evidence of users. This research has been set within a historical and contextual framework to gain a more complete understanding of the role of the gardens for Maggie's. The thesis firmly situates Maggie's within a history of healthcare gardens. Likewise, it has shown how Maggie's approach to design links to a wider focus on green research.

The data analysis has led the author to assert that the key qualities (garden essences) of healthcare gardens are embodied within the term "resilient place". This new definition helps refine the character of an effective healthcare garden and is useful when considering the design of a healthcare centre, both inside and out.

The photo-elicitation and interviews were able to highlight stories and layers of experiences of the case study gardens. The findings present not only evidence of the narrative of resilience, but also evidence of where the case studies do not function effectively as resilient places. As the title of this thesis indicates, there remain some questions in relation to the Maggie's gardens.

In this conclusion the new perspective presented here, is fully defined and the implications of the research findings explored. This includes some recommendations for Maggie's. It also outlines an exploration of further research opportunities.

12.1: Resilient places: A new perspective on healthcare gardens

Careful analysis of the data revealed the specific networks and affordances presented by the case study gardens. The research suggests that healthcare gardens can uniquely embrace certain qualities, which are defined as the garden essences: thresholds, sensory richness, the density of time and homeliness.

The research also shows that a garden can provide specific and unique opportunities for care and this in turn can enhance the healing ethos of a healthcare community, thereby contributing to the wellbeing of its users. The essences offer strength, elasticity and dynamism that enable a garden to become a resilient place and can contribute to

the community's overall wellbeing. The historical research outlined in chapter 1 suggests that at various points in history the role of these garden essences has been better understood. The literature review presented in chapter 2 indicates that there is an increased understanding, across the disciplines, as to the significance of healthcare gardens. Chapter 3 highlighted the need to focus on the user's experience and to develop mixed research methods to study a healthcare garden. Chapters 4 and 5 presented an in-depth look at Maggie's gardens in the context of the organisation's aims and ambitions, as well as other contemporary healthcare gardens.

The research found that healthcare gardens should embrace a range of thresholds, ensuring that they operate optimally with the built, medical and social environments. Chapter 6 discussed how these gardens should afford open spaces that are both bounded and intimately connected with the purpose of the organisation. A necessary feature, the findings suggest, is the provision of sheltered outdoor spaces to enable year round use. Chapter 7 explored how sensory richness ensures they are always "gardens of action". It is indicated that these gardens need to offer a range of deep (but gentle) sensory moments for visitors, including careful consideration of how sound, fragrance, colour and touch operate and provision for symbolic and sensory memories. Chapter 8 highlighted how healthcare gardens need to embrace the "density of time" and provide opportunities for people to explore time in different ways and through different activities. While Chapter 9 emphasised that consideration needs to be given as to how these gardens can enhance, through design, planting and evolvment, a sense of homeliness for the healthcare centre.

The research has demonstrated that these garden essences can only operate effectively if the garden is cared for. Chapter 10 stressed that healthcare gardens need to embrace a strong sense of care and this includes ensuring that staff are supported by and engaged with the garden. As Maggie's point out, when people are unwell, in shock or dying they often experience a crisis that challenges perception, purpose and meaning. A garden, it is suggested, offers thresholds at a physical, cognitive and symbolic level. They are always points of transition; for people in crisis they can occasion openness, and in these moments the mind is much freer than normal. If a healthcare garden is operating effectively it will generate stories. These stories may be the narratives of the people who use the space, or they may be the narratives that emerge within the site. Combined, they create the narrative of resilience as discussed

in chapter 11; the real evidence of a healthcare garden operating as a resilient place (figure 12.1).



Figure 12.1. The 'flower forest' at Maggie's Cheltenham, one example of a 'small story' (© Hindmarsh, 2011)

What is suggested here is that the essences and ensuing narrative of resilience, unique to a garden and different from any other art form, can contribute to and reinforce the healing ethos of an organisation. This new hypothesis builds on work, as outlined in chapter 2, about therapeutic landscapes (Gesler, 1996), generative space (CARITAS online, 2012) and the 'virtues of gardens' (Cooper, 2006). It insists on an idea of 'coded mutualism' (Thompson, 2013) between built and green space indicating that a garden can also offer a strong contribution to the concept of 'milieu management'. It also demands the agency of the healthcare garden to be considered and to firmly situate gardens and garden history within current debates within design where a different understanding of ecological health is emerging (Fry, 2012; Reis et al., 2013).

A healthcare garden is contrasted with what the built environment offers; indeed the research suggests that the specific affordances of a garden are quite different and sometimes much stronger than the effects of architecture. As one participant stated it clearly:

The garden and green spaces are areas to take you away from the hustle and bustle of everyday life and give you the opportunity to stop, look around and appreciate nature. Admire the blooms, enjoy

the fragrance, listen to the joyful singing of birds, feel the wind and warm sunshine on your face. This takes you away from cancer and who would dare to say it does not help in the healing process. (MD14 man with cancer, 2012)

This could be described, to follow Jencks' (2006) analogy, as the garden placebo. It could also be connected to the idea of the 'silent carer' (Martin, 2013). But placebo maintains a medical correlation and inevitably conjures some sort of hidden aim or deception. The garden placebo does not do justice to the directness of responses to the gardens found in the data. Likewise, the silent carer also suggests something hidden or quiet. Instead, a healthcare garden as "resilient place" is the most apposite term because it foregrounds the ecological and allows for a more expansive, outward looking view of the ways in which gardens, people, health and care are entwined.

The thesis concludes that both garden researchers and healthcare professionals should re-examine not only the value of a garden but also what counts as evidence. As discussed in chapter 3, garden researchers need to look at the range of networks that a garden holds, embracing both a phenomenological and an ecological perspective. Such an approach suggests that perception and action are intertwined and that there is a reciprocal relationship between perceiving and the environment. A healthcare garden cannot be discussed in the way that perhaps other aspects of material culture can; its capacities can never be measured in the way that an object, commodity or drug can. Understanding its contribution to what Miller (2009) calls the 'aesthetic' of a place, demands a mixed method approach to research. Understanding what its contribution to the wellbeing of its users might be, likewise, demands a multi-layered investigation. Healthcare professionals need to consider the special affordances of a garden, and the opportunities for compassion. These have more to do with personal experiences and memories – more to do with art than science.

The findings emphasise the evolving nature of a healthcare garden and the importance of co-design, both in terms of the design process but also in the on-going maintenance of the garden. They also stress the value of a slow design approach. Both the temporality and evolving nature of a garden are its strength. A garden will always involve an emotional commitment from its users. In this way it represents an example of what Chapman (2005) describes as 'emotionally durable design'. Healthcare gardens can offer different ways of dwelling, which can reinforce a sense of homeliness. If patients and staff are directly involved in the care and development of these gardens their potential to enhance both individual wellbeing but also the overall

ethos and therapeutic programme is greater. These gardens provide unique opportunities to refine the quality of care thereby emphasising the potential of 'becoming human by design', to echo Fry's (2012) words.

12.2: A new garden paradigm at Maggie's?

The research presents new knowledge as to the roles of Maggie's gardens and the complexities of their relationships with the people who use them. The findings have led to a series of recommendations for the organisation.

Maggie's already recognises the impact of the architecture and interior design of their centres. They have developed a sophisticated architectural brief and an international reputation enticing world-famous architects to work with them. They have written and spoken about how their buildings can and do dismantle preconceptions and change people's requirements.

The research for this thesis reveals how the gardens can offer specific and different things for both staff and visitors. The research highlights the ways in which Maggie's gardens operate as resilient places revealing how they contribute to the creation of 'calm friendly spaces' and the hence the ethos of the organisation (Jencks & Heathcote, 2010: 221). The title of this thesis includes a question mark because the research also highlights where Maggie's gardens function less well as resilient places, revealing where there is less evidence of the garden essences. A sense of homeliness is not always achieved and there is evidence that some aspects of the gardens' designs appear to reinforce the centres as bold architectural spaces rather than homely domestic spaces.

The research therefore concludes that, for the main part, the gardens at Maggie's do support and enhance the work of the organisation. However, the research also concludes that the gardens at Maggie's are underused and underestimated (chapter 6-9). There is evidence that this is changing with some of the newer centres. Clearly Maggie's are addressing some of the issues identified by this research. Their new initiative, mentioned in chapter 10, to appoint therapeutic gardeners at some centres is an example of this. There is also evidence, as discussed in chapter 11, that Maggie's are taking a new and more integrated approach to landscape and building within their newest centres, such as Glasgow Gartnavel and Oxford.

Maggie's are in a strong position to re-invigorate the healthcare garden. Their determined belief in the power of design and their freedom (because they deal with the non-medical side of cancer) to focus on the individual and social, should be extended to embrace the value of gardens more fully. Despite the work by Macmillan (2010b) the landscape profession has consistently failed to impress upon healthcare stakeholders that investment in gardens will deliver much more than they cost. Maggie's could challenge this; they have an opportunity to re-introduce gardens into the medical process.

Maggie's have an opportunity, especially with the newer centres, to situate themselves more strongly within the broader changes that have taken place within design. There is a need to articulate the strategic and creative role of the designer in a much broader context (and one that goes far beyond iconic buildings) than is currently being pursued by the organization. Flora Gathorne-Hardy's work for Maggie's, for example, is indicative of a younger generation of designers who now work within a broader and multidisciplinary context. This same context can be seen in other arenas such as public art where there has been a shift from individual commissioning to process and community-based initiatives.

Today organisations such as the Design Council (2014) talk of design-led innovation, insisting on the social role of designers and their importance when tackling major issues such as health, ageing and community cohesion. Manzini (Manzini & Jegou, 2003; Manzini & Vezzoli, 2008) writes about a broader context for the designer especially in relation to environmental sustainability. During the last fifteen years there has been a shift, with increasing strategic use of designers and design thinking both within business and community sustainability initiatives. Maggie's own story should be able to track this shift. More could be said about this and, as this thesis has argued, it is the gardens that hold the key to articulating this more clearly. It is within the garden designs that these changes can be seen and best understood.

As cancer care centres Maggie's are also in a strong position to explore the relationship between gardens and health in more depth. This does not mean they have to promote or aspire to the medicinal and healing properties of plants or to seek out a 'cancer garden design'. They need to say more gently, through the creation of resilient places, that gardens are always connected with health. Their gardens have the potential to emphasise the value of plants within a medical context and this is different

to an exploration of the use of plants within medicine. Too often, as discussed in chapter 7, use and value are conflated to the detriment of a deeper understanding of the value of plants and gardens within a healthcare context. The suggestion from this research is that they have a role in humanising the medical process.

Maggie's need to position themselves more strongly, not only within the architecture of health (Jencks & Heathcote, 2010), but also within the history of gardens of health. This thesis presents a range of historical examples in order to show how the garden essences have, in the past, operated within healthcare. Maggie's can also learn from other contemporary gardens. Again this study had demonstrated how other organisations, both within and beyond cancer care, make use of gardens to enhance healthcare. The comparative case studies (discussed in chapter 5) within this research helped to clarify findings and issues to do with people and place; they provided another layer, helping to further refine the garden essences. Most significant of all is the fact that the comparative studies consistently reinforce the key findings of the research at Maggie's, thereby giving further weight to these conclusions.

For Maggie's to achieve a new garden paradigm (resilient places) they need to address more carefully the garden essences and the care and management of their gardens. They need to focus more on sensory richness and less on intellectual symbolism. They need to focus more on the slow design of the gardens and less on architectural or landscape statement. They need to emphasise the agency of the gardens. This can be done through a new approach to their sites achieved through a different design process and a different type of dialogue between architecture, landscape and community.

This research has identified some considerations for the organisation based on the findings. Future Maggie's centre designs should include a range of "garden thresholds" as well as outdoor spaces that are sheltered (chapter 6); designers and gardeners should focus on creating opportunities for deep sensory moments and the evocation of the "density of time" (chapters 7 & 8); careful attention needs to be paid to how the gardens can extend a sense of homeliness by providing intimate but interconnected spaces (chapter 9); each centre needs to have its own gardener who is strongly connected with the daily workings of the centres and who can develop a team of volunteers (chapter 10); opportunities to develop the stories of the gardens need to be

addressed and then these stories need to be listened to and woven into the evolution of the existing and future centres (chapter 11).

Maggie's use the term, 'milieu management' to encapsulate the spaces of the Maggie's buildings; the way these and the staff facilitate the establishment and maintenance of "real" community; and the processes and nature of the activity of the professionals who staff the programme (Lee, 2012: 26). Their centres become communities and their buildings provide permanent accessible and secure places where people feel an affinity and a sense of ownership.

This research suggests that the same can be done with their gardens but in an even more dynamic way. It proposes that a garden can make a unique contribution to milieu management. What is argued is that these gardens, functioning as resilient places, can do more than provide a calming environment. They can also contribute greatly to the social relationships and the symbolic functions of a Maggie's centre. The presence of a well-designed and maintained garden can enhance the quality of care. Through the activities and stories that this garden generates a stronger narrative and sense of community can be developed.

12.3: Re-balancing the design brief

The bias towards buildings within healthcare in the UK was discussed in chapter 6 and Maggie's are no exception. The role of gardens and the need for propitious siting in order to maximise health should be reintroduced to healthcare. More attention could be paid to the overall site and the relationship between built and green environment.

Although Maggie's clearly value their gardens, their architecture has always led the way. Maggie's explain that this is primarily pragmatic and financial; that they have to concentrate on fundraising for the building (Jencks, cited in De Verteuil, 2013).

However, it perpetuates the commonly held view that gardens are an 'add on', a luxury or even an extravagance. This raises a significant point suggesting that Maggie's should place a stronger focus on site planning; integrating landscape and architecture to speak as one voice, not as separate elements. They should also re-examine their design process and place greater emphasis on a collaborative stance. One way to ensure this happens would be to re-balance their architectural brief. Although they

have begun (since the experience of Maggie's London) to team architects and landscape architects at an early stage, the suggestion is far more radical than this.

By re-balancing the brief, the garden and its thresholds lead the design. This rebalancing brings about, a stronger fusion between ecology and technology in ensuring that the built environment emerges out of and with a care for nature. It puts more emphasis on the design process and the idea that site, garden, building, programme and community are all fundamentally connected. That place, space and the process of dwelling are always intimately entwined.

This is not to suggest that gardens take precedent over buildings, but why not start with the garden and allow the building to evolve out of it, rather than the other way round? This would ensure that interior spaces "naturally" lead outdoors. It would also ensure that the gardens are fully integrated with the centres; offering not only different types of spaces but also further opportunities for green sensory detail.

What is proposed is that the 'Maggie's Architectural Brief' (discussed in chapter 4 and included in appendix 7A) should be rebalanced with landscape leading the design process. A new brief is proposed under the title, 'Maggie's Site Design Brief' and is included in its entirety in appendix 7B. This new brief is refocused to include consideration of both architecture and landscape at all points, emphasising the role of not just the architect, but also the garden designer too. The language is changed replacing the words 'building' and 'build' with 'Maggie's Centre' and 'design' respectively to emphasise the whole site. The one point on the outside spaces is replaced with a series addressing each garden essence and there is more discussion and acknowledgement on how the design, both inside and out, can tell the story of the organisation. To show the potential impact of this research on Maggie's gardens, below are the most salient additions to the brief:

Consider how the garden design can operate in relation to the following themes:

Thresholds

How the garden can provide spaces that are intimately connected with the activities of the organisation - open yet contained. The gardens should provide a buffer zone for

entering and leaving the Maggie's buildings. The outside spaces and garden features can provide landmarks and way finding for visitors to a Maggie's Centre. The garden spaces can provide a particular type of sanctuary.

The provision of sheltered (from sun) and protected (from wind and rain) outdoor spaces or conservatories, where people can sit out in the fresh air all year round, is important.

Sensory Richness

Careful attention needs to be given to the sensory presence of plants and materials within the garden. How the gardens can provide opportunities for sensory moments, helping to provide a calm, soft space for visitors and staff, both inside and out. This suggests an emphasis on sensory richness (colour, sound, fragrance, texture), opportunities for sun, warmth, coolness and shade, and a garden that is 'in action' in all seasons.

Consideration as to how the garden can contribute to sensory qualities (not just visual) – that 'inside outside feel'. Also the inclusion of 'practical' and edible plants. Consideration also for the inclusion of water features.

The Density of Time

Seasonal change and cycles within the garden can be helpful to visitors and staff. It is important that the role of the garden in both winter and summer is considered. Strong symbolism and memorials should be avoided. Consideration should be given to how the garden spaces can provide opportunities for people to pause or slow down. How the garden can provide places for solitude as well as places for both staff and families to take a break. Also how the garden spaces can provide opportunities for walking, conversations and group therapeutic activities such as Tai Chi or yoga. Privacy considerations are important here.

Homeliness

The role of the garden in providing comfortable, intimate, 'homely' places should be considered. How the garden can contribute to the idea of sanctuary conveying both a sense of intimacy and interconnectedness. That the garden can enhance feelings of homeliness and set a tone and assist people (staff, patients and family members) in feeling more comfortable and 'at home'. Perhaps the garden can perform the same role as the kitchen table within the Centre?

Care

From the outset, careful consideration should be given to how the garden might evolve and be cared for. Maggie's gardens should always feel loved. Providing opportunities for staff and visitor engagement will be important. 'Low maintenance' styles should be avoided, but at the same time, complex and strongly metaphorical designs can reduce sense of ownership and value.

Thus, the new brief introduces the themes of thresholds, sensory richness, density of time, homeliness and care in direct relation to the garden design at Maggie's. It also introduces the idea of the 'Maggie's kitchen garden' to express the type of outdoor space required. This is a new and more expansive interpretation of the idea of the kitchen garden; one that may include growing flowers, fruit and vegetables but which is also about a very special 'place apart' in fresh air.

12.4: Further areas for scholarship

This research has resulted in a series of findings that were supported by the comparative case studies. It also offered an innovative research method that presents a new approach within garden studies focused on the user experience. While the implications of these findings for both garden researchers and healthcare professionals are indicated it is also useful to consider them as groundwork for further areas of investigation; research is now needed to replicate and extend these findings.

The new centres at Maggie's present a ripe opportunity for further research, not least because it is clear that the organisation has begun to develop its own understanding of

the role of their gardens. Further research at Gartnavel, Oxford and other new centres could include comparative work to older garden sites. At Gartnavel there is a particular opportunity because both staff and visitors have moved between the older Glasgow Gatehouse site and the newer site. More extensive space syntax studies combined with qualitative interviews could be productive here.⁶⁸ Research looking at the impact of the new 'engagement gardeners' across the sites would be also useful, perhaps in collaboration with Thrive. This would be an unusual opportunity to focus on the voice of the gardener, placing their work within both the context of the history of healthcare gardens and therapeutic horticulture.

In view of the findings it would make sense to develop a further a collaborative, qualitative research project investigating the role of design at Maggie's that explored the interconnections between both interior and exterior design and the psychosocial environment. This would ensure a stronger focus on the interdependence of the built and green environment. Such a project would benefit from drawing on international, comparative case studies within cancer care.

The findings also suggest there is an opportunity to take a closer look at the impact of green spaces on healthcare workers. It would be interesting, for example, to look at Maggie's statistics on stress related staff illness. Would it be possible to identify, through further qualitative research, the impact of the designed environment (both inside and outside) on staff? Again, the robustness of such a project would rely on comparative case studies.

The impact and use of any user-led research needs to be discussed and addressed with Maggie's. How it might feed into their design process and further research needs careful consideration. At present their design process involves very little user-consultation, even within the new centres.⁶⁹ One suggestion is that the gardens can lead the way (as is happening with at Maggie's Oxford) bringing a more inclusive approach.

⁶⁸ It was noted in chapter 3 that space syntax tools would have been more effective in this research if they had been far more extensive in tracking daily and seasonal patterns.

⁶⁹ There was, for example, no visitor consultation for the new centre at Glasgow Gartnavel.

Beyond Maggie's is a need for further research and understanding about those places (generally, and not specifically gardens) that people find restorative and why. Is there a special place, for example, that cancer patients and their families seek out during treatment? Such research could link to research of so-called cancer survivorship, such as that being done at Southampton University or with the National Cancer Intelligence Network (NCIN) who are developing robust data analysis of two million people living with cancer in the UK (Macmillan, 2013). It would be useful to study the idea of 'alternative gardens' to further refine what qualities of outdoor spaces are valued when people are unwell. The need to research those places people find therapeutic including 'dissident *topophilias*' has already been identified (Laws, 2009, see chapter 2) and there is some timely research at ECEHH looking at how specific areas within distinct local communities are used or constructed as therapeutic spaces (research by Bell, ECEHH online, 2013; White et al., 2013a & b).

This thesis presented a method to creatively and critically address the ways in which gardens are connecting with people's lives (experiences, perceptions and memories), place and healthcare. The photo-elicitation interviews proved an effective technique to uncover some of the more subtle experiences of gardens. Participants conveyed their personal experiences and this included unprompted information about their wellbeing. This technique could be further developed, perhaps in conjunction with audio work, to further reveal the multisensory experiences of gardens.⁷⁰

What is sought now is a new form of healthcare garden historiography that can develop a critical approach perhaps by combining geographical and landscape design research. An approach that says 'garden is tension', to echo Wylie's (2007) pronouncements on landscape, and that focuses on the 'telling of the small stories' (Lorimer, 2006). Such an approach could lead to the establishment of a network in the UK, not dissimilar to the Therapeutic Landscape Network (2013) in America that provides a focus for robust research and brings academics, designers, healthcare professionals and gardeners together.

This research has also hinted at the 'poetics of the garden space'. The idea of a garden as resilient place should now be further explored through philosophy, art and

⁷⁰ Film and digital media should also be considered perhaps building on Maggie's recent film made by Amy Hardie (*The Tuesday Group*, 2012), although the intrusiveness of film within healthcare should also be carefully considered.

garden history. Further research on the idea of a garden conveying a sense of compassion and homeliness is required. The theme of homeliness also offers a way to combine philosophy, history, literature, art and healthcare. What has emerged out of this thesis is evidence that the healthcare garden presents an opportunity to study in depth human perceptions, emotion and experience. There is more to understand about wellbeing and a healthcare garden provides an opportunity to look at the complexities of issues such as belief, healing and placebo. The research has identified the need for further understanding of garden thresholds (as defined in chapter 6) as transitional opportunities for changes in perception, emotion and experience. Why can a garden offer possibilities for subtle transformation of both our outer environment and our inner level of mind, emotion and the body?

This thesis insists that an ecological approach (Gibson, 1979; Heft, 2010; Grahn et al., 2010; Reis et al., 2013) is helpful because it prompts researchers to emphasise the experience of landscape over time and to focus on the interconnections among society, the environment and our health. This is particularly pertinent to the healthcare garden because to explore the qualities of environmental experience over time may shed new light on the relationship between gardens and psychological wellbeing (Heft, 2010: 28). The question is how best to encounter and recount the networks, layers and textures of a garden. How to convey the narrative of resilience that can reanimate these embodied relationships. There needs to be a way to combine affordances with dwelling and the suggestion of this thesis is to focus on the telling of the small stories of a resilient place.

A final return to Fra Angelico's painting of the *Annunciation* (c.1442) reinforces this point that gardens offer something different (see figure 0.1). If the garden essences identified within this research are considered by healthcare professionals, it would be interesting to speculate on how gardens could become far more comprehensively integrated into the daily working of healthcare environments. The *Annunciation* encapsulates the intimate relationship between human, architecture and garden. It puts a spotlight on the role gardens can play in humanising medical processes. It becomes a symbol for fuller definitions of a sense of homeliness and care.

BIBLIOGRAPHY

- Abden, R., & de Wit, S. (1999) *The Enclosed Garden. History and Development of the Hortus Conclusus and its Reintroduction into the Present-day Urban Landscape*. Rotterdam: 010 Publishers.
- Abrams, D. (1996) *The Spell of the Sensuous*. New York: Vintage Books.
- Ackerman, D. (1990) *A Natural History of the Senses*. London: Phoenix.
- Adams, A., Theodore, D., Goldenberg, E., McLaren, C., & McKeever, P. (2010) 'Kids in the Atrium: Comparing Architectural Intentions and Children's Experiences in a Pediatric Hospital Lobby', *Science and Medicine* 70 (5), pp. 658-667.
- Adams, M. (2009) 'Hearing the City: Reflections on soundwalking', *Qualitative Researcher* 10, pp. 6-10.
- Addison, J. (1712) *Spectator*. (411) Saturday 21 June. Available to download at <http://www.gutenberg.org/files/12030/12030-h/12030-h/SV2/Spectator2.html#section411> [accessed 12 June 2014]
- Akehurst, M.A. (2011) York Retreat: A Vernacular of Equality' in Guillery, P. (2001) *Built from Below: British Architecture and the Vernacular*. Routledge, pp. 73-95.
- Akers, A., Barton, J., Cossey, R., Gainsford, P., Griffin, M., & Micklewright, D. (2012) 'Visual color perception in green exercise: positive effects on mood and perceived exertion', *Environmental Science Technology*. Aug 21;46 (16), pp. 8661-6.
- Alfrey, N., Daniels, S., & Postle, M. (2004) *Art of the Garden* [Exhibition catalogue]. London: Tate Gallery.
- Allaway, Z. (2012) 'Gardens for Life', *Garden Design Journal* 121, August, pp. 23-27
- Amphlett, P. (1985) 'The Hochschule für Gestaltung, Ulm', in Hamilton, N. (1985) *From Spitfire to Microchip. Studies in the History of Design from 1945*. London: The Design Council
- Annemans, M., Van Audenhove, C., Vermolen, H. & Heylighen, A. (2012) 'What Makes An Environment Healing? Users and Designers about the Maggie's Cancer Care Centre London', *Out of Control. Proceedings from the 8th International Design & Emotion Conference*, London, 11-4 September
- Appleton, J. (1975) *The Experience of Landscape*. London: Wiley-Blackwell
- Arbury, J (2008) 'Do 'Therapeutic Landscapes' play a pivotal role in analysing the relationship between 'health' and 'place'?', *Geog 736 – Geographies of Health and Place*. Available at: <http://portal.jarbury.net/essay/therapeutic.html> [accessed 10 January 2011]
- Arida, A. (2003) 'Architecture and the New Paradigm: A response to Charles Jencks', *Architectural Review* June, p. 30
- Augé, M. (1995) *Non-Places: Introduction to an Anthropology of Supermodernity*. London: Verso Books

- Augé, M. (2000) 'Non-places', in Read, A. (ed.) *Architecturally Speaking*. London: Routledge, pp. 7-11
- Bachelard, G. ([1964] 1994 edition) *The Poetics of Space*. Boston: Beacon Press
- Bacon, F. ([1597-1625] 1997), *Essays*. Hertfordshire: Wordsworth Editions
- Bagot, K.L. (2004) 'Perceived Restorative Components: A Scale for Children', *Children, Youth and Environment* 14 (1), pp. 120-140
- Baird, C., & Bell, P (1995) 'Place Attachment, Isolation, and the Power of the Window in a Hospital Environment: A Case Study', *Psychological Reports*, 76, pp. 847-850
- Baker, K. (2012) *Captured Landscape: The Paradox of the Enclosed Garden*. London: Routledge
- Barbara, A., & Perliss, A. (2006) *Invisible Architecture, Experiencing Places through the Sense of Smell*. Milan: Skira
- Barnett, R. (2007) 'Sacred Groves: Sacrifice and the Order of Nature in Ancient Greek Landscapes', *Landscape Journal* 26 (2) pp. 252-269
- Barton, J., & Pretty, J. (2010) 'What is the best dose of nature and green exercise for improving mental health? A multi-study analysis', *Environment, Science & Technology* 44 (10), pp. 3947-3955
- Barton, J. (2006) 'The Effects of Green Exercise on Psychological Health and Well-being', unpublished Ph.D thesis, Department of Biological Sciences, University of Exeter
- Barton, J., Hine, R., & Pretty, J. (2009) 'Green Exercise and Green Care: Evidence, Cohorts, Lifestyles and Health Outcomes', occasional paper. Colchester: Centre for Environment and Society, University of Essex
- Barwell, I., & Powell, J. 'Gardens, Music & Time', in O'Brien, D. (ed.) *Gardening, Philosophy for Everyone*. Chichester: John Wiley & Sons Ltd, pp. 135-147
- Bass Warner, S. (1993) 'Restorative Gardens: Green Thoughts in a Green Shade', *British Medical Journal* 306, pp.1080-1081
- Bayes, K. (1994) *Living Architecture: Rudolf Steiner's ideas in practice*. Edinburgh: Floris Books
- BBC Radio Four, (2009) *The Hawthorne Effect, Mind Changers* [radio broadcast] BBC Radio 4, first broadcast, 3 August 2009
- Beazley, E. (1960) *Design and Detail of the Space Between Buildings*. London: The Architectural Press
- Berger, J. (1980) *About Looking*. London: Bloomsbury
- Berger, J. (1984) *And Our Faces, My Heart, Brief as Photos*. London: Bloomsbury
- Bergson, H. ([1921] 1999), *Duration and Simultaneity*. Manchester: Clinamen Press

- Berleant, A. (1992) *The Aesthetics of Environment*. Philadelphia: Temple University Press
- Berleant, A. (1993) 'The Aesthetics of Art and Nature', in Kemal, S., & Gaskell, I. (1993) *Landscape, Natural Beauty and the Arts*. Cambridge University Press, pp. 228-243
- Bernard of Clairvaux (1090-1153) from J. P. Migne (ed.) (1885) *Patrologia Latina*. 281 (271), col. 569. Translated in Comito (1978: 177)
- Berry, L.L., Parker, D., Coile, R., Hamilton, D.K., O'Neil, D.D., & Sadler, B.L., (2004) 'The Business Case for Better Buildings', *Frontiers of Health Service Management*, 21 (1), pp. 1-2. Available at: www.healthdesign.org/aboutus/press/release/frontiers_0904.pdf [accessed 14 November 2011]
- Bertauski, T. (2003) *Plan Graphics for the Landscape Designer*. New Jersey: Prentice Hall
- Bhatti, M., & Church, A. (2004) 'Home, the Culture of Nature and Meanings of Gardens in Late Modernity', *Housing Studies* 19 (1), pp. 37-51
- Bird, W. (2007) *Natural Thinking: Investigating the Links between the Natural Environment Biodiversity & Mental Health*, Report for RSPB. Available at: http://www.rspb.org.uk/Images/naturalthinking_tcm9-161856.pdf [accessed 10 July 2012]
- Birksted, J. (ed.) (1999) *Relating Architecture to Landscape* London: E & FN Spon
- Bite, I., & Lovering, M.J. (1984) 'Design Opens Doors for the Elderly', *Landscape Architectural Review* 4 (3), pp. 9-14
- Bite, I. & Lovering, M.J. (1985) 'Design for the Elderly', *Landscape Architecture* Nov/Dec, pp. 79-81
- Blaszczyk, R.L. (2012) *The Colour Revolution*. Cambridge, Massachusetts: MIT Press
- Blessner, B., & Salter, L. (2007), *Spaces Speak, are you listening? Experiencing aural architecture*. Cambridge MA: MIT Press
- Block, K., Block, P., & Gyllenhaal, C. (2004) *The Role of Optimal Healing Environments in Patients Undergoing Cancer Treatment: Clinical Research Protocol Guidelines*. University of Minnesota: Informe Design. Summary available at: http://www.informedesign.org/Rs_detail.aspx?rsId=2268 [accessed 12 July 2012]
- Bloomer, K. C., & Moore, C.W. (1977) *Body, Memory and Architecture*. New Haven, CT: Yale University Press
- Blundell Hones, P. & Woudstra, J. (2014) 'Some Modernist Houses and their Gardens, part 6: Alvar & Aino Aalto's House at Munkkiniemi', *Die Gartenkunst* 26 (1), pp. 107-122
- Blunt, A. (2005) 'Cultural Geography: Cultural Geographies of Home', *Progress in Human Geography* 29 (4), pp. 505-515

- Blunt, A., & Dowling, B. (2006) *Home*. Oxon: Routledge
- Blunt, A., & Varley, A. (2004) 'Geographies of Home', *Cultural Geographies* 1 (1), pp. 3-7
- Boccaccio, G. ([1350] 2003 revised edition) *The Decameron*. Penguin Classics
- Boetzkes, A. (2009) 'Phenomenology and Interpretation, Beyond the Flesh', *Art History* 32 (4), pp.690-711
- Bordass, W. (2006) *Post-Occupancy Evaluation and Feedback: Getting Started*. Useable Buildings Trust (UBT). Available at: www.useablebuildings.co.uk [accessed 20 January 2011]
- Bordass, W., Leaman, A., & Elecy, J. (2006) *A Guide to Feedback and Post-Occupancy Evaluation*. Useable Buildings Trust (UBT). Available at: www.useablebuildings.co.uk [accessed 20 January 2011]
- Borja, E. (1999) *Zen Gardens*. London: Ward Lock
- Bostin, K. (2011) (Fira Landscape Architects), interview with author as audio walking tour of garden at Macmillan Renton Unit at Hereford County Hospital, 10 October 2011
- Bowen, S., McSeveny, K., Lockley, E., Wolstenholme, D., Cobb, M., & Dearden, A. (2013) 'How what if for you? Experiences of Participatory Design in the UK Health Service', *Co-Design: International Journal of CoCreation in Design and the Arts* 9 (4), pp. 230-246
- Bowden-Pickstock, S. (2009) *Quiet Gardens, The Roots of Faith*. London: Continuum
- Bowden, M. (ed.) (1999) *Unravelling the Landscape, An Inquisitive Approach to Archaeology*. Marlow: NPI Media Group
- Bradwell, P., & Marr, S. (2008) 'Making the Most of Collaboration: An International Survey of Public Service Co-Design, DEMOS and Pricewaterhouse Coopers Public Sector Research'. London: Report
- Brady, E. (2003) *Aesthetics of the Natural Environment*. Edinburgh: Edinburgh University Press
- Brady, E. (2007) 'Aesthetic Regard for Nature in Environmental and Land Art', *Ethics, Place and Environment*, 10 (3), October, pp. 287-300
- Brawley, E. (2005) *Design Innovations for Aging and Alzheimer's*. New York: John Wiley and Sons, Inc.
- Brawley, E. (2007) *Designing for Alzheimer's Disease*. New York: John Wiley and Sons
- Bream Healthcare (2008) *Scheme Document SD 5053*. Hertfordshire: BRE Global Ltd.
- Brewin, W. (2013a) *Creative Spaces: Dementia, Community and Nature* [Film]. St Austell: Sensory Trust, first published 7 February 2013. Available at: http://www.youtube.com/watch?v=6lXAlCJa_uo [accessed 14 March 2013]

- Brewin, W. (2013b) *Creative Spaces, Executive Summary of Evaluation Report*, St Austell: Sensory Trust
- Bronfenbrenner, U., & Ceci, S. (1994) 'Nature – Nurture Reconceptualized in Developmental Perspective: A bioecological Model', *Psychological Review* 101 (4), pp. 568-586
- Brook, I. (1998) 'Goethean Science as a Way to Read Landscape', *Landscape Research* 23:1, pp. 51-69
- Brook, I. (2010a) 'The Virtues of Gardening', in O'Brien, D. (ed.) *Gardening, Philosophy for Everyone*. Chichester: John Wiley & Sons Ltd, pp. 13-25
- Brook, I. (2010b) 'The Importance of Nature, Green Spaces, and Gardens in Human Well-being', *Ethics, Place and Environment* 13: 3, October, pp. 295-312
- Brookes, J. (1969) *Room Outside*. London: Thames & Hudson
- Brown, J. (1999) *The Pursuit of Paradise. A Social History of Gardens and Gardening*. London: HarperCollins Publishers
- Brydon, I. (2004) 'There is No Outer without Inner Space: Constructing the *Haveli* as Home', *Cultural Geographies* 11, pp. 26-41
- Building Centre Trust (2005) *Capital Health, London's New Healthcare* [Exhibition Catalogue], London: The Building Centre Trust/ NHS
- Bull, G. (2010) 'A Room with a View', *Landscape Magazine* 1 July, pp. 22-26
- Burton, R. ([1638] 1962 edition) *Anatomy of Melancholy*. Special Collections, Bristol University
- Busch, A. (2004) *Geography of Home*. Princeton: Architecture Press
- C21 Understanding and Coping with Cancer in the 21st Century (2009) 'Blueprint for a New Kind of Care' *C21*, 3
- Calkins, M. (1988) *Design for Dementia: Planning Environments for the Elderly and Confused*. Owings Mills, Maryland: National Health Publishing
- Campbell, K. (2007) *Icons of Twentieth-Century Landscape Design*. London: Frances Lincoln
- Campbell, L., & Wiesen, A. (2009) *Restorative Commons: Creating Health and Well-being through Urban Landscapes*. Delaware: USDA Forest Service
- Campbell, M. (2005) 'What Tuberculosis did for Modernism: The Influence of a Curative Environment on Modernist Design and Architecture', *Medical History* 49 (4) pp. 436-488
- Capek, K. (1929) *The Gardener's Year*. London: George Allen & Unwin
- Careri, F. (2002) *Walkscapes: Walking as an Aesthetic Practice*. Barcelona: Gustavo Gili, SA (Land&Scape Series)

- Carroll, M. (2003) *Earthly Paradises: Ancient Gardens in History and Archaeology*. London: British Museum Press
- Carstens, D. Y. (1985) *Site Planning and Design for the Elderly: Issues, Guidelines and Alternatives*. New York: Van Nostrand Reinhold
- Carstens, D.Y. (1998) 'Housing and Outdoor Spaces for the Elderly', in Cooper Marcus, C., & Francis, C. (eds.) (revised, 2nd edition) *People Places: Design Guidelines for Urban Open Space*. New York: John Wiley & Sons, pp. 209-259
- Castree, N. (2005) *Nature*. London: Routledge
- Centre for Healthcare Design (1999) *Assessing the Built Environment for the Patient and Family Perspective: Patient-Centred Environmental Checklist*. Boston: The Pitcher Institute
- 'Charles Jencks, Cosmic Gardener' (2012), *Nature Magazine* 473, p. 283
- Chapman, J. (2005) *Emotionally Durable Design*. London: Earthscan
- Chapman, J., & Grant, N.(eds.) (2007) *Designers, Visionaries & Other Stories*. London: Earthscan
- Chapman, T. (2001) 'There's No Place Like Home', *Theory, Culture & Society*, 18 (6), pp. 135-146
- Charon R. (2006) *Narrative Medicine: Honouring the Stories of Illness*. New York, NY: Oxford University Press
- Charon, R. (2001) 'Narrative Medicine: A model for empathy, reflection, professional and trust', *Journal of American Medical Association* 280 (15), pp.1896-1902
- Charon, R. (2007) 'The sciences of narrative medicine', *Canadian Family Physician* vol. 53, no. 8, pp. 1265-1267
- Chevalier, S. (1998) 'From woollen carpet to grass carpet: Bridging house and garden in an English suburb', in Miller, D (ed.) *Material Cultures, Why Some Things Matter*. London: UCL Press
- Chevallier, A. (2000) *Encyclopaedia of Herbal Medicine*. London: Dorling Kindersley
- Chick, C (2010) 'Garden Project Aims to Improve Dementia Care', *Cornish Guardian*, 4 August 2010, p.8
- Chiesa, M., & Hobbs, S. (2009) 'Making sense of social research: How useful is the Hawthorne Effect?', *European Journal of Social Psychology* 38 (1), pp. 67-74
- Cicero (45BC) *De Natura Deorum*. English translation by H. Rackham (1993), Cambridge Massachusetts: Harvard University Press
- Cimprich, B. (1993) 'Development of an intervention to restore attention in cancer patients', *Cancer Nursing* 16 (2), pp. 82-92

- Clark, A. (ed.) (2011) *Design Anthropology: Object Culture in the 21st Century*. Austria: Springer-Verlag
- Clark, K. (1999) *Conservation Plans in Action*. English Heritage
- Clark, K. (2001) *Informed Conservation: Understanding Historic Buildings and their Landscapes for Conservation*. Royal Commission on the Historic Monuments of England
- Clifford, J., & Marcus, G.E. (eds.) (1986) *Writing Culture, The Poetics and Politics of Ethnography*. Berkeley: UCP
- Cobb, E. ([1977] 1994 edition) *The Ecology of Imagination in Childhood*. Putnam, Connecticut: Spring Publication
- Coffey, A., & Atkinson, P. (1996) *Making Sense of Qualitative Data*. London: Sage
- Coffin, D. (1994) *English Garden: Meditation & Memorial*. Princeton: Princeton University Press
- Cohen, U., & Wiesman, G. (1991) *Holding onto Home*. Baltimore: John Hopkins University Press
- Coles, R., & Millman, Z. (eds.) (2013) *Landscape, Well-being and Environment*. London: Routledge
- Colquhoun, M. (2007) 'Healing the land, healing ourselves', *CADUCEUS*, 72, pp. 6-11
- Comito, T. (1979) *The Idea of the Garden in the Renaissance*. New Brunswick, New Jersey: Rutgers University Press
- Commission for Architecture and the Built Environment (CABE) (2003) *Radical Improvements in Hospital Design (CABE Healthy Hospitals)*. London CABE. Available at:
<http://webarchive.nationalarchives.gov.uk/20110118095356/http://www.cabe.org.uk/files/radical-improvements-in-hospital-design.pdf> [accessed 25 January 2011]
- Commission for Architecture and the Built Environment (CABE) (2006) *Our Health, Our Care, Our Say*, Government white paper, 22 February. London: CABE [accessed 25 January 2011]
- Commission for Architecture and the Built Environment (CABE) (2009a) *Future Health: Sustainable Places for Health and Wellbeing*, London: CABE. Available at:
<http://webarchive.nationalarchives.gov.uk/20110118095356/http://www.cabe.org.uk> [accessed 25 January 2011]
- Commission for Architecture and the Built Environment (CABE) (2009b) *Sustainable Places for Health and Wellbeing*. London CABE. Available at:
<http://webarchive.nationalarchives.gov.uk/20110118095356/http://www.cabe.org.uk> [accessed 25 January 2011]

Commission for Architecture and the Built Environment (CABE) (2010a) *Community Green: Using Local Spaces to Tackle Inequality and Improve Health*, London: CABE. Available at: <http://webarchive.nationalarchives.gov.uk/20110118095356/http://www.cabe.org.uk> [accessed 25 January 2011]

Commission for Architecture and the Built Environment (CABE) (2010b) *Urban Green Nation: Building the Evidence Based*, London: CABE. Available at: <http://webarchive.nationalarchives.gov.uk/20110118095356/http://www.cabe.org.uk> [accessed 25 January 2011]

Concise Oxford English Dictionary (2004) Oxford: Oxford University Press

Conradson, D. (2005) 'Landscape, care and the relational self: Therapeutic encounters in rural England', *Health & Place* 11, pp. 337-348

Conroy Dalton, R., & Hanson, J. (2010) 'Feeling good and feeling safe in the landscape: a 'syntactic' approach', in Ward Thomson, C., Aspinall, P., & Bell, S. (eds.) *Innovative Approaches to Researching Landscape and Health*. Abingdon: Routledge, pp. 211-230

Consumers for Health (2013) 'House of Commons, 9th July, Westminster Hall Debate on Herbal Medicine Regulation'. Summary available at: www.consumersforhealthchoice.com/news/2013/07/house-of-commons-9th-july-westminster-hall-debate-on-herbal-medicine-regulation/ [accessed 15 November 2013]

Coons, D. (1998) 'Wandering', *The American Journal of Alzheimer's Care and Related Disorders Research* 3 (1), pp. 31-36

Cooper Marcus, C. ([1995] 2006 edition) *House As A Mirror of Self*. Berwick: Nicholas-Hays, Inc.

Cooper Marcus, C. (2005) *Healing Gardens in Hospitals*. Reprinted in Wagenaar, Cor (ed.) (2006) *The Architecture of Hospitals*. Rotterdam: Nai Publishers, pp. 314-329

Cooper Marcus, C. (2010) *Landscape design: Patient-specific Healing Gardens*. World Health Design. Available at: www.worldhealthdesign.com [accessed 20 January 2011]

Cooper Marcus, C., & Barnes, M. (1995) *Gardens in Healthcare Facilities: Uses Therapeutic Benefits and Design Recommendations*. Martinez, California: The Centre for Health Design

Cooper Marcus, C., & Barnes, M. (1999) *Healing Gardens, Therapeutic Benefits and Design Recommendations*. New York: John Wiley & Sons

Cooper Marcus, C., & Francis, C. (eds.) (1997, revised, 2nd edition) *People Places: Design Guidelines for Urban Open Space*. New York: John Wiley & Sons

Cooper Marcus, C., & Sachs, N. (2013) *Therapeutic Landscapes. An Evidence-Based Approach to Designing Healing Gardens and Restorative Outdoor Spaces*. New York: John Wiley & Sons

Cooper, D. E. (2006) *A Philosophy of Gardens*. Oxford: Oxford University Press

- Cooper, D.E. (2003) 'In Praise of Gardens', *British Journal of Aesthetics* 45 (2), pp. 101-113
- Cooper, D.E. (2012) *Convergence with Nature*. Padstow, Cornwall: T. J. International Ltd.
- Cooper, D.E., & James, S. (2005) *Buddhism, Virtue & Environment*. Aldershot: Ashgate
- Cooper, G. (2006) *Art and Nature: Healing, Design for Health*. Hertford: BookART
- Cooper, G., & Taylor, G. (2000) *Gardens for the Future*. New York: The Monacelli Press
- Coulthard, T. (2008) 'The Return of the Roof Garden: Great Ormond Street Hospital', *Landscape* 11.08, pp. 8-14
- Coverley, M. (2010) *Psychogeography*. Harpenden: Pocket Essentials
- Cowper, W. ([1785] 2007) 'The Garden', in *The Task: A Poem in Six Books*. Slough: Dodo Press
- Cresswell, J.W. (2007) *Qualitative Inquiry and Research Design*. London: Sage
- Cresswell, T., & Merriman, P. (2012) *Geographies of Mobilities: Practices, Spaces & Subjects*. Farnham, Surrey: Ashgate
- Cross, N. (1980) 'The Recent History of Post-Industrial Design Methods', in Hamilton, N. (ed.) *Design & Industry: The Effects of Industrialisation and Technical Change on Design*. London: The Design Council
- Crouch, D. (2003), 'Spacing, Performing and becoming; tangles in the mundane' *Environment and Planning A*. 35 (11) pp. 1945-1960
- Crouch, D. (2010a) 'Flirting with Space', unpublished conference paper presented at 'Creativity and Space' conference. University of Exeter
- Crouch, D. (2010b) 'Flirting with Space: Thinking Landscape Relationally', *Cultural Geographies* 17 (1), pp. 5-18
- Crowley, J.E. (2001) *The Invention of Comfort*. Baltimore: John Hopkins University Press
- Currie, C. (2005) *Garden Archaeology: A Handbook*. York: Council of British Archaeology
- Curtis, S.E., Gesler, W., Fabian, K., Francis, S., & Priebe, S. (2007) 'Therapeutic landscapes in hospital design: A qualitative assessment by staff and service users of the design of a new mental health inpatient unit', *Environment and Planning C* 25 pp. 519-610
- Daniels, S. (2004) 'Suburban Prospects', in Alfrey, N., Daniels, S., & Postle, M. *Art of the Garden* [Exhibition catalogue]. London: Tate Gallery, pp. 22-34

- Dankl, K. (2013) 'Style, Strategy and Temporality: How to Write an Inclusive Design Brief', *The Design Journal* 16 (2) pp. 159-174
- Dannenberg, A., Frumkin, H., & Jackson, R. (2011) *Making Healthy Places, Designing and Building for Health, Well-being and Sustainability*. London: Island Press
- Darling, E. (2007) *Re-forming Britain, Narratives of Modernity before Reconstruction*. Oxford: Routledge
- Davidoff, L., L'Esperance, J., & Newby, H. (1976) 'Landscape with Figures: Home and Community in English Society', in Mitchell, J., & Oakley, A. *The Rights and Wrongs of Women*. Middlesex: Penguin Books, pp. 139-176
- Davidson, J., & Milligan, C. (2004) 'Embodying Emotion Sensing Space: Introducing Emotional Geographies'. *Social and Cultural Geography* 5 (4), pp. 523-532
- Davies, B. (2010) 'Developing a Natural Health Service' *Green Places* 63, pp. 24-26
- Day, C. (2003) *Consensus Design*. New York: Elsevier Press
- Day, K., Carreon, D., & Stump, C. (2000) 'The Therapeutic Design of Environments for People with Dementia: A Review of the Empirical Research', *Gerontologist* 40 (4), pp. 397-416
- De Bottom, A. (2006) *The Architecture of Happiness. The Secret Art of Furnishing Your Life*. London: Penguin Books
- De Certeau, M. (1980) 'Walking in the City', in Doring, S. (ed.) (1993) *The Cultural Studies Reader*. Oxon: Routledge, pp. 156-163
- De Certeau, M. (1984) *The Practice of Everyday Life*. Los Angeles: University of California Press
- De Verteuil, A. (2013) 'In conversation with Charles Jencks', *Garden Design Journal*, February, pp.14-17
- Dementia Services Development Centre (DSDC) (2010) *10 Helpful Hints for Dementia Design at Home*. Stirling: University of Stirling
- Department of Education (DOE) (2013) *The National Curriculum in England: Framework Document* February. Available at: <http://media.education.gov.uk/assets/files/pdf/n/national%20curriculum%20consultation%20-%20framework%20document.pdf> [accessed 20 July 2013]
- Department of Health (DOH) (2007a) *Cancer Reform Strategy*. Available at: www.dh.gov.uk [accessed 16 February 2011]
- Department of Health (DOH) (2007b) *Report of Arts and Health Working Group*. Available at: http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_073589.pdf [accessed 16 February 2011]

Department of Health (DOH) (2007c) *A Prospectus for Arts and Health*. Available at: http://www.artscouncil.org.uk/publication_archive/a-prospectus-for-arts-and-health/ [accessed 16 February 2011]

Department of Health (DOH) (2008a) *Healthy Weight, Healthy Lives: A Cross Government Strategy for England*. Available at: www.dh.gov.uk [accessed 16 February 2011]

Department of Health (DOH) (2008b) *ASPECT A Staff and Patient Environment Calibration Toolkit*. Available at: www.dh.gov.uk [accessed 16 February 2011]

Department of Health (DOH) (2008c) *AEDET Achieving Excellence Design Evaluation Toolkit*. Available at: www.dh.gov.uk [accessed 16 February 2011]

Department of Health (DOH) (2009) 'Living Well with Dementia – National Dementia Strategy'. Available at: www.dh.gov.uk/en/SocialCare/NationalDementiaStrategy/index.htm [accessed 16 February 2011]

Department of Health (DOH) (2010) 'Quality outcomes for people with dementia: building on the work of the National Dementia Strategy'. Available at: www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/@ps/documents/digitalasset/dh_119828.pdf [accessed 16 February 2011]

Department of Health (DOH) (2011) *Improving Outcomes: A Strategy for Cancer*. Available at: www.dh.gov.uk [accessed 20 July 2013]

Department of Health (DOH) and Arts Council of England (2007) *A Prospectus for Arts and Health*. Available at: http://www.artscouncil.org.uk/publication_archive/a-prospectus-for-arts-and-health/ [accessed 16 February 2011]

Depledge, M., Stone, R., Bird, W. (2011) 'Can Natural and Virtual Environments be Use to Promote Human Health & Wellbeing?', *Environmental Science & Technology*, June

Design Council (2014) <http://www.designcouncil.org.uk> [Accessed 12 June 2014]

Diaz Moore, K. (2007) 'Restorative Dementia Gardens: Exploring How Design May Ameliorate Attention Fatigue', *Journal of Housing for the Elderly* 21 (1) pp. 73-88

Dolan, P., & White, M.P. (2007) 'How can Measures of Subjective Well-Being Be Used to Inform Public Policy?', *Perspectives on Psychological Science* 2, pp. 71-85

Domosh, M. (1998) 'Geography and Gender: Home, Again?', *Progress in Human Geography* 22, pp. 276-282

Donald, C. (2008), 'The Appliance of Science', *The Sunday Times*, 17 August

Dovey, K. (1985) 'Home and Homelessness', in Altman, I., & Werner, C. M. (eds.) *Home Environments*. New York and London: Plenum Press, pp. 33-64

Dovey, K. (1999) *Framing Places: Mediating Power in Built Form*. London and New York: Routledge

- Downey, A. (2009) 'An Ethics of Engagement, Collaborative Art Practices and the Return of the Ethnographer', *Third Text* 23 (5), pp. 593-603
- Eagleman, D. (2011) *Incognito: The Secret Lives of the Brain*. Edinburgh: Canonsgate Books Ltd.
- Eckerling, M. (1996) 'Guidelines for Designing Healing Gardens', *Journal of Therapeutic Horticulture* 8, pp. 21-25.
- Edelstein, E.A. (2005) *Mapping Memory of Space and Place*, National Academy of Sciences. Report on workshop on Neuroscience and Healthcare Architecture. Available to download from www.anfarch.org [accessed 6 February 2013]
- Edelstein E. A. (2008) Building Health. *Health Environments Research & Design Journal* 1 (2), pp. 54-59
- Edelstein, E. A. (2008) 'Searching for Evidence', *Health Environments Research & Design Journal* 1 (4), pp. 40-60.
- Edelstein, E.A. (2009) 'Influence of Lighting on Health', *InformedDesign* 7 (02). Available at: www.informedesign.umn.edu [accessed 6 February 2013]
- Edvardsson, D., & Street, A. (2007) 'Sense or no-sense: the nurse as embodied ethnographer', *International Journal of Nursing Practice* 14, pp. 24-32
- Ehrenreich, B. (2010a) 'Smile! You've Got Cancer', *The Guardian* 2 January. Available online at <http://www.guardian.co.uk/lifeandstyle/2010/jan/02/cancer-positive-thinking-barbara-ehrenreich> [accessed 10 December 2012]
- Ehrenreich, B. (2010b) *Smile Or Die: How Positive Thinking Fooled America And The World*. London: Granta Books
- Eizenberg, E. 'The Production of Contesting Space: Community Gardens and the Cultivation of Social change'. Unpublished conference paper, Department of Environmental Psychology, City University of New York. Available at: www.openspace.eca.ac.uk/conference/proceedings/PDF/Eizenberg.pdf [accessed 10 March 2010]
- Eliade, M. (1954) *The Myth of the Eternal Return or Cosmos and History*. Princeton: Princeton University Press, 1971
- Eliade, M. (1957) *The Sacred and the Profane*. London: Harcourt Books
- Elliott, J. (2005) 'The Medical World of Medieval Monks', *BBC News* [online], 6 August. Available at: <http://news.bbc.co.uk/go/pr/fr/-/1/hi/health/3745498.stm>
- Elliott, L. (2011) 'Liz Elliott meets William Pye', *Home & Garden* 1 March 2011, pp. 66-72
- English, J., Wilson, K., & Keller-Olaman (2008) 'Health, Healing and Recovery: Therapeutic Landscapes and the Everyday Lives of Breast Cancer Survivors', *Social Science & Medicine* 67 (1), pp. 68-78

Enhancing the Healing Environment (2006) *Evaluation of Enhancing the Healing Environment Programme*, York Health Economics Consortium for the Department of Health. Available at: www.enhancingthehealingenvironment.org.uk [accessed 20 March 2013]

Ethnomedica (2013) 'Researching the Herbal Traditions of Britain'. Available at: www.kew.org/ethnomedica/ [accessed 30 September 2013]

EuroQoL Group (1990) *EQ-5D Health Questionnaire*. Available at: www.euroqol.org/home.html [accessed 10 January 2010]

Evans, D. (2004) *Placebo: Mind Over Matter in Modern Medicine*. London: HarperCollins

Evelyn, J. ([1661] 1976) *Fumifugium or the Inconvenience of the AER and SMOAK of London dissipated together with some Remedies*. Exeter: Rota at the University of Exeter

Facer, C. (2012) e-mail correspondence with author, 1 July 2012

Faculty of Public Health (2010) *Great Outdoors: how our Natural Health Service uses green space to improve wellbeing*. Available at: http://www.fph.org.uk/uploads/r_great_outdoors.pdf [accessed 6 February 2013]

Fallan, K. (2010) *Design History: Understanding Theory and Method*. Oxford: Berg

Farrer, N. (2011) 'Recognising the Value of Landscape', *Horticulture Weekly* 25 March, p. 19

Fearnley-Whittingstall, J. (2002) *The Garden. An English Love Affair*. London: Seven Dials

Ferris, J., Morris, M., Norman, C., & Sempik, J (eds.) (2001) *People, Land Sustainability: A Global View of Community Gardening*. Nottingham: PLS

Flick, U. (2002) *An Introduction to Qualitative Research*. London: Sage

Forty, A., & Kuchler, S. (1999) *The Art of Forgetting*. Oxford: Berg

Fox, W. (ed.) (2000) *Ethics and the Built Environment*. London: Routledge

Francis, M., & Hester, R.J. (eds.) (1999) *The Meaning of Gardens*. Cambridge Massachusetts: MIT Press

Francis, M., Lindsey, P., & Stone Rice, J. (1994) *The Healing Dimension of People-Plant Relations, Proceedings of a Research Symposium*. University of California: Centre for Design Research

Freeman, J. (2004) *The Making of the Modern Kitchen*. London: Berg

Froggett, L., & Little, R. (2008) *Precarious Flight: An Evaluation of the Arts Programme Running in UCLH*, Lancaster: University of Central Lancaster. Available at: <http://www.uclan.ac.uk/facs/health/lshpm/pru/index.htm> [accessed 6 February 2013]

- Frost, P. (2010) *Natural Spaces and Health: Mapping Accessible Natural Greenspace in Wales*. London: The Economics of Ecosystem & Biodiversity (TEEB). Available at: www.TEEBweb.org [accessed 6 February 2013]
- Frumkin, H. (2001) 'Beyond Toxicity, Human Health and the Natural Environment', *American Journal of Preventive Medicine* 20 (3), pp. 234-240
- Fry, T., & Perolini, P. (2012) 'Home eco-nomy: dwelling, destruction & design'. *Design Philosophy Papers* 1
- Fry, T. (1994) *Remakings: Ecology, Design, Philosophy*. Sydney, Australia: Envirobook
- Fry, T. (2009) *Design Futuring: Sustainability, Ethics and New Practice*. Oxford: Berg
- Fry, T. (2011) *Design as Politics*. Oxford: Berg
- Fry, T. (2012) *Becoming Human By Design*. Oxford: Berg
- Fuad-Luke, A. (2009) *Design Activism, beautiful strangeness for a sustainable world*. London: Earthscan
- Gage, J. (1993) *Colour and Culture. Practice and Meaning from Antiquity to Abstraction* London: Thames & Hudson
- Gage, J. (1999) *Colour and Meaning. Art Science & Symbolism*. London: Thames & Hudson
- Galbraith, A. (2004) 'Healthy Growth', *Scotland on Sunday* September
- Gallis, C. (2007) *Green Care in Agricultural: Health Effects, Economics and Policies*. Vienna: University Studio Press
- Galloway, S. (2009) 'Theory-based Evaluation and the Social Impact of the Arts', *Cultural Trends* 18 (2) pp. 125-148
- Gathorne-Hardy, F. (2013b) Maggie's Cancer Caring Centres (2011). Available at: www.maggiescentres.org [accessed 12 December 2013] statements on Maggie's Oxford Homepage, Maggie's (2013)
- Gerlach-Spriggs, N., & Healy, V. (2010) 'The Therapeutic Garden: A Definition', *Healthcare & Therapeutic Design Newsletter*, Spring 2010. Available at <http://www.asla.org/ppn/Article.aspx?id=25294> [accessed 14 October 2010]
- Gerlach-Spriggs, N., Kaufman, R.E., & Bass Warner, S. (1998) *Restorative Gardens, The Healing Landscape*. New Haven; London: Yale University Press
- Gesler, W. M. (1992) 'Therapeutic Landscapes: Medical Issues in Light of the New Cultural Geography', *Social Science & Medicine* 34, pp. 734-746
- Gesler, W. M. (1996) 'Lourdes: Healing in a Place of Pilgrimage', *Health and Place* 2, pp. 95-105
- Gesler, W. M. & Kearns, R. A. (2002) *Culture Place and Health*. Oxon: Routledge,

- Gesler, W.M., (2003) *Healing Places*. Oxford: Rowman & Littlefield
- Geographies Of Health And Wellbeing, University Of Durham (GOHwell) (2013) www.dur.ac.uk/geogrphahy/gohwell [accessed 13 February 2013]
- Gibson, J. (1966) *The Senses Considered as Perceptual Systems*. Boston, MA: Houghton Mifflin
- Gibson, J. (1977) 'The Theory of Affordances', in Shaw, R., & Bransford, J. (eds.) *Perceiving, Acting and Knowing*. Mahwah: Lawrence Erlbaum Associates
- Gibson, J. (1979) *The Ecological Approach to Visual Perception*. Boston, MA: Houghton Mifflin
- Giedion, S. (1941, 2008 edition) *Space, Time and Architecture*. Cambridge, Massachusetts: Harvard University Press
- Gilliard, J., & Marshall. M. (2012), *Transforming the Quality of Life for People with Dementia through Contact with the Natural World*. London: Jessica Kingsley Publishers
- Gillies, A. (with images by Maja Daniels) (2010) 'Inside the Dementia Ward', *The Guardian* Saturday 11 December
- Goodrich, J., & Cornwell, J. (2008) *Seeing the Person in the Patient* (Point of Care Review Paper). London: The Kings Fund.
- Graff, V. (2011) 'Carrots in the car park. Radishes on the roundabout. The deliciously eccentric story of the town growing ALL its own veg', *Mail Online* 10 December 2011. Available at: www.dailymail.co.uk/femail/article-2072383/Eccentric-town-Todmorden-growing-ALL-veg.html
- Grahn, P., & Stigsdotter, U. (2003) 'Landscape Planning and Stress', *Urban Forestry and Green Planning* 2, pp.1-18
- Grahn, P., Tenngart Ivarsson, C., Stigsdotter, U., & Bengtsson, I. (2010) 'Using Affordances as a Health-promoting Tool in a Therapeutic Garden' in Ward Thomson, C., Aspinall, P., & Bell, S. (eds.) *Innovative Approaches to Researching Landscape and Health*. Abingdon Oxon: Routledge, pp. 120-161
- Gray, C. (2006) 'Managing the Unmanageable: The Politics of Cultural Planning', *Public Policy and Administration* 21 (2) pp.101-113
- Great Ormond Street Hospital opens staff garden* (2008) (press release) 28 August. London: Great Ormond Street Hospital
- Greenhalgh, T. (2001) *How to read a paper: the basics of evidence based medicine*. London: BMJ Books
- Grieve, M. ([1931] 1971) *A Modern Herbal*. New York: Dover Publication Inc.
- Griffin, A., & Hill, M. (n.d.) *St Bartholomew's Hospital, Nine Centuries of Healthcare*. London: A.G. Bishop & Sons Ltd
- Grigson, G. ([1955]1996) *An Englishman's Flora*. Oxford: Helicon Reference Classics

- Groenewegen, P., van den Berg, A., de Vries, S., & Verheij, R. (2006) 'Vitamin G: effects of green space on health, well-being, and social safety', *BMC Public Health* 6 (149). Available at: www.ncbi.nlm.nih.gov/pmc/articles/PMC1513565/ [accessed 12 March 2011]
- Guenther, R., & Vittori, G. (2005) *Sustainable Healthcare Architecture*. Hoboken: John Wiley
- Gurney, D. F. (1913) *Poems*. London: Country Life
- Hallam, E., & Hockey, J. (2001) *Death, Memory & Material Culture*. Oxford: Berg
- Hampshire County Council (2000) *Queen Eleanor's Garden, The Castle Winchester*. Hampshire: Hampshire Printing Services
- Hand, M., & Shove, E. (2004) 'Orchestrating Concepts: Kitchen Dynamics and Regime Change', *Good Housekeeping and Ideal Home, 1922-2002*, *Home Cultures* 1 pp. 235-256
- Harper, D. (2002) 'Talking About Pictures: A Case for Photo Elicitation', *Visual Studies* 17 (1) pp. 13-26
- Harris, M. (1996) *The Healing Garden*. Canada: HarperCollins
- Harrison, R. P. (2008) *Gardens, An Essay on the Human Condition*. Chicago: UCP
- Hartig, T., & Cooper-Marcus, C. (2006) 'Healing Gardens: Places for nature in healthcare', *The Lancet*, 368, pp. 36-37
- Hartig, T. (2007) 'Towards Understanding the Restorative Environment as a Health Resource', unpublished conference paper presented at 'Open Space: People Space' conference, Edinburgh College of Art. Available at: www.openspace.eca.ac.uk/conference/proceedings/PDF/Hartig.pdf [accessed 16 March 2010]
- Hartig, T. (2008) 'Green space, psychological restoration and health inequality', *The Lancet* 372, pp. 1614-5
- Hartig, T., & Staats, H. (2004) 'Alone or with a friend: A social context for psychological restoration and environmental preferences', *Journal of Environmental Psychology* 24, pp. 199-211
- Hartig, T., Evans, G.W., Jamner, L.D., Davis, D.S., & Garling, T. (2003) 'Tracking restoration in natural and urban field settings', *Journal of Environmental Psychology* 23, pp. 109-123
- Hartig, T., Korpela, K., Evans, G., & Garling, T. (1997) 'A Measure of Restorative Quality in Environments', *Scandinavian Housing & Planning Research* 14, pp. 175-194
- Hartig, T., Mang, M., & Evans, G. W. (1991) 'Restorative effects of natural environment experiences', *Environment and Behaviour* 23 (1), pp.3-26.

- Harvey, B., Liddicott, R., de Freitas, A., Farmer, P., Waller, D., Bucknole, I., & Purdy, R. (2012) *Dementia Uncovered, A series of films giving a voice to people living with dementia* [Film]. St Austell: Sensory Trust. Available at: http://www.youtube.com/playlist?list=PLz6pclimYNUB2QbDaumD_ev1RQuW1Exr6 [accessed 14 March 2013]
- Harvey, J. (1989) *Medieval Gardens*. London: Batsford
- 'Healing Gardens for Cancer Charity' (2011) *Garden Design Journal*, 1 December, p. 12
- Heath, Y., & Gifford, R. (2004) 'Post-Occupancy Evaluation of Therapeutic Gardens in a Multi-Level Care Facility for the Aged', *American Journal of Alzheimer Diseases and other Dementias* 19 (4), pp. 239-242
- Heathcote, E. (2012) *The Meaning of Home*. London: Frances Lincoln Limited
- Heerwagen, J. (2009) 'Biophilia, Health and Well-being', in Campbell, L., & Wiesen, A. (eds.) *Restorative Commons: Creating Health and Well-being through Urban Landscapes*. Delaware: USDA Forest Service, pp. 38-58
- Heerwagen, J.H., & Orians, G.H. (1993) 'Humans, habitats and aesthetics', in Kellert, S. R., & Wilson, E.O. (eds.) *The Biophilia Hypothesis*. Washington DC: Island Press
- Heft, H. (2010), 'Affordance and the perception of landscape: an inquiry into environmental perception and aesthetics', in Ward Thomson, C., Aspinall, P., & Bell, S. (eds.) *Innovative Approaches to Researching Landscape and Health*. Abingdon: Routledge, pp. 9-32
- Heidegger, M. ([1964] 1993) 'Building dwelling thinking', in Krell, D. (ed.) *Basic Writings*. New York: HarperCollins
- Heliker, D., Chadwick, A., & O'Connell, T. (2000) 'The meaning of gardening and the effects of perceived well being of a garden project on diverse populations of elders', *Activities, Adaption and Aging* 25 (3), pp. 35-57
- Herzog, T., Chen, H.C., & Primeau, J.S. (2002) 'Perceptions of the restorative potential of natural and other settings', *Journal of Environmental Psychology* 22, pp. 295-306
- Hickey, W. (2010) 'Health and Healthy Communities: A Research Approach to a New Health and Wellness Model', *InformDesign Case Study*. Available at: www.informdesign.unm.edu [accessed 26 January 2010]
- Hickman, C. (2006a) (2 vols.) *Vis Medicatrix Naturae: The Design and Use of Landscapes in England for Therapeutic Purposes Since 1800*. Unpublished Ph.D thesis, University of Bristol
- Hickman, C. (2006b) 'Therapeutic Gardens: An Overview of the History of Hospital Gardens in England from 1800', conference paper presented at the Forum UNESCO University and Heritage 10th International Seminar, 'Cultural Landscapes in the 21st Century', 11-6 April 2005: Newcastle-upon Tyne. Available at: <http://conferences.ncl.ac.uk/unescolandscapes/files/HICKMANClare.pdf> [accessed 12 December 2009]

- Hickman, C. (2008) 'Cheerful Prospects and Tranquil Restoration: The Visual Experience of Landscape as part of the Therapeutic Regime of the British Asylum, 1800-1860', *History of Psychiatry* 20 (4), pp.425-451
- Hickman, C. (2013) *Therapeutic Landscapes. A History of English Hospital Gardens Since 1800*. Manchester: Manchester University Press
- Hicks, D. (1999), *My Kind of Garden*. Suffolk: Garden Art Press
- Higgins, A. (2012) 'Northumberlandia, the lady of the North. A supine land goddess makes her debut', *Washington Post*, 22 November. Available at: www.charlesjencks.com/#!media-articles [accessed 10 January 2013]
- Highmore, B. (ed.) (2002a) *The Everyday Life Reader*. London. Routledge
- Highmore, B. (2002b) *Everyday Life and Cultural Theory*. London: Routledge
- Highmore, B. (ed.) (2009) *The Design Culture Reader*. Oxford: Routledge
- Hill, J. (1998) *Occupying Architecture: Between the Architecture and the User*. London: Routledge
- Hill, T. ([1652] 1988) *The Gardener's Labyrinth*. Oxford: Oxford University Press
- Hiller, B., & Hanson, J. (1984) *The Social Logic of Space*. Cambridge: Cambridge University Press
- Hillier, B. (1996) *Space is the Machine*. Cambridge: Cambridge University Press, available as an e-book to download from Space Syntax (2009) www.spacesyntax.com [accessed 27 January 2010]
- Hirschfeld, C. (1777-1785) *Theorie der Gartenkunst, 5 Volumes*. Hildesheim: Georg Olms, pp. 115-116
- Hitchings, R. (2003) 'People, plants and performance: on actor network theory and the material pleasures of the private garden', *Social & Cultural Geography* 4, (1) pp. 99-113
- Hobhouse, P. (1992) *Plants in Garden History*. London: Pavilion Books
- Hodgson Burnett, F. ([1911] new edition 1993) *The Secret Garden*. Ware, Hertfordshire: Wordsworth Editions Ltd.
- Holl, S., Pallasmaa, J., & Perez-Gomez, A. (1994) *Questions of Perception, Phenomenology of Architecture*. Tokyo: A & U
- Honeyman, M. K. (1992) 'Vegetation and stress: a comparison study of varying amounts of vegetation in countryside and urban scenes', in Relf, D. (ed.) *The Role of Horticulture in Human Well-Being and Social Development: A National Symposium*. Portland, Oregon: Timber Press, pp. 143 - 145.
- Hosking, S., & Haggard, L. (1999) *Healing the Hospital Environment*. London: E. & F.N. Spon

'Garden Parties for Maggie's' (2012). *House and Garden Online*. Available at: <http://www.houseandgarden.co.uk/garden-parties-for-maggies> [accessed: 30 June, 2012]

Howard, J. (1789) *An Account of the Principle Lazarettos in Europe... Together with Further Observations on Some Foreign Prisons and Hospitals etc.* Warrington: William Eye Printer

Hunt, J. D. (2000) *Greater Perfections, The Practice of Garden Theory*. London: Thames & Hudson

Hunt, J. D., & Willis, P. (eds.) (1975) *The Genius of the Place, The English Landscape Garden 1620-1820*. London: HarperCollins

Hunt, Y. (2010) 'Green Gyms, Not as we know it', *Green Places*. 63 pp. 21-22

Ingold, T. (2000) *The Perception of the Environment*. London: Routledge

Isenstadt, S. (2006) *The Modern American House*. New York: Cambridge University Press

James, W. (1892) *Psychology: The Brief Course*. New York: Holt

Jay, M. (1993) *Downcast Eyes: The Denigration of Vision in 20th Century French Thought*. Berkeley: University California Press

Jencks, C. (1983) *Kings of Infinite Space. Frank Lloyd Wright and Michael Graves*. London: Academy Editions

Jencks, C. (1996) *What is Post-Modernism?* London: Academy Editions

Jencks, C. (2003) *The Garden of Cosmic Speculation*. London: Frances Lincoln

Jencks, C. (2002) *The New Paradigm in Architecture. The Language of Post-Modernism*. London: Yale University Press

Jencks, C. (2006) 'Maggie Centres and the Architectural Placebo', in Wagenaar, Cor (ed.), *The Architecture of Hospitals*. Rotterdam: Nai Publishers

Jencks, C. (2007) '13 Propositions of Post Modern Architecture', in Jencks, C., & Kropf, K. (eds.) *Theories and Manifestoes of Contemporary Architecture*. Chichester: Wiley

Jencks, C. (2010) 'Presentation' at Maggie's', 'Architecture & Health: A Symposium'. Unpublished presentation at Maggie's London London: Maggie's Cancer Caring Centres. Available at: <http://www.youtube.com/watch?v=SyV04vnTVO0&list=PLF6A64149B7DE9C86&index=3> [accessed 12 November 2012]

Jencks, C. (2011) *The Universe in the Landscape. Landforms by Charles Jencks*. London: Frances Lincoln

- Jencks, C. (2012a) *SGD John Brookes Award – Winner Charles Jencks* [Documentary] Available at: www.sgdawards.com/#/john-brookes-award/4570928737 [accessed 12 November 2012]
- Jencks, C. (2012b) *Charles Jencks, Desert Island Discs* [radio broadcast]. BBC Radio 4, first broadcast 1 July 2012
- Jencks, C., & Heathcote, E. (2010) *The Architecture of Hope*. London: Frances Lincoln
- Jencks, C., & Jencks, L. (2013) 'A Long Ecology', *Resurgence* September/ October, pp.34-37
- Jodidio, P. (2006) *Architecture: Nature*. London: Prestel
- Jones, C.A. (ed.) (2006) *Sensorium: Embodied Experience, Technology and Contemporary Art*. Cambridge, USA: MIT Press
- Jones, S. (1992). 'Was there a Hawthorne effect?', *American Journal of Sociology* 98 (3) pp. 451–468
- Julier, G. (2013) 'From Design Culture to Design Activism', *Design & Culture* 5 (2), pp. 215-236
- Kamp, D. (2009) 'Creating Restorative Settings: Inclusive Design Considerations', in Campbell, L., & Wiesen, A. (eds.) *Restorative Commons: Creating Health and Well-being through Urban Landscapes*. Delaware: USDA Forest Service, pp. 110-122
- Kamp, D. (2013) e-mail to author, 6 June 2013
- Kaplan, R. (1992a) 'The psychological benefits of nearby nature', in Relf, D. (ed.) *The Role of Horticulture in Human Well-Being and Social Development: A National Symposium*. Portland, Oregon: Timber Press, pp. 125 - 133.
- Kaplan, R. (1993) 'The role of nature in the context of the workplace', *Landscape and Urban Planning* 26, pp. 193-210.
- Kaplan, R. (2001) 'The nature of the view from home: psychological benefits', *Environment and Behaviour* 33, pp. 307-542
- Kaplan, R., & Kaplan, S. (1987) 'The garden as restorative experience: a research odyssey', in Francis, M., & Hester, R. T. (eds.) *The Meanings of the Garden: Conference Proceedings*. Davis, Center for Design Research, University of California.
- Kaplan, R., & Kaplan, S. (1989) *The Experience of Nature: A Psychological Perspective*. Cambridge: Cambridge University Press.
- Kaplan, R., & Kaplan, S. (1999) 'Restorative Experience: The Healing Power of Nearby Nature', in Francis, M., & Hester, R.J (eds.) *The Meaning of Gardens* Cambridge Massachusetts: MIT Press, pp. 238-243
- Kaplan, R., Bush, J.W., & Berry, C.C. (1976) 'Health Status: Types of Validity and the Index of Well-being', *Health Services Research* 11 (4) pp.478-507
- Kaplan, R., Kaplan, S., & Ryan, R. (2001) *With People in Mind: Design and Management of Everyday Nature*. Washington DC: Island Press

- Kaplan, S. (1983) 'A model of person – environment compatibility', *Environment and Behaviour* 15, pp. 311-332.
- Kaplan, S. (1992) 'The restorative environment: nature and human experience', in Relf, D., (ed.) *The Role of Horticulture in Human Well-Being and Social Development: A National Symposium*. Portland, Oregon: Timber Press, pp. 137-138
- Kaplan, S. (1995) 'The Restorative benefits of Nature: Towards an Integrative Framework'. *Journal of Environmental Psychology*. 115, pp. 169-182
- Katcher, A., Friedmann, E., Beck, A., & Lynch, J. (1983) 'Looking, Talking and Blood Pressure: The physiological consequences of interaction with the living environment', in Katcher, A., & Beck, A. (eds.) *New Perspectives on Our Lives with Companion Animals*. Pennsylvania: University of Pennsylvania Press, pp. 351-359
- Katcher, A., Sega, H., & Beck, A. (1984) 'Comparison of Contemplation and Hypnosis for the Reduction of Anxiety and Discomfort During Dental Surgery', *American Journal of Clinical Hypnosis* 27, pp. 14-21
- Kellert, S. R., & Wilson, E.O. (1993) *The Biophilia Hypothesis*. Washington DC: Island Press
- Kellert, S. R., Heewagen, J., & Mador, M. (eds.) (2008) *Biophilic Design: Theory, Science and Practice of Bringing Buildings to Life*. New York: John Wiley
- Keswick, M. (1995) *A View from the Frontline*. London: Maggie's Cancer Caring Centres
- Keswick, M. (2003) *The Chinese Garden: History, Art and Architecture*. Harvard University Press
- Khan, N.F, Harrison, S., Rose, P.W., Ward, A., & Evans, J. (2012) 'Interpretation and acceptance of the term 'cancer survivor': A United Kingdom-based qualitative study', *European Journal of Cancer Care* 21 (2), pp. 177-83
- Kienast,D. (1998) *Kienast-Gardens*. Berlin: Birkhäuser
- Kings College (2013) 'The Centre For The Humanities And Health, 'A narrative future for healthcare, Conference'. Available at: www.kcl.ac.uk/innovation/groups/chh/Narrative-Medicine-Conference-/About-the-Narrative-Medicine-conference.aspx [accessed 30 September 2013]
- The King's Fund (2003) *Evaluation of the King's Fund's Enhancing the Healing Environment Programme, Improving the Patient Experience*. Norwich: The Stationary Office
- Kingsbury, N., & Richardson, T. (2000) *Vista, The Culture and Politics of Gardens*. London: Frances Lincoln
- Kirklín, D., & Richardson, R. (eds.) (2003), *The Healing Environment: Without and Within*. London: Royal College of Physicians
- Kleinman A., Eisenberg L., & Good, B. (1978) 'Culture, illness, and care: clinical lessons from anthropological and cross-cultural research', *Annals of Internal Medicine* 88, pp. 251–88.

- Koren, L. (2000) *Gardens of Gravel and Sand*. Berkeley, California: Stone Bridge Press
- Korpela, K., & Hartig, T. (1996) 'Restorative qualities of favourite places', *Journal of Environmental Psychology* 16, pp. 221 - 233
- Korpela, K., Hartig, T., Kaiser, F., & Fuhrer, U. (2001) 'Restorative Experience and Self-Regulation in Favourite Places', *Environment and Behaviour* 33 (4), pp. 572-589
- Krinke, R. (ed.) (2005) *Contemporary Landscapes of Contemplation*. Oxfordshire: Routledge
- Kuo, F.E., & Sullivan W.C. (2001) 'Environment and crime in the inner city: does vegetation reduce crime?', *Environment and Behaviour* 33: 343-367
- Lafargue, L. (2004), 'Nature is to Nurture: A Post Occupancy Evaluation of the St Michael Health Care Center in Texarcana, TX'. Unpublished MLA dissertation, Louisiana State University and Agricultural Mechanical College
- Lambert, D., Goodchild, P., & Roberts, J. (1995) *Researching a Garden's History: A Guide to Documentary and Published Sources*. London: Landscape Design Trust in association with the Centre for the Conservation of Historic Parks and Gardens
- Landscape Institute (2013b) (position statement), *Public Health and the Landscape*. Available at: www.landscapeinstitute.org [accessed 15 December 2013]
- Lasch. C. (1977) *A Haven in a Heartless World*. New York: Basic Books
- Latane, C. (2009) 'Healing Gardens, Healing with Nature', *Landscape Architecture* 11, pp. 28-35
- Latour, B. (2005) *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford: Oxford University Press
- Latour, B., & Yaneva, A. (2008) 'Give me a Gun and I will Make All Buildings Move: An ANT's View of Architecture', in Geiser, R. (ed.) *Explorations in Architecture: Teaching, Design, Research*. Basel: Birkhauser, pp. 80-89
- Lau, S.S.Y., & Yang, F. (2009) 'Introducing Healing Gardens into a Compact University Campus: Design Natural Space to Create Healthy and Sustainable Campuses', *Landscape Research* 34 (1), pp. 55-83
- Laumann, K., Gärling, T., & Stormark, K. M. (2001) 'Rating scale measures of restorative components of environments', *Journal of Environmental Psychology* 21 (1), pp. 31-44
- Laws, J. (2009) 'Reworking Therapeutic Landscapes: The Spatiality of an 'alternative' Self-help Group', *Social Science & Medicine* 69, pp.1827-1833
- Lechtzin, N., Busse, A., Smith, M, Grossman, S., Nesbit, A., & Diette, G (2010) 'A randomized trial of nature scenery and sounds versus urban scenery and sounds to reduce pain in adults undergoing bone marrow aspirate and biopsy' *Journal of Alternative and Complementary Medicine* 16 (9), pp. 965-972

- Lee, L. (2012) (version 2) *Maggie's Principles and Practices*. London: Maggie's Cancer Caring Centres
- Lee, L. (2013) email to author, 6 January
- Lennox-Boyd, A. (2002) *Designing Gardens*. London: Frances Lincoln
- Levitt, S., & List, J. (2011) 'Was There Really a Hawthorne Effect at the Hawthorne Plant? An Analysis of the Original Illumination Experiments', *American Economic Journal: Applied Economics* 3 (1) pp. 224–238.
- Lewis, C.A. (1995), 'Human Health and Well-being: The Psychological, Physiological, and Sociological Effects of Plants on People', in Relf, P.D. & Matsuo, E. (eds.) 'Horticulture in Human Life, Culture and Environment, *Acta Horticulture* 391, pp. 31-39
- Lewis, C.A. (1996) *Green Nature/Human Nature: The Meaning of Plants in our Lives*. Urbana: University of Illinois Press
- Linden, S., & Grut, J. (2002) *Healing Field: Working with Psychotherapy and Nature to Rebuild Shattered Lives*. London: Frances Lincoln (in association with the Medical Foundation for the Care of Victims of Torture)
- Ling, R. (2008) 'Design for Life: The First Maggie's Cancer Care Centre in England has Opened in London', *FX The Business of Design* August, pp. 78-81
- Longman Dictionary of English Language* (1984), Harlow, Essex: Longman Group Limited
- Lorimer, H. (2006) 'Herding Memories of Humans and Animals', *Environment and Planning D: Society and Space* 24, pp. 497-518
- Louv, R. (2005) *Last Child in the Woods: Saving our Children from Nature Deficit Disorder*. Chapel Hill, North Carolina, NC: Algonquin Press
- Lynch, K. & Hack, G. (1984) 'The Art of Site Planning' reproduced in Swaffield, S. (2002) *Theory in Landscape Architecture*. Philadelphia: University of Pennsylvania Press, pp. 37-38
- Lynch, K. & Hack, G. (1984) 'Site Design' reproduced in Swaffield, S. (2002) *Theory in Landscape Architecture*. Philadelphia: University of Pennsylvania Press, pp. 57-58
- Mabey, R. (1996) *Flora Britannica*. London: Chatto & Windus/ Sinclair Stevenson
- Mabey, R. (2008) *Nature Cure*. London: Vintage
- Mabey, R. (2012) *Richard Mabey, All in the Mind* [radio broadcast]. BBC Radio 4, first broadcast 26 June 2012
- MacDonald, A. (2008) *The Garden Placebo: Ideas About Science and Health in the Garden of Cosmic Speculation and the Maggie's Centre Gardens*. Unpublished MA dissertation, University of Bristol
- Macmillan Cancer Support (1987) *Macmillan Green: A New Planning Concept for the Care of Cancer Patients*. London: Macmillan Cancer Support

- Macmillan Cancer Support (2009) 'Calming Landscape Research', in *Landscape in Cancer Environments Guidance* (version 1). London: Macmillan Cancer Support
- Macmillan Cancer Support, (2010a) *Macmillan Quality Environment Mark, Self Assessment Tool*. Available at: www.macmillan.org.uk [accessed 10 December 2010]
- Macmillan Cancer Support (2010b) *Landscape in Cancer Environments Guidance* (version 1). London: Macmillan Cancer Support
- Macmillan Cancer Support (2010c) *Art in Cancer Environments* (version 2). London: Macmillan Cancer Support
- Madge, P. (1997) 'Ecological Design: A New Critique [1997]', reprinted in Highmore. B. (ed.) (2009) *The Design Culture Reader*. New York: Routledge
- 'Maggie's Cancer Care Centres' (2011) *Gardens Illustrated* 1 October 2011, p. 91
- Maggie's (2006) *Frequently Asked Questions, Maggie's Joy of Living Campaign*. London: Maggie's Cancer Caring Centres
- Maggie's (2008) *Maggie's London Opening*. London: Maggie's Cancer Caring Centres
- Maggie's (2009a) *Maggie's Annual Review 2008/9*. London: Maggie's Cancer Caring Centres
- Maggie's (2009b) *Maggie's Joy of Living Campaign: Frequently Asked Questions*. London: Maggie's Cancer Caring Centres
- Maggie's (2009c) *Maggie's Identity Guidelines*. London: Maggie's Cancer Caring Centres
- Maggie's (2009d) *Maggie's Nottingham*. London: Maggie's Cancer Caring Centres
- Maggie's (2009e) *Maggie's Cotwolds*. London: Maggie's Cancer Caring Centres
- Maggie's (2010) *Architecture & Health Symposium*. London: Maggie's Cancer Caring Centres
- Maggie's (2011a) *The Maggie's Approach to Cancer 2010/11 Annual Review*. London: Maggie's Cancer Caring Centres
- Maggie's (2011b) *Maggie's Matters Spring/Summer 2011*. London: Maggie's Cancer Caring Centres
- Maggie's (2011c) *Annual Audit Report 2011*. London: Maggie's Cancer Caring Centres
- Maggie's (2012a) *As Much and As Many, 2011/2012 Annual Review*. London: Maggie's Cancer Caring Centres. Available at: www.maggiescentres.org [accessed 12 March 2013]
- Maggie's (2012b) 'Architectural Brief'. London: Maggie's Cancer Caring Centres. Available at: www.maggiescentres.org [accessed 8 December 2013]

- Maggie's (2012c) *Medical Brief*, Maggie's Cancer Caring Centres (2012). Available to download from www.maggiescentres.org [accessed 12 March 2013]
- Maggie's (2012d) *What is Maggie's?*. London: Maggie's Cancer Caring Centres. Available at: www.maggiescentres.org [accessed 12 March 2013]
- Maggie's (2012e) *Maggie's Matters Summer 2012*. London: Maggie's Cancer Caring Centres
- Maggie's (2012f) *Art Advisory Group Remit*. London: Maggie's Cancer Caring Centres
- Maggie's (2012g) *Job Description for Sessional Gardener*. London: Maggie's Cancer Caring Centres
- Magnus, A. ([1260] Berloni edition, 1867) *De Vegetabilibus, Historiae Naturalis Pars XVIII*
- Malkin, J. (2008) *A Visual Reference for Evidence-Based Design*. Concord, CA: The Centre for Health Design
- Manzini, E. (2001) 'Ideas of Wellbeing: Beyond the rebound effect'. Unpublished conference paper at 'Sustainable Services and Systems: Transitions towards Sustainability', The Centre for Sustainable Design, Amsterdam
- Manzini, E. (2003) 'Scenarios of Sustainable Wellbeing', *Design Philosophy Papers* 1. Available at: <http://changedesign.org/Resources/Manzini/Manuscripts/ManziniScenarios.pdf> [accessed 15 August 2013]
- Marijsse, J. (2013) *Healing Relations in a Network: An Architectural Analysis of the Experience of Visitors at Maggie's London*. Unpublished MA dissertation, KU Leuven, Belgium
- Markham, G. (1613) *The English Husbandman*.
- Markham, G. (1614, British Library edition) *The Second Booke of the English Husbandman*.
- Marras, A. (ed.) (1999) *ECO-TEC, Architecture of the In-Between*. New York: Princeton Architectural Press
- Martensen, R. (2009) 'Landscape Designers, Doctors and Making Health Urban Spaces in 19th Century America' in Campbell, in L., & A. Wiesen, A. *Restorative Commons: Creating Health and Well-being through Urban Landscapes*. Delaware: USDA Forest Service, pp. 26-38
- Martin, D. (2013) 'Care by Design: Understanding the Role of Architecture in Healthcare'. Postdoctoral research in progress, in collaboration with Maggie's, University of York, Department of Sociology
- Martin, G., Nancarrow, S., Parker, H., Phelps, K., & Regen, E. (2005) 'Place, policy and practitioners on rehabilitation, independence and the therapeutic landscape in the changing geography of care provision', *Social Science & Medicine* 61, pp. 1893-1904

- Martínez-Soto, J., Gonzales-Santos, L., Pasaye, E.H., & Barrios, F.A. (2012) 'Exploration of Neural Correlates of Restorative Environment Exposure through fMRI'. Paper presented at Academy of Neuroscience for Architecture Universidad Nacional Autónoma de México, Instituto de Neurobiología, Querétaro, México.
- Mason, J., & Davies, K. (2009) 'Coming to our Senses: A Critical Approach to Sensory Methodology', *Realities Working Paper* 11, University of Manchester. Available at: www.manchester.ac.uk/realities [accessed 10 December 2009]
- Mason, T. (2006) *Designed with Care: Design and Neighbourhood Healthcare Buildings*. London: CABE
- Massey, D. (1992) 'A Place Called Home', *New Formations* 17, pp. 3-15
- Massey, D. (2005) *For Space*. London: Sage
- Mayo, E. (1949) *Hawthorne and the Western Electric Company: The Social Problems of an Industrial Civilisation*. London: Routledge.
- Mazuch, R. (2005) 'Creating Healing Environments: Humanistic Architecture and Therapeutic Design', *Journal of Public Mental Health* 4 (4), pp. 48-52
- McDonagh, D., Hekkert, P., van Erp, J., & Gyi, D. (2004) *Design and Emotion*. London: Taylor Francis Press
- McDonnell, J. (2009) 'Collaborative negotiation in design: A study of design conversations between architect and building users', *CoDesign* 5 (1), pp. 35-50
- McDowell, C.F., & Clark-McDowell, T. (1998) *The Sanctuary Garden*. New York: Simon and Schuster
- McEwan, G. (2008) 'A Landscape to Treasure', *Horticulture Week*, 29 May, pp. 19-20
- McLean, T. (1989) *Medieval English Gardens*. London: Viking
- McIlwain, J. (1993) *The Hospital of St Cross and St Cross Church*. Pitkin Guides, Andover: Hampshire
- McShane, K. (2007) 'Anthropocentrism vs Nonanthropocentrism: should we care?', *Environmental Values* 16:2, 169-186
- Meah, A. (2013) 'Reconceptualizing Power and Gendered Subjectivities in Domestic Cooking Spaces', *Progress in Human Geography* 17 September pp. 1-20
- Melton, J. (1620) *Astrologaster*. University of California: William Andrews Clark Memorial Library [1975, digitized 2006]
- Menin, S., & Samuel, F. (2003) *Nature & Space: Aalto and Le Corbusier*. London: Routledge
- Meredith, B., & Storm, E. (2009) 'Slow Design – A Conscious Approach to Creating Wellbeing', *Create-The-Good-Life*. Available at: http://www.create-the-good-life.com/slow_design.html [accessed: 10 July 2013]

- Merleau-Ponty, M. ([1962] 2002) *The Phenomenology of Perception*. London: Routledge
- Miller, D. (2001) *Home Possessions: Material Culture Behind Closed Doors*. Oxford: Berg
- Miller, D. (2008) *The Comfort of Things*, Cambridge: Polity Press
- Miller, D. (ed.) (1997) *Material Cultures: Why Some Things Matter*. London: University College London Press
- Miller, M. (1999) 'Time and Temporality in Japanese Gardens', in Birksted, J. (ed.) *Relating Architecture to Landscape*. London: E. & F.N. Spon, pp. 43-59
- Miller, M. (2010) 'Time and Temporality in the Garden', in O'Brien, D. (ed.) *Gardening, Philosophy for Everyone*. Chichester: John Wiley & Sons Ltd. pp. 179-191
- Mind (2007) *Ecotherapy – the Green Agenda for Mental Health*. Mind. Available at: http://www.mind.org.uk/assets/0000/2139/ecotherapy_executivesummary.pdf [accessed: 10 February 2013]
- Minter, S. (1993) *The Healing Garden*. London: Headline Book Publishing
- Minter, S. (2000) *The Apothecaries' Garden. A History of Chelsea Physic Garden*. Gloucestershire: Sutton Publishing
- Minter, S. (2005) *The Healing Garden. A Practical Guide for Physical and Emotional Well-being*. London: Transworld Publishers/ Eden Project
- Mizuno, K. (2002) *Landscapes for Small Spaces. Japanese Courtyard Gardens*. London: Kodansha
- Mooney, P., & Lenore Nicell, P. (1992) 'The Importance of Exterior Environment for Alzheimer Residents: Effective Care and Risk Management', *Healthcare Management Forum* 5 (2), pp. 23-29
- Moore, E.O. (1981) 'A prison environment's effect on health care service demands', *Journal of Environmental Systems* 11, pp.17-34
- Morris, N. (2003) *Health, Well-Being and Open Space Literature Review*. Edinburgh: OPENspace. Available at: www.openspace.eca.uk [accessed: 17 January 2011]
- Moynihan, E.B. (1979) *Paradise as a Garden*. New York: George Brazillier
- Mukherjee, S. (2011) *The Emperor of All Maladies*. London: HarperCollins Publishers Ltd.
- Munoz, S. & Nimegeer, A. (2012) *Hospital Grounds Reimagined. Final Report & Toolkit*. Centre for Rural Health. University of Highlands & Islands. Available at: <http://www.uhi.ac.uk/en/research-enterprise/res-themes/health/centre-for-rural-health/GreenspaceFinalReportandToolkit.pdf> [Accessed 17 December 2013]

- MYMOP2 Questionnaire (1999) Exeter: Institute of Health Service Research, Peninsular Medical School,. Available at: <http://sites.pcmd.ac.uk/mymop/index.php?c=faqs> [accessed: 27 October 2010]
- Nanda, U. (2008) *Sensthetics*. VDM Verlag Dr Mueller e.K
- Nash, E. P. (1996) *Frank Lloyd Wright. Force of Nature*. New York: Todtri Publications
- National Audit Office (2007) *Improving Services and Support for People with Dementia*. Available at: www.nao.org.uk/publications/0607/support_for_people_with_dement.aspx [accessed: 10 February 2011]
- National Health Service (NHS) (2013) *Five steps to mental wellbeing*. Available at: www.nhs.uk/conditions/stress-anxiety-depression/pages/improve-mental-wellbeing.aspx [accessed: 9 May 2013]
- National Health Service (NHS) Scotland, University of Warwick and University of Edinburgh (2006) *Warwick-Edinburgh Mental Well-being Scale (WEMWBS)*. Available at: www.healthscotland.com/scotlands-health/population/Measuring-positive-mental-health.asp [accessed: 9 May 2013]
- National Institute for Health and Clinical Excellence (NICE) (2006) 'Four commonly used methods to increase physical activity' PH2 Guidance. Available at: <http://guidance.nice.org.uk/PH> [accessed: 9 May 2013]
- National Urban Forestry Unit (NUFU) (2004, printed leaflet) *Hospital Greenspace as an Aid to Healthcare*. Wolverhampton: NUFU
- Natural England (2009) *Our Natural Health Service*. Available at: www.naturalengland.org.uk/publications [accessed: 1 December 2012]
- Naylor, C., Mundle, C., Weeks, L., & Buck, D. (2013), *Volunteering in Health & Care*. London: The Kings Fund
- Neuberger, C. (2007) 'The Correlation Effect of Horticultural Activities – the influence of working with plants on human experiences', in Gallis, C. (ed.) *Green Care in Agriculture, Health effects, Economics and Policies, Proceedings*. Vienna, Austria, pp. 153-166
- New Oxford Dictionary* (2001).Oxford: Oxford University Press
- NHS Estates (2003) *Improving the Patient Experience: Evaluation of the King's Fund's Enhancing the Healing Environment Programme*. Norwich: TSO
- Nichols, H. (2009) 'Learning Outside the Classroom', *Teaching Times* vol. 4, 1, pp. 47-57. Available at: www.teachingtimes.com [accessed: 4 December 2012]
- Nightingale, F. (1863, 3rd edition) *Notes on Hospitals*. London: Green, Longman, Roberts and Green
- Noble, G., & Chatterjee, H. J. (2008) 'Enrichment Programs in Hospitals: Using Loan Boxes in University College Hospital', in Chaterjee, H. J. (ed.) *Touch in Museum: Policy and Practice in Object Handling*. Oxford: Berg, pp. 215-223

- Norfolk, D. (2000) *The Therapeutic Garden*. London: Bantam Books
- Norman, D. A. (2002) 'Emotion and design: Attractive things work better', *Interactions Magazine*, ix (4), pp. 36-42. Available to download http://www.jnd.org/dn.mss/emotion_design.html [accessed: 14 January 2010]
- Norman, D. A. (2004), *Emotional Design*. New York: Basic Books
- O'Brien, D. (ed.) (2010) *Gardening - Philosophy for Everyone: Cultivating Wisdom* Chichester: John Wiley & Sons Ltd
- O'Brien, L. (2005) *Trees and Woodlands: Nature's Health service*. Farnham Surrey: Forestry Research. Available at: <http://www.forestry.gov.uk/fr/INFD-5ZBBG5> [accessed: 9 May 2013]
- O'Brien, L., & Murray, R. (2006) *A Marvellous Opportunity for Children to Learn: A Participatory evaluation of Forest School in England and Wales*. Farnham Surrey: Forestry Research. Available at: [http://www.forestry.gov.uk/pdf/fr0112forestschooolsreport.pdf/\\$file/fr0112forestschooolsreport.pdf](http://www.forestry.gov.uk/pdf/fr0112forestschooolsreport.pdf/$file/fr0112forestschooolsreport.pdf) [accessed: 9 May 2013]
- Oakley, H. (2009, pamphlet) *The Royal College of Physicians of London and its Medicinal Garden*. London: The Royal College of Physicians. Available at: www.replondon.ac.uk/garden [accessed: 20 July 2013]
- Office for National Statistics (ONS) (2012) *National Well-being Interactive Wheel of Measures*. Available at: <http://www.ons.gov.uk/ons/interactive/well-being-wheel-of-measures/index.html> [accessed: 16 February 2013]
- Olds, A. (1989) 'Nature as healer', *Children's Environments Quarterly* 6 (1) pp. 27 - 32.
- Onions, C. T. (ed.) (1996) *The Oxford Dictionary of Etymology*, Oxford: Clarendon Press
- Orians, G.H. (1986) 'An Ecological and Evolutionary Approach to Landscape Aesthetics', in Pennington Rowsell, E.C., & Lowenthal, D. (eds.) *Meanings and Values in Landscape*. London: Allen & Unwin
- Otto, R. (1926) *The Idea of the Holy*. Oxford: Oxford University Press
- Paine, R., & Francis, C. (1999) 'Hospital Outdoor Spaces', in Cooper Marcus, C., & Francis, C. (eds.) (revised, 2nd edition) *People Places: Design Guidelines for Urban Open Space*. New York: John Wiley & Sons, pp. 263-288
- Pallasmaa, J. (1994) 'An Architecture of the Seven Senses', in Holl, S., Pallasmaa, J., & Perez-Gomez (eds.) *A. Questions of Perception, Phenomenology of Architecture*. Tokyo: A & U, pp. 27-39
- Pallasmaa, J. (2005) *The Eyes of the Skin: Architecture and the Senses*. Chichester, West Sussex: John Wiley & Sons
- Pallasmaa, J. (2010a) 'Embodied Wisdom', *Resurgence* 262 pp. 20-23
- Pallasmaa, J. (2010b) 'The Dream-life of tactility', *Fourth Door Review* 8, pp. 132-139

- Pallasmaa, J., & Sato, T. (2007) *Alva Aalto: Through the Eyes of Shigeru Ban*. London: Black Dog Publishing
- Palmer, J.M. (2010) 'The Forest for Trees: Fieldbooks as Sites of Change: Reading and Writing 'Cities in the 21st Century'', in Brace, C., & Johns-Putra A.G. (eds.) *Process: Landscape and Text*. Amsterdam: Rodopi
- Papanek, V. (1985) *Design for the Real World, Human Ecology & Social Change*. London: Thames & Hudson
- Parsons, C. (1994) 'Spirit of Healing', in Francis, M., Lindsey, P., & Stone Rice, J. (eds.) *The Healing Dimension of People-Plant Relations, Proceedings of a Research Symposium*. University of California: Centre for Design Research, pp. 303-308
- Peacock, J., Hine, R., & Pretty, J. (2007) 'Got the blues, then find some greenspace: The mental health benefits of green exercise activities and green care', *MIND Week Report*, February 2007
- Pearson, D (2009), *Spirit: Garden Inspiration*. London: Fuel
- Pearson, D. (2008a) 'Alternative Therapy', *Garden Design Journal* 75, pp.16-21
- Pearson, D. (2008b) 'Tree of Life', *The Observer Magazine*, 11 May, pp.69
- Pearson, D. (2011) Lecture given at SGD Annual Conference, London, October 2011. London: Society of Garden Designers
- Pearson, D. (2012) 'Sanctuary in the City', *Elle Decoration* 1 May 2012, pp. 134-135
- Pearson, David (1994) *In Search of Natural Architecture*. London: Gaia Books
- Peck, R.L. (1998) 'Recent trends in Alzheimer's facility design: an interview with Elizabeth Brawley', *Nursing Homes* 6, pp.1-4
- Perry, G. (2007) 'Does Art have a Place in Hospitals?', *Times*, 12 September
- Pink, S. (2007a, 2nd edition) *Doing Visual Ethnography*. London: Sage
- Pink, S. (2007b) 'Walking with video', *Visual Studies* 22 (3), pp. 240-52
- Pink, S. (2008a) 'Analysing visual experience', in Pickering, M. (ed.) *Research Methods in Cultural Studies*. Edinburgh: Edinburgh University Press
- Pink, S. (2008b) 'Mobilising visual ethnography: making routes, making place and making images', *Forum Qualitative Sozialforschung/Forum: Qualitative Research*, 9 (3). Available at: www.qualitative-research.net/index.php/fqs/article/view/1166 [accessed: 12 January 2010]
- Pink, S. (2009) *Doing Sensory Ethnography*. London: Sage
- Pink, S. (2011) 'Sensory digital photography: Re-thinking 'moving' and the image' *Visual Studies* 26, 1, March 2011, pp. 4-13
- Pink, S. (2012) *Situating Everyday Life: Practices and Places*. London: Sage

- Pollock, A., & Marshall, M. (eds.) (2012) *Designing Outdoor Spaces for People with Dementia*. Stirling: University of Stirling
- Porter, C. (2013) *Hospice Gardens – More Than The Sum of Their Parts*. Unpublished MA thesis, University of Plymouth
- Potter, J. (1998) *Secret Gardens*. London: Conran Octopus Ltd.
- Potteiger, M., & Purinton, J. (1998) *Landscape Narratives*. Chichester: John Wiley & Sons
- Preston, R. (2009) 'Hope you will be able to recognise us': The representation of women and gardens in early twentieth-century British domestic 'real photo' postcards', *Women's History Review* 18 (5) November 2009, pp. 781-800
- Pretty, J. (2007) *The Earth Only Endures*. London: Earthscan
- Pretty, J., Griffin, M., Sellens, M., & Pretty, C. (2003) *Green Exercise: Complimentary Roles of Nature, Exercise and Diet in Physical and Emotional Well-Being and Implications for Public Health Policy*. CES Occasional Paper 2003-1, University of Essex
- Pretty, J., Peacock, J., Sellens, M., & Griffin, M. (2005) 'The mental and physical health outcomes of green exercise', *International Journal of Environmental Health Research* 15(5), pp. 319-337
- Prior, L. (1988) The Architecture of the Hospital: A Study of Spatial Organization and Medical Knowledge, *The British Journal of Sociology* 39 (1), pp. 86-113
- Prior, L. (1992) 'The Local Space of Medical Discourse, Disease, Illness and Hospital Architecture', in Lachmund, J., & Stollberg, G. (eds.) *The Social Construction of Illness*. Stuttgart: Franz Steiner, pp. 67-84
- Prosser, J. (2006) 'Researching with visual images: Some guidance notes and a glossary for beginners'. University of Leeds, working paper. Available at: www.realifemethods.ac.uk [accessed: 6 December 2009]
- Proust, M. (1913-27 1944) *Remembrance of Things Past, Volume 12, Time Regained*, Translated by Hudson, S. (1944) London: Chatto & Windus
- Pye, W. (2010) *William Pye: His Word and His Works*. London: Brown & Brown
- Quest-Ritson, C. (2001) *The English Garden: A Social History*. London: Penguin Books
- Radley, A., & Taylor, D. (2003) 'Images of Recovery: A Photo-Elicitation Study of a Hospital Ward', *Qualitative Health Research* 13 (1), pp.77-99
- Rainey, R.M. (2010) 'The Garden in the Machine: Nature Returns to the High-Tech Hospital', *Sitelines* V (11), pp. 14-17
- Raingruber, B. (2011) 'The effectiveness of psychosocial interventions with cancer patients: An integrative review of the literature (2006-2011)', *ISRN Nursing* 16 November

- Ratcliffe, E. (2013) 'What it says I don't know, but it sings a loud song: Reflections on birdsong, meaning, and place'. National Trust Places blog Available at: <http://ntplanning.wordpress.com/2013/01/11/what-it-says-i-dont-know-but-it-sings-a-loud-song-reflections-on-birdsong-meaning-and-place/> [accessed 1 October 2013]
- Rawcliffe, C. (2008) "Delectable Sights and Fragrant Smelles': Gardens and Health in Late Medieval and Early Modern England', *Garden History* 36, pp. 3-21
- Rayner, G., & Lang, T. (2012) *Ecological Public Health. Reshaping the Conditions of Good Health*. London: Routledge
- Regnier, V.A. (1985) *Behavioural and Environmental Aspects of Outdoor Space Use in Housing for the Elderly*. Los Angeles: University of Southern California, Andrus Gerontology Centre
- Reid, G. (2002) *Landscape Graphics: Plan, Section, and Perspective Drawing of Landscape Spaces*. New York: Watson-Guptil Publications
- Reifenberger, B. (2007) *Garden Story, Inspiring Spaces, Healing Places* [DVD]. New York: PBS
- Reis, S., Morris, G., Fleming, L., Beck, S., Depledge, M., Steinle, S., Sabel, C., Cowie, H., Hurley, F., Dick, J., Smith, R., Austen, M., & White, M. (2013) 'Integrating and Environmental Impact Analysis'. Article currently in press
- Relf, D. (ed.) (1990) *The Role of Human Well-Being and Social Development*. Portland, Oregon: Timber Press
- Relph, E. (1976) *Place and Placeness*. London: Pion
- Relf, P. (1999) 'The role of horticulture in human well-being and quality of life', *Journal of Therapeutic Horticulture* 10: pp.10-14
- RIBA & Ipsos MORI (2012) *The Way We Live Now: What People Need and Expect from their Homes*. London: RIBA & Ipsos MORI. Available at: http://www.ipsos-mori.com/DownloadPublication/1467_sri-riba-the-way-we-live-now-may-2012.pdf [accessed: 12 March 2013]
- Richards, L. (2009, 2nd edition) *Handling Qualitative Data*. London: Sage
- Richardson, D. (1992) *Plants for People: The Psychological and Physiological Effects of Plants*. Alachua, Florida: Associated Landscape Contractors of America
- Richardson, J., & Grose, J. (2009) 'The Use of Descriptive Words and Metaphor in Patient and Carer Experience of Palliative Day Care: Secondary Analysis of a Qualitative Study', *The Open Nursing Journal* 3, pp.18-24
- Richardson, T. (2001) 'An Essayist in the Garden: What Makes a Space a Place?', *Hortus* 57 (15) (1) pp. 89-95
- Richardson, T. (2005) 'Psychotopia', in Kingsbury, N., & Richardson, T. (eds.) *Vista, The Culture and Politics of Gardens*. London: Frances Lincoln, pp. 131-160

- Richardson, T. (2007) *The Arcadian Friends. Inventing the English Landscape Garden*. London: Transworld Publishers
- Rodaway, P. (1994) *Sensuous Geographies: Body, Sense and Place*. London: Routledge
- Rodiek, S., & Schwarz, B (eds.) (2005) *The Role of the Outdoors in Residential Environments for Aging*. New York: The Haworth Press, Inc.
- Rose, M. (2006) 'Gathering 'dreams and presence': a project for the cultural landscape', *Environment and Planning D: Society and Space* 24, pp. 537-554
- Rosewell, B. (2009) 'Maggie Centre Garden, Charing Cross by Dan Pearson', *Thinking Garden Blog*, 11 February. Available at: <http://thinkinggardens.co.uk/reviews/garden-by-dan-pearson-for-the-maggie-centre-charing-cross-london/> [accessed: 2 April 2011]
- Ruga, W., & Kirkaldy, S. (2012) 'Beyond Evidence-Based Design: A Call to Leadership to Create Healthcare Environments that Enable Flourishing', *Medical Construction & Design* March/April, pp. 32-35. Available at: <http://www.thecaritasproject.info/aplacetoflourish/resources.html>[accessed: 19 March 2013]
- Russell, J., Greehalgh, T., Byrne, E., & McDonnell, J. (2008) 'Recognizing rhetoric in healthcare policy analysis', *Journal of Health Services Research and Policy* 13 (1), pp. 40-46
- Rutherford, S. (2003) *The Landscapes of Public Lunatic Asylums in England, 1808-1914*. Unpublished Ph.D thesis, De Montfort University, Leicester
- Rybczynski, W. (1988) *Home A Short History of an Idea*. New York: Viking Penguin
- Sacks, O. (2009) 'Foreword', in Campbell, L., & Wiesen, A. (eds.) *Restorative Commons: Creating Health and Well-being through Urban Landscapes*. Delaware: USDA Forest Service, pp.1-5
- Sadler B.L, DuBose J., & Zimring C.M. (2008) 'The Business Case for Building Better Hospitals through Evidence – Based Design', *Health Environment Research and Design Journal* 1 (3), May
- Sand Rose Project (2009, unpublished pamphlet) *Annual Report*.
- Scher, P., & Senior, P. (1999) *The Exeter Evaluation: Evaluation Research Project of Exeter Healthcare Art*. Manchester Metropolitan University, Arts for Health
- Schroeder, H. (1991) 'The Psychological Value of Trees', *The Public Garden* 6 pp. 17-19
- Schwartz, D. (1989) 'Visual Ethnography: Using Photography in Qualitative Research', *Qualitative Sociology* 12(2) pp. 119-154
- Scott, A., Carter, C., Brown, K., & White, V. (2009) 'Seeing is Not Everything': Exploring the Landscape Experiences of Different Publics', *Landscape Research* 34 (4), pp. 397-424

- Scott, P. (2013) *The Making of the Modern British Home*. Oxford: Oxford University Press
- Scully, V. (1962, 2013) *The Earth, the Temple and the God: Greek Sacred Architecture*. San Antonio, Texas: Trinity University Press.
- Search, G. (2001) *The Healing Garden*. London: BBC Worldwide Ltd.
- Self, A., Thomas, J., & Randall, C. (2012) *Measuring National Well-being: Life in the UK, 2012*. Office for National Statistics (ONS)
- Sempik, J., Aldridge, J., & Becker, S. (2002) 'Social and Therapeutic Horticulture: Evidence and Messages from Research', *Report Evidence Issue 6*. Loughborough University, Thrive & Centre for Child and Family Research (CCFR), Loughborough University
- Sempik, J., Aldridge, J., & Becker, S. (2005) *Health, well-being and social inclusion; Therapeutic horticulture in the UK*. Bristol: The Policy Press
- Sensory Trust (2010) 'Record of design consultation meeting with staff, and families', Sensory Trust (Wendy Brewin) and Dirtworks (David Kamp & Michael Rubin) and author, Trevarna Care Home, St Austell, 21 July 2010
- Sensory Trust (2012) *Ernie & Ethan – A Creative Spaces Story* [Film], St Austell: Sensory Trust, published 16 July 2012. Available at: http://www.create-the-good-life.com/slow_design.html [accessed: 14 March 2013]
- Serres, M. (with Bruno Latour) ([1995]2009) 'The Past is No Longer Out-of-Date', reprinted in Highmore, B. (ed.) (2009) *The Design Culture Reader*. Oxon: Routledge, pp. 307-316
- Shackell, A., & Walter, R. (2012) *Green Space Design for Health and Well-Being*. Edinburgh: Forestry Commission
- Sharr, A. (2007) *Heidegger for Architects*. Abingdon: Routledge
- Shepherd, P. (1969) *Gardens*. London: TBS
- Sherman, S.A., Varni, J.W., Ulrich, R.S., & Malcarne, V.L. (2005) 'Post-occupancy evaluation of healing gardens in a pediatric cancer centre', *Landscape and Urban Planning* 73(2-3), pp.167-183
- Shoemaker, C.A. (ed.) (2002) *Interaction by design; brining people and plants together for health and wellbeing*. An international symposium, July 2000, Chicago Botanic Garden, Chicago, Illinois, USA
- Shove, E., Watson, M., Hand, M., & Ingram, J. (2007) *The Design of Everyday Life*. Oxford: Berg Publishers
- Silverman, D. (1993) *Interpreting Qualitative Data*. London: Sage
- 'Smell of jasmine 'as calming as valium' (10 July 2010) *Daily Telegraph*

Smith, J. (2007) 'Health and Nature: The Influence of Nature on Design of the Environment of Care', *Centre for Health Design*. Available at: www.healthdesign.org [accessed: 10 January 2010]

Snoad, L. (2011) 'Centres for Caring', *Design Week Blog*, 21 January. Available at: www.designweek.co.uk/home/blog/centres-for-caring/3022596.article [accessed: 12 February 2013]

Society of Garden Designers (SGD) (2012), *SGD John Brookes Award – Winner Charles Jencks* [Film]. London: Society of Garden Designers. Available at: www.sgdawards.com/#/john-brookes-award/4570928737 [accessed 10 January 2013]

Soesman, A. (1990) *Our Twelve Senses*. Stroud: Hawthorn Press

Sontag, S. (1977) *Illness as Metaphor*. Allen Lane

Southern, R. ([1953] 1993) *The Making of the Middle Ages*. London: Pimlico

Sparke, P. (1998) *A Century of Design*. London: Reed Consumer Books Ltd.

Speigel, D, Bloom, J., Kraemer, H., & Gotteil, E. (1989) 'Effect of psychosocial treatment on survival of patients with metastatic breast cancer', *Lancet* 14 October (2) pp. 888-91

Speigel, D., Butler, L., Geise-Davis, J., Koopman, C., Miller, E., DiMiceli, S., Classen, C., Fobair, P., Carlson, R., & Kraemer, H. (2007) 'Effects of supportive-expressive group therapy on survival of patients with metastatic breast cancer: A randomized prospective trial', *Cancer* 110 (5), pp. 1130-8.

Spencer, L., & Richtie, J. (1994) 'Qualitative data analysis for applied policy research', in Bryman, A., & Burgess, R.G. (eds.) *Analysing Qualitative Data*. London. Routledge

Spencer, L., Ritchie, J., Lewis, J., & Dillon, L. (2003) *Quality in Quality Evaluation: A Framework for Assessing Research Evidence*. London: Government Chief Social Researcher's Office. Available at: www.natcent.ac.uk [accessed: 18 August 2013]

Spencer, L., Ritchie, J., & O'Connor, W. (2003) 'Analysis: Practices, Principles and Processes' and 'Carrying Out Qualitative Analysis', in Richtie, J., & Lewis, J. (eds.) *Qualitative Research Practice*. London: Sage

Spiegel, B. (2011) 'Ripping up the rulebook', *Green Places* June. St Austell: Sensory Trust, pp.31-34

Stankos, M., & Schwarz, B. (2007) 'Evidence-Based Design in Healthcare: A Theoretical Dilemma', *Interdisciplinary Design and Research e-Journal (IDRP)* 1 (1). Available at: www.idrp.wsu.edu/ [accessed: 14 January 2010]

Staricoff, R. (2004) *Arts in Health: A Review of the Medical Literature*. Arts Council. Available at: http://www.artscouncil.org.uk/publication_archive/arts-in-health-a-review-of-the-medical-literature/ [accessed 21 February 2013]

Staricoff, R., Duncan, J., & Wright, M. (2004) *A Study of the Effects of Visual and Performing Arts in Healthcare*. London: Chelsea & Westminster Hospital

- Sternberg, E.M. (2009) *Healing Spaces, The Science of Place and Well-Being*. Massachusetts & London: The Belknap Press of Harvard University Press
- Stevens, E.F. (1918) *The American Hospital of the Twentieth Century: A Treatise on the Development of Medical Institutions, Both in Europe and America Since the Beginning of the Present Century*. New York: Architectural Record Publishing Company
- Stevenson, A. (2003) 'Natural Healing: An Innovative Hospital Garden has been Created by Painter and Sculptor Jane Kelly', *The Herald*, Saturday October 11
- Stevenson, F., & Humphris, M. (2007) *A Post Occupancy Evaluation Report of the Dundee Maggie Centre*. Dundee: University of Dundee in Association with Bute Medical School, University of St Andrews and the Maggie's Centres
- Stigsdotter, U.A. (2004) 'A Garden at your Workplace May Reduce Stress', *International Academy for Design and Health*, pp.147-157
- Stoneham, J. (1998) *The Design of Landscape Around Sheltered Housing*. Unpublished MPhil dissertation, University of Reading
- Stoneham, J., & Jones, R. (1997) 'Residential Landscapes: Their Contribution to the Quality of Older People's Lives', in Wells, S. (ed.) (1997) *Horticultural Therapy and the Older Population*. USA: Haworth Press Inc.
- Stoneham, J., & Thoday, P. (1994) *Landscape Design for Elderly and Disabled People*. Chichester: Packard Publishing Ltd.
- Strong, R. (1992) *Gardens Through the Ages*. London: Conran Octopus
- Stuart, D. (2004) *Dangerous Garden. The Quest for Plants to Change Our Lives*. London: Frances Lincoln
- Sturgeon, A. (2010) 'Mother of Invention', *Green Places*, April, pp. 28-30
- Sugg, Ryan. D.(2012) 'Workshop of the World? Manufacturing the British Product', in Beward. C., & Wood, G. (eds.) *British Design from 1948: Innovation in the Modern Age*. Exhibition Catalogue, London: Victoria & Albert Museum, pp. 267-289
- Sulik, G. (2012) *Pink Ribbon Blues: How Breast Cancer Culture Undermines Women's Health*. New York: Oxford University Press
- Sullivan, W.C. (2005) 'Forest, Savannah, City: Evolutionary Landscapes and Human Functioning', in Bartlett, P. (ed.) *Urban Place, Reconnecting with the Natural World*. Cambridge, Massachusetts: MIT Press, pp. 237-252
- Sumner, J. (2000) *The Natural History of Medicinal Plants*. Cambridge: Timber Press
- Sustainable Development Commission (2008) *Health Place and Nature: How outdoor environments influence health and wellbeing – a knowledge base*. Available at: http://www.sdcommission.org.uk/data/files/publications/Outdoor_environments_and_health.pdf [accessed: 23 January 2013]

- Svendsen, E. (2009) 'Cultivating Resilience: Urban Stewardship as a Means to Improving Health and Well-being', in Campbell, L., & Wiesen, A. (eds.) *Restorative Commons: Creating Health and Well-being through Urban Landscapes*. Delaware: USDA Forest Service, pp. 59-87
- Swaffield, S. (2002) *Theory in Landscape Architecture*. Philadelphia: University of Pennsylvania Press
- Symes, M. (2006) *A Glossary of Garden History*. Buckinghamshire: Shire Books
- Tabbush, P., & O'Brien, L (2003) *Health & Well-being: Trees, Woodland and Natural Spaces*. Edinburgh: Forestry Commission
- Talbot, J.F., & Kaplan, R. (1991) 'The Benefits of Nearby Nature for Elderly Apartment Residents', *International Journal of Aging & Human Development* 33(2) pp. 119-130
- Tan, L., & Szebeko, D. (2009) 'Co-designing for Dementia: the Alzheimer 100 Project', *Australian Medical Journal* 1 (12), pp. 185-198
- Taylor, A. F., Wiley A., Kuo, F.E., & Sullivan W. C. (1998) 'Growing up in the inner city: Green spaces are places to grow', *Environment and Behaviour* 30, pp. 54-75
- Taylor, C. (1983) *The Archaeology of Garden*. Buckinghamshire: Shire Publications
- Taylor, E. (2009) *Survey of Design Research in Healthcare Settings, The Use and Impact of Evidence-Based Design*. Concord: California: Centre for Healthcare Design
- Telier, A. (ed.) (2011) *Design Things*. Cambridge, Massachusetts: MIT Press
- The Telegraph (2010) 'Smell of Jasmine as calming as valium' July 2010. <http://www.telegraph.co.uk/science/7881819/Smell-of-jasmine-as-calming-as-valium.html> [accessed 14 January 2012]
- Tennessen, C.M., & Cimprich, B. (1995) 'Views to nature; effects on attention', *Journal of Environmental Psychology* 15, pp.77-85
- Ternent, K. (2008) *Creative Courtyards Scheme by Milton Keynes Arts for Health (2005-7)* Department of Health
- Teyssot (2005) 'A Topology of Thresholds', *Home Culturs* 2 (1), pp. 89-116
- Thackara, J. (2006) *In the Bubble, Designing in a Complex World*. Cambridge, USA: MIT Press
- Thacker, C. (1979) *The History of Gardens*. London: Croom Helm Ltd. Publishers
- The Maggie's Centre: Architecture and Healing* (2011, exhibition catalogue) 26 February – 8 May 2011. London: Victoria and Albert Museum
- Thomson, S. (2013) *The Outdoor Landscapes of Cornwall's Secondary School Grounds; The Politics of Design*. Unpublished Ph.D thesis, University of Exeter
- Thompson, I. (2000) *Ecology, Community & Delight: Sources of Values in landscape Architecture*. London: E & FN Spon

- Thompson, I. (2009) *Rethinking Landscape: A Critical Reader*. Oxon: Routledge
- Thoreau, H. (1853) *Journal*. 5, January 21 1853. Reprinted in Cramer, J. (2011) *The Quotable Thoreau*. New Jersey: Princeton University Press
- Thorne, J. (2007) *A Study of Physic Gardens Old and New*. Unpublished MA dissertation, University of Bristol
- Tilley, C. (2006), 'The Sensory Dimension of Gardening', *Sense & Society* (3), pp. 311-330
- Tilley, C. (2009), 'What Gardens Mean', in Vannini, P. (ed.) *Material Culture and Technology in Everyday Life, Ethnographic Approaches*. Oxford: Peter Lang, pp. 171-193
- Titman, W. (1992) *Play, Playtime and Playgrounds – Key issues for Teachers, Supervisors and Governors of Primary Schools*, Learning Through Landscapes. Crediton, Devon: Southgate Publishers
- Titman, W. (1994) *Special Places, Special People: Hidden Curriculum of School Grounds*, Learning Through Landscapes. Crediton, Devon: Southgate Publishers
- Titman, W. (2007) *Enabling Outdoor Learning in the early Years Foundation Staged in Cornwall*. London: Wendy Titman Associates
- Townsend, M., & Weerasuriya, R. (2010) *Beyond Blue to Green: The Benefits of Contact with Nature for Mental Health and Well-being*, Melbourne, Australia: Beyond Blue Ltd.
- Tuan, Y. (1974) *Topophilia: A Study of Environmental Perception, Attitudes and Values*. Englewood Cliffs: Prentice-Hall
- Tunnard, C. (1938) *Gardens in the Modern Landscape*. London: The Architectural Press
- Turner, G. (2012) *The Power of Silence: The Riches that Lie Within*. London: Bloomsbury
- Turner, T. (2005) *Garden History: Philosophy & Design 2000BC – 2000AD*. London: Spon Press
- Tyson, M. (1998) *The Healing Landscape: Therapeutic Outdoor Environments*. New York: McGraw-Hill
- Ulrich, R. S., & Parsons, R. (1992) 'Influences of passive experiences with plants on individual well-being and health', in Relf, D. (ed.) *The Role of Horticulture in Human Well-being and Social Development*. Timber Press, Portland, Oregon, pp. 93 - 105.
- Ulrich, R., Simons, R., Losito, B., Fiorito, E., Miles, M., & Zelson, M. (1991) 'Stress Recovery during Exposure to Natural and Urban Environments', *Journal of Environmental Psychology* 11, (3), pp. 201-203
- Ulrich, R.S. (1979) 'Visual Landscapes and Psychological Wellbeing', *Landscape Research* 4, pp. 17-23

Ulrich, R.S. (1984) 'View through a window may influence recovery from surgery', *Science* 224, pp. 420-421

Ulrich, R.S. (1999) 'Effects of Gardens on Health Outcomes: Theory and Research', in Cooper Marcus, C., & Barnes, M. (ed.) *Healing Gardens, Therapeutic Benefits and Design Recommendations*. New York: John Wiley & Sons, pp. 27-86

Ulrich, R.S. (2002) 'Health Benefits of Gardens in Hospitals', conference paper presented at 'Plants for People' conference. Floriade, The Netherlands: International Exhibition. Available at:
<http://greenplantsforgreenbuildings.org/attachments/contentmanagers/25/HealthSettingUlrich.pdf> [accessed 10 December 2009]

Ulrich, R.S., & Addoms, D.L. (1981) 'Psychological and Recreational Benefits of a Residential Park', *Journal of Leisure Research* 13, pp.43-65

Ulrich, R.S., Quan, X., Zimring, C., Joseph, A., & Choudhary, R. (2004) *The Role of the Physical Environment in the Hospital of the 21st Century: A One-in-a-lifetime Opportunity*. Concordia, California: Center for Health Design

Ulrich, R.S., Zimring, C., Zhu, X., Dubose, J., Seo, H-B., Choi, Y-S., Quan, X., & Joseph, A. (2008) 'A Review of the Research Literature on Evidence-Based Healthcare Design', *Health Environments Research and Design Journal (HERD)* 1 (3), pp. 1-75. Available at: www.healthdesign.org [accessed: 18 January 2010]

University of Durham (2012) *Moving to a New Psychiatric Hospital: What Patients Carers and Staff Told Us About Hospital Design and Wellbeing*. Available to download from www.dur.ac.uk/geography/gohwell/research_reports/ [accessed: 12 August 2013]

University of Durham, Centre for Arts and Humanities in Health and Medicine (CAHHM) (2005) *Designing for Health: Architecture, Art and Design at the James Cook University Hospital*. University of Durham, Durham. Available at: <https://www.dur.ac.uk/resources/cahham/reports/JCUH%20FINAL%20Feb05.pdf> [accessed 12 August 2013]

University of the West of England (2007) *Building on the Evidence: Qualitative Research on the impact of Arts in Mental Healthcare*. University of Durham, Durham. Available at:
<https://www.dur.ac.uk/resources/cahham/reports/JCUH%20FINAL%20Feb05.pdf> [accessed 12 August 2013]

University of Salford (2007) *Sense, Brain and Space*. University of Salford. Available at: www.anfarch.org [accessed: 15 January 2013]

University of the West of England (2007) *Building on the Evidence: Qualitative Research on the impact of Arts in Mental Healthcare*. University of West of England, Bristol. Available at:
<http://hsc.uwe.ac.uk/net/research/data/sites/1/movingoneval%20jan08.pdf> [accessed 12 August 2013]

Van den Berg, A. (2005) *Health impacts of healing environments: A review of the benefits of nature, daylight, fresh air and quiet in healthcare settings*. Groningen: Foundation 200 years University Hospital Groningen

- Van den Burg, A., & Wagenaar, C. (2006) 'Healing by Architecture', in Wagenaar, C. (ed.) *The Architecture of Hospitals*. Rotterdam: Nai Publishers, pp. 254-257
- Van der Linden, V. (2013) *Maggie's Healing Environment in Design Practice & User Experience*. Unpublished MA dissertation, KU Leuven, Belgium
- Van Gennep, A. (196) *The Rites of Passage*. Chicago: The University of Chicago Press
- Vattimo, G. (1997) 'The End of Modernity', in Leach, N. (1997) *Rethinking Architecture*. London: Routledge, pp. 148-154
- Verderber, S. (1986) 'Dimensions of person-window transactions in the hospital environment', *Environment and Behaviour* 18, pp. 450-466
- Verderber, S., & Fine, D. J. (2000), *Healthcare Architecture in an Era of Radical Transformation*. Newhaven & London: Yale University Press
- Verey, R. (2001) *Making of A Garden*. London: Frances Lincoln
- Verey, R., & Lees-Milne, A. (1980) *The Englishwoman's Garden*. London: Chatto & Windus
- Verlade, M., Fry, G., & Tveit, M. (2007) 'Health Effects of Viewing Landscapes – Landscape Types in Environmental Psychology', *Urban Forestry and Urban Greening* 6, pp. 199-212
- Voltaire, ([1759] 2007) *Voltaire*. London: Penguin Classics
- Von Bingen, H. (1098-1179) *Physica*. English Translation, Throop, P (1998), Rochester: Healing Arts Press
- Wagenaar, C. (2010) 'Presentation' at Maggie's', Maggie's London, 'Architecture & Health Symposium'. Available at: <http://www.youtube.com/watch?v=SyV04vnTVO0&list=PLF6A64149B7DE9C86&index=3> [accessed 12 November 2012]
- Wagenaar, C. (ed.) (2006) *The Architecture of Hospitals*. Rotterdam: Nai Publishers
- Wagstaffe, A. (2012) *Creative Spaces: A Supporting Change Report of the Big Lottery Fund*. St Austell: Sensory Trust
- Walker, S. (2006) *Sustainable by Design*. London: Earthscan
- Waller, S. (2011) 'Funding Miracles: How one innovative development programme sustained Florence Nightingale's vision of a healing environment', *Caritas Magazine* June, pp.31-33
- Waller, S., & Finn, H. (2004) *Enhancing the Healing Environment, a guide for NHS Trusts*. London: The Kings Fund/NHS Estates
- Ward Thomson, C., Aspinall, P., & Bell, S. (eds.) (2010) *Innovative Approaches to Researching Landscape and Health*. Abingdon: Routledge

- Waters, F. (2009) 'Pictures of Health', *Daily Telegraph Review* 12 December
- Watkins, N. (2008) 'Lost in Translation: Bridging Gaps Between Design and Evidence-Based Design', *Health Environments Research Journal (HERD)* 1(2), pp. 39-46
- Wear, A. (1992) 'Making Sense of Health and Environment in Early Modern England', in Wear, A. (ed.) *Medicine in Society*. Cambridge: Cambridge University Press, pp. 119-149
- Wells-Thorpe, J. (2004) 'The Maggie Centres Project', in NHS Estates. Unpublished paper presented at, 'The Environment for Care: An NHS Estates Symposium'. Dublin
- Wells, N. (2000) 'At home with nature: Effects of 'greenness' on children's cognitive functioning', *Environment and Behaviour* 32, pp. 775-795
- Wells, N., & Evans, G. (2003) 'Nearby nature: A buffer of life stress among rural children', *Environment and Behaviour* 35, pp. 311-330
- Wells, S. (ed.) (1997) *Horticultural Therapy and the Older Adult Population*. New York: The Haworth Press
- Westley, M. (2013, leaflet) *Grenville Ward Courtyard. Therapeutic Placemaking for the Royal Cornwall Hospital Trust 2004-13*. Falmouth: Westley Designs Ltd.
- Whatmore, S. (2002) *Hybrid Geographies, Natures Cultures Spaces*. London: Sage Publications Ltd.
- Wheeler, B., White, M., Stahl-Timmins, W., & Depledge, M. (2012) 'Does Living by the coast improve health and wellbeing?' *Health & Place*. 18 (5) pp.1198-1201
- White, M., Cracknell, D., Corcoran, A., Jenkinson, G., & Depledge, M. (2013a) 'Do Preferences for Waterscapes Persist in Inclement Weather and Extend to Sub-aquatic Scenes?', *Landscape Research*
- White, M., Pahl, S., Ashbullby, K., Herbert, S., & Depledge, M. (2013b) 'Feelings of Restoration from recent nature visits', *Journal of Environmental Psychology* 35, pp. 40-51
- White, M., Smith, A., Humphryes, K., Pahl, S., Snelling, D., & Depledge, M. (2010) 'Blue Space: The importance of water for preferences, affect and restorativeness ratings of natural and built scenes', *Journal of Environmental Psychology* 30, pp. 482-493
- Whitehouse, S., Varni, J. W., Seid, M., Cooper Marcus, C., Ensberg, M. J., Jacobs, J.R., & Mehlenbeck, R.S. (2001) 'Evaluating A Children's Hospital Garden Environment: Utilization and Consumer Satisfaction', *Journal of Environmental Psychology* 21 (3), pp. 301-314
- Wilkie, K. (2012b) *Led by the Land: Landscapes by Kim Wilkie*. London: Frances Lincoln
- Williams, A. (2002) 'Changing Geographies of Care: Employing the Concept of Therapeutic Landscapes as a Framework for Examining Home Space', *Social Science & Medicine* 55, pp. 141-154

- Williams, A. (2007) *Therapeutic Landscapes*. Farnham, Surrey: Ashgate
- Williams, A. (ed.) (1999) *Therapeutic Landscapes: The dynamic between place and wellness*. Oxford: Press of America
- Wilson, A. (2002) *Influential Gardeners: The Designers who shaped 20th century garden style*. New York: Clarkson Potter Publishers
- Wilson, A. (2009) 'Up on the Roof: Great Ormond Street Hospital', *Gardens Illustrated* February, pp. 90-92
- Wilson, E. O. (1984), *Biophilia: The Human Bond With Other Species* Cambridge. Massachussets & London: Harvard University Press
- Winterman, D. (2013) 'The surprising uses of Birdsong', *BBC News Magazine*. Available at: <http://www.bbc.co.uk/news/magazine-22298779> [accessed 1 October 2013]
- Woodward, I. (2009) 'Material Culture and Narrative: Fusing Myth, Materiality and Meaning', in Vannini, P. (ed.) *Material Culture and Technology in Everyday Life, Ethnographic Approaches*. Oxford: Peter Lang
- Wordsworth, W. (1807) 'Poems in Two volumes' in (1994) *The Collected Poems of W. Wordsworth*. London: Wordsworth Editions
- World Health Organization (WHO) (2004) *Quality of Life (WHOQOL)*. Available at: www.who.int/substance_abuse/research_tools/whoqolbref/en/ [accessed 11 December 2009]
- World Health Organization (WHO) (2009) *Constitution*. Available at: www.who.int/governance/eb/constitution/en/index.html [accessed 28 February 2013]
- World Health Organisation (WHO) (2011a) 'International Conference on Environmental and Occupational Determinants of Cancer: Interventions for Primary Prevention'. Available at: www.who.int/phe/news/events/international_conference/en/ [accessed 28 February 2013]
- World Health Organisation (WHO) (2011b) *World Health Report*. Geneva: WHO
- Worpole, K. (2009) *Modern Hospice Design*. Abingdon Oxon: Routledge
- Worpole, K. (2010) 'Going Gently – Maggie's Shows Modern Architecture Rediscovering its Humanity', *Rationalist Association* 9 February 2010
- Woudstra, J. (1999) 'Detailing and Materials of Outdoor Space: The Scandinavian Example', in Birksted, J. (ed.) *Relating Architecture to Landscape*. London: E. & F.N. Spon
- Woudstra, J. (2000) 'The Corbusian Landscape: Arcadia or No Man's Land', *Garden History* 28 (1), pp. 135-151
- Woudstra, J. (2004) 'The Changing Nature of Ecology: A History of Ecological Planting', in Dunnett, N., & Hitchmough, J. (eds.) *The Dynamic Landscape*. Abingdon: Taylor Francis

- Woudstra, J. (2006) 'Landscape First and Last', in Simms, B. (ed.) *Eric Lyons & Span*. London: RIBA Publishing
- Wylie, J. (2007) *Landscape*. Oxfordshire: Routledge
- Yaneva, A. (2009) 'Border Crossings. Making the Social Hold: Towards an Actor-Network Theory of Design', *Design and Culture* 1 (3), pp. 273-288
- Yerrell, P. (2008) *National Evaluation of BTCV's Green Gym*. Oxford: Oxford Brookes University, School of Health & Social Care
- Zarren, H. (2000) *Take the Time* (Reno: The Association of Healing Healthcare). Available at: <http://www.healinghealthcareassoc.org/documents/takethetime.pdf> [accessed 10 December 2010]
- Ziesel, J. (2006) *Inquiry by Design, Environment/ Behavior/ Neuroscience in Architecture, Interiors, Landscape and Planning*. New York: W.W. Norton & Company Ltd.
- Zeisel, J. (2007) 'Creating a Therapeutic Garden that Works for People Living with Alzheimer's', in Rodiek, S., & Schwartz, B. (eds.) *Outdoor Environments for People with Dementia*. New York: Routledge
- Zeisel, J. (2009) *I'm Still Here: A Breakthrough Approach to Understanding Someone Living with Alzheimer's*. New York: Avery/Penguin Group
- Zeisel, J., & Tyson, M. (1999) 'Alzheimer Treatment Gardens', in Cooper Marcus, C., & Barnes, M. (eds.) *Healing Gardens: Therapeutic Benefits and Design Recommendations*. New York: John Wiley, pp. 437-504
- Zeisel, J., Hyde, J., & Lefkoff, S. (1994) 'Best Practices: An Environment-Behaviour (E-B) Model for Alzheimer's Special Care Units', *American Journal of Alzheimer's Care and Related Disorders and Research* 9 (2) pp. 4-21
- Zimring, C., & DuBose, J. (2011) 'Healthy Healthcare Settings', in Dannenberg, A., Frumkin, H., & Jackson, R. (eds.) *Making Healthy Places, Designing and Building for Health, Well-being and Sustainability*. London: Island Press, pp. 203-215
- Zumthor, P. (2011) 'Peter Zumthor conversation with Hans Ulbrich Obrish & Julia Peyton-Jones'. London: Serpentine Gallery. Available at: www.serpentinegallery.org/2011/04/serpentine_gallery_2011_zumthor.html

Websites

Absolute Wonder (n.d.) www.absolutewonder.com [accessed 9 October 2013]

Academy Of Neuroscience For Architecture (2013) www.anfarch.org [accessed 15 January 2013]

Alex Johnson Landscape Design (2000) <http://www.elemental-landscape-architects.co.uk/> [accessed at various times]

Allotment Regeneration Limited (ARI) (2013) <http://ari.farmgarden.org.uk/> [accessed 9 May 2013]

Alzheimer's Association (2011) www.alz.org [accessed 5 February 2011]

Alzheimer's Society (2011) www.alzheimers.org.uk [accessed 5 February 2011]

American Cancer Society (2012) *The History of Cancer*.
<http://www.cancer.org/acs/groups/cid/documents/webcontent/002048-pdf.pdf>
[accessed 17 January 2012]

American Horticultural Therapy Association (AHTA) (2011) www.ahta.org.
[accessed 17 January 2011]

Annual Serpentine Pavilion (2011) www.serpentinegallery.org/2011/04 [accessed 26 February 2013]

Arabella Lennox-Boyd [www.arabellalennoxboyd](http://www.arabellalennoxboyd.com) (2013) [accessed 8 March 2013]

Arts Council England, The Arts Health and Wellbeing (2007)
<http://www.artscouncil.org.uk/media/uploads/phpC1AcLv.pdf> [accessed 18 November 2010]

Arts for Health Cornwall (2013) www.artsforhealthcornwall.org.uk [accessed 18 November 2013]

ARTstore (2003) <http://www.artstor.org/index.shtml> [accessed at various times]

Blue Gym (2011) www.bluegym.org.uk [accessed 20 October 2009]

Bre Environmental Assessment Method (BREEAM) www.breeam.org [accessed 11 December 2010]

Bridgeman Education (n.d.) <http://www.bridgemaneducation.com/> [accessed at various times]

British Trust For Conservation Volunteers (BTCV) Green Gym (2011)
www.btcv.org/greengym [accessed 19 January 2011]

Building Better Healthcare (2008-11) www.bbhealthcare.co.uk [accessed 20 January 2011]

Campaign For Greener Healthcare (2008) <http://greenerhealthcare.org> [accessed 19 January 2011]

Cancer Research UK (2012) www.cancerresearchuk.org [accessed 7 December 2012]

Care Farming Initiative (NCIF) (2010) www.ncfi.org.uk [accessed 12 January 2011]

The Caritas Project (2012) <http://thecaritasproject.info/index.html> [accessed 19 March 2013]

Center For Health Design (CHD) (2013) www.healthdesign.org [accessed 18 January 2013]

The Centre For The Humanities And Health At Kings College, London (2013) 'a narrative future for healthcare', www.kcl.ac.uk/innovation/groups/chh/narrative-medicine-conference-/about-the-conference.aspx [accessed 10 April 2013]

Centre For Sustainable Healthcare (2013) www.sustainablehealthcare.org.uk [accessed 9 May 2013]

Centre For Visual Methodologies And Social Change (2008) www.ivmproject.ca [accessed 30 January 2010]

Charles Jencks (2013) www.charlesjencks.com/index.html [accessed 10 January 2013]

Chelsea Barracks Partnership (2013) www.chelseabarrackspartnership.com [accessed 6 April 2013]

Chelsea Physic Garden (2013) www.chelseaphysicgarden.co.uk [accessed 10 May 2013]

Children & Nature Network (C&NN) (2011) www.childrenandnature.org [accessed 18 January 2011]

Christine Facer (2013) www.christinefacer.com [accessed 11 March 2013]

Combat Stress Therapeutic Garden (2010) www.rhs.org.uk/shows-events/hampton-court-palace-flower-show/2010/gardens/a-to-z/the-combat-stress-therapeutic-garden [accessed 20 October 2010]

Combat Stress Therapeutic Garden, Independent Gardening Limited (2010) www.independentgardening.co.uk/projects/combat-stress-garden [accessed 15 March 2013]

Commission For Architecture & Built Environment (CABE) (2011) www.cabe.org.uk [accessed 25 January 2011]

Conservation Foundation (Gardening Against the Odds Awards) (2013) www.conservationfoundation.co.uk [accessed 18 April 2013]

Cornwall Care (2008) www.cornwallcare.com [accessed 5 February 2011]

Conservation Evidence (2010) www.conservationevidence.com [accessed 28 January 2010]

Dan Pearson Studio (2013) www.danpearsonstudio.com [accessed 11 March 2013]

Donald Loggins found at Lizy Christy Garden <http://www.lizchristygarden.us/> [accessed 13 June 2013]

Dementia Services Development Centre (DSDC) (2010) www.dementiashop.co.uk [accessed 5 February 2011]

Design Against Crime (2011) www.designagainstcrime.com [accessed 26 October 2009, 17 January 2011]

Design and Emotion (2006) www.designandemotion.org [accessed 28 January 2010]

Design Of The Times (2007) www.dott07.com & (2011) www.dottcornwall.com [both accessed: 28 January 2010]

Department Of Health (2010) www.dh.gov.uk [accessed 12 January 2011]

Dirtworks, PC (2011) www.dirtworks.us [accessed 18 January 2010]

Don Norman (just noticeable difference) (2002) <http://jnd.org> [accessed 28 January 2010]

Dupont Company found at Hagley Museum and Library (n.d.) <http://www.hagley.org/2012/10/tracking-the-business-of-color-in-the-hagley-library-collections> [accessed 13 June 2013]

Easy Tour China (n.d.) <http://www.easytourchina.com/photo-p1895-humble-administrator-s-garden-moon-gate> [accessed 12 October 2013]

EcoMinds Project (2013) www.mind.org.uk [accessed 9 May 2013]

English Heritage (n.d.) <http://www.english-heritage.org.uk/> [accessed at various times]

Enhancing The Healing Environment (EHE) (2013) <http://www.kingsfund.org.uk/projects/enhancing-healing-environment/about-ehe> [accessed 20 March 2013]

Environmental Design Research Association (EDRA) (2007-10) www.edra.org [accessed: 19 January 2011]

Environments For The Aging (2011) www.environmentsforaging.com Conference, Atlanta, GA, March 2011, [accessed 5 February 2011]

European Centre For Environment And Human Health (ECEHH) (2011) www.ecehh.org [accessed 15 March 2013]

Federation Of City Farms & Community Gardens (2012) www.farmgarden.org.uk [accessed: 25 January 2012]

Finsbury Health Centre (n.d.) http://www.e-architect.co.uk/london/finsbury_health_centre.htm [accessed: 12 October 2013]

Fira Landscape Architects (2013) www.fira-la.com [accessed 1 October 2011]

Framework (2011) www.framework-natcen.co.uk [accessed 11 March 2011]

Free Online Dictionary (2013) <http://www.thefreedictionary.com> [accessed 10 October 2013]

Forest Schools (2009) www.forestschoools.com [accessed 22 January 2011]

Forestry Commission Scotland – Outdoor Spaces For Health And Wellbeing (2012) www.forestry.gov.uk [accessed 10 May 2012]

Forestry Research (2013) www.forestry.gov.uk/forestresearch [accessed 9 May 2013]

Garden Parties For Maggie's – House And Garden Magazine (2012) www.houseandgarden.co.uk/garden-parties-for-maggies/intro-to-maggies [accessed 16 May 2012]

Gardening Against The Odds (2013) www.gardeningagainsttheodds.com [accessed 18 April 2013]

Glasgow Homeopathic Hospital (GHH) (2012) [http://ghh.info/welcome .htm](http://ghh.info/welcome.htm) [accessed 10 May 2012]

Green Care Research, University of Essex (2012) www.greenexercise.org [accessed 15 January 2013]

Garden Share (n.d.) <http://www.garden-share.com/photo/paleis-het-loo-4?context=user> [accessed 12 October 2013]

Garden Visit (n.d.) http://www.gardenvisit.com/garden/st_gall-sankt_gallen [accessed 27 January 2014]

Geographies Of Health And Wellbeing, University Of Durham (GOHwell) (2013) www.dur.ac.uk/geogrphahy/gohwell [accessed 13 February 2013]

Guerrilla Gardening (2013) www.guerrillagardening.org [accessed 9 May 2013]

Healthcare Design Magazine (2011) www.healthcaredesignmagazine.com [accessed 18 January 2010]

Health Environments Research And Design (HERD) (2011) www.herdjournal.com [accessed 18 January 2010]

Healthy Living Centres (New Opportunities Fund) (2001-5) <http://webarchive.nationalarchives.gov.uk/+www.dh.gov.uk/en/Publichealth/Healthimprovement/Healthyliving/HealthyLivingCentres/index.htm> [accessed 16 February 2013]

Healthy Parks Healthy People Australia (2010) www.parkweb.vic.gov.au [accessed 19 January 2011]

Helen Hamlyn Centre (2010) www.hhc.rca.ac.uk [accessed 30 January 2010]

Hello Poetry (n.d.) <http://hellopoetry.com/poem/this-is-the-gardencolours-come-and-go/> [accessed: 10 October 2013]

Horatio's Garden (2012) www.horatiogarden.org.uk [accessed 13 December 2013]

House and Garden (2012) (www.houseandgarden.co.uk) [accessed 30 June, 2012]

IDEO (2011) www.ideo.com [accessed 28 January 2010]

Incredible Edible Todmorden Unlimited (2013) www.incredible-edible-todmorden.co.uk [accessed 13 March 2013]

Informedesign (2002, 2005) www.informedesign.umn.edu [accessed 26 January 2010]

International Visual Methodologies For Social Change Project (2010) www.ivmproject.ca [accessed 26 January 2010]

Jane Derbyshire and David Kendall (2009) <http://www.jddk.co.uk/sectors/landscape> [accessed: 12 October 2013]

Jane Kelly (2012) www.janekelly.co.uk [accessed 10 May 2012]

Japan Guide <http://www.japan-guide.com/e/e3909.html> [accessed 17 November 2013]

Japanese Search (n.d.) <http://www.japanesearch.com/nanzen-ji-南禅寺-temple-in-kyoto/> [accessed 12 October 2013]

Jencks2 (2013) www.jenckssquared.com/ [accessed 10 January 2013]

Julie Messervy Design Studio (2013) www.jmmds.com [accessed 9 May 2013]

Kew Foundation (2013) Medicinal Uses of British Plants Research Project, [/www.kew.org/science-research-data/directory/projects/medicusesbritplants.htm](http://www.kew.org/science-research-data/directory/projects/medicusesbritplants.htm) [accessed 12 June 2013]

Kim Wilkie Associates (2013) www.kimwilkie.com [accessed: 8 April 2013]

King's Fund Initiative 2002-7 (2011) www.enhancingthehealingenvironment.org.uk [accessed 18 January 2011]

King's Fund (2011) www.kingsfund.org.uk [accessed: 18 January 2011]

Labyrinthos, Labyrinths & Mazes Resource Centre (2010) www.labyrinthos.net [accessed 13 December 2010]

Labyrinth Society (2013) www.labyrinthsociety.org [accessed 12 March 2013]

Landscape Institute (2013) www.landscapeinstitute.org [accessed 1 October 2013]

Lily Jencks Studio (2013) www.lilyjencksstudio.com [accessed 22 May 2013]

Living Medicine (People And Plants For Health) (2013) www.livingmedicine.org [accessed 9 May 2013]

Liz Christy Garden, New York City (2007) www.lizchristygarden.us [accessed 13 May 2013]

London Museums of Health and medicine, St Bartholomews (n.d.)
<http://www.medicalmuseums.org/St-Bartholomews-Hospital-Museum-and-Archives/>
[accessed at various times]

Macmillan Cancer Support (2013) www.macmillan.org.uk [accessed 18 March 2013]

Macmillan Cancer Environments (2013)
<http://www.macmillan.org.uk/howwecanhelp/cancerenvironments/cancerenvironments.aspx> [accessed 18 March 2013]

Macmon Architects (2012) www.macmon.co.uk [accessed 10 May 2012]

Maggie's Cancer Caring Centres (2011) www.maggiescentres.org [accessed 26 January 2011]

Maggie's (2013) www.maggiescentres.org [at various times]

Mapping Architectural Controversies (MAP) (2009)
www.mappingcontroversies.co.uk [accessed 28 January 2010]

Matara Gardens Of Well-Being (2012)
www.mataragardensofwellbeing.com [accessed 28 June 2012]

Meristem (restorative gardens for healthcare environments) (2006-9)
<http://meristem.org> [accessed: 18 January 2010]

Merriam Webster Dictionary Online (2013) Available at: <http://www.merriam-webster.com/dictionary> [accessed: 7 September 2013]

Mimosa (2014)
<http://www.mimosa.eu/projects/Spain/Madrid/Health%20Care%20Centre%20San%20Blas>
[accessed 7 January 2014]

Mind (2013) www.mind.org.uk [accessed: 10 February 2013]

Narrative Medicine www.narrativemedicine.org [accessed: 15 January 2013]

National Centre For Social Research Qualitative Research Unit (NATCEN) (2011)
www.natecen.ac.uk [accessed 11 March 2011]

Natural England (2013) www.naturalengland.org.uk [accessed 1 December 2012]

National Health Service (NHS) (2013) *five steps to mental wellbeing*
www.nhs.uk/conditions/stress-anxiety-depression/pages/improve-mental-wellbeing.aspx
[accessed 9 May 2013]

National Health Service Forest (NHSforest) (Campaign for Greener England)
(2008) www.nhsforest.org [accessed: 19 January 2011]

Network Of Narrative Medicine www.kcl.ac.uk/innovation/groups/chh/narrative-medicine-conference-/about-the-conference.aspx [accessed 15 January 2013]

Openspace Research Centre (2011) www.openspace.eca.uk [accessed 17 January 2011]

Office Of National Statistics (ONS) (2010) www.ons.gov.uk/well-being [accessed 11 March 2011]

Oxford Botanic Garden (2013) www.botanic-garden.ox.ac.uk [accessed 10 May 2013]

Outdoor Design Resource, Australia (2010) www.odsnews.com.au [accessed 8 February 2010]

Oxford Dictionary Online (2013) Oxford Dictionaries Available at: <http://oxforddictionaries.com> [accessed: 11 October 2013]

Paintings In Hospitals (2013) www.paintingsinhospitals.org.uk [accessed 17 May 2013]

Peckham Experiment (A Study into the Nature Of Health) www.thephf.org [accessed 9 May 2013]

Penny Brohn Cancer Care www.pennybrohncancercare.org [accessed 19 October 2012]

Poetry Foundation (n.d.) www.poetryfoundation.org [accessed: 9 October 2013]

Plymouth City Council (2013) Royal Naval Hospital www.plymouth.gov.uk [accessed: 13 October 2013]

President's Advisory Committee on Public Art, University of Michigan (2010) http://public-art.umich.edu/the_collection/campus/north/38 [accessed 12 January 2014]

Prince's Foundation For The Built Environment (2010) www.princes-foundation.org/ [accessed 10 January 2010]

Quiet Garden Movement (The Quiet Garden Trust) (2010) www.quietgarden.org [accessed 24 May 2012]

Research Design Connections (2009-10) www.researchdesignconnections.com [accessed 17 January 2011]

Roget's 21st Century Thesaurus (2013) Third Edition. Philip Lief Group [accessed 12 December 2013]

Roots & Shoots (2011) www.rootsandshoots.org.uk [accessed 20 October 2012]

Royal College of Physicians Medicinal Garden (2013) Information available at: www.rcplondon.ac.uk/museum-and-garden/garden [accessed 12 July 2013]

Royal Horticultural Society (RHS) Campaign For School Gardening (2013) <http://apps.rhs.org.uk/schoolgardening/default.aspx> [accessed 9 May 2013]

Sensory Studies (2013) www.sensorystudies.org [accessed 22 May 2013]

Sensory Trust (2011) www.sensorytrust.org.uk [accessed 6 January 2011]

Serpentine Galleries (n.d.) <http://www.serpentinegalleries.org/exhibitions-events/serpentine-gallery-pavilion-2011-peter-zumthor> [accessed at various times]

Slow Cities (Cittaslow UK) (2011) www.cittaslow.org.uk [accessed 8 February 2010]

Slow Design (2004/5) www.slowdesign.org [accessed: 8 February 2010]

Slow Food (2011) www.slowfood.com [accessed 8 February 2010]

Slow Food UK (2006-8) www.slowfood.org.uk [accessed 8 February 2010]

Slow Gardening (n.d.) <http://www.slowgardening.net/handout.html> [accessed: 13 October 2013]

Slow Lab (2010) www.slowlab.net [accessed 8 February 2010]

Slow Planet (2011) www.slowplanet.com/blog/home/ [accessed 8 February 2010]

Social Design Network: Design 21 (2007-8) www.design21.sdn.com [accessed 8 February 2010]

Society Of Garden Designers (SGD) (2013) www.sgd.org.uk [accessed 10 January 2013]

Space Syntax (2009) www.spacesyntax.com [accessed 27 January 2010]

Stanford Center on Stress and Health (2010) <http://stresshealthcenter.stanford.edu/> [accessed 2 December 2010]

Sustainable Everyday Project (2011) www.sustainable-everyday.net/sephome/home.html [accessed 24 January 2011]

The Ecology Centre, Kinghorn, Fife (2012) www.theecologycentre.org [accessed 20 October 2012]

The Guardian (n.d.) <http://www.theguardian.com/lifeandstyle/2008/feb/17/gardens> [accessed at various times]

The Pioneer Health Centre in Peckham (n.d.) <http://cassieclarke.co.uk/mixedup/?tag=peckham-project> [accessed 20 November 2013]

The Sound Agency (2013) www.thesoundagency.com [accessed 1 October 2013]

Therapeutic Landscape Network (2013) www.healinglandscape.org [accessed 7 January 2013]

Thrive (2011) www.thrive.org.uk [accessed 12 January 2011]

Topio Limited (2013) <http://topio.co.uk> [accessed 6 April 2013]

Topher Delaney (2013) www.tdelaney.com [accessed 9 May 2013]

Touchstone Collaborations (2013) www.touchstonecollaborations.com [accessed: 6 April 2013]

Understanding Landscape Through Creative Autoethnography (Exeter University) (2007) <http://geography.exeter.ac.uk/understandinglandscape/> [accessed 26 October 2009]

Victoria & Albert Museum <http://collections.vam.ac.uk/item/O17825/in-a-shoreham-garden-watercolour-palmer-samuel/> [accessed at various times]

Visualising Ethnography (2010)
www.lboro.ac.uk/departments/ss/visualising_ethnography [accessed 28 January 2010] includes details of 'experiences: photography in a hospital setting'

UNESCO (1992-2014) The Sanctuary of Epidaurus, Greece
<http://whc.unesco.org/en/documents/110323> [accessed 18 June 2013]

Wellbeing 2011 (2011) www.biad.bcu.ac.uk/research/wellbeing2011/ [accessed 11 March 2011]

Wellcome Library, London (n.d.) <http://wellcomelibrary.org/> [accessed at various times]

Westley Design (2008) www.westleydesign.co.uk [accessed 13 March 2013]

Wikimedia Commons (2004) 'Emilia in the Garden'
[http://commons.wikimedia.org/wiki/File%3AEmilia_in_the_rosegarden_\(Teseida\).jpg](http://commons.wikimedia.org/wiki/File%3AEmilia_in_the_rosegarden_(Teseida).jpg) [accessed: 13 October 2013]

World Health Design (2011) www.worldhealthdesign.com [accessed 20 January 2010]

World Soundscape Project (2013) <http://www.sfu.ca/~truax/wsp.html> [accessed 1 October 2013]

Interviews

Anderson, A. (2012) (Centre Head Maggie's Edinburgh), interview with author, 29 May 2012

Bostin, K. (2011) (Fira Landscape Architects), interview with author as audio walking tour of garden at Macmillan Renton Unit at Hereford County Hospital, 10 October 2011

Brewin, W. (2010) (Creative Spaces Project Manager, Sensory Trust), interview with author as audio walking tour of outside space at Trevarna Care Home, St Austell, 16 September 2010

Brewin, W. (2013c) (Creative Spaces Project Manager, Sensory Trust), interview with author, St Austell, 15 March 2013

Byrne, B. (2010) (Centre Head Maggie's London), interview with author as walking tour of Maggie's London garden, 28 September 2010

Creaser, R. (2010) (Gardener at Maggie's London), interview with author as walking tour of Maggie's London, 29 September 2010

Creaser, R. (2012) (Gardener at Maggie's London), interview with author at Maggie's London, 27 June 2012

Facer, C. (2010) (Landscape Designer), interview with author at Througham Court, 29 July 2010.

Fide J. (2011a) (Centre Head, Maggie's Cheltenham), interview with author as a walking tour at Maggie's Cheltenham, 7 April 2011,

Fide J. (2011b) (Centre Head, Maggie's Cheltenham), interview with author at Maggie's Cheltenham, 11 October 2011

Fide J. (2011c) (Centre Head, Maggie's Cheltenham), interview with author at Maggie's Cheltenham, June 2012

Gathorne-Hardy, F. (2013) (Landscape Designer), interview with author (by telephone), 8 April 2013

Halman, M. (2010) (Gardener), interview with author at Trinity Hospice, London, 27 Sept 2010

Hardie, A. (2012) (Filmmaker), interview with author (by telephone), May 2012

Howells, L. (2010) (Centre Head Maggie's Dundee), interview with author as walking tour of the garden at Maggie's Dundee, September 2010

Howells, L. (2013) (Centre Head Maggie's Dundee), telephone conversation with author, 13 March 2013

Jencks, L. (2012) (Landscape Designer), interview with author at studio, 4 July 2012

Lee, L (2010) (Maggie's CEO), interview with author at Maggie's HQ, London, 14 December 2010

Kamp, D. (2012) (Dirtworks NY), interview with author at Trevarna Care Home, St Austell, 18 February 2012

Kelly, J. (2012) (Artist and gardener), interview with author as walking tour of Glasgow Homeopathic Hospital Garden, 10 May 2012

Marles, K. (2013) (Environments Design Lead at Macmillan), telephone conversation with author, 4 October 2013

McQuade, M. (2013) (Maggie's Development Director), interview with author (by telephone), 15 August 2013

Murphy, R. (2011) Extracts from interview with Richard Murphy by Joseph Crinion, Architectural Student, University of Newcastle [transcript given to author]

Pearson, D. (2010) (Landscape Designer), interview with author at Dan Pearson's Studio, 14 December 2010

Porter, C. (2010) (Landscape Designer), interview with author as audio walking tour, North Devon Hospice, Barnstaple, 20 October 2010

Stoneham, J. (2011) (Director of Sensory Trust and plant designer for Creative Spaces Project), interview with author as walking tour of outdoor spaces at Trevarna Care Home, St Austell, 6 April 2011

Westley, M. (2010) (Wesley Designs), interview with author at Westley Designs studio and also as walking tour on site of Play For Life Inclusive Project at Royal Cornwall Hospital, 23 September 2010

Wilkie, K. (2012) (Landscape Designer), interview with author (by telephone), 18 September 2012

Wolfe Murray, D. (2010) (Independent Gardening Limited), telephone conversation with author, 22 October 2010

Principle Interviews and Photo-elicitation with Research Participants

Maggie's Cheltenham (33 people interviewed)

MC1 female volunteer (2011)
MC2 female staff (2011)
MC3 female staff (2011)
MC4 woman with cancer (2011)
MC5 female visitor (2011)
MC6 woman with cancer (2011)
MC7 man with cancer (2011)
MC8 woman with cancer (2011)
MC9 female volunteer (2011)
MC10 man with cancer (2011)
MC11 male visitor (2011)
MC12 man with cancer & female relative (2011)
MC13 man with cancer (2011)
MC14 female staff (2011)
MC15 man with cancer (2011)
MC16 male staff (2011)
MC17 woman with cancer (2011)
MC18 woman with cancer (2011)
MC19 female staff (2011)
MC20 female volunteer (2011)
MC21 female staff (2011)
MC22 female volunteer (2011)
MC23 female staff (2012)
MC24 male staff (2012)
MC25 male staff (2012)
MC26 woman with cancer (2012)
MC27 man with cancer (2012)
MC28 woman with cancer (2012)
MC29 man with cancer and female relative (2012)
MC30 2 female visitors (2012)

Maggie's Dundee (29 people interviewed)

MD1 male volunteer (2011)
MD2 woman with cancer (2011)
MD3 female staff (2011)
MD4 man with cancer (2011)
MD5 female staff (2011)
MD6 female staff (2011)
MD7 woman with cancer (2011)
MD8 woman with cancer (2011)
MD9 woman with cancer & male family member (2011)
MD10 female staff (2012)
MD11 female staff (2012)
MD12 female staff (2012)
MD13 female staff (2012)
MD14 man with cancer (2012)
MD15 woman with cancer (2012)
MD16 2 men with cancer (2012)
MD17 female visitor (2012)
MD18 woman with cancer (2012)

MD19 woman with cancer (2012)
MD20 woman with cancer & male relative (2012)
MD21 woman with cancer (2012)
MD22 man with cancer (2012)
MD23 man with cancer (2012)
MD24 woman with cancer (2012)
MD25 female relative (2012)
MD26 women with cancer (2012)

Maggie's Edinburgh (24 people interviewed)

ME1 female staff (2011)
ME2 woman with cancer (2011)
ME3 woman with cancer (2011)
ME4 woman with cancer (2011)
ME5 woman with cancer (2011)
ME6 male volunteer (2011)
ME7 female staff (2011)
ME8
ME9
ME10 male visitor (2012)
ME11 male staff (2012)
ME12
ME13 female volunteer (2012)
ME14 male volunteer (2012)
ME15 female volunteer (2012)
ME16 man with cancer (2012)
ME17 woman with cancer (2012)
ME18 female staff (2012)
ME19 woman with cancer & female relative (2012)
ME20 4 women with cancer (2012)
ME21 woman with cancer (2012)
ME22
ME23 male volunteer (2012)
ME24 woman with cancer (2012)

Maggie's London (39 people interviewed)

ML1 female staff (2010)
ML2 female staff (2010)
ML3 male staff (2010)
ML4 female staff (2010)
ML5 female staff (2010)
ML6 female staff (2010)
ML7 female staff (2010)
ML8 female staff (2010)
ML9 man with cancer (2010)
ML10 woman with cancer (2010)
ML11 woman with cancer (2010)
ML12 3 woman with cancer, 1 man with cancer (2010)
ML13 woman with cancer (2010)
ML14 man with cancer (2010)
ML15 woman with cancer (2010)
ML16 woman with cancer (2010)
ML17 woman with cancer (2010)
ML18 woman with cancer (2011)

ML19 woman with cancer (2011)
ML20 female staff (2011)
ML21 man with cancer (2011)
ML22 female staff (2011)
ML23 male relative (2012)
ML24 woman with cancer (2012)
ML25 female staff (2012)
ML26 woman with cancer (2012)
ML27 woman with cancer (2012)
ML28 man with cancer (2012)
ML29 man with cancer & female relative (2012)
ML30 man with cancer & female relative (2012)
ML31 woman with cancer (2012)
ML32 female volunteer (2012)
ML33 woman with cancer (2012)
ML34 male volunteer (2012)

Maggie's Nottingham

MN1 female relative (2012)

Maggie's Highlands

MH1 female staff (2010)

MH2 female staff (2010)

Maggie's Fife

MF1 female staff (2010)

MF2 female staff (2010)

MF3 female staff (2010)

MF4 female staff (2010)

Macmillan Ambulatory Oncology Centre, Leighton Hospital, Crewe (6 people interviewed)

MACC1 man with cancer (2011)

MACC2 woman with cancer (2011)

MACC3 female staff (2011)

MACC4 female staff (2011)

MACC5 female staff (2011)

MACC6 female staff (2011)

Macmillan Ambulatory Cancer Treatment Unit, Warwick Hospital (11 people interviewed)

MACW1 man with cancer (2011)

MACW2 man with cancer (2011)

MACW3 woman with cancer (2011)

MACW4 woman with cancer (2011)

MACW5 man with cancer (2011)

MACW6 woman with cancer (2011)

MACW7 man with cancer (2011)

MACW8 female relative (2011)

MACW9 woman with cancer (2011)

MACW10 female staff (2011)

MACW11 female staff (2011)

The Friends Garden, Great Ormond Street Hospital for Children, London (19 people interviewed)

GOSH1 female staff (2011)
GOSH2 female staff (2011)
GOSH3 female staff (2012)
GOSH4 female staff (2012)
GOSH5 female staff (2012)
GOSH6 female staff (2012)
GOSH7 male staff (2012)
GOSH8 male staff (2012)
GOSH9 male staff (2012)
GOSH10 female staff (2012)
GOSH11 female staff (2012)
GOSH12 male staff (2012)
GOSH13 female staff (2012)
GOSH14 male staff (2012)
GOSH15 male staff (2012)
GOSH16 female staff (2012)
GOSH17 female staff (2012)
GOSH18 female staff (2012)
GOSH19 male staff (2012)

Trevarna Garden, Cornwall Care, St Austell, Cornwall (17 main interviews, further 21 shorter interviews (CS20- 40) conducted in collaboration with the Sensory Trust)

CS1 & CS16 female staff (2 interviews, January & September 2012)
CS2 female staff (2012)
CS3 male community member (2012)
CS4 male community member (2012)
CS5 male community member (2012)
CS6 female community member (2012)
CS7 male community member (2012)
CS8 female staff (2012)
CS9 male staff (2012)
CS10 male staff (2012)
CS11 female staff (2012)
CS12 female relative (2012)
CS13 female staff (2012)
CS14 female family member (2012)
CS15 female staff (2012)
CS16 see CS1
CS17 female relative (2012)
CS18 male relative (2012)
CS19
CS20 female staff (2012)
CS21 female staff (2012)
CS22 female resident (2012)
CS23 male relative (2012)
CS24 male resident (2012)
CS24 male resident (2012)
CS24 female staff (2012)
CS26 male staff (2012)

CS27 female staff (2012)
CS28 female relative (2012)
CS29 female staff (2012)
CS30 female staff (2012)
CS31 male and female relatives (2012)
CS32 female relative (2012)
CS33 female resident (2012)
CS34 3 female visitors (friends of resident) (2012)
CS35 female relative (2012)
CS36 male staff (2012)
CS37 female staff (2012)
CS38 male staff (2012)
CS39 2 female staff
CS40 female resident (2012)

CSa male resident (2010)
CSb female resident (2010)
CSc male resident (2010)

The Sand Rose Project, Marazion, Cornwall

SRP1 male visitor (2011)
SRP2 female visitor (2011)
SRP3 female visitor (2011)
SRP4 female visitor (2011)
SRP5 male visitor (2011)
SRP6 male visitor (2011)
SRP7 male visitor (2011)
SRP8 female visitor (2011)
SRP9 male visitor (2011)
SRP10 female visitor (2011)

Visitors' Books

Maggie's London (2011-12)
Maggie's Cheltenham (2011-12)
Maggie's Dundee (2011-12)
Maggie's Edinburgh (2011-12)

Online Surveys/ Audits

Maggie's Cheltenham (MCOS) (2011)
Maggie's Dundee (MDOS) (2011)
Maggie's Edinburgh (MEOS) (2011)
Maggie's London (MLOS) (2011)
Maggie's Online Centre (2011)
Maggie's Visitor Audit (2011)

Friends Garden, Great Ormond Street (GOSHOS) (2012)
Sand Rose Project (SRPOS) (2012)
Sand Rose Project Visitor Feedback (SRPVF) (2010-12)

Papers/ presentations by the author that have arisen from the research for this thesis

Poster presentation, 'Dementia, Gardens and Community', at '27th International Conference of Alzheimer's Disease International', London, 7-10 March 2012. Collaboration with The Sensory Trust.

Paper presentation, 'Resilient Places? The Restorative Paradigm and The Maggie's Centre Gardens', at 'Ethics and Aesthetics of Architecture and Environment (Landscape strand) Conference', Newcastle University, 11-13 July 2012.

Paper presentation, 'The Narrative of Resilience: Sensory Mapping and Maggie's Cheltenham', at 'Environmental Utterances Conference', Falmouth University, 1-2 September, 2012.

Paper presentation, 'Resilient Places: Restorative Gardens, Health and the Maggie's Centres', at 'ESF Research Symposium', Combined Universities in Cornwall, Falmouth, 26 November 2012.

Paper presentation, 'The Silent Carers: Exploring the Role of Architecture and Gardens at the Maggie's Cancer Care Centres', at 'WELL-BEING 2013', Birmingham City University, 23-24 July 2013. Joint paper with Daryl Martin from the University of York.

Paper presentation, (report) 'Resilient Places? Healthcare Gardens and Maggie's', at Maggie's Professional Advisory Board Meeting, London, 30 October 2013.