THE SALUTOGENIC ROLE OF THE ENVIRONMENT IN MAINTAINING AND ENHANCING WELL-BEING

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Abstract

The impact of place on human well-being is a core theme within Environmental Psychology. Research on the positive effects of place has typically focussed on how specific types of place such as *green* or *natural* environments restore individuals who are depleted in physical or psychological resources in some way. The current research offers a contrasting but complementary position to this existing body of research. The primary aim was to explore the range of places that have the potential to provide well-being benefits to well (i.e., not depleted) individuals. This approach shifts the emphasis from a focus on narrow categorisation of place and from a restoration (pathogenic) to a health-promotion (salutogenic) narrative of place/well-being relationships. The research was grounded in the Person Place Process theoretical framework (Scannell & Gifford, 2010) and draws on theories of well-being (Keyes, 1998) and behaviour (COM-B; Michie et al., 2011). Further aims of the research were to consider how an individual's relationship to place and barriers they could experience accessing place, impact multiple well-being outcomes. The findings have implications for place-related health-seeking behaviour and social prescribing. The research employed a mixed-methods approach utilising semi-structured interviews and online surveys. The interviews in Study 1 (N = 20) used an inductive approach, generating rich, nuanced data relating to place/well-being relationships. The aim of Study 1 was to investigate the relationships people had with places they felt positively impacted their well-being. Initial conclusions from this first study indicated that the range of places people selected were diverse will well-being outcomes moving beyond positive affect to eudaimonic and social aspects of well-being and were used to explore theoretical frameworks for well-being, place attachment and place related behaviour. These findings informed the design of two online survey studies (N = 289) and (N = 530). The surveys employed a range of items and measures relating to place/well-being relationships. Study 2 was an exploratory study with the aim of investigating whether the experiences reflected on by participants in study 1 were common to a wider sample and the findings helped clarify the theoretical understanding of characteristics of place, aspects of well-being, and person-place relationships. Study 3 built on the previous two studies and the findings indicated participants associated a wide range of places with varied, positive well-being outcomes and that place attachment and behavioural determinants of access to place, also impact on this relationship. Whilst the

results did indicate that place characteristics and types impacted differentially on aspects of perceived well-being, differences by these factors were marginal. The findings across the 3 studies emphasised the range of places with the potential for health promotion, the importance of understanding place/well-being relationships, and how behavioural barriers/facilitators impact access to these places. The implications of the findings are discussed in terms of how people relate and access the full range of places that support well-being, including the implications for theories of place attachment (Person, Place Process model). The conclusion is drawn that the complexity of person-place relationship is beyond the scope of single models and requires a flexible approach that focuses on individual experiences of, and relationships with, place. The implications for well-being and behaviour (COM-B) are discussed in terms of suggestions for interventions that utilise salutogenic potential of place.

Keywords: Environmental Psychology, Place, Well-being

Contents

List of tables

List of Figures

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Chapter 1: Introduction and Rationale: 'We Shape Our Buildings, Thereafter They Shape Us'

The aim of this chapter is to position this thesis within the larger body of published work that considers people's well-being outcomes, and how they are associated with the places people spend time in. After an introduction to the importance of considering human well-being in the context of place, this chapter addresses three key points within place/well-being research. First, there is an exploration of the way in which places have typically been considered in terms of factors that can harm human well-being. The focus on recovery from this position of sub-optimal well-being has dominated place/well-being research; arguments are presented in this chapter to challenge this approach. Second, the use of categories that focus on the physical attributes of a place (type of place categories) is considered within the context of place/well-being research. Third, the importance of taking into consideration individual differences in people's interactions with place is discussed, specifically, the role of person-place relationships. Chapter 2 clarifies the specific theories, models and frameworks that were used to guide the studies within this thesis and develop the research questions. The studies that investigated these research questions are outlined in Chapter 2, then detailed in Chapter 3 (Study 1), Chapter 5 (Study 2) and Chapter 6 (Study 3).

1.1 Place/well-being research: How do environments shape wellness?

Well-being outcomes are increasingly seen as a way of judging the state of a nation's health, alongside more traditional economic markers such as Gross Domestic Product (ONS, 2019). The United Nations (UN, 2019) has urged its members to gather happiness and well-being information as positive well-being is linked to improved health outcomes. This data is recognised as a key component of Joint Strategic Needs Assessments (JSNA), which are central in planning the future health and care needs of a population (Department for Health and Social Care, 2019). Well-being outcomes are highlighted as important targets in international (United Nation, 2019; World Health Organisation, 2019) and national (Randall, 2014) public health policies. In the UK where this research is set, the Office of National Statistics (ONS) publishes data quarterly on personal and economic well-being, including a range of measures such as employment rates, perceptions of the future and self-reported anxiety levels (ONS, 2019).

A key role of public health is to explore ways to maintain and improve these well-being outcomes. One important aspect of this is to consider the role of the environment. The World Health Organisation (WHO) stated nearly 25% of diseases were caused by environmental factors (Zhang et al., 2018). Typically, research in this field has involved exploring the impact of environmental hazards such as pollution and physical stressors, for instance noise and crowding (e.g., Baum, Singer & Baum, 1981; Lederbogen, et al., 2011). However, the focus of environmental research has shifted to include the impact that specific environments, particularly 'natural' or 'green' places, have on health and well-being (Bragg & Atkins, 2014).

With a global increase in urban living, there is a focus on how to create or enhance urban environments that impact positively on well-being outcomes, as well as reducing the burden of disease. The World Health Organisation (WHO) Healthy Cities Network aims to enable positive health and well-being outcomes and includes a strong focus on environmental factors including the provision of urban green space (WHO, 2019). Research indicates clear links between greener living environments and reduced mortality, increased self-rated health, more favourable cardio-vascular markers, and reduction in type 2 diabetes rates (Clarke & Wentworth, 2016; Stoltz & Schaffer, 2018; University of Exeter & Defra, 2018).

Access and exposure to natural places are also seen as playing an important role in tackling health inequalities in the UK (Allen & Balfour, 2014; Sustainable Development Commission, 2007). For example, the role of the environment and the importance of accessing greenspace to improve well-being outcomes has been highlighted in the Public Health Outcomes Framework (Public Health England, 2018). The impact of environment on well-being is also considered within the government's 'A green Future' environment plan (Defra, 2018) and the Public Health England Prevention Concordant on Mental Health (Public Health England, 2017). During the COVID 19 pandemic in 2020, the UK government published guidance from Defra and Natural England on accessing green spaces (Gov.uk, 2020); and this guidance emphasised the role of green spaces in maintaining physical and mental well-being. Access to green spaces particularly urban green spaces, became a focus for debate within local government and the media during

the 2020 lockdown, with the emphasis on health inequalities in the UK, for example Barney Ronay writing in The Guardian 7th April 2020 stated that:

> *"[…] when parks and public spaces are finally closed, it will be one of the most destructive side-effects of this pandemic to date. A disaster for physical and mental health."*

Samuelsson et al. (2020) suggest that urban green spaces such as parks, play a 'critical' role in reducing stress, building social capital in times of social distancing, and building resilience at times of crisis such as the 2020 pandemic.

Research into place/well-being relationships explores outcomes across physical, health, economic, social and mental well-being. Whilst the central themes remain the same, the focus for research is slightly different across disciplines such as human geography, architecture, health studies and psychology. Public health research has focused on an epidemiological understanding of the 'pathogens' within the environment and the impact these have on the population. The emergence of the field of Environmental Psychology in the late 1960s expanded the focus to include the interactions between persons, their physical environments, the psychological processes that govern our interactions with these locations, and the human behaviour that results as a consequence. Marcus (2018) suggested that the social sciences tended to ignore the physical environment, with of course the exception of work that is positioned within geography, until the emergence of Environmental Psychology.

The interdisciplinary roots of research into place/well-being relationships has resulted in differences and inconsistencies in how health and well-being outcomes are defined and measured. There are diverse terminologies and theoretical frameworks used to address similar research questions. The aim of this thesis is to explore place/well-being relationships from an Environmental Psychology perspective. Emerging from the work of Brunswick and Lewin on the impact of physical environments on psychological functioning and behaviour, Environmental Psychology developed into a distinct field in the late 1960s. There are a number of identifying features of contemporary Environmental Psychology (Steg et al., 2013) that support its use within this thesis.

Within the field of Environmental Psychology, there is an emphasis on an interactive approach, for example the impact of a specific environment on a person is considered alongside how people behave in relation to place. This acknowledgement of dynamic relationships helps to provide a clearer understanding of how to develop strategies and interventions that can positively impact on well-being as well as shaping our physical environments.

Environmental Psychology has a history of interdisciplinary collaborations for example with geography, environmental sciences, and health promotion (Kitchin et al., 1997; Singh, 2018; Stokols, 1978). In addition, it draws on traditional fields within psychology such as cognitive, social, developmental and health psychology, applying these core areas of psychological science to the context of environmental influences (Pacheco & Lucca-Irizarry, 1995). This supports the use of a wider range of methodological approaches as well as extending the reach beyond the confines of the specific field. Environmental Psychology also employs a range and rigour of research approaches (e.g., Tanur, 1985; Lange & Dewittes, 2019) to tackle real-world issues, whilst being embedded in a discipline that places a high value on positioning empirical research within theoretical and contextual frameworks. The aim of this thesis is to explore factors involved in place/well-being relationship using a rigorous approach employing a mix of methods to position the key concept of person-place relationships and well-being within theoretical and organisational frameworks.

Despite the strengths of Environmental Psychology, there are perceived limitations within existing place/well-being research, which have contributed to the development of the projects within this thesis. These limitations include: 1) The dominance of a deficit model of well-being, 2) the focus on a green/urban dichotomy that does not reflect the potential range of places to offer place/well-being benefits and 3) the lack of focus on the role of person-place relationships in understanding the potential well-being benefits of place. Each of these limitations will be addressed in subsequent sections of this chapter.

1.2 The dominance of a deficit model

Environmental psychology research exploring place/well-being relationships is typically based on the premise that people must be in a depleted state (i.e., cognitively fatigued, stressed, or ill) to obtain benefits from engaging with environments (Alcock, et al., 2014; Korpela et al., 2016; Pretty et al., 2007; Takayama, et al., 2014). Many research studies are based on individuals experiencing some particular 'deficit' in order to benefit from interacting with particular environments such as nature, and this narrative has been dominant within place/well-being research for many years. This deficit approach can also be found in research that focuses on the impact of stressors within the environment on individual health and well-being. In the mid-late 20th century, the idea that environments created stress was explored. Milgram (1970) was amongst the first to consider how aspects of urban living could elicit a stress response; and environmental psychologists have emphasised reducing the presence and impact of 'stressors' such as noise (Glass & Singer, 1972; Clark & Paunovic, 2018), density and crowding (Stokols, 1972), and air pollution (Bullinger, 1990; Ventriglio et al., 2020).

The fact that green places are associated with higher levels of well-being could be understood through enhanced air quality (Craig et al., 2016), buffering of anthropogenic noise (Gidlöf-Gunnarsson & Öhrstrom, 2010) and the reduction of other environmental stressors. Often, there is an objective comparison between larger numbers of people in urban environments to lower numbers in rural/green settings which is the focus of research into environmental stressors. For example, the impact of density (i.e., the number of people in given physical space) associated with urban environments could be considered as a key consideration in the way they are perceived and whether these settings elicit stress responses. Acute, high levels of density in urban locations produce physical stressors such as increased noise, temperature and carbon dioxide levels (Basner et al., 2014; Clark & Paunovic, 2018; GOV.UK, 2018); these, in turn, can elicit physiological stress responses in individuals including, endocrine and autonomic nervous system activation. Prolonged, chronic exposure to environmental stressors could have direct pathogenic consequences (e.g., pollution; WHO, 2019) but also prologued activation of the stress response both of which are linked to negative physical and mental health outcomes (respiratory and cardiovascular disease, depression and anxiety (Clark &

Paunovic, 2018). However, in environmental psychology these physical stressors will rarely be the primary research focus. Instead, density is considered in terms of its impact on crowding, which is a psychological construct that refers to the extent to which individuals perceive the presence of others as an intrusion (Stokols, 1972). From this perspective, the extent to which the presence of others can act as a stressor depends on the complex interplay of spatial, social and personal factors (Stokols, 1972). This means that whilst rural environments may be characterised by much lower density, the presence of others may still act as stressors.

Within person/place-well-being research a number of pathways have been proposed that offer explanations as to the nature of the relationship between nature and well-being. Hartig et al. (2014) suggest four pathways through which environments impact well-being: stress, air quality, physical activity, and social contact. The fact that green places are associated with higher levels of well-being could be understood through enhanced air quality (Craig et al., 2016), buffering of anthropogenic noise (Gidlöf-Gunnarsson & Öhrstrom, 2010) and less crowding i.e., the reduction of environmental stressors. Green places could also afford opportunities for activity and social contact but not necessarily more than urban or built environments. Van Hetzel et al. (2015) proposed a pathway whereby green environments offer greater macro and microbiota which lead to increased human biota. The gut-brain axis is a bidirectional system that suggests that gut health is linked to cognitive and emotional functioning (Carabotti et al., 2016), so higher levels of human biota are associated with positive well-being outcomes. A number of theories refer to our ability to process natural elements with more fluency (e.g., Joye & van den Berg, 2011) however there is a lack of evidence to support the idea that information processing is different for natural and non-natural elements per se (Baxter & Pelletier, 2019). Research will continue to explore whether there is a direct pathway whereby elements of blue and green environments are linked directly to well-being or if they fulfil requirements of environments that indirectly support well-being.

Overall, there is an underlying narrative throughout the literature that urban environments elicit greater levels of environmental stressors and that places that elicit well-being outcomes are ones that lack stressors; with the focus on the absence of ‘negative’ factors (Devlin, 2018). Prior to the emergence of positive psychology, the study

of health and well-being emphasised reducing or counter-acting negative consequences resulting from environmental stressors, rather than producing positive well-being outcomes. This focus on restoring deficits in well-being rather than enhancing wellness is typified by two main approaches that dominate place-well-being research: therapeutic environments and restoration theories.

1.2.1 Therapeutic Environments

Therapeutic environments are designed to reduce symptoms for individuals who are depleted cognitively, stressed or experiencing mental ill-health such as anxiety or depression (Alcock et al., 2014; Cohen-Cline et al., 2015; Weimann et al., 2015). Typically, therapeutic environments have been *extraordinary* or noteworthy locations rather than *everyday* places; they are often tied-in with spiritual traditions such as places of pilgrimage or healing waters. In many cases, links to nature are integral, as seen in medieval monastic infirmary gardens, 19th century asylum gardens (Marcus, 2018) and the Japanese concept of Shinrin-yoku or forest bathing (Takayama et al., 2014). Whilst more everyday places are now being explored, the history of the prior research, combined with the current interest in nature, has meant that there is an assumption that therapeutic environments are primarily positioned within natural places (Bell et al., 2015; Bragg & Atkins, 2016; Korpela et al., 2016).

The proposition that natural environments offer therapeutic benefits has gained renewed interest around the world. For example, forest bathing programs have been developed for gaming addicts and firefighters with PTSD in South Korea (Williams, 2017). In the UK, the Ecominds project provides a range of nature-based therapies for a variety of clients including victims of torture (Bragg et al., 2013). Animal Assisted Therapy programmes have been developed in many countries including Belgium, Germany and Austria (Hassink & van Dijk, 2006).

There are numerous UK organisations that promote the narrative that there is a therapeutic link between green or natural places and positive health and well-being outcomes. This includes commercial companies (e.g., Gardeners World magazine) and non-government organisations (e.g., RSPB); and the NHS is notable by taking a substantial role in promoting the value of green places and, specifically, nature-based interventions.

In 2020, the UK government announced a £4m project for the support and development of green social prescribing with seven 'test and learn' sites selected for investment. These sites develop and support projects promoting activity in and visits to nature (NHS, 2020). The investment by the UK government was underpinned by a belief that nature is beneficial for health and well-being. In many cases, supporting evidence is rather limited. One example is a blog (Morton, 2016) that suggests that links between nature a wellbeing 'probably work through a variety of mechanisms', makes broad reference to restoration, and links to studies supporting Stress Reduction Theory. The additional cited evidence is drawn from the Natural England People and Nature survey (Gov.uk, 2021). Further examples of the NHS considering the role of nature includes the use of nature recovery rangers working within NHS trusts (Reiss, 2021) to manage the use of greenspaces on NHS sites and the NHS Greenspace project 'Bringing the outside in' (Naturescot, 2020). However, the term 'therapeutic environment' is used inconsistently and without clarity, with terms such as green care, ecotherapy and nature-based interventions used interchangeably (Bragg & Atkins, 2016), alongside the use of broader terms such as therapeutic landscapes and social prescribing. This has created confusion, for example, when it comes to health and social care commissioning of services. Bragg and Atkins attempted to search for consensus over terminology, but their research suggested agreement amongst stakeholders was not forthcoming (Bragg & Atkins, 2016).

Various authors emphasised the importance of distinguishing between therapeutic environments, and the related idea of restorative environments (Bragg & Atkins, 2016; Townsend et al., 2018; van den Berg & Staats, 2018). Therapeutic environments involve nature-based interventions that have a primary goal of addressing a cognitive deficit, stress or symptoms of mental illness (e.g., Murray et al., 2019). They involve the active use of natural elements at the heart of the intervention rather than including casual encounters with nature. Interventions based around therapeutic environments focus on the physical properties of the environment and people's relationships with them, in order to elicit an improvement in health through targeting of specific mental illnesses or perceived well-being deficits (e.g., Zaki et al., 2020). Thus, it can be argued that therapeutic environments are positioned within the deficit model of place/well-being associations.

The focus on nature as a therapeutic resource has certainly captured the zeitgeist to the extent that other places with the potential to offer well-being benefits have been less prominent in (or even absent from) environmental psychology research. The current thesis does not focus on nature therapy grounded in deficit model; instead, it moves towards exploring how people engage with personally meaningful places in both nature and urban settings and the role these play in enhancing and maintaining well-being.

1.2.2 Restoration Theories

The restoration theories of Stress Reduction Theory (Ulrich, 1979) and Attention Restoration Theory (ART, Kaplan & Kaplan, 1989) have stimulated a large body of research, to the extent that they dominate place/well-being relationship research in Environmental Psychology. These 'restoration' theories align with a deficit approach. Both theories focus on how to restore cognitive and emotional aspects of well-being from a starting point of an individual being depleted in some way. They assume an evolutionary pathway for the restorative powers of natural environments or green spaces. This section provides an overview of each restoration theory, for a full account of these restoration theories please see other critiques (e.g., Devlin, 2018; Joye & Dewitte, 2018; Joye & van den Berg, 2011).

Stress Reduction Theory (SRT, Ulrich, 1979, 1981, 1983, 1991) focusses on restoration in terms of physiological stress reduction which primarily results from affective reactions to viewing or experiencing nature. The theory was based on research that proposes that observing nature improved post-operative recovery rates. Ulrich (1981) noted that improved recovery rate was due to reduced stress levels in patients who observed natural elements from their hospital windows. According to SRT, this occurred because non-threatening natural environments represented a place of refuge and restoration for the patients due to removal of environmental stressors such as noise and crowding. Generally, SRT suggests stress is a reaction to negative cognitive appraisal of situations and/or environments that produce arousal of cardiovascular and neuroendocrine systems. This, in turn activates the parasympathetic nervous system and therefore, reduces both negative affect and physiological stress. Positioned within an evolutionary perspective, Ulrich postulates that as we evolved physiologically and psychologically within what we would now view as 'natural' environments, then our

responses to threats such as those that trigger our stress responses are situated within a natural environment. Environments that were advantageous to survival and recovery for our ancestors, did not contain urban elements, so these do not feature in our current recovery mechanisms. The brain mechanisms that evolved in the Environment of Evolutionary Adaptiveness (EEA) contain features that adapted to the threats posed and these now shape the way we respond to current threats for example the stress response (Bennett, 2019). As our response to stress is multidimensional (psychological, physiological, and behavioural) a 'multimodal process' is required to aid recovery from stress or what Ulrich calls 'an adaptive constellation of restorative responses' (Ulrich, 1991. P. 204). These include being attentive and engaged with restorative environments that then are associated with fewer feelings of fear and therefore lowering physiological arousal, impacting the activity of electrocortical systems. Our response to elements of our environments that are natural, have a parasympathetic component which helps support recovery from stress (Ulrich, 1991). Environments that pose threats or provide valuable resources but that are predominantly built or urban, have not been embedded in our response pathways in the same way that natural environments have (Bennett, 2019).

A restoration theory grounded firmly within cognitive theories of directed and involuntary attention is the Attention Restoration Theory (ART; Kaplan & Kaplan, 1989). The foundations for the attention constructs used in ART are based in the work of William James (1892, as cited in Kaplan, 1995. p. 169) and the concept of directed attention (Mesulam, 1985). ART centres on the limited capacity of directed, focussed attention, which becomes fatigued, for example after completing a problem-solving task. Kaplan (1995) outline a broad evolutionary pathway by which this process has come to be. Tasks that require prolonged directed attention cause fatigue and deplete our attentional resources. Kaplan suggests that avoiding fatigue and depleted attentional resources in adaptive terms could be an advantageous process. If we focus our attention by choice on a particular task to the exclusion of other environmental factors, we could become vulnerable to sources of threat; this lack of vigilance would put us at risk of injury or death either through cognitive errors (i.e., operating machinery) or not seeing a modern evolutionary threat (i.e., add one). The evolutionary role of nature in this explanation is that many natural elements do not require directed focussed attention and have

characteristics which both important and interesting. Involuntary attention focused on natural elements then allows depleted directed attention resources to replenish, reducing evolutionary risks. Kaplan (1995) proposes that aspects of the modern built environment are split in what is interesting and what is important. This need to divide attention means these environments are not only *not* restorative, they are functionally disadvantageous from an evolutionary perspective.

Rainisio and Inghilleri (2013) suggest that both ART and SRT deficit restoration theories assume that constructs such as well-being have a maximum or optimal level and that stressors deplete these to sub-optimal levels. Restoration theories then explore how to restore resources back to an optimal level, i.e., they adopt a homeostasis model (Devlin, 2018). Hagerty et al. (2001) criticised the 'deficit view' of measuring well-being, such as quality of life, because this approach indicates there is a maximum level of well-being or 'full' health. This homeostasis approach limits the opportunities for increasing well-being for any individuals except those who are depleted, and also raises issues about how these levels are objectively measured. What is maximum well-being?

In ART, four characteristics of an environment were identified as more likely to aid attentional restoration: *fascination, being away*, *extent* and *compatibility*. 'Fascination' refers to the capacity of the environment to attract and hold attention, 'being away' involves a conceptual rather than physical move away, 'extent' concerns coherence of the environment and 'compatibility' is the match between purpose, intent and the environment (Kaplan, 1995). The premise of ART is that not only do built environments deplete attentional resources, but importantly, natural environments more frequently meet these restorative criteria. Nature contains patterns and elements that require little focussed attention allowing for quicker recovery from depletion, the opportunity for reflection and restoration to 'optimal' well-being (Kaplan, 1995).

Restoration theories have been widely utilised and provides clear support for the role natural environments play in restoring attentional fatigue (e.g., Grassini, 2019). Restoration research has been used to develop interventions, strategies and policies that aim to improve well-being. Nature based therapy projects typically aim for specific therapeutic goals or long-term improvements in well-being, that are only loosely connected to outcomes cited in restoration literature. Despite this, organisations such as

Mind and The Wildlife Trust justify their use of interventions and projects that emphasise the role of nature by citing reports (e.g., Bragg et al., 2013; Bragg et al., 2015) that use restoration theories, specifically ART, as a theoretical underpinning. ART would only pertain to short-term restoration of depleted cognitive functioning and psychological mood states (Bowler et al., 2010; Hartig et al., 2014). Cleary et al. (2017) suggested the emphasis on restoration (the deficit model) rather than well-being enhancement has restricted research in this field.

The focus on the removal of environmental stressors, can suggest that the remaining environmental characteristics must therefore conversely promote positive well-being; but this may not be the case. A useful point for comparison is to consider how definitions of health have evolved. The WHO (World Health Organisation) definition of health has now moved beyond the deficit approach which focused on ill health (a pathogenic approach) by recognising that health is not merely the absence of 'disease or infirmity' (WHO, 2019) but also involves factors that support and promote positive health and well-being (a salutogenic approach). In the same way positive or enhancing environments are not those that merely represents the absence of stressors, but places that support and promote positive well-being.

1.2.3 Health promotion, not depletion: the Salutogenic Health Model

An alternative to the deficit model is to shift the focus to health promotion. The promotion of positive well-being relates to the concept of salutogenesis. Its focus is on factors that support human health and well-being rather than on pathogens or the factors that cause disease or ill-health (Antonovsky, 1979). The aim of salutogenesis in relation to well-being is to emphasise the maintenance and enhancement of well-being. In many ways it is consistent with positive psychology, supporting outcomes such as flourishing, thriving, engagement, growth, cohesion, attachment, and positive affect (Devlin, 2018). By adopting a salutogenic approach, it is possible to consider how places can enhance well-being for all, not just those who are stressed, cognitively or emotionally depleted or experiencing other types of mental ill-health. The salutogenic use of place can be developed at a personal level through and understanding of how places can support different aspects of well-being or at a more formal level through the development of place-based interventions. Salutogenic use of place may involve people accessing places

they already use but on a more regular basis. For example, if a person finds that spending time in local woodlands supports their well-being, then exploring how they can access this resource by overcoming barriers and embracing facilitators to ensure use can be embedded in their behaviour. This may involve the individual joining a structured group or activity, such as a walking or art group that accesses nature (e.g., a woodland), or volunteering for an organisation like Wildlife Trust. Alternatively, the process may be less formal and involve a personal commitment to use the place more regularly and in a more considered way. Where the place is one that is already accessed regularly, such as a person's own home, salutogenic use may simply involve a process of reflection about the aspects of well-being that are being supported and a recognition of how these can be further developed.

Whilst the deficit models (i.e., therapeutic environments and restoration theories) have dominated Environmental Psychology research on place/well-being associations, salutogenesis is more consistent with health promotion. This was illustrated by the WHO definition of health and government strategy such as Prevention Concordat for Better Mental Health (2017), which calls for a more prevention-focussed approach to mental health. This thesis is positioned within a salutogenic orientation to the exploration of place/well-being associations and further rationale for this choice is in Chapter 2.

1.3 Challenging the nature/urban dichotomy: Any colour as long as it's green?

As discussed earlier, there is a history in Environmental Psychology of exploring the negative consequences of stressors that mainly exist within urban environments (Lederborgen et al., 2011; Munzel et al., 2020; Stokols, 1972; Tao et al., 2021). This has led to cities being viewed as inherently stress-inducing. Thus, creating a strong discourse about negative aspects of cities in stark comparison with the positive benefits of access to nature, creating a false environmental dichotomy (Velarde et al., 2007; Wilkie & Clouston, 2015).

Manzo (2018) suggests that anti-urban Environmental Psychology research, with its focus on stressors and problems of urban living, has resulted in an *anti-urban* legacy. This is evident with references such as urban green spaces as 'relieving the stress of city living' (Hanlon & Price, 2018. p. 30) and 'countering these urban threats' (Zhang et al.,

2018. p. 2). Equivalent negative phrases are rarely, if ever, found in the literature relating to natural environments. This suggests that there is a wider narrative in research and in cultural terms that 'demonizes' cities (Manzo, 2018). Despite research outlining the benefits of urban living within positive psychology (e.g., Hollis, 2013; Seligman & Czichzentmihalyi, 2000), cities are rarely framed in a way that suggests how built elements relieve the stress of rural life, even though work on stewardship and landscape architecture shows that managed and built elements within green spaces are valued (Tveit et al., 2006). The current situation is that the urban environments discourse tends towards the extreme so that cities are as Manzo describes it 'great or awful' (Manzo, 2018. p. 108).

One result of the 'anti-urban' narrative is that natural environments tend to be presented in a wholly positive light. The focus on therapeutic environments and restoration theories, with their emphasis on the positive impact of natural environments, and their dominance within place/well-being research, has fed the view that 'nature is good'. This narrative extends beyond Environmental Psychology with Sociological considerations of the social construction of nature dating back to the 1990s (Greider & Garkovich, 1994; Proctor,1998). This discourse has contributed to the exaggerated dichotomy between natural and urban as they are viewed within place/well-being research, and there are growing calls for research to move beyond this 'green versus grey' narrative (e.g., Stoltz & Schaffer, 2018). The very narrow scope of dominant deficit theories, mean place/well-being research has been drawn into a very narrow remit. Beyond the focus of restoration theories, the links between broader well-being outcomes and types of place, such as natural or urban environments, is less clear. It is proposed that the full range of places that might produce broader well-being outcomes relating to concepts such as personal growth and autonomy should be explored. It may be a greater variety of *supportive* places exist and do more than simply make us happy, reduce stress or restore focussed attention.

Places are often categorised according to their dominant features such as green or nature, urban, urban green space and more recently blue space (those related to water) (e.g., Apkinar, 2017; Houlden et al, 2019; Huang et al., 2019; White et al., 2010). These *type of place* categories have been used consistently within Environmental Psychology,

but how they are defined and measured is less consistent (Taylor & Hochuli, 2017). These categories, in particular 'nature', carry significant cultural and/or geographical differences (Rainisio & Inghilleri, 2013). The label and perception of *green* in Sweden or Canada may vary qualitatively with how the same category is applied in the UK. These categories also play into cultural assumptions about the value of places, with *green* and *nature* carrying positive associations with health in comparison to *urban*. A further consideration is that green and nature have been used as synonyms and yet there are clear differences (Wheeler et al., 2015).

In their Evidence Statement on the links between natural environments and human health, the department for environment, food, and rural affairs (Defra) define a 'natural' environment as:

> "The whole of our physical and biological world, excluding spaces where the key components are non-living built structures created by humans but including urban green space, parks and gardens. It is recognised that most, if not all, 'natural environments' in the UK are to some extent 'manmade'. (University of Exeter & Defra, 2018. p.7)

This illustrates how broad some definitions of green spaces are, by this account it would be hard to see how people could avoid contact with natural environments in their daily lives; and thus, how the impact of the green element in contexts such as Attention Restoration Theory research could be judged.

The issues around defining and measuring green spaces is further complicated when people's perceptions of nature or green space are considered, because people interpret their environments differently. Perceptions of our environments are influenced by both personal experience and sociocultural representations, particularly when considering urban green spaces (Castree, 2013). The use of *urban* to categorise any built space may also be problematic, there is a huge difference between a tower block and a stately home. Similarly, the use of 'blue' to categorise places as diverse as wild coastal regions of Scotland and Liverpool docks may be limiting.

Within this thesis, there is a re-examination of the scope of the places that elicit positive well-being outcomes, with the aim of challenging the 'green is good, urban is

bad' narrative. There is still merit in using 'type of place' categories to position the current research within existing literature.

1.4 The role of person-place relationships: One size fits all?

In addition to the limitations of the deficit model and urban/nature dichotomy, there has also been a strong focus on the physical characteristics of place, particularly in the context of reducing negative health impacts. The idea that specific physical place characteristics make it more likely to elicit positive well-being is engaging particularly for those designing place/well-being interventions, town planners and architects. However, this keenness to identify prototypical physical places come at the expense of acknowledging the importance of our relationship to place.

Scannell and Gifford (2010) express it eloquently when they describe the complexity of person-place bonds:

> "The tapestry that describes the nature of one's relationship to a place is unique for each individual" (Scannell & Gifford, 2010. p. 5)

The way that people interpret characteristics of a place, for example the meaning they attribute to them, will be influenced by individual differences. The complex relationships that people have with places tend to be oversimplified by attempts to capture a 'one size fits all' place that improves well-being outcomes for everyone. One way to address this concern is to explore individual differences through the perspective of person-place theories.

There are a number of theories of person-place bonds, but the key concepts in them of place attachment, place dependence and place identity are commonly used (Lewicka, 2011). Place attachment is defined as positive feelings towards place. Place identity represents the beliefs that the self is defined in relation to place. Place dependence is the extent to which a place is valued for its physical characteristics and the resources that facilitate the achievement of important behavioural goals (Jorgensen & Stedman, 2006). The conceptual frameworks integrating these concepts vary in the hierarchy between them (Scannell & Gifford 2010). Place attachment is positioned differently within frameworks. For example, Sense of Place (Jorgensen & Stedman, 2006) positions place attachment as distinct but hierarchically equivalent to place identity and

place dependence. The Person Place Process organisational framework by Scannell and Gifford (2010) considers place attachment as an overarching concept encompassing all three dimensions. A more thorough discussion of these models is provided in Chapter 2, along with the rationale for the specific choice of a place attachment framework for the thesis.

Place attachment has been linked to positive well-being outcomes (e.g., Theodori, 2001) particularly on understanding how the bonds to place develop and impact on well-being outcomes. Korpela has produced a series of studies focused on how place attachment can mediate the restorative properties of place. Ratcliffe and Korpela (2016) examined how memory and place attachment can be measured as predictors of perceived restoration in relation to favourite places. Korpela et al. (2009) suggests that it is an individual's attachment and preferences for a place that lead to positive well-being outcomes rather than a type of place per se. More recently Ratcliffe and Korpela (2016) claim the emphasis on restoration theories (ART and SRT) leaves a gap in terms of *experiences* of place. They express the need for research to consider the way that meanings develop, and the impact these have on well-being outcomes.

Within person-place research the focus has been on either the 'place', as is the case with place/well-being research (e.g., White, et al., 2010) or the 'person' as is the case with place attachment research (Lewicka, 2011). The two elements often do not get equal weighting within research. An aim of this thesis is to consider both aspects in a more balanced way. A body of work that has established this balance is Korpela's research into favourite places (e.g., Korpela & Ylen, 2007; Korpela et al., 2008, 2009, 2010; Ratcliffe & Korpela, 2016) which emphasises how our emotional response and bonds with place mediate our responses to place. His research indicates that whilst natural environments can be restorative the emotional bonds associated with 'favourite' places also impacts on their restorative capacity. Building on the foundations from the extensive research into our relationships with place, there are a number of directions that place/well-being research has developed. Whilst complementing restoration theory research, this thesis aligns with approaches that seek to explore the positive impact on our well-being through focussing on our bonds with place by considering the role of place attachment as a factor within place-well-being relationships.

The approach adopted in this thesis helps illustrate the complexity of people-place relationships and the importance of moving beyond the narrow scope of restoration theories.

The Person Place Process conceptual framework (Scannell & Gifford, 2010) was adopted within this thesis and further discussion is presented in the methodological chapter (Ch. 2).

1.5 Aims of current research and thesis research questions

The studies presented in this thesis aim to address three perceived limitations in place-well-being research:

1. Typically, research exploring environment-well-being associations are based on the premise people must be cognitively fatigued, stressed, or ill to obtain benefits from engaging with specific built or natural environments (the deficit model).
2. Place/well-being research also employs an urban vs. nature dichotomy that does not fully capture the range of environments individuals use for well-being purposes (urban/nature dichotomy).
3. Existing research often overlooks people-place relationships as an important individual-differences factor that influences well-being outcomes achieved (one size fits all).

The research within this thesis explored the potential of places to elicit well-being outcomes in the general population, not just those who are depleted. A range of self-reported well-being outcomes are considered. The research explored both physical and non-physical characteristics of the place that individuals associate with positive well-being outcomes, as well as the relevance of 'type of place' categories widely used within Environmental Psychology research. Lastly the thesis addresses the role of person/place relationships within place/well-being research, the impact this has on self-reported well-being outcomes and the positioning of the concept of place attachment within person-place theoretical frameworks. Based on the limitations and the research aims the following research questions are investigated:

1. In what ways can a range of physical environments be seen to enhance and maintain positive well-being outcomes in individuals? (RQ 1)
2. What characteristics across a range of physical environments impact on well-being outcomes? (RQ 2)
3. To what extent do person-place relationships impact on self-reported well-being outcomes for individuals? (RQ 3)

Chapter 2: Theoretical context and methodologies

Chapter 1 presented an overview of place/well-being research and perceived limitations of existing research which the studies in this thesis were intended to address. This chapter provides the theoretical context for these research limitations and research questions. It provides an outline of how well-being and person-place relationships are defined within specific theoretical frameworks, clarifies what *salutogenesis* and *place* mean within this thesis, and provides a rationale for the use of a mixed methods approach employed to achieve the research aims.

2.1 Well-being

The research reported in this thesis is focussed around understanding the potential of places and person-place relationships in maintaining and enhancing well-being. This section provides an overview of well-being and the salutogenic orientation position of the current research within a health promotion context. There is then a discussion around how well-being has been conceptualised and measured, with justification for the conceptualisation of well-being within this thesis.

2.1.1 Treatment or prevention?

In considering places as a potential resource for improving and maintaining well-being, there is a need to be clear on the orientation of the approach adopted. In this context, places can be viewed as a *treatment*, when they are considered within a pathogenic approach to health, or as *prevention*, with the focus on salutogenesis. As outlined in Chapter 1, the dominant position within place/well-being research is the focus on the impact and management of environmental stressors and how individuals can restore themselves from a position of depletion (i.e., a deficit). This 'deficit' approach can be understood within the pathogenesis paradigm of health and well-being, which addresses the question 'What factors make people ill or harm their well-being?' There is an assumption that by elimination of the causes of disease or poor well-being, individuals will be returned to a position of optimal or perfect health (Okan et al., 2019). However, the assumption that good health or positive mental well-being is merely the absence of disease or stressors has been challenged by the salutogenic approach (Antonovsky, 1979). Considering place/well-being relationships from a salutogenic orientation requires a shift

to addressing the alternative question of 'What factors make people well or enhance their well-being?' (Mittelmark & Bauer, 2017; Okan et al., 2019). In other words, how can we prevent ill health in the first place.

The 'salutogenic model' was developed by Antonovsky (1979, 1987, 1993b, 1996) to explore the origins of *health,* presenting a supplementary approach to the widely accepted pathogenic approach which considers the origins of *disease*. The Salutogenic model involved shifting the emphasis from factors that have a negative impact on health and create disease, to an emphasis on salutary factors that determine an individual's position on an Ease/Dis-ease continuum (Mittelmark & Bauer, 2017).

Antonovsky suggested that sociocultural and historical contexts shape both what we find stressful and how we cope with the stressors we experience. A core concept within his Salutogenic model is 'sense of coherence'. When an individual faces a source of stress, their sense of coherence determines their ability to cope. This process combines a desire to cope, an understanding of the challenge, and a belief in the availability of the resources needed (Antonovsky, 1996; Lindström & Eriksson, 2005) and our sense of coherence comes from how well aligned and predictable these three components are. 'Resistant resources' are developed to manage these stressors, define our abilities to combat the demands of life (Okan et al., 2019) and our capacity to create health (Lindström & Eriksson, 2005). In addition to intra-personal factors such as sense of coherence, the Salutogenic model incorporates extra-personal, external factors such as social and physical environments. Our environments can act as mediating factors on how we perceive and deal with stress. Supportive environments are those that facilitate good health and/or positive well-being (Mittelmark & Bauer, 2017).

The salutogenic approach to well-being aligns to a number of different theoretical frameworks relevant to place/well-being research. Mittelmark and Bauer (2017) suggest that hedonic and eudaimonic well-being have synergy with the salutogenic approach. Erikson and Lindström (2014) consider salutogenesis as an umbrella concept which includes 30 theories that contribute to our understanding of well-being. Included under this umbrella: quality of life, Diener's subjective well-being (e.g., Diener, 1984), and Keyes' concept of flourishing (e.g., Keyes et al., 2002).

In addition to the original Salutogenic 'model' developed by Antonovsky, salutogenesis as a scholarly orientation (Lindström & Eriksson, 2005; Mittelmark & Bauer, 2017) or broad approach has also become prevalent, particularly within health promotion research. The term 'salutogenesis' has become a key concept within health promotion, used by organisations such as the NHS, NICE and the UK government. The original model focussed on an individual's ability to achieve a sense of coherence as a way of combatting stressors. The term salutogenesis is now more frequently used in a general way, relating to how resources can be used to maintain and improve health and well-being (Mittelmark & Bauer, 2017). In this thesis, salutogenesis is used in this broader context, rather than the narrow 'Salutogenic model' as proposed by Antonovsky (1979). The aim is to identify and explore potential salutary factors in the context of place, that can act as a resource for positive well-being.

The use of place as a resource for well-being is becoming established within health promotion (e.g., Bragg & Atkins, 2016; Shanahan et al, 2019). However, in many cases the narrative is still very much positioned within pathogenesis. The assumption is that in order to return to a state of health, there is a need to rectify a 'deficit', or remove stressors, to re-establish well-being levels following a less-than-optimal state. A more *salutogenic orientation* would be to consider how everyday places can be used to enhance well-being. In this approach, individuals explore places as a resource for personal well-being maintenance and enhancement, which is more in line with the concept of individualised health, where people are involved in their own health care. The UK government's Framework for Personalised Care and Population Health (Public Health England, 2014) and 'All our Health' frameworks (Public Health England, 2020) include wider determinants of health such as our relationship with physical environments. Within the current thesis the salutogenic orientation assumes that the starting point for understanding place/well-being relationships is in exploring the potential for places, and person-place relationships, to positively impact well-being.

2.1.2 Conceptualising well-being

Well-being can be defined as psychological factors that contribute to mental health in its broadest terms (Trudel-Fitzgerald et al., 2019). It supplements objective measures of population well-being such as income, housing, employment, education and physical

health indicators (e.g., morbidity) that are used to assess the health of a group or population (Forgeard et al., 2011). There is broad consensus when it comes to conceptualising well-being but there are some areas of continued debate (Gasper, 2010; Trigwell et al., 2014). Some researchers equate well-being with a single construct such as 'life satisfaction' (Huta & Waterman, 2014); more frequently researchers and theorists acknowledge the multifaceted nature of well-being (Cleary et al., 2017; Finch et al., 2014; Forgeard et al., 2011). In positive psychology, well-being has been distinguished by two key concepts: hedonia and eudaimonia (e.g., Chen et al., 2012; Clearly et al., 2017; Dodge et al., 2012; Keyes et al., 2002; Ryan & Deci, 2001; Ryff, 1989; Seligman & Csikesntmihalyi, 2000; Waterman, 1993). These two core concepts are used extensively within well-being research, but there is a need to clarify their usage within this thesis as there is considerable debate about how they are applied.

Hedonic Well-being. The term hedonic well-being refers to the subjective experiences of happiness or pleasure irrespective of the source (e.g., Dodge et al., 2012). There is debate over the terminology used and criteria for inclusion when defining hedonic well-being (e.g., Chen et al., 2012; Forgeard et al., 2011); but typically, it has been conceptualised as comprising of a number of constructs such as life satisfaction, quality of life, happiness and positive affect (Huta & Waterman, 2014). The close inter-relationships between these constructs has contributed to the difficulty agreeing a single definition (Medvedev & Lanhuis, 2018). For example, the inclusion of life satisfaction as part of hedonic well-being continues to cause debate, with researchers such as Sumner (1996) rejecting its inclusion. Some argue that life satisfaction is related to broader reflections on success such as income (Kahneman et al., 2006) while others suggest that it is related to affect or mood with an emphasis on how people feel about their lives (Diener, 1999; Schwarz & Strack, 1999).

Diener (2012) suggested that his 'Subjective Well-being' approach was an appropriate conceptualisation of hedonic well-being, with its focus on life satisfaction *and* positive feelings (Diener, 2012. p. 590). The term subjective well-being has been used widely and, in many cases, interchangeably with hedonic well-being (Chen et al., 2012; Cleary et al., 2017). However, despite the dominance of Diener's approach within hedonic well-being research, there is some inconsistency with the use of the term *subjective* well-

being. The Organisation for Economic Cooperative Development (OECD) guidelines on measuring subjective well-being conceptualise subjective well-being as life evaluation, affect and eudaimonia (OECD, 2013). The term hedonic well-being will be used within this thesis and will refer to positive affect, including happiness, and life satisfaction.

The idea of rating well-being by measuring hedonia is appealing as it is relatively clear to define and measure. Findings from research are also comparatively easy to disseminate to a wider audience, with hedonic measures frequently translated as 'happiness'. Numerous reports from NGOs discuss happiness levels (e.g., The Children's Society, 2019) with government figures on hedonic well-being reported as 'happiness indexes'. There are however limitations with using hedonia as a sole measure of well-being, as it only provides a partial picture by focussing on the *experience* of positive well-being (Keyes et al., 2002). Such research can provide an insight into what it feels like to have positive well-being but lacks detail of the causes and functions of this well-being.

This thesis adopts the lens of environmental psychology but the focus on a salutogenic approach to well-being also aligns with positive psychology. A perception of positive psychology is that it attempts to minimize the role of 'negative' affect. For example, the broaden-and-build theory proposes that people strive for a ratio of positive to negative affect of at least 3:1 (Fredrickson, 2001). However, whilst positive psychology emphasises the way in which emotions such as happiness can act as both a marker of, and also elicit, positive well-being, it also acknowledges the experiences and value of the whole range of human affect.

Measures such as the Positive and Negative Affect Scale (PANAS: Watson et al., 1988) distinguish between 'positive' and 'negative' affect. However, it is useful to question assumptions that emotions that may be unpleasant to experience are 'negative' and are, consequently, also undesirable. By placing a value judgement on the desirability of emotions, it could be that their contribution in terms of well-being is overlooked. The presence of 'positive' affect tends to be perceived as a marker for positive well-being (Fredrickson, 2001) and in relation to experiences in place has been widely researched (see Houlden et al., 2018 for a systematic review). Whilst the value of 'negative' affect such as fear, anxiety or anger have been researched (e.g., Gerod Parrott, 2014) their focus in terms of place-based research has received little attention, being limited to negative

associations with hedonic well-being. Well-being, particularly hedonic well-being with its focus on positive affect may seem to be clearly positioned within positive psychology, the focus of the current thesis is to achieve a more balanced view of well-being that acknowledges the full range of well-being experiences.

High levels of hedonic well-being are not necessarily associated with wider well-being (Ryan & Deci, 2001). Oishi et al. (2007) suggested that whilst very high levels of positive affect and life satisfaction may be associated with social functioning and stability of relationships, they are not optimal for other aspects of effective functioning such as academic achievement and income. In the context of place/well-being relationships, we can experience hedonic well-being (e.g., happiness) within a place without it being 'good' for us and vice versa (McMahan & Estes, 2011). Attending a gym may not make some of us happy, but it may improve aspects of our well-being. Additional aspects of well-being therefore need to be considered, including the concept of eudaimonia.

Eudaimonic Well-being. Eudaimonia is based on the Aristotelian notion of a 'good life' or living life to one's fullest potential (e.g., Pritchard et al., 2020). Its conceptualisation was developed to supplement hedonic approaches to well-being, specifically to balance 'living well' with 'feeling good' (Forgeard et al., 2011. p. 94; Huta & Waterman, 2014). One clear framework to conceptualise eudaimonic well-being that has been widely adopted (e.g., Chen et al, 2012; Pritchard et al., 2020) is Ryff's model of psychological well-being, which includes six components: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life and self-acceptance (Ryff, 1989, Ryff and Keyes, 1995). These components are core to eudaimonic well-being (Huta & Waterman, 2014) and were developed to complement the hedonic definition of well-being by considering the source of well-being and how 'well' a life is lived (Forgeard et al., 2011; Keyes et al., 2002).

A further distinction between hedonic and eudaimonic well-being focusses around the subjective/objective nature of the approaches. Hedonic well-being has been firmly positioned as a subjective perspective. The emphasis is on an individual's reflections on their feelings (e.g., Diener et al., 1999). Eudaimonic well-being emphasises the subjective reflection on experiences and motivations of well-being. It also contains an objective element; the behaviours that are associated with, for example, pursuing goals (Waterman

et al., 2010). Both hedonic and eudaimonic well-being are now established concepts within well-being research and the continued debate around how they are conceptualised shows how valued and dynamic the field is. However, the diversity of definitions can create a lack of consistency and clarity in well-being research.

Social Well-being. Whilst the dichotic conceptualisation of hedonic and eudaimonic well-being is well-established, the addition of social well-being (Keyes, 2002) has been less widely adopted. Keyes (2002) suggests that social well-being relates to how people interact with other individuals as well as a wider society. Ryff's six elements of well-being as a representation of eudaimonic well-being is not disputed; however, Keyes proposes that social well-being should also represent additional but distinct eudaimonic components. Social well-being was developed in order to address a perceived omission in existing definitions of well-being; the emphasis within hedonic and eudaimonic well-being on the 'primarily private' perspective (Keyes, 1998. p. 121). Keyes felt there was a need to acknowledge the social structures that people operate within, and drew on philosophy, social psychology and sociology, to identify five core dimensions of social well-being (Keyes, 1998). Social integration is the extent to which people have a relationship to society. Social acceptance is the trust individuals have in the abilities and qualities of others. Social contribution relates to how valued people perceive themselves to be as a member of society. Social actualisation involves judgements around the potential and direction of society. Social coherence is the extent that society 'makes sense' (Keyes, 1998).

Whilst the distinction between hedonic and eudaimonic well-being is well established, the concept of social well-being as a distinct aspect has been harder to consolidate. Keyes (2002) identified social well-being as being equal in hierarchical terms to conceptualisations of emotional (hedonic) well-being and psychological (eudaimonic) well-being. This 3-factor structure of well-being has been supported in research (Luijyen, 2019; Perugini et al., 2017). However, others have challenged this assumption (e.g., Machado, 2015; De Bruin & du Plessis, 2015; Jovanovic, 2015) suggesting a bi-factoral model of well-being that subsumes social well-being within the realm of more traditional definitions of eudaimonic well-being, or that factors that relate to others within society (e.g., social coherence) do not belong within definitions of well-being (Cooke et al., 2016).

2.1.3 Measuring well-being

Historically, and particularly within public health, well-being as something to be measured has been positioned within the medical or pathogenic model (Finch et al., 2014). 'Well-being' was incorporated within health, using morbidity and mortality rates as a marker for well-being (Forgeard et al., 2011). Whilst this objective data is important in understanding issues such as health inequalities that impact on well-being, the pathogenic model can obscure our understanding of well-being (Keyes, 1998; Finch et al., 2014). For example, it is possible to live a 'good life' whilst experiencing multiple health issues or to experience poor well-being when physically well. Other measures frequently cited as reflecting national well-being, particularly within a social policy context, such as income, housing, employment (e.g., by the ONS) are important, but blunt tools in understanding the experience of well-being.

An alternative approach is to consider physiological measures of well-being. These measures typically focus on arousal levels or stress, either through salivary cortisol or serotonin (e.g., Dambrun et al., 2012, Lee & Lee, 2020). Whilst this approach may have application in terms of judging an affective response to a particular situation, the focus on arousal and emotional response suggest that only aspects of hedonic well-being are being considered.

A criticism of many attempts to measure well-being is that they are very narrow in their focus (Cooke et al., 2016; Forgeard et al., 2011). Many researchers use specific measures of one aspect of well-being (for example hedonic well-being) whilst omitting other facets. This can provide a clear focus for research, but it can mean that when work is disseminated and applied to a public health or social policy context there is a lack of clarity. In order to capture a more robust understanding of well-being, measures need to reflect the multifaceted nature of human well-being (Forgeard et al., 2011).

Due to an exponential growth in research on well-being, across a range of fields there is an ever-widening variety of methods used to measure well-being (Camfield & Skevington, 2008). If it is acknowledged that well-being is a multi-faceted concept (e.g., Forgeard et al., 2011) then there needs to be clarity and consistency in how those facets are operationalised. Understandably following on from the debates over how well-being is conceptualised, there is corresponding division over how well-being data is captured.

By far the most widely used approach to capturing well-being data is through the use of self-report surveys (Camfield & Skevington, 2008). These typically rely on individual's perceptions of their own well-being. Linton et al. (2015) identified 99 self-report measures of well-being and stated that there was not only a huge variety of dimensions included, but that many measures failed to be positioned within a stated theoretical framework. Cooke et al. (2016) identified 42 self-report measures of well-being and found that there was considerable inconsistency in the use of terminology and definitions of the concepts surrounding well-being. They concluded that there was no 'exemplary instrument' to measure well-being (Cooke et al., 2016. p. 749). Despite concern self-report measures are influenced by other factors for example mood, timing and social desirability bias, there is considerable value in gaining an understanding of perception of well-being (Camfield & Skevington, 2008). As Clark (2002) suggests this is whether or not an individual's reasoning for giving that judgement is understood fully or not.

2.1.4 The treatment of well-being in this thesis

Adopting a salutogenic perspective allows an exploration of a complex multifaceted view of human well-being beyond those associated with recovery from a position of deficit. Over-simplifying well-being into a single aspect (e.g., hedonia) means that the human experience is being reduced and a full picture of person-place/well-being relationships would not be possible. The aim of the current thesis was to adopt a view of well-being that encapsulates a fuller picture of well-being. This may be considered as broadly aligning to positive psychology but attempts to offer a broader perspective through the lens of Environmental Psychology.

Within this thesis well-being is viewed as having three parts, hedonic well-being, eudaimonic well-being and social well-being. In line with the majority of researchers (e.g., Busseri et al., 2015; Cleary et al., 2017; Diener, 2012; Dodge et al, 2012), the term hedonic well-being is conceptualised as an umbrella term for life satisfaction and positive affect. Eudaimonic well-being is defined using Ryff's six components of psychological well-being: Self-acceptance, environmental mastery, positive relations with others, personal growth, autonomy, and purpose in life (Ryff, 1989). Social well-being will be aligned to Keyes (1998) approach with the five dimensions of social well-being: social integration, social acceptance, social contribution, social actualization, social coherence.

To understand perceptions of place/well-being relationships, participants needed to recollect their experiences in relation to place. To achieve this, retrospective self-report data were implemented using semi-structured interviews (Study 1) and surveys (Study 2 and Study 3). Whilst it is difficult to gain a clear picture of what information individuals are using when they determine their judgement on their own well-being, there is an assumption that people's recollections, in both extended conversation and in responses to surveys, are based within their experiences (Camfield & Skevington, 2008; Clark, 2002). There is also an acknowledgement that there are aspects of construction within this discourse (Camfield & Skevington, 2008). This approach is consistent with the post-positivist, critical realist positioning of this thesis.

2.2 Place or space?

The terms *space* and *place* are frequently used as synonyms within common parlance, but in the context of academic discourse the terms are imbued with meaning. Clarification of their usage is required. Tuan (1977) initially identified a difference in the way the words *space* and *place* could be used. It suggested the meanings attributed to a location mark the distinction between a space and a place. When spaces are linked to social meanings and personal experience, they *become* places. As the overarching purpose of this thesis is to explore people's use of an environment and their reflections on this relationship, this clearly requires an attribution of meaning, and so the term *place* will be used.

The use of the term place within this thesis was also supported when considering how Hunziker et al. (2007) distinguish between the terms. They suggest that *space* refers to the perception of landscape in terms of biological needs and use of the land, whereas *place* involves self-reflection and social integration. Research and theories that focus on the mainly physical characteristics of an environment, frequently emphasising evolutionary explanations of person-place relationships, see environments as *spaces*. Theories and research that focus on individual, cultural and group meanings of a landscape perceive locations as *places*. Whilst this is a useful approach, all research in the field does not follow this clear distinction. As Hunziker et al. (2007) acknowledge, there is some blurring of lines, with integration with *space*-focussed theories acknowledging the role of person experiences and affective response, and *place*-focussed theories acknowledging the role of innate preferences for particular characteristics or landscapes.

This thesis explores the well-being benefits elicited from spending time in specific locations. Therefore, the meanings and experiences individuals reflect on, transform the *space* into a *place*. There will still be an exploration of physical characteristics of environments and how environments are used in order to explore the possibility of common features in places that elicit well-being responses. Nevertheless, the clear focus on personal experiences, value and connections to places, justifies the use of the term place throughout this thesis.

2.3 Person-place relationships

In considering the impact place has on well-being, there is a need to incorporate the theories that explore the transformation of a space into a place. The ways in which people relate to places (person-place relationships) impacts their use of place, and the well-being benefits they derive from spending time there. The precise nature of these relationships has been debated and a variety of approaches have been developed: Sense of place (e.g., Jorgensen & Stedman, 2006), Person Place Process framework of place attachment, (PPP, Scannell & Gifford, 2010), Place Attachment models (e.g., Shumaker & Taylor, 1983; Low & Altman, 1992), Place Identity models (e.g., Proshansky, 1978, Drosletis & Vignoles, 2010). Despite a heterogeneity of approaches, Low and Altman (1992) proposed that most person-place theories shared three key components that echo the ABC models of attitudes within traditional psychology:

- Affect
- Behaviour
- Cognition

These three elements are commonly identified as place attachment, place identity and place dependence in Environmental Psychology (Jorgensen & Stedman, 2006). Place attachment is viewed as positive feelings towards place. Place identity represents the beliefs that the self is defined in relation to place. The Importance of these three key aspects are widely acknowledged. Place dependence is the extent to which a place is valued for its physical characteristics and the resources that facilitate the achievement of important behavioural goals (Jorgensen & Stedman, 2006. p. 316). However, the way these constructs have been conceptualised and how they relate to one another are sources of debate. Scannell and Gifford describe theory development in place attachment

as ‘hazy’ (Scannell & Gifford, 2010. p. 2) and Hunziker et al. (2007) suggest that the reason there is ongoing debate is that the component elements of place attachment, place identity and place dependence are so strongly linked that differentiating and operationalising the dimensions is problematic.

Shamai (1991) proposed that ‘Sense of Place’ could be used as a term to reflect the bonds people develop with meaningful places. Whilst the term has been used across different fields and in a diversity of ways (Hashemnezhad et al., 2013), typically the focus is on the affective, cognitive and behavioural aspects of person-place bonds. Sense of Place has been conceptualised as a theory where the general attitudes towards spatial settings are composed of the three key elements that are *hierarchically equivalent* (Jorgensen and Stedman, 2006). Sense of Place could have offered an appropriate theoretical framework for the research within this thesis, a number of limitations meant that it was not seen as the most appropriate choice within this context. Raymond et al. (2017) suggest it has neglected to explore how the meaning individual’s attribute to place are the product of both environmental features and personal/individual components. Scannell and Gifford (2010, 2016, 2017) also suggest that there are other key aspects of person-place relationships that are not included in Sense of Place approaches, such as the social and physical characteristics of the place itself and the socio-cultural context.

A conceptual framework that attempts to synthesise the existing ranging theories and models of person-place bonds, is the three-dimensional (tripartite) Person, Place, Process (PPP) framework proposed by Scannell and Gifford (2010) (Figure 1). Focussing on place attachment, the PPP framework broadens out the conceptualisation of people-place relationships around the three central dimensions of Person, Place and Process. By incorporating a number of diverse definitions, theories and structures explored within academic discourse in this field, the framework attempts to present an umbrella structure for the exploration of person-place relationships.

The dimensions of the PPP framework are designed to address three key questions that relate to Person, Place and Process.

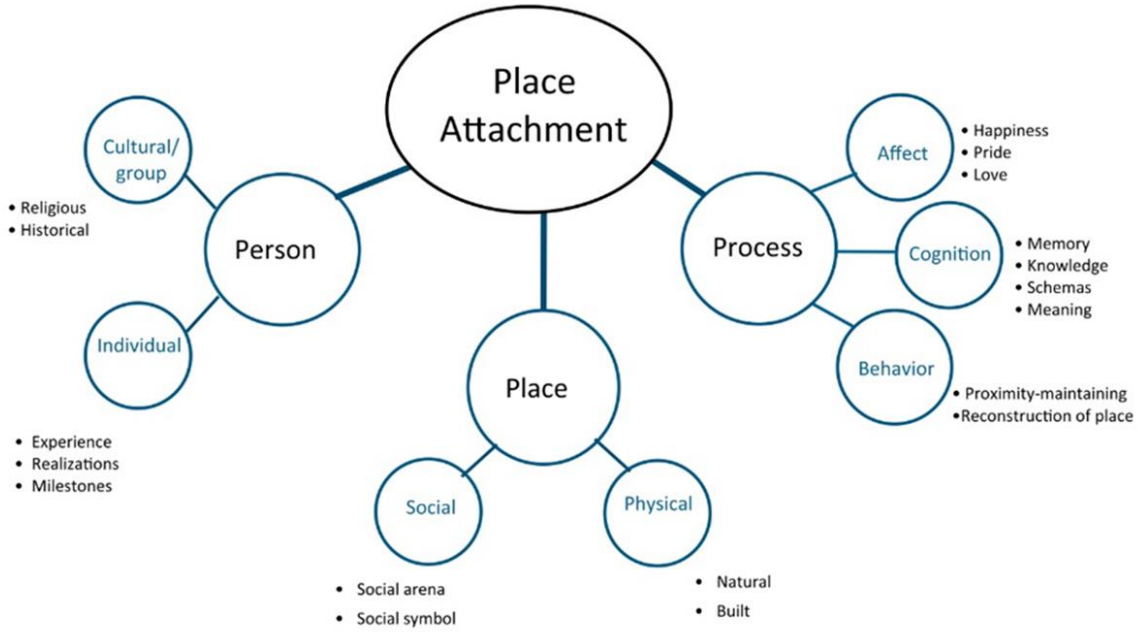
Person. The person dimension of the PPP framework addresses the question ‘Who is attached?’ This considers the individual and collective meanings that determine

personal connections to a place. Meaningful events, personal memories and shared sociocultural experiences, all impact on the development of person-place relationships.

Place. The place dimension addresses the question 'where is the individual attached to?' This includes physical aspects of the place such as characteristics and types of place, as well as social aspects of place, such as how places enable social interaction, provide a sense of community or represent group identities.

Figure 1

Person Place Process Framework of place attachment (Scannell & Gifford, 2010a)



Process. The process dimension addresses the question 'how are individuals attached?' This dimension which can be aligned to the Sense of Place model (e.g., Jorgensen & Stedman, 2006), considers the affective (e.g., happiness, pride, hope) and cognitive (e.g., schemas and memories) aspect of person-place bonds, as well as how behaviours such as proximity maintenance and place reconstruction are indicators of place attachment. Proximity maintenance can be indicated in behaviour by the frequency and duration of visits to a place that a person is attached to and a reticence to be away from the place. Place reconstruction can be indicated by the use of elements from an attached place but in a different location, in order to establish the familiar and valued.

Scannell and Gifford suggest that application of the Person Place Process (PPP) framework could benefit future work in a number of different ways. The PPP framework can be used to explore the 'threads' that connect people with place and emphasises the complexity of these links (Scannell & Gifford, 2010, p. 5). This allows researchers the structure and flexibility to focus on a specific dimension (Person, Place or Process) but also the interaction between dimensions and levels. The suggestion being that the elements of person-place relationships (e.g., affect, memories, cultural context) do not exist in isolation and, that by investigating how they are linked, we can gain a richer understanding of how places impact on people.

Within the context of this thesis, it is recognised that the bond between people and place is central to understanding how individuals respond differently to a range of environments. The current thesis approaches place/well-being relationships as a multidimensional potentially 'messy' phenomenon. The PPP framework (Scannell & Gifford, 2010) which positions place attachment as a complex, multidimensional concept can readily be applied within the body of work reported in this thesis.

2.4 Mixed methods

The research presented in this thesis implements a mixed methods approach with the inclusion of both qualitative and quantitative methods. It is aligned broadly to the post positivist, critical realism stance, to provide *significant enhancement* (Collins et al., 2006), meaning that the use of both qualitative and quantitative methods will maximize the interpretation of the data.

Quite often people-place aspects in environmental psychology research such as the physiological response to environmental stressors are addressed through reductionist positivist research (e.g., Mahnke & Mahnke, 1987). Such approaches place an emphasis on the scientific method embedded in the assumption that human experience exists outside of our understanding of it (Chirkov, 2021). However, other research adopts a broader range of approaches that incorporate complex interactions of physical environments, sociocultural factors and the actions of agents themselves (Naess, 2015). Even the exploration of causal relationships that lend themselves to a positivist experimental approach, for example the impact of sound on stress response, rarely exist

within closed systems in a real-world context; this relationship may be less intransitive and more fluid than it at first appears using this approach.

An alternative to the reductionist positivist approach is critical realism (e.g., Bhaskar, 2009) which negotiates a path between naïve realism (Guba & Lincoln, 1994) and the idealism of postmodernist psychological approaches (Pilgrim, 2019). Critical realism distinguishes between the 'real' and 'observable' worlds and asserts that phenomena need to be considered within the structures that generate them (Collier, 1994). As such critical realism offers environmental psychology an approach that acknowledges ontological realism that there is a world, physical, sociocultural, or mental, that exists independent of our understanding of them (Chirkov, 2021) but emphasises the need to consider epistemological relativism, the idea that knowledge is valid within a specific situation but will vary according to the context within which it is being observed or measured (Pilgrim, 2019). A critical realist perspective establishes that there can be causal links between factors, but also acknowledges that the 'open' systems involved are so complex, as is the case with the relationships between people and places described in this thesis. This meant that a realist positivist perspective was not the appropriate paradigm to adopt.

The mixed method research within this thesis adopts an equivalent status, sequential design (Tashakkori & Teddllie, 1998) aligning to the critical realism paradigm that is not tied to a single research approach (e.g., experimental) of realist positivism; instead, it suggests that a range of methods can and should be used to address research aims (McEvoy & Richards, 2006). In this thesis, mixed methods include semi-structured interviews, surveys implementing single items, open questions, and measures. The use of mixed methods is not uncommon in Environmental Psychology but continues to cause debate in terms of its methodological considerations. For some the use of mixed methods creates an incompatibility of ontological and epistemological stances that undermines the use of either method (e.g., Giddings, 2006), with the use of qualitative methods undermining positivist claims and conversely the use of quantitative methods undermines the richness and power of qualitative methods. However, Howe (1988) challenged this 'incompatibility thesis' and suggested mixed methods can provide insights that draw on the strengths of both qualitative and quantitative approaches without undermining each

other, supported by the concept of methodological pluralism (Cresswell & Clarke, 2007). Burke Johnson and Onwuegbuzie (2004) take this further and claim that mixed methods have the capacity to produce work that surpasses a single method approach. The justification for using mixed methods can be seen in terms of providing a more 'complete' or comprehensive account of the research aims (Bryman, 2006a). However, there is a concern that mixed methods research frequently fails to effectively integrate findings (O'Cathain et al., 2007). This thesis is comprised of three studies, adopting a sequential qualitative to quantitative approach, considering both aspects as complimentary and of equal status. The analysis of the qualitative and quantitative research was conducted separately and then the findings were integrated to produce a composite analysis (Yardley & Bishop, 2007).

Study 1 (Ch. 3) has a research goal that is exploratory (Johnson & Christensen, 2004) with an inductive approach used to explore the relationships between an individual's well-being outcomes and the places they spend time in. As such, this was a wholly qualitative study, using semi-structured interviews. It explored the main research question: In what ways can a range of physical environments be seen to enhance and maintain positive well-being outcomes in individuals? The data for Study 1 was analysed using Inductive Thematic Analysis which not only maintained the inductive nature of this study but aligns with the critical realist approach adopted in this thesis. Using Greene et al.'s criteria (1989) the purpose of the research within this thesis was to *both* compliment *and* develop. Each study helps to elaborate, illustrate, clarify and enhance the findings from the other studies. In this context, the results from Study 1 are used to inform the design of Studies 2 and 3.

Study 2 (Ch. 5) was a self-report survey that elicited predominantly quantitative data. Some qualitative data was gathered to fulfil the descriptive goal of this element of the research (Johnson & Christensen, 2004). It involved the identification and description of characteristics of the places people felt had a positive impact on their well-being, as well as identifying the well-being outcomes people reported when spending time in these places. It also aimed to identify the aetiology of variations in well-being outcomes, for example aspects of person-place relationships such as place attachment. The use of a self-report survey in both Study 2 and 3 is in line with a frequently adopted approach

within place/well-being research. It allows for the inclusion of measures based on those that are validated and currently widely applied, ensuring the results can be positioned within existing research. The use of interviews (Study 1), open and closed questions (Study 2 and 3) also allowed for comparison of different types of self-report data (Camfield & Skevington, 2008).

Study 3. (Ch. 6) The goal of Study 3 was explanatory (Johnson & Christensen, 2004) as it focussed on the development of theoretical understanding of place/well-being relationships, including the relationships between well-being, place attachment, characteristics of place and behavioural determinants of engagement with place. It employed a predominantly quantitative survey technique in order to develop the findings from the previous two studies.

By employing a mixed methods approach the research was able to capture more of the intricacies and nuances of the interaction of people and places than either quantitative or qualitative methods would alone, with each study developing from the previous whilst providing complementing data that helps build a picture of the complexity of place/well-being relationships.

2.5 Summary

This chapter has positioned the current research within a theoretical context for well-being and person-place relationships. The studies reported in chapter 3 (Study 1), chapter 5 (Study 2) and chapter 6 (study 3) provide explorations of perceptions of individual place/well-being relationships. They adopted a Salutogenic orientation focussing on how a range of places can provide opportunities for positive well-being outcomes. Following on from the inductive analysis in Study 1, the self-reported well-being outcomes were considered in terms of hedonic, eudaimonic and social well-being and reflections on person-place relationships were contextualised within the Person, Place, Process framework of place attachment (Scannell & Gifford, 2010).

Chapter 3 (Thesis Study 1)
From Antarctica to Ikea: A Qualitative Exploration of Place/Well-being Relationships

The qualitative study reported in this chapter used semi-structured interviews (*N* = 20) with adult volunteers, who were not specifically cognitively fatigued, stressed, or ill. Inductive Thematic Analysis (ITA) was employed on the rich data generated by the participants. The range of places people perceived as positively impacting their well-being was explored, including the variety of well-being outcomes experienced, the characteristics and function of the places chosen, and the personal meaning attributed to place/well-being relationships. There was a recognition that behaviours related to accessing place are mediated by facilitators and barriers that impact on these place/well-being relationships. The findings of Study 1 are reported and positioned within current academic discourse within this chapter; however, the integration of these primary research findings into a broader theoretical context, and how this contributed to development of Study 2 and Study 3 are discussed in the next chapter (Ch. 4).

3.1 Introduction

An understanding of person-place/well-being relationships is needed to use places effectively as a salutogenic resource. For example, if the type of 'social prescribing' (e.g., care farming, green gyms) highlighted in the 2018 Green Future Plan (Defra, 2018) is to have real impact on individuals' well-being, we need to be clear how people relate to place. Are there features of the place itself that elicit positive well-being outcomes, or are the bonds people have to place, and the meanings those relationships hold, at the core of place/well-being relationships? The aim of the current study was to explore the features of the places respondents describe, as well as the relationships that they have with places perceived to positively impact well-being.

Place/well-being research tends to be approached from a relatively narrow perspective, reflecting the dominant narratives that have developed around the impact of broad 'types' of place. The nature/urban dichotomy has resulted in an emphasis on distinguishing participant's response to a range of places pre-selected by the researcher and aligned with this dichotomy. For example, participants are typically presented with a range of images containing water, rural landscapes and urban green spaces or more

specific characteristics such as trees (e.g., Beute & de Kort, 2014; Gamble et al., 2014). This approach is advantageous because researchers can have greater control over variables within the study design. However, a disadvantage is that participants are limited to the places selected by researchers; this means that the focus is on the objectively defined physical properties of the environments, rather than any personal meanings attributed to place. Participants within the current study were asked to generate and reflect on a range of places that they felt had a positive impact on their well-being. If participants were asked to provide a single example such as a 'favourite' place (e.g., Korpela et al., 2008, 2009, 2010; Ratcliff & Korpela, 2016) or a place that was particularly meaningful (e.g., Scannell & Gifford, 2017) they could feel pressure to select a place that can be held apart from the norm. The current study aimed to provide data that reflected *everyday* places alongside more *extraordinary* places. By using a broad ranging qualitative approach, this study facilitated the re-examination of the assumptions behind much of the research in this field. The use of an inductive approach ensures that novel findings and those that counter the dominant narratives within the field are given credence (Braun & Clarke, 2006).

Research Questions

As this study is a wide scoping, exploratory study, the research questions reflect the broad aims of the thesis as a whole. The primary research question was:

> In what ways can a range of physical environments be seen to enhance and maintain positive well-being outcomes in individuals? (Thesis RQ 1)

There was also consideration of the following research questions:

- What characteristics across a range of physical environments impact on well-being outcomes? (Thesis RQ 2)
- To what extent do person-place relationships impact on self-reported well-being outcomes for individuals? (Thesis RQ 3)

3.2 Method

3.2.1 Methodological considerations

A qualitative design was adopted involving semi-structured interviews. Whilst there was prior consideration of the research topics and related theoretical concepts, an inductive

approach was adopted for this study. A deductive approach to the interviews and analysis could have provided a more directed focus for the study, however, it could also result in narrowing down the scope of the thesis and risk confirmatory bias. The interview protocol for this study was developed in order to guide the interviews and ensure that the data generated was as comparable between participants as possible in regards to both depth/breadth. Six main aspects of place/well-being relationships were identified for the interviews: the actual places/environments, emotional connections to place, social aspects of place, aspects of psychological and subjective well-being linked to place, participant's reflections on the role of place in well-being, and the use of place as a salutogenic resource. Sample interview questions included those that asked for elaboration on a place they had mentioned, e.g., "When you spend time in a natural environment is there a purpose to your being there?"; "So elaborate a bit more on your garden, I mean you can describe it for me if you want, and what it means and what it does for you?" (see appendix 1 for further details). These six core interview aspects were developed by initial reading around place well-being research focussing on theories of person-place relationships (e.g., Sense of place, Jorgensen & Stedman, 2001; Person Place Process, Scannell &Gifford, 2010) well-being (e.g., psychological, subjective well-being, Diener, 1984; Ryff, 1989; Flourishing, Keyes, 2007) the relationships between health and place (e.g., ART. Kaplan &Kaplan, 1989; SRT, Ulrich,1991; favourite place research, Korpela et al., 2008).

The interviews and coding processes were approached from a point of openness to the significance of the themes developed in the data, and an exploration of wider meanings and interpretations from the perspective of existing literature. It is acknowledged that an inductive analysis is still to a certain extent embedded in current narratives in the field. As Braun and Clarke suggest: "Researchers cannot free themselves of their theoretical and epistemological commitments" (Braun & Clarke, 2006. p.79). Inductive Thematic Analysis (ITA) was adopted as it can be integrated into the broader mixed methods approach of the thesis in terms of its ontological and epistemological framework (Braun & Clarke, 2006). ITA facilitates a rich description of the data set whilst allowing for a focus on a particular aspect in line with the research question adopted and can focus on either semantic or latent themes. The present study allowed for

interpretation of the data set with the focus on a semantic level of exploration as this aligns with a critical realist perspective.

3.2.2 Recruitment and access

Three organisations were selected for recruitment via opportunity sampling, primarily for convenience of location and access. These included a sixth form college, a U3A group and a university. The researcher had personal contact with the sixth form college where the principal, a former employer, had offered access for recruitment, teaching and support staff were recruited for this study. The U3A or 'University of the Third Age' organisation (a learning cooperative for older adults) was selected as it was felt that engagement with research fitted in with the broad educational remit of the organisation, offering interest to the group. In practical terms they have monthly meetings which meant the researcher was able to address a large number (approximately 100) of potential respondents in a single session. University staff were selected due to convenience.

Following ethics approval from the University of Sunderland ethics committee, and once gatekeeper permission had been granted, potential respondents were offered an introduction to the researcher and the research topic via face-to-face groups sessions and/or email. Participants were purposively sampled, and recruitment continued until saturation had been achieved (Glaser & Strauss, 1967; Hennink & Kaiser, 2017). As part of the iterative process, initial detailed reading and analysis of interviews began alongside recruitment. When the point was reached where gathering more data did not yield further insights (Bryant & Charmaz, 2007), saturation had been achieved and recruitment stopped. In total 19 interviews were arranged with 20 respondents. Eighteen respondents were interviewed in a one-to-one setting. One couple from the U3A group asked to be interviewed together; this was the only dyadic interview in the study. It was felt that there was no methodological reason why they should not be interviewed together.

3.2.3 Respondents

The age, gender and distribution of respondents per organisation can be seen in Table 1. The ages of the respondents were spread over a large range, with older adults well represented due to the criteria for membership of the U3A group.

Table 1

Descriptive characteristics of the study sample

Age group	Women (*n*=12)	Men (*n*=8)	All (*n*=20)
16-24	0	0	0
25-44	4	3	7
45-64	2	3	5
65+	6	2	8
Organisation			
College	5	4	9
University	1	2	3
U3A group	6	2	8

The respondents were all resident in the north east of England, coming from a range of backgrounds including ethnicity and occupation. An interest/involvement in education was a common factor for many of the participants.

3.2.4 Data collection

The sixth form college interviews were conducted over a three-day period in an interview room provided. Furniture was arranged to allow for a degree of informality in order to promote clear communication. The respondents from the U3A group and the university were interviewed in public spaces negotiated to be convenient and comfortable for the respondents. The recruitment process allowed some of the respondents to meet the researcher before the interviews, these initial recruitment meetings provided potential participants with a context for the research and an explanation of requirements e.g., time involved and nature of the interview. This made the interview process easier in practical terms as respondents knew who they were meeting by sight and were able to approach in the public places with some confidence, creating a relaxed productive atmosphere.

An interview guide (Appendix 1) consisting of prompts relating to key concepts raised by the research question was used in the interviews. It was made clear to respondents that this was to be used as a prompt sheet if required and was not a check list. Very broad points were developed from initial reading around place/well-being research, but the interview process allowed for additional topics to be discussed if they arose. The inductive nature of the approach meant that there was considerable flexibility as to the scope of the interviews whilst the interview guide helped in allowing cross-

respondent comparability. The interviews were recorded using a digital audio recorder, no respondents expressed concern over being recorded. Security around data storage was explained at the recruitment stage, in the participant information sheet (Appendix 2), consent form (Appendix 3) and was reinforced verbally before the interview commenced. Respondents involved in the study spoke freely and enthusiastically about a number of different places they spent time in, and the perceived impact of these places on their well-being. There was only one respondent (R10) that initially reported that she did not feel that places impacted on her well-being. However, during the course of the interview she proceeded to talk in depth about places that she associated with positive impacts on her well-being and her data was included in the study. It may be that in this instance the interviewer failed to frame the context of the interview clearly to the respondent. Following the interviews respondents regularly commented on how much they had enjoyed the process and that it had reignited their enthusiasm for spending time in the places they had been discussing.

3.2.5 Data analysis

The audio recordings were transcribed creating a verbatim account of the interviews (see Appendix 4 for an example extract) and analysed using Inductive Thematic Analysis (ITA) (e.g., Braun & Clarke, 2006). Initial coding involved detailed annotation of the data items (transcripts) to identify elements that were noteworthy (see Appendix 5 for an example of initial coding), initial codes were developed with corresponding data extracts identified. After further analysis, codes were refined and mapped onto a mind map, this helped to display links between codes, and identify potential themes. The transcripts were revisited regularly throughout the process in order to ensure the candidate themes and subsequent themes and subthemes were rooted in the data. Once themes and subthemes were constructed illustrative data extracts were selected.

3.3 Analysis and interpretation

This section explores the themes identified by the ITA using illustrative data extracts and interprets and contextualises the data in terms of relevant existing literature.

Table 2

Themes and subthemes developed through Inductive Thematic Analysis

Themes	Additional Subthemes
Built environments	Cities
	Workplaces
	Domestic places
Non-built environments	Green places
	Blue places
Characteristics of environments	Physical properties
	Intangible aspects
Challenge	Places offering challenge
	Novel places
	Limits to challenge
Ownership and control	Places that are mine
	Shared places
Social aspects of identified places	Interpersonal relationships
	Community
	Personification of place
Temporal aspects of identified places	Time
	Age
	Personal history
Cognitive aspects identified places	Cognition
	Memories
	Schema
	Affect
	Preferred places
Facilitators to accessing place	Physical access
	Social factors
	Cognitive factors
Barriers to accessing place	Physical access
	Perceived ability
	Perceived risk
	Social factors

The integration of these findings with broader theoretical frameworks is discussed further in Chapter 4 of this thesis. The themes and subthemes proposed after the coding process had been completed can be seen in Table 2. The main themes identified described a wide range of places that people reported as having a positive impact on well-being. These can be broadly categorised as those that focus on the *place* and those that focus on *person-place relationships*. The themes that were developed around *place* explore how features and functions of built and non-built places, support well-being and encourage bonds to develop. The narratives around place within these themes illustrate direct relationships where people reflected on how being in a place makes them feel and respond. More indirect relationships focussed on how places facilitate valued activities. The themes that related more strongly to *person-place relationships* included challenge, ownership/control, social, temporal, cognitive aspect of place as well as how barriers/facilitators impact behaviour in relation to place. The focus within these themes is how, irrespective of the features of type of environment, places provide people with a range of experiences that impact their well-being. The aim of the analysis was to provide a 'rich thematic description' and analysis of the entire data set in order to allow for the exploration of participants' views that may not fall within narratives on the topic (Braun & Clarke, 2006. p. 81).

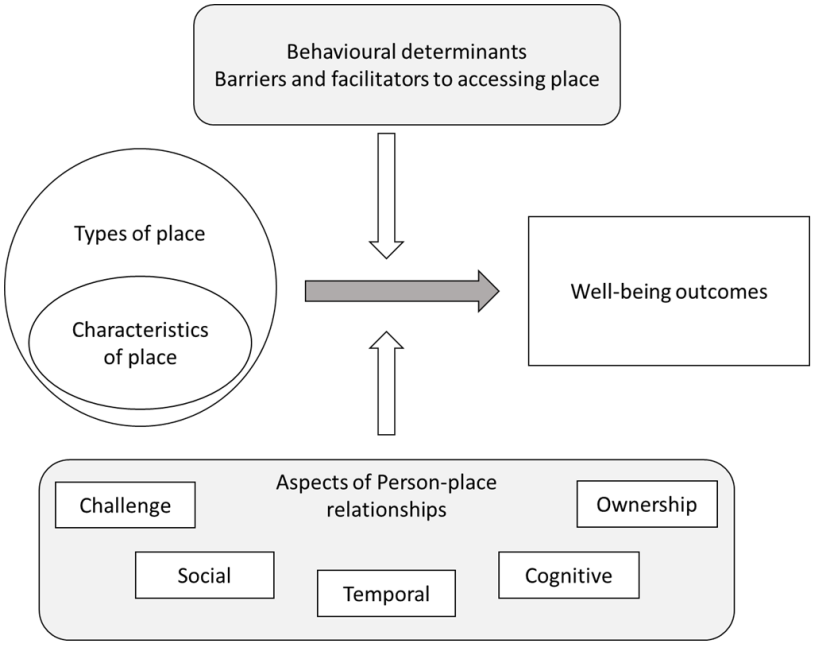
The themes and subthemes developed are indicative of the participants' responses and were developed to reflect common and noteworthy narratives that were identified in the interview transcripts. The way in which places were grouped together was influenced by the ways in which participants reflected on their time there. As is reflected in the subthemes developed participants accounts of built and non-built environments did diverge. A clear example of this is the inclusion of places according to their function within the built environment theme. The role that places played within respondents' lives was much clearer when discussing specific built environments than non-build. An interesting anomaly here is inclusion of gardens within the *domestic* rather than the *green* subtheme, this was because the way in which participants talked about their gardens aligned better with this structure, gardens were part of the home. There was a concerted attempt to respond in a *bottom-up,* inductive way to the data, however

it is important to acknowledge that the ways in which places are classified within Environmental Psychology literature will have impacted on how the data was read.

The relationship between the themes can be seen in Figure 2, with themes reflecting types and characteristics of place and aspects of person-place relationships and behavioural determinants that mediate how people access places.

Figure 2

Schematic of themes identified in Study 1 analysis



In order to present a coherent narrative within the thesis as a whole, the interpretation of the data presented in this section reflects the order of the research questions for the study.

- The types and characteristics of places chosen and seen to enhance and maintain positive well-being outcomes in individuals.
- Aspects of person-place relationships such as challenge, ownership, social factors, time, cognition and perceptions of facilitators and barriers to accessing places.

3.3.1 Places

Participants selected a wide **range of places** that they felt had a positive impact on their well-being. Some of the places mentioned were generic types of place, such as homes, beaches or cinemas (see Appendix 6 for a full list), whereas others were more specific named examples such as Hamsterly woods, or Disney World (Appendix 7). Some places were selected by multiple participants (homes, gardens, and historical properties) whereas other choices were more idiosyncratic (e.g., a cruise ship and a cathedral). The range of places spanned from the everyday (Ikea) to the extraordinary (Antarctica).

Types of Place. One way the places described by participants can be categorised is as built and non-built environments. These two themes allowed for an encompassing description of nearly all the places people discussed, whilst still providing the opportunity for the exploration of the idea of 'types of place'. Within place/well-being research the term 'urban' is frequently applied to places that include built elements. However, within the current study 'urban' did not provide an accurate description of the places reflected on by participants.

The theme of **built environments** brings together extracts related to conspicuously constructed places, consisting of the subthemes of cities, workplaces and domestic settings. The use of the term 'urban' was not seen as appropriate as this represented only a very small subset of built places respondents chose. The built environments described by respondents were not necessarily to be found in an urban setting, for example historical properties and homes. Many respondents reported an awareness of a personal preference for built environments with **cities** cited as a contrast to 'natural' places. An aspect of this preference was the idea that built places offered an indicator of progress.

> *That's not to say wild places aren't beautiful it's, um see what man can achieve, man/woman/person with the ability can achieve and then what they can build and the surprises of it too. [R19]*[1]

[1] Respondents are identified by numbers in this study, as culturally appropriate pseudonyms would have compromised confidentiality as participants were drawn from small populations (Saunders et al., 2015).

Cities are viewed by R19 as an indicator of social growth, and this contributes to positive social well-being. Social actualisation, a component of social well-being (Keyes, 1998), refers to the ability of society to realize its potential and evolve. Cities are seen in this example as places where there is clear evidence of progress and achievement. The provision of resources within different types of place affords the ability to undertake activities that are valued. For R14 cities were places that particularly met this need.

> *Part of the reason we chose to go to the cities that we go to, the things that we want to do, the activities we want to enjoy. [R14]*

Cities can also be seen as places that support positive eudaimonic well-being. *Personal growth* and *purpose in life*, both components of eudaimonic well-being (Ryff, 1989), are associated with goal support. Places that enable activities and support goal achievement, in this example cities, provide opportunities for personal growth through the development of skills and self-improvement, and a purpose in life by providing a sense of direction and goal attainment (Ryff & Keyes, 1995).

If the premise is accepted that place attachment and well-being are interlinked (Casakin & Kreitler, 2008; Knez et al., 2018; Rollero & Di Picolli, 2010; Scannell & Gifford, 2017), then the way in which different places support development of these bonds also helps illustrate the positive impact of places. Place dependence (e.g., Jorgensen & Stedman, 2006) is an aspect of person-place relationships that addresses the extent to which places provide resources that are congruent with the aims of the individual. This is recognition that places are not just an end in themselves but are valued for how they support activity. Scannell and Gifford (2010) suggest that one reason that we form attachments to a place is that they provide us with the resources to achieve goals that we value. This function of person-place bonds is particularly effective when the goals of the individual match the resources of a particular place (Scannell & Gifford, 2017). The extract above shows that for some respondents the resources available in cities best support their most valued activities.

A number of respondents generated data related to **workplaces.** Some of these places were designated work locations (e.g., a school or hospital) and others were work areas within a residential setting. Personalisation of a workplace was seen as important in

indicating place identity (Jorgensen & Stedman, 2006). It could also be seen as an attempt to recreate a place to maintain proximity to an attached place such as home. In this next extract the desk takes on the familiar personal characteristics of a domestic space which increases the likelihood of attachment.

> *If you were to go down to my desk now you would see I've got a picture of my son. I've got everything that I want. I've got my little, you know my little action figures…It makes me feel comfortable. [R06]*

Expressing aspects of personal values by personalising places or recreating aspects of an attached place, helps support place identity through 'place congruent continuity' (Casakin & Kreitler, 2008. p. 667). Effectively the use of elements of an attached place helps with a sense of coherence which in turn supports well-being. However, these displays of territoriality and reconstruction of place were not common to all participants. For example, R14 suggests that workplaces need clearly identifying as such and rejected the practice of personalising a workplace.

> *I think in the end it's impossible really to make an office space anything other than an office space, I never had any photos in there because it's still an office…what's the point? You know it's an office. [R14]*

There seemed to be a difference between those who felt that personalising places helped a sense of ownership and belonging in a workplace, and those who preferred to partition workplaces from other areas of their lives. The ability to choose how to manipulate an environment is revisited later in this chapter in relation to *control*.

How place contributes to a sense of self (place identity) can be complex. Status conveyed by workplaces was linked by one interviewee to the idea of social mobility and aspiration.

> *It's an example of social mobility…but to go into the hospital and carry out research in what you'd like, call a middle-class environment working with what you might call middle class people erm as an equal so that's a nice feeling, I just picture my parents when you know I'm describing that. [R12]*

Manzo (2005) suggests that experiences-in-place create meaning which in turn contributes to place attachment. The meaning attributed for R12 meant that the workplace was valued for its contribution to their place identity. In their interview, R12 talked in some depth about how some of the places they spent time in, affirmed their status as a 'professional'. This was a source of personal pride contributing to the noteworthy or special nature of the places. Time spent in places that enable personal skills and knowledge development as well as places that confer status can be seen to provide eudaimomic well-being outcomes, specifically *personal growth* and *purpose in life* (Ryff, 1989). This extract also contains expressions of positive affect such as pride which contributes to the 'process' aspect of the Person Place Process framework (Scannell and Gifford, 2010), as well as being relevant to the positive affect element of hedonic well-being.

For some respondents place identity was less about status and more about enjoying the 'work' identity they adopted. Twigger-Ross and Uzzell (1996) suggest that place congruency occurs when people attach themselves to places that fit their view of who they are, and that they feel represent a preferred representation of themselves. In this extract R19 feels that they like the version of themself when they are in their workplace. It is likely that this is a contributing factor as to why it was selected as a place that she felt had a positive impact on her well-being.

> *Oh, I love it, I've always worked for big organisations so just whizzing in and seeing all the nurses and receptionists and the doctors. It's just like I belong here. I think I'm more perky when I'm here. [R19]*

The importance of how identity linked to place was highlighted by a respondent who was facing imminent redundancy. The place that represented work was identified as key in facing the change in circumstances, the loss of proximity to the attached place was expressed.

> *I mean for twelve years I've been going to the same room and come next Friday… [R05]*

Fullilove (1997) found that displacement that causes bond disruption produced negative affect in the form of sadness and longing, concluding that place attachment was primarily

based in affect. Security seeking motives are a driver for place attachment (e.g., Chatterjee, 2005; Scannell & Gifford, 2017), this can be extended beyond physical security to wider concepts such as financial security. Scannell and Gifford (2010) suggest that key functions of place attachment are security, goal supporting and continuity. When the respondent R05 is facing the loss of their job, the workplace represents this loss of a secure place and a loss of continuity.

Another prominent theme related to **domestic places**, this included residential settings and gardens. The decision was made to include gardens with domestic settings here, as much of the data generated in relation to gardens held resonance and indeed overlapped with those for residential places. This highlights the problem with trying to categorise places as urban or natural or even built or non-built: gardens are essentially constructed and are closely tied to homes, but by definition include many *green* if not natural elements. In the Person and Nature Survey (PANS) conducted by Natural England (Natural England, 2021), gardens are treated separately from other *natural* places and are not included in the items relating to engagement with nature. The inclusion of gardens under the domestic settings subtheme was guided by extracts from respondents, for example R02 described her garden as 'an extension' of her home.

It is unsurprising domestic places were prominent in this data set. Scannell and Gifford (2017) found that houses and homes were the most frequently cited places in their research that allowed participants free choice of meaningful places. There were numerous extracts that showed the strength of positive responses afforded by homes.

> *A strong link to it and er we've always loved it, right from when we'd gone in it. It cuddled… I always said it cuddled us' [R15]*

This personification of the home conveys the strength of the attachment and value placed on it. The prototype offered by a first home was the only real bond R06 experienced with a residential place. This attachment has not been replicated in subsequent residences.

> *I think through my childhood in terms of you know feeling at home, I think there was only one of the houses that we ever had that I've felt… that was the first one where I was born. [R06]*

The functions of place attachment, survival and security, goal support, self-regulation and continuity, (Scannell & Gifford, 2010, 2017) are all aspects that homes can provide. An example of this is R02 who described her home as a place where she felt safe.

> *The further away I am from somewhere familiar the more nervous I'm going to get but at least I know I can always come back. [R06]*

These bonds to place are manifested by a desire to maintain closeness. Proximity maintenance ensures that individuals have access to resources that support a sense of security (Scannell & Gifford, 2017) as well as providing a stable sense of place that supports social coherence (Keyes, 1998).

In the same way that people talked about communicating aspects of themselves through their workspaces, people were aware that domestic settings could be used as an expression of their sense of self and place identity. Scannell and Gifford (2010) consider how individuals incorporate cognitions about places within self-definitions.

> *To be in the houses of people I care about…I'm just thinking about anchors. Happy anchors would be going to see my parents, really sort positive thing and also going 'round to see good, really good friends…It's part of them…thinking about it the interiors kind of represent you know a bit of the person isn't it. So, in that way I kind of feel like I'm being, gaining a better insight into that person who I care about.' [R12]*

R12 is aware that domestic places are a reflection of the people who live there, and that by 'reading' these places they understand how people are defining themselves and expressing their identities. Overall interview responses around built environments were typically focussed on the way in which places support needs rather than considerations of the physical qualities of the place itself.

Non-built environments. The theme of non-built environments was developed to incorporate places that predominantly feature green elements such a trees and vegetation and blue elements (water). The term non-built environments was preferred to the more frequently used term 'natural' as many of the places included in this section are clearly heavily designed and managed (e.g., public parks and seaside locations). Within

this theme the terms ‘green’ and ‘blue’ places are used to represent the place types described by respondents. The use of the term ‘green places’ is loosely used to refer data items relating to vegetation and discussions of ‘natural’ places. Respondents placed a greater emphasis on the physical features of green place compared to places included in the built theme. For some respondents the link to improved well-being and the vegetation in green places was clearly expressed.

> *I could have had the worse day of my life and I would get the dog and go over and just walk around and see the trees you know and smell some flowers and I was fine. [R05]*

The restorative narrative in this extract is clear, with the woodland environment rectifying the effects of a difficult day. Within Attention Restoration theory (ART, Kaplan & Kaplan, 1989) and Stress reduction Theory (Ulrich, 1979) nature was cited as particularly beneficial in restoring cognitive and emotional resources.

The presence of trees was also linked to contrasting feelings of security (R02, R015) and claustrophobia (R13).

> *…A sense of safety as well, you know, that it’s not too open. [R02]*

> *Where we live, we’re surrounded by trees which isn’t ideal [R13]*

Appleton’s prospect/refuge theory (1975) suggests that certain environments are preferred due to their adaptive evolutionary advantage. Woodlands can be viewed in this context; trees can be seen as a potential *refuge* (hiding place) and open places such as clearings, offer the opportunity for a clear *prospect* (open view) of the surrounding area and thus potential threats. Whilst green places have been associated with restoration, places that are high in refuge, such as woodlands, can increase attentional fatigue and stress levels (Gatersleben & Andrews, 2012), and for some people wooded areas are perceived as scary or negative environments (Milligan & Bingley, 2007).

The theory of environmental identity (Clayton, 2003) emphasises that place attachment may be directed towards physical (in this case natural) aspects of place and was incorporated into the Place dimension of the Person Place Process framework.

> *I love the fact that I'm more likely to see deer, rabbits, fish do you know. Looking out for the birds and everything…Sometimes I squeal with delight at a deer…I just love that. I don't want to sound too Wordsworthian but that being at one with nature. It's just gorgeous…It's more than pleasure I think it's that I feel that that is my almost my rightful place. [R02]*

This extract illustrated how individuals consider their nature-based place identity as being a source of enhanced well-being. For R02 green places provide them with a sense of coherence through alignment of person and the environment, by finding their 'rightful' place (Mittlemark & Bauer, 2017). According to the Salutogenic approach this type of supportive environment helps people understand and cope with challenges and as such promotes positive well-being.

Blue places. Open water, rivers, sea, and lakes were all selected as places that had a positive impact on well-being (see Appendix 4 for a full list).

> *It's something about water isn't it, walking beside water and rivers and so on. I think most people like doing that…it's calming [R02]*

There is a growing body of work exploring the importance of blue places for restoration and well-being (Garrett et al., 2019; Roe et al., 2019). Whilst the physical properties of water and waterside places are often the focus (Dempsey et al., 2018; Pitt, 2018), there is a growing interest in how blue places support valued activities and promote wider aspects of well-being (Drake et al., 2021; Thompson & Wilkie, 2020; White et al., 2021).

For some respondents blue places provide 'open' spaces which was linked to well-being.

> *I think it just gives…that being able to gaze into infinity I think, when you go to the coast you can just go and just…you know. [R11]*

A view of the sky and the horizon was valued by respondents and has been linked with lower rates of depression (Dempsey et al., 2018). This suggests that visual elements are important in the role blue places play in place/well-being relationships.

The narratives around the 'seaside' were less focussed on physical features of coastal regions and more embedded in meaning. The seaside held clear **memories** and associations that play a role in the formation and maintenance of place attachment. The

seaside as an example of a coastal location, seemed to be a particularly prototypical place that people had strong attachments to. Stokols and Shumaker (1981) suggest that features common to a type of place (e.g., the seaside) can form the basis of attachment through generic place dependence. The memories that people formed, for example in childhood, help shape **schemas** of a place that will influence not only future attachments but also an individual's sense of self. Personal memories contribute to a more stable sense of self (Twigger Ross & Uzzell, 1996) which Scannell & Gifford (2017) cite as a key function of place attachment. The prominence of seaside locations in the data set can also be linked to a meaning-mediated model proposed by Stedman (2003). This model of place attachment suggests that individuals bond to the meaning associated with features rather than specific places per se. Therefore, the symbolic meaning of a particular type of place can form the basis of place attachment.

As with many of the other places cited by respondents, it may be the case that seaside locations also offer people the opportunity to undertake activities or allow them to display an aspect of their identity that they value. In the case of the seaside this could represent perceptions of family time, recreation and carefree 'fun' activities. *Seaside* is a term associated with recreational coastal places and the value of coastal blue spaces on mental health was tied more to recreational visits than being resident by the sea (White et al., 2021). Therefore, *proximity* to a blue place was not the only factor in well-being outcomes.

Characteristics of place. In addition to the two broad themes of built and non-built places, respondents' extracts were considered in terms of the specific characteristics of the places that enhanced their well-being outcomes. Some of these characteristics described are physical qualities such as light levels or sounds, however also included in this section are rather more intangible qualities such as tranquillity or atmosphere. Not all the characteristics of place that respondents talked about are included in this section as this would be too cumbersome. Some key examples are provided that were discussed by a number of respondents or were felt to be particularly pertinent or illustrative. This theme helps to illustrate the complexity and diversity of the places viewed as enhancing but also the level of engagement respondents had with the process of reflecting on these places.

Physical properties. A predominant characteristic present in a number of the responses was 'light'. Light has an influence on well-being (Tomassoni et al., 2015) and these benefits were explored by respondents. For many, access to high levels of 'natural' light was valued in both outdoor environments and indoor places. In outdoor places control over light and the qualities of shade offered by vegetation were also highlighted. In this following extract the quality of light variation adds to the aesthetics and atmosphere of a place.

> *Rivers, woodland give me an enormous sense of happiness, of contentment of well-being. Something to do with the nature, the sounds the greenery, if the sunlight dapples, sunlight and just ah feeling. Ahhh (sigh) totally like you can breathe. In the head I get this, this is the area I like most, this is where I most like being. [R02]*

For a number of respondents, both 'light' and 'open' places were closely linked. The terms 'open air' and 'open places' were used to describe similar experiences. Orians (1980) suggests that the search for suitable savannah-like habitats influences our preferences, translating to a perception that open spaces are in some way enhancing. For some respondents, this reported preference can be linked to a view of the sky or an open vista.

> *The more open the space erm the more of the sky I can see the nicer it is. [R12]*

In this data set the open places described typically applied to outside space, however R20 reflected on a positive response to time spent in a railway station.

> *Just waiting and looking at the board and watching people running around. [R20]*

For many respondents, it was the visual elements of an environment that they referred to, however the other senses do come into play. Being exposed to a multi-sensory experience in a place was described in positive terms.

> *It's actually having trees, plants, birds, sound it's everything. [R11]*

> *There's an assault on the senses but it's a pleasant assault. It's not traffic, not traffic noise it's not like here with babble, it's just birds singing you know. And I'm having good conversation with whoever I'm walking with. [R14]*

This distinction between positive and negative noises was an interesting one. Traffic noise was generally cited as a negative noise, as illustrated in the extract above, and this echoes Environmental Psychology research into stressors (e.g., Glass & Singer, 1972; Tao et al., 2021). The importance of soundscapes to place/well-being relationships is gaining recognition including the development of the Perceived Restorativeness Soundscape Scale (PRSS, Payne, 2013). Natural sounds such as birdsong are commonly cited as playing a role in perceived restoration (Ratcliffe et al., 2013); however, different types of birdsong are associated with differential restorative outcomes with individual differences playing a role. In addition to the aesthetic quality of different birdsong the semantic values including the meanings attributed to different types of birdsong also play a role (Ratcliffe et al. 2016).

The range of *positive* noises cited by respondents was diverse, for example the sound of the wind in the trees and birdsong. Research has suggested that the more *natural* the noise the greater the perceived restoration (see Payne & Guastavino, 2018 for an overview of research in this field) but the sounds talked about by respondents were not all nature related. For some the sound of children playing was evocative.

> *When you go on a summer's day or something and hear all the sounds of people, you know? And the children and the buckets and spades and there's 'come here' you know? And you get all those sounds' [R11]*

This emphasises the individual aspects of place/well-being relationships, sound preferences are just as personal and idiosyncratic as other aspects of place.

Intangible features. As well as identifying physical elements there were a number of less tangible aspects that contributed to places being perceived as positively impacting well-being. In the following extract 'being lost' seems to describe being fully immersed in a place.

> *I can lose myself in Ikea…Ikea's a day out in our house. We sit on all the sofas you know so shopping boosts my well-being. [R02]*

Whilst Ikea may not be everyone's idea of a place that supports positive well-being, ART (Kaplan &Kaplan, 1989) may offer an insight. There are four qualities of a place that make it more or less likely to provide restorative potential: being away, soft fascination, extent and compatibility. Extent involves total immersion and engagement with a place (Kaplan, 2001). R02 describes Ikea as a place where she can 'lose herself' indicating immersion, and all Ikea stores are set up in the same way meaning familiarity is present no matter which store is visited. Importantly personal preferences are a core concept in ART as an individual needs to experience congruence with compatible environments if they are to be restorative (Kaplan & Kaplan, 1989)

Places that offer individuals a sense of losing themselves or escape were prevalent. For many the idea of escape related to time away from home and work.

> *I think holidays being away, even if it's for a weekend… I think sometimes even just a change of scenery can make you feel better. [R09]*

The extract above also indicates one difficulty in trying to examine the positive impact place has on well-being. How much of the value of escaping to a different environment is the pull of the new, the pushing aside of the over-familiar or the appeal of the activities related to being 'on holiday'? In addition, it is likely that this will vary in any given situation across places, times, and in line with individual differences. *Being away* is a central aspect of Attention Restoration Theory (ART) (Kaplan & Kaplan, 1989) and certainly for these respondents' places that offer some form of escape are cited as in some way enhancing well-being.

Other intangible aspects identified by respondents related to 'qualities' places possess. These seemed to be particularly fuzzy concepts for respondents to articulate. A number of respondents referred to 'atmosphere' (e.g., R14) and the concepts of 'peace' and 'tranquillity' which went beyond the presence or absence of sounds.

> *The outdoors, like beautiful open spaces that are tranquil and relaxing, I'm very much drawn to, it would have to have some tranquillity and calm and*

> *peace er…and it would have to be full of well, light and flowers and colour and tranquillity, everything together and then I would appreciate the interaction of the nature. [R18]*

One final aspect considered within this intangible subtheme relates to 'authenticity'. For some respondents spending time in a place, they felt had an element of authenticity was valued. For example, R14 emphasised a preference for a 'real' pub. Stokols and Shumaker (1981) suggest that schemas of places are important; the features common to a type of place, for example a pub, may be the source of place attachment. Schemas provide a prototype for places we perceive as enhancing and when we encounter elements of this schema, we can gain positive well-being outcomes (Feldman, 1990; Stokols &Shumaker, 1981). Within the PPP framework of place attachment schemas contribute to the process component (Scannell & Gifford, 2010). Recognising a place as real or authentic suggests a sense of continuity (Scannell & Gifford, 2017) that is a key function of place attachment.

3.3.2 The role of person-place relationships

The themes discussed within this section are less about descriptions of the *places* participants chose and more about the relationships they have with these places. It became apparent that for many respondents places regularly contained elements of **challenge**. In some instances, this came in the form of physical challenge; the extract below relates to hill walking.

> *Just being physical, being able to use your body and being able to enjoy using it that's what that's about. [R19]*

The feeling that challenges have been faced and overcome was explored in relation to a range of both physical and non-physical activities.

> *It's quite an academic challenge working out… and it can be um a modern place or an old place, how it, if it's an historical place, what the people at the time must have thought, compared to how it's seen now. [R04]*

Whether the challenge is physical or intellectual the presence of effort is central.

It's also the effort as well you have to put in that sort of helps with the well-being. [R07]

Places that made people feel 'productive' or competent, were seen in a positive light and can be linked to the dimension of *purpose in life* within eudaimonic well-being. Ryff (1989) links the idea of purpose in life with theoretical frameworks from a number of sources including Allport's definitions of maturity, specifically notions of directedness and intentionality. This seems to echo respondents' reference to places that help focus these aspects through providing challenge.

Challenge can also be interpreted through the Person Place Process framework in terms of attachment to places that help support goals. Scannell and Gifford (2010) suggest that this may be an indirect process involving self-regulation of emotions and the comparison of current states to greater goals (Korpela, 1989). In this context, challenge in places may provide individuals with evidence of their progress and support this self-regulation process. Korpela and colleagues go on to consider how favourite places provide the restoration needed to free up cognitive abilities required for self-regulation. It may be the case that short-term relief indicated in ART (Kaplan & Kaplan, 1989) draws people to places that offer restorative potential. An alternative interpretation is that individuals experience a range of emotions when facing challenges and this heightened affect contributes to closer person-place bonds and also to well-being (Giuliani, 2002).

The appeal of unknown or novel places as exciting and offering the challenge of the 'new', was echoed by a number of respondents. One interpretation may be in the context of 'being away' as a key element of ART (Kaplan & Kaplan, 1989). However, it was clear that novel places were described less in terms of escape from everyday places and more the pursuit of being immersed in the unfamiliar.

Prague would be a good one because I'm out of my comfort zone. [R01]

Personal attachment can provide a secure base for exploration and the very process of being away can help develop place meaning for being home (Case, 1996). Fried (2000) suggests that place attachment can become dysfunctional if a person stays in one place for too long.

The idea of claiming **ownership** and **control** over a place was apparently a contributory factor for many respondents' positive response to that place.

> *It's mine and I love it because it's mine and because I chose it. [R08]*

This sense of positive affect and pride specifically associated with ownership and control is an example of how relationships to place support hedonic well-being (Keyes, 2002). For some respondents, the issues of ownership and control clearly applied to workplaces.

> *I have really liked, I have had my own classroom and I've been the only one who's taught in it, it's the first time I've ever had that and I've really liked that again possibly going back to the control thing…I do like the ownership. [R03]*

R03's sense of *autonomy* and *environmental mastery,* both core aspects of eudaimonic well-being (Ryff, 2008) were apparent. Autonomy provides individuals with self-determination and independence. Having the ability to adapt, and the ability to manage aspects of one's environment (environmental mastery) helps to create a sense of control. Existing research has established a link between autonomy and well-being in the workplace (Slemp et al., 2015), with control over aspects of physical settings and job role both seen as contributory factors. These aspects of positive well-being enable individuals to exert their will and manipulate a place as they wish, as illustrated in the following extract about home.

> *I'm on my own there so it's how I want it, it's mine, I bought it from new and I've done it as I want it. So I like being in there because obviously I've fashioned it more or less…how I want it…it's the first that I've had yes after getting divorced. It's the first time I've been on my own. [R11]*

Riger and Laurakas (1981) consider how place attachment can be predicted by ownership as well as length of residence. Place attachment can manifest itself in the idea of control; proximity maintenance is easier where there is control over a space, control is most likely to be assured if there is ownership of a place.

The theme of **social aspects** aimed to examine how place and interpersonal relationships are intertwined in this data set. This involved consideration of interpersonal

factors as well as wider social contexts. Whether the presence of other people was welcomed or not, was a clear consideration in all settings. For example, for R06 there was a 'need' to share places with someone, for other participants, consideration was given to the context, the place or activity involved. For a number of people, the company they welcomed was limited to valued individuals such as friends or partners (R12). Within eudaimonic well-being this can be understood in the context of two dimensions, self-acceptance and positive relations with others. The following extract illustrates how self-acceptance can help manage the use of places in order to enhance well-being.

> *I never go out far on the moors or anything on my own because…I won't go too far…I don't know really, I think probably I wouldn't feel confident enough just to wander about by myself on the hills in case something happened I suppose. [R11]*

Respondents expressed an appreciation of time alone, but this was mediated by lack of confidence in their solitude in these places. Whilst these extracts illustrate concern over confidence rather than specifically personal safety, it seems reasonable to suggest that the latter quote intimates that safety was a concern. Staats and Hartig (2004) investigated the impact of being in company on restoration. They suggested that when safety was a concern then restoration was higher if the person was in company. For R11 there was clearly a concern around personal safety so it is possible that having company on their visits would positively impact on their well-being outcomes.

Respondents also generated data that related to wider social consideration such as a sense of belonging. For R06 having an allocated workspace was seen as important as an indicator of membership and belonging.

> *I never felt as though I belonged whereas when I came here, and I think that's down to the fact I have my own desk, I know that sounds a bit childish. [R06]*

A sense of belonging, whether in a workplace or a wider community was a topic reflected on by a number of participants.

> *For me that feeling of community makes me feel comfortable, knowing people. [R06]*

Within Keyes' conceptualisation of social well-being, social contribution and social integration (Keyes, 1998) are both pertinent to places that provide people with a sense of belonging. Social contribution refers to the value people place on their position and contribution to society, social integration is an indicator of how much people feel they are part of a society (Keyes, 1998). In this example feeling part of a community acts as an indicator of acceptance and shows that the individual is valued, and this contributes to their social well-being. Belongingness is also considered within person-place relationships, positioned within the 'process' dimension of the Person Place Process framework (Scannell &Gifford, 2010). A sense of belonging was cited as an example of positive affect and as such an indicator of place attachment as well as hedonic well-being.

The lack of feeling of community resulted from a perceived lack of shared values for a respondent who was reflecting on their experiences living in Dubai.

> *I found it very difficult living there er very difficult for a woman to live there and I found it very hard to take the huge differences between the rich and the um and the ones that served. [R18]*

The feeling of being uncomfortable with the values observed within the community led to feelings of exclusion. This in turn will have negatively impacted her sense of shared community ties or group identity described by Scannell and Gifford in the social aspect of the Place dimension of the PPP (Scannell & Gifford, 2010). It is likely that the respondent's social well-being will have been impacted as the extract indicates her social contribution to the community she was living in, was not seen as valued (Keyes, 1998). The place described in this extract failed to affirm the status of a group with which the individual identified, i.e., being a woman.

The theme of **temporal aspects** of place contains extracts that in some respect link to time, including the passing of time as indicated by age and personal history. A prevalent theme was how personal preferences and relationship to places had changed during respondents' lifespan.

> *I think as you get older you get more sort of, not sedentary but you like, you like your little comforts, you like your special chair. [R06]*

Adjusting expectations with age can also be seen in terms of relinquishing control of valued places.

> *I like being outside and my next life task is to come to terms with not being as fit as I was…I do have two guys who come once a month that help me with stuff. That was quite hard. Anyone can clean my house but my garden…so it was sort of me letting go and them learning what I wanted and I'm sure if they were doing anybody's garden it would be the same, you're quite protective. [R19]*

Research has suggested that aspects of well-being change with age (Ryff & Singer, 2008) part of this could be due to changes in the way we use and relate to places. This is further explored in the barriers subsection of this chapter.

A number of respondents made links between places they felt had a positive impact on their well-being and childhood experiences, with **personal histories** playing an important role in the formation of place attachment and resultant well-being outcomes. For some this was simply the pleasure of revisiting places that were familiar. Time spent in places that were valued in earlier life were imbued with important memories that for some respondents enhanced their appreciation of time spent in a specific location.

> *For me it's got a lot of personal memories back to when I was a child when my father was alive. [R18]*

These memories in relation to place can be linked to a number of different aspects of well-being. In terms of hedonic well-being, the place may elicit positive affect such as happiness or affection. Personal history in relation to place also relates to the self-acceptance component to eudaimonic well-being (Ryff, 1989). Places pertinent to our past help the comprehension and acceptance of different aspects of our selves. In the extract above, the social context could also impact on how relations with others are viewed. If the memories of spending time with her father are positive then the place could help support a view of themselves as having positive relations with others (Ryff, 1989). Twigger-Ross and Uzzell (1996) suggest that personal memories can enhance place attachment by contributing to a more stable sense of self (place referent continuity). These memories, particularly childhood memories also impact on adult landscape

preference experiences (Adevi & Grahn, 2012) and familiarity with landscape types influence well-being outcomes they elicited (Cleary et al., 2017).

Within the PPP framework (Scannell & Gifford, 2010), place attachment is both an individual and collective phenomenon, with the preservation of culture and ritual playing a key role. The following extracts consider continued legacy and how places can be a linked to past and future generations beyond personal timelines.

> *That's almost like my roots, my foundation that's tradition years, years, decades of traditions…My grandpa once said to me that I could stop going to football after 63 years because that's how long he went for. [R02]*

Personal familial links added value to specific locations but there were also broader historical, cultural factors for some respondents who considered the longer-term social contexts of historical properties.

> *What happened in this place where I'm standing maybe a hundred years ago, what life was like, very interested in everything that's attached to a location… the location things that are attached to in terms of meaning they're very important I would say… in terms of making me feel part of what makes me happy and my well-being. [R12]*

For R12 the historic property provides social actualization and social cohesion (Keyes, 1998). The respondent gains a sense of how society progresses and provides a sense of continuity through the ages so supporting positive social well-being which contributes to a stable sense of self.

Scannell and Gifford (2010) present the view that the cultural and individual levels of place are interlinked and can be at the personal, wider historical or even spiritual context. For one respondent in particular shared cultural values were an important draw to the places he identified as personally enhancing.

> *It's the culture, a lot of it is the …the Islamic influence and the Jewish, what is called the Jewish Safadi influence which appeals to me in a big way so there's a lot of associations not just geographical. [R04]*

Shared symbolic meanings such as those talked about by R04 help create 'group framed' place attachment (Scannell & Gifford, 2010. p. 2).

The **cognitive aspects** theme contained data that referenced affect, memories and schema. This was clearly a discrete theme in the analysis but due to the inter-connection of place/well-being relationships, many of the points contained within this theme have already been addressed in this chapter (schema and memories). To avoid repetition this section will just focus on affect.

When asked about places that positively impacted their well-being a prevalent response in terms of **affect** was to talk about places that made them happy.

Rivers, woodland give me an enormous sense of happiness, [R02]

In Scannell and Gifford's PPP framework of place attachment (2010), affect is considered within the process dimension. Positive affect creates positive associations with places (Giuliani, 2000) and this drives proximity maintenance and attachment. Within the concept of hedonic well-being, happiness is seen not just as an example of positive affect but also as notable in its own right (Keyes, 2002). Positive affect was expressed by respondents including pleasure, comfort, ease, contentment, love, gratitude, pride, excitement. Emotions such as anxiety and fear were also discussed but not in negative terms, rather associated with challenge, which may lead us to reconsider the place of affect within well-being. Anxiety and fear within challenge, represented an experience that produced positive well-being outcomes but may have involved affect that some (e.g., Watson et al., 1988) would consider as negative. Manzo (2005) suggest that relationships to place may involve both positive and negative affect.

The iterative nature of the coding process meant that after the main analysis of the data corpus further themes became apparent relating to **barriers and facilitators** to accessing places. Waterman et al. (2010) suggested that in order to fully understand eudaimonic well-being outcomes we need to consider both subjective and objective aspects. The subjective aspects involve the individual's experiences, and the objective element refers to the behaviours that are associated with pursuing goals. Physical access was a commonly cited determinant of behaviour. If an individual cannot physically access

or engage with a place, then its potential as a resource for positive well-being is irrelevant. Access in terms of distance, time and financial implications were all cited.

> *The main barriers I think would be either independently being able to get somewhere or having somebody to call upon. [R16]*

> *There's always going to be money (as a barrier). [R09]*

Specific considerations such as route finding, practical aspects of stewardship such as path maintenance as well as more internal factors such as sense of direction were also talked about as potential barriers.

> *Generally, those paths aren't as well maintained you know quite often the path will become perhaps either overgrown or ploughed up. Of course, that adds to the challenge but sometimes not a challenge you're ready for. [R07]*

> *I get lost easily I've got no sense of direction whatsoever. [R10]*

The perception of capability and the perceived risks associated with accessing locations were also seen as determinants of behaviour.

> *I wish I could go away by myself because he would never do what I want to do, but I wouldn't have the confidence to go by myself. [R10]*

In a number of cases this was recognised as a dynamic process and related to aging.

> *You think more about what could happen, I think you know like when you're younger and you don't care about on the rollercoaster when you're older you're like oh no that looks a bit high. [R08]*

The limitations of reduced mobility or strength mean that the relationships to places may alter as control shifts. The feeling that increasing age led to increased vulnerability meant that for some respondents, access to previously valued places was compromised.

> *I think you get to a point where you realise you are slower, when you go somewhere like London and you do all of a sudden realise how vulnerable you are. I realise I'm much more vulnerable. [R17]*

Limiting access to places could impact negatively on all of the well-being outcomes associated with place/well-being relationships. Ryff and Singer (2008) explored the different dimensions of eudaimonic well-being in relation to age and found autonomy and environmental mastery showed incremental changes over the life-course, while purpose in life and personal growth declined more sharply (Ryff &Singer, 2008). The feelings of vulnerability reported by these respondents could impact their ability to behave independently and regulate their behaviour (autonomy), manage their environments (environmental mastery) limit their opportunities for developing positive relation with others, and reduce the possibility for pursuing goals and engaging in valued activities (purpose in life, personal growth) (Ryff, 1989). In the data extracts above the focus was more on perceptions of vulnerability, however, the only interview conducted with a couple (R15 and R17) raised an interesting qualifier to this.

> *He sees himself…He isn't more vulnerable. [R15]*

The view of older adults as vulnerable was clearly seen as a limiting factor but to what extent this was a 'perceived' concern was brought into question. The internalisation of stereotypes about aging are negatively associated with active aging (Fernandez-Ballesteros et al., 2020). These extracts illustrate that concerns about aging were associated with a perception that active use of places would become more limited. The COM-B model (Michie et al, 2010) suggests that *capability, opportunity* and *motivation* are key components in determining behaviour. Perceptions of capability form part of this model. In these extracts individuals' perceptions of their capability is impacted by their views of what aging will mean for them.

Perceived vulnerability also impacts on how other see us, and these social perceptions could impact our place related behaviour. The views of others were a consideration in terms of regulating behaviour such as entering a pub on their own (R14). In the following extract it is clear that even though the respondent's behaviour is not impacted by social perceptions, she is aware of them.

> *A lot of people have said to me I ought to get a dog…they said I shouldn't walk alone, and I said well why ever not? I've always walked on my own. I mean who is going to hang around the moors waiting for me? [R13]*

For some people being aware of these social perceptions of their capability, the risks involved in valued activities, and the perceived appropriateness of their behaviour in relation to place is a potential barrier.

The barriers and facilitators individuals reported may impact on them spending time in these places and this may impact on opportunities for improved well-being. This is particularly important as eudaimonic well-being consists of both subjective and objective aspects (Waterman et al., 2010). Therefore, if considering positive eudaimonic outcomes as a desired consequence of a behaviour such as accessing place in a salutogenic way, understanding how barriers and facilitators act as behavioural determinants is worthwhile.

3.4 Conclusion

The results of this study indicated a wide range of places had a positive impact on well-being outcomes. This was true both between participants but also for each individual, with many reflecting on a variety of places in their responses. This suggests that the range of places available to promote well-being may be broader than currently considered, but that the use of place is highly idiosyncratic. The implications for public health applications are that there needs to be an awareness that a 'one size fits all' approach, for example green therapies, is unlikely to be wholly successful. There will be a need to focus on an individualised approach and more pertinently the need for the focus to be on supporting individuals in gaining a greater awareness of their salutogenic use of place. What is encouraging in this respect is that the study showed that, for these individuals at least, there was a good capacity for reflection and self-awareness when it came to understanding their use of place. Participants had a clear understanding of the spectrum of well-being outcomes. They did not just choose 'favourite' places with heightened affect, or places that simply made them 'happy', they looked beyond hedonic well-being, to places they felt were 'good' for them. This nuanced understanding of the role of eudaimonic well-being suggests that the concept has face validity and has positive implications for the use of place in a public health context.

When it comes to considering whether there are 'universal' characteristics or types of place that promote well-being, the results are indicative that light, water, and 'open' prospect are common to many. Both blue and green places feature heavily but

given the ideographic nature of this study further evidence would be needed to state whether these had concrete implications for designing for well-being. For many participants the built environment was just as important, and the richness of their responses in relation to these places, brings into questions the use of broad terms like 'urban' with all the inherent narrative and cultural values embedded in it (Champion & Hugo, 2016). Participants expressed an understanding of the importance of personal meanings attributed to place, and the impact this has on place/well-being relationships. Place identity and place attachment were particularly strong narratives with individuals reflecting on how their relationships to place, went beyond the aesthetic and physical characteristics. This highlights the need to go beyond an understanding of attributes of a place itself when considering how people could be asked to use places in a salutogenic way; person-place relationships are clearly integral.

A final point addressed in this study is whether this awareness of the value of place translates into place seeking behaviour. Participants made reference to proximity maintenance through frequency and duration of visits, but also reflected on factors that may restrict their access or engagement. The determinants of people's behaviour in relation to place, suggest that facilitators and barriers to access are important to consider, particularly within a health promotion context. Wilkie and Davinson (2021) conducted a scoping review on behaviour change interventions where nature exposure was the primary focus. Of the 52 studies reviewed there was a general lack of theoretical underpinning with only 6% clearly citing a theoretical framework for behaviour change despite that being the intended outcome of the interventions. These factors that impact on behaviour needed exploring further in subsequent studies in the thesis, therefore there was a need to develop a fourth thesis research question.

> To what extent do behavioural determinants act as facilitators or barriers to accessing places perceived as having a positive impact on their well-being (Thesis RQ4)

This qualitative study has provided rich narratives around place/well-being relationships that are often absent from research in this field and has helped to reveal the complexity of these relationships. The hope of a 'silver bullet' when it comes to designing for well-being, or for place-based interventions is brought into doubt, but the ability of individuals

to delve into, and reflect meaningfully on, these relationships offer optimism in the context of individualised, client-led interventions. What is needed now is a clearer understanding of whether these findings are only applicable for the current participants or if the same findings are replicated in the wider population.

Chapter 4: Theoretical Integration of Study 1 Findings

In Chapter 3, the findings of Study 1 were discussed within current academic literature and references to relevant theory. The aim of this chapter is to bring those findings together, integrate them into a broader theoretical context, in order to bridge between these findings and the studies that follow in the thesis. The focus is on four main theoretical frameworks: 1) hedonic, social and eudaimonic well-being (Keyes, 1998; Ryff, 1989), 2) Attention Restoration Theory (Kaplan & Kaplan, 1989), 3) The Person Place Process framework of place attachment (Scannell & Gifford, 2010) and 4) The COM-B model of behaviour (Michie et al., 2010).

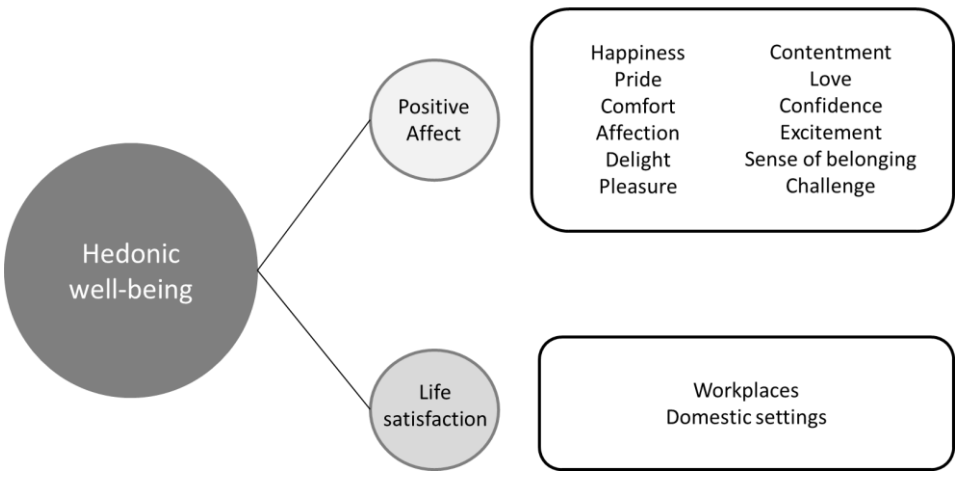
4.1 Well-being outcomes

The aim of Study 1 was to explore the range of places that positively impacted well-being, so it was unsurprising all Study 1 participants reported well-being outcomes. The results support the established categorisation of well-being into hedonic and eudaimonic well-being (e.g., Ryff, 1989) but also the inclusion of social well-being in place/well-being relationships (Keyes, 1998).

Hedonic well-being is typically described as consisting of, positive affect, particularly happiness, and life satisfaction (e.g., Cleary et al, 2017). These components of hedonic well-being were present in Study 1 data (Figure 3).

Figure 3

Schematic of study 1 data mapped onto aspects of hedonic well-being



Places were regularly described in terms of the positive affect they elicited (e.g., happiness and pride). There were, however, instances in the data from Study 1 where the label of *positive* affect could be queried. Some words such as challenge, fear and anxiety are on the surface examples of *negative* affect, and yet were clearly linked to places cited as having a *positive* impact on well-being. Measures used to identify affect such as the widely applied PANAS (Positive and Negative Affect Scale, Watson et al., 1988) clearly categorises affect as *either* positive or negative. The Process component of the Person Place Process framework (Scannell & Gifford, 2010) suggests that potentially both positive and negative affect are involved in place attachment. The data from Study 1 brings into question whether the value of a place, in terms of its ability to provide positive well-being outcomes, can be assessed through the mere presence of positive affect and the absence of 'negative' affect. What constitutes positive or negative affect may be more open to subjective interpretation than is indicated by existing measures of hedonic well-being; potentially the use of the terms positive and negative are too rigid in this context. Life satisfaction is also identified as a dimension of hedonic well-being (Deci & Ryan, 2008; Deiner, 1984), within Study 1 it was talked about by respondents in relation to the pride and satisfaction gained from workplaces and domestic settings.

Eudaimonic well-being. In the data generated by the 19 interviews in Study 1, all six aspects of eudaimonic well-being conceptualised by Ryff (1989) were addressed (self-acceptance, environmental mastery, positive relation with others, personal growth, autonomy, and purpose) (Figure 4). For example, places such as cities were valued by participants because they provided the opportunity and resources for valued activities (Korpela, 1989) and this supports personal growth and provides a purpose in life. Autonomy in the context of control over 'personal' places such as workspaces and domestic settings were cited as reasons places provided positive well-being. Respondents also showed they were able to resist social pressure and show self-determination when they utilise places. The data from Study 1 suggests that eudaimonic well-being is an integral part of place/well-being relationships, and this allows consideration of places in terms of the potential they can offer in accessing the full range of well-being outcomes.

Figure 4

Schematic of study 1 data mapped onto aspects of eudaimonic well-being

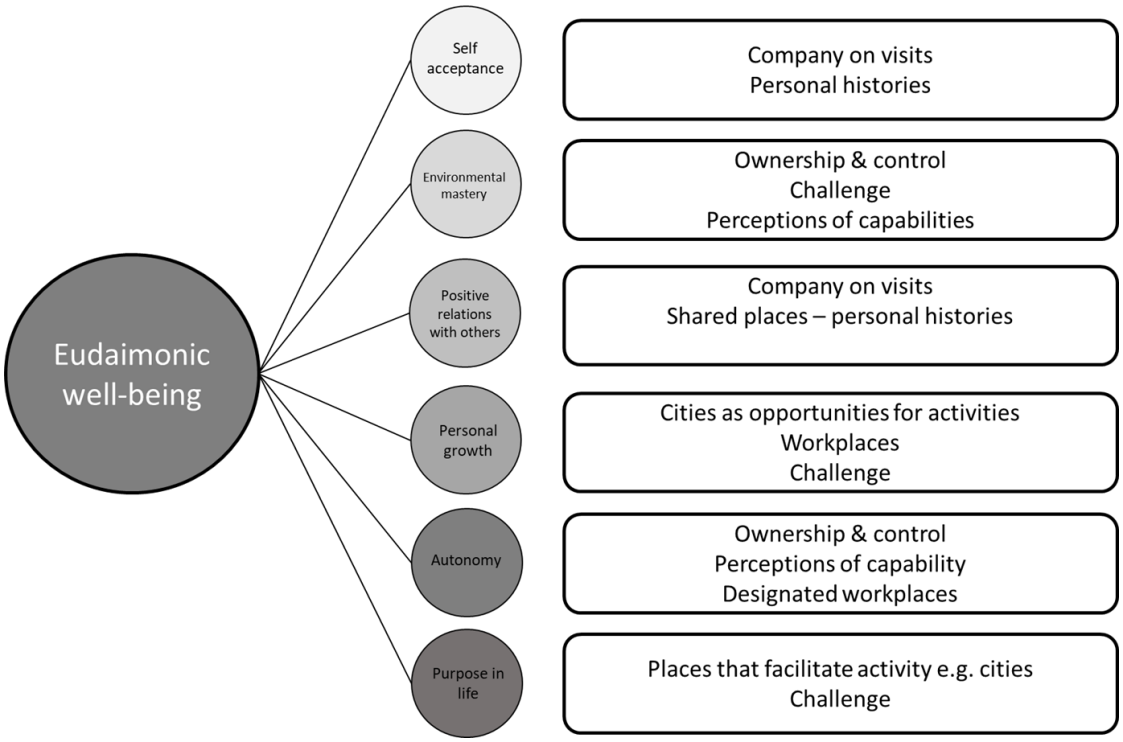
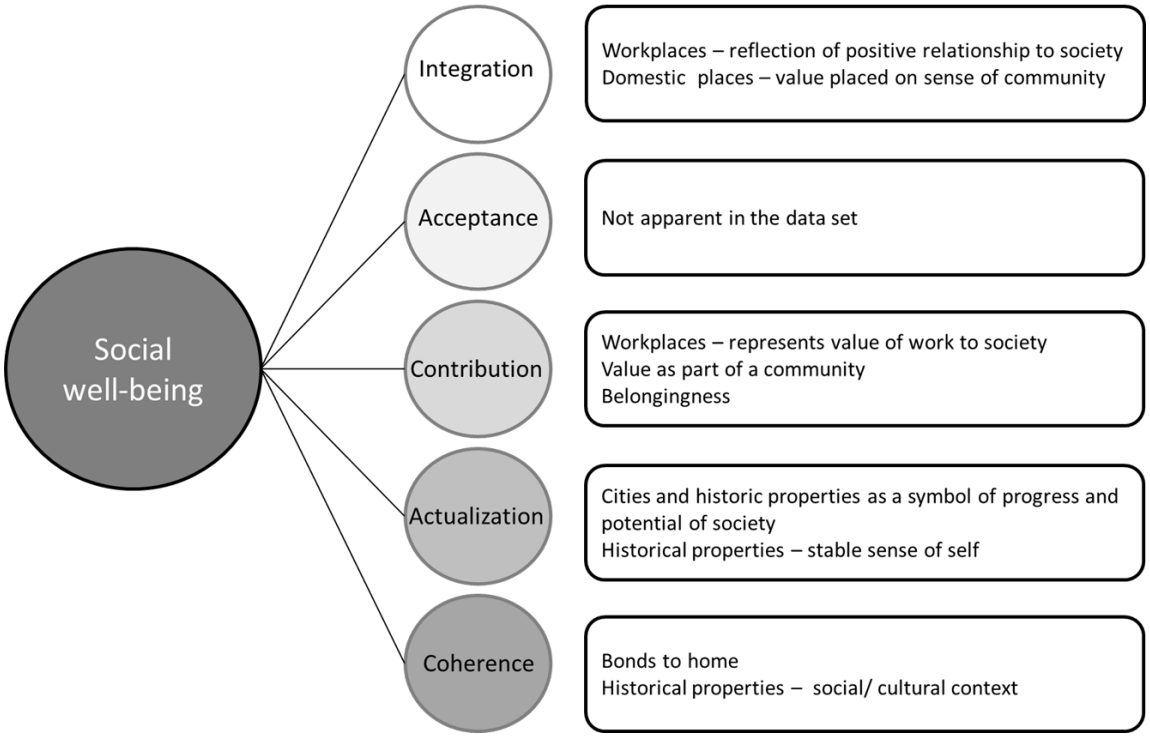


Figure 5

Schematic of study 1 data mapped onto aspects of social well-being



Social well-being. Keyes (1998) proposed social well-being as a supplement to existing definitions of well-being. The focus on individual well-being was not disputed but Keyes suggested that social context was also important in understanding a fuller range of well-being outcomes. Of the five components of social well-being suggested by Keyes (1998) (social actualization, social contribution, social integration, social acceptance and social cohesion), only social acceptance was not apparent in the data from Study 1 (Figure 5). Places that facilitated peoples' perceptions of themselves as a valued, active part of society or the community were particularly pertinent. This provided participants with a sense of their place in society (social integration) and that this is valued (social contribution). Cities and historical properties provided respondents with a sense of the potential and direction of society (social actualization).

The representation of hedonic, eudaimonic and social well-being in the data from Study 1 illustrates the multi-dimensional conceptualisation of well-being (Finch et al., 2014). The distinction between the three different types of well-being was supported and the use of this model of well-being was seen as appropriate for use in the other two studies in this thesis.

4.2 Restoration or enhancement

Restoration theories dominate the narrative within place/well-being research, with the impact of the cognitive Attention Restoration Theory (Kaplan & Kaplan, 1989) evident throughout policy and practice in this field. In a scoping review of nature-based interventions theoretical underpinning was found to be largely absent or limited in its application, despite this, ART was referenced in 22 of the 52 studies included (Wilkie & Davinson, 2021). When considering the data from Study 1 in light of restoration theories, respondents referred to the aspects Kaplan and Kaplan described in their ART (fascination, extent, being away and compatibility). Kaplan and Kaplan (1989) suggested that a range of places have the capacity to provide restoration, but that 'green' places offered the best opportunity. These findings were not reflected in the data in Study 1 with no strong emphasis across the data set linking only predominantly 'green' places and narratives around restoration. The potential for restoration was reflected on in the rich and diverse range of places chosen. Whilst green places were discussed by R05 in terms of broad restoration qualities. Other aspects of ART were talked about in relation to a

range of places; Ikea as an example of extent and holiday destinations as an obvious example of being away.

In line with a broadly restorative approach, a number of respondents described using places in a therapeutic way when depleted (e.g., escaping everyday stresses) but in addition to this a number of respondents reported using places as part of their well-being regime. In a challenge to the 'deficit' approach presented by theories such as the ART, respondents did not report place/well-being outcomes as *only* being present when they were 'depleted' in some way. Whilst there were references to how places could perform a restorative function, the dominant narrative was that places could act in a health promoting way, highlighting the salutogenic potential of place/well-being relationships. The positive well-being outcomes respondents referred to were not always described in terms of restoration from cognitive load (directed attentional fatigue). To the contrary, some places described in terms of their well-being benefits involved activities that were in themselves cognitively depleting. The use of places to prevent physical and mental ill health was indicated in the data from Study 1 but requires further exploration, places clearly hold salutogenic potential beyond existing practice in therapeutic places.

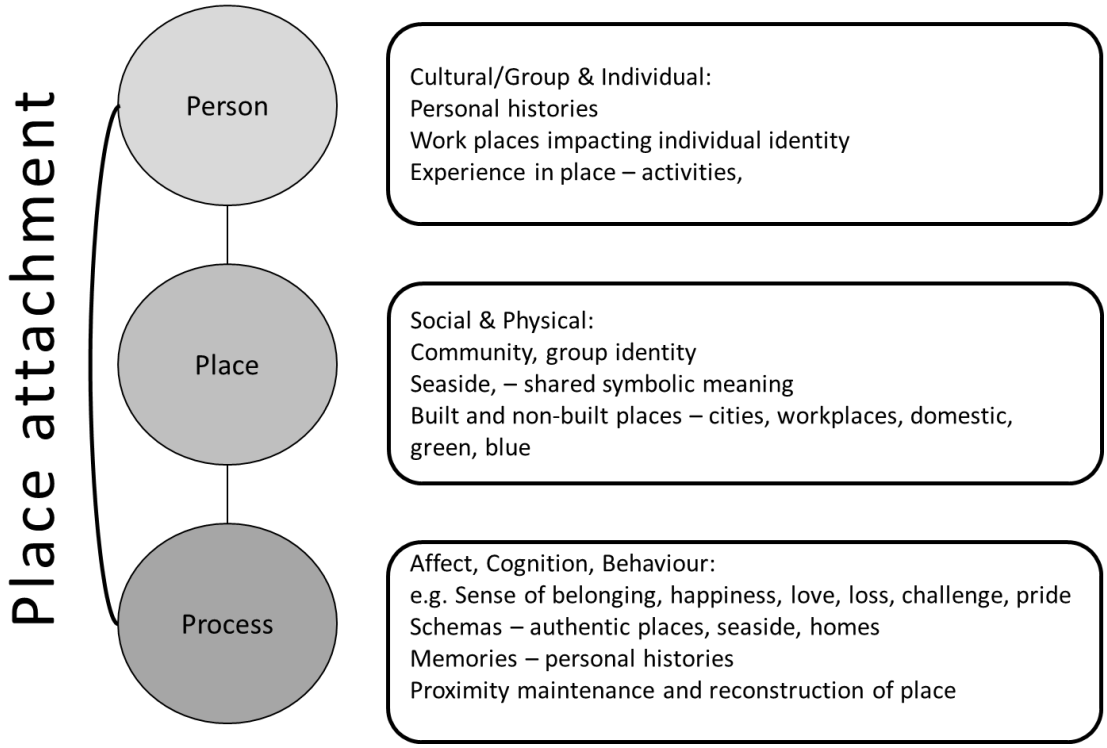
4.3 Place attachment

When asked to select places that they perceived as enhancing, participants' reflections can be interpreted in terms of place attachment theory. The data from Study 1 suggests that place attachment is an integral element of the place/well-being relationship and therefore plays a role in the use of place in a salutogenic way. The three-dimensional (tripartite) **Person Place Process** (PPP) framework of place attachment proposed by Scannell and Gifford (2010) brings together a range of definitions of place attachment incorporating other wider theoretical concepts, into a single coherent framework. The multidimensionality of the framework allows for the rich interpretation of the data from Study 1 within the context of place attachment (Figure 6).

Person. The Person dimension of the PPP framework (Scannell & Gifford, 2010) is focussed on who is attached to a place; to what extent is that attachment an individually held meaning, or based on a shared collective understanding of place? The Person aspect was most clearly manifested within Study 1 as a discourse around collective place

Figure 6

Schematic of study 1 data mapped on to the Person Place Process framework



attachment e.g., 'British' people having an affinity with the coast. This idea of a collective attachment was also emphasised when the importance of community identity in domestic places was considered. Within the 'temporal aspects of place' theme the Place element of the PPP model manifested itself at both the individual and collective or community levels including personal histories. Manzo (2005) suggests that 'experiences-in-place' help create meaning, Scannell and Gifford (2010) take this further in making clear the relationship between the experience people have in places and the development of place attachment. The data extracts in Study 1 support the view that places provide opportunities for individual and shared memories that are integral to the development of place attachment. Goal achievement and meaningful events can be symbolised in places, for example when R12 talked about how his workplace instilled pride in his achievements. His individual identity as a professional is clearly important but also coming from a working-class background the shared group identity is also impacted.

Place. The Place dimension of the Person Place Process model asks what is it about the place to which we connect? Scannell and Gifford (2010) suggest that considering attachment in both social and physical terms is important and surmise that

even though social place attachment may be stronger than physical place attachment, both influence the nature of the overall bond. Within social place attachment, Scannell and Gifford considered Riger and Laurakas' (1981) work on social ties, belongingness to neighbourhoods and familiarity with residents. These were all ideas raised by respondents in their interviews as discussed in the temporal and social aspects of place themes. Physical attachment is considered in terms of residence, ownership, and rootedness but also in terms of physical features of a place (characteristics of the environment, built and non-built places) and how this can impact on supporting people's goals.

Process. The Process dimension of the PPP framework considers how individuals and groups relate to a place. It focusses on three psychological aspects of place to explore this further: affect, cognition, and behaviour. All three of these aspects are manifested in data extracts predominantly within the 'cognitive aspects of place' theme. Both positive and negative affect were mentioned by participants and clearly contribute to their person-place bonds and, more specifically, their attachment to places. Belongingness was touched on repeatedly in the data from Study 1 (Giuliani, 2002). This was often linked to people's personal histories, the frequency and duration of time spent in a place, as well as their responses to shared spaces. Particularly evident was how this process dimension was reflected on in relation to domestic settings and green places. If it is accepted that attachment is expressed through actions (Scannell & Gifford, 2009) then the proximity-maintaining behaviour described by some participants can be seen as behaviours that indicate an attachment to place. The behaviour of reconstructing places, either literally through modelling of homes, gardens, and workplaces or through visiting similar places, suggests that bonds to place can manifest themselves in different ways. Territoriality, ownership and control can be seen to come into play here as individuals or groups try to maintain proximity with a place by excluding or controlling the access of others (Scannell & Gifford, 2010). Respondents felt the value of these personal places, for example, through an allocated workplace, a first home post-divorce; a place they saw as *theirs*.

Memories, belief, meaning and knowledge that Scannell and Gifford see as making up the cognitive elements of the Process dimension are all represented within study 1 (Scannell & Gifford, 2010). The role of schemas in shaping people's knowledge and

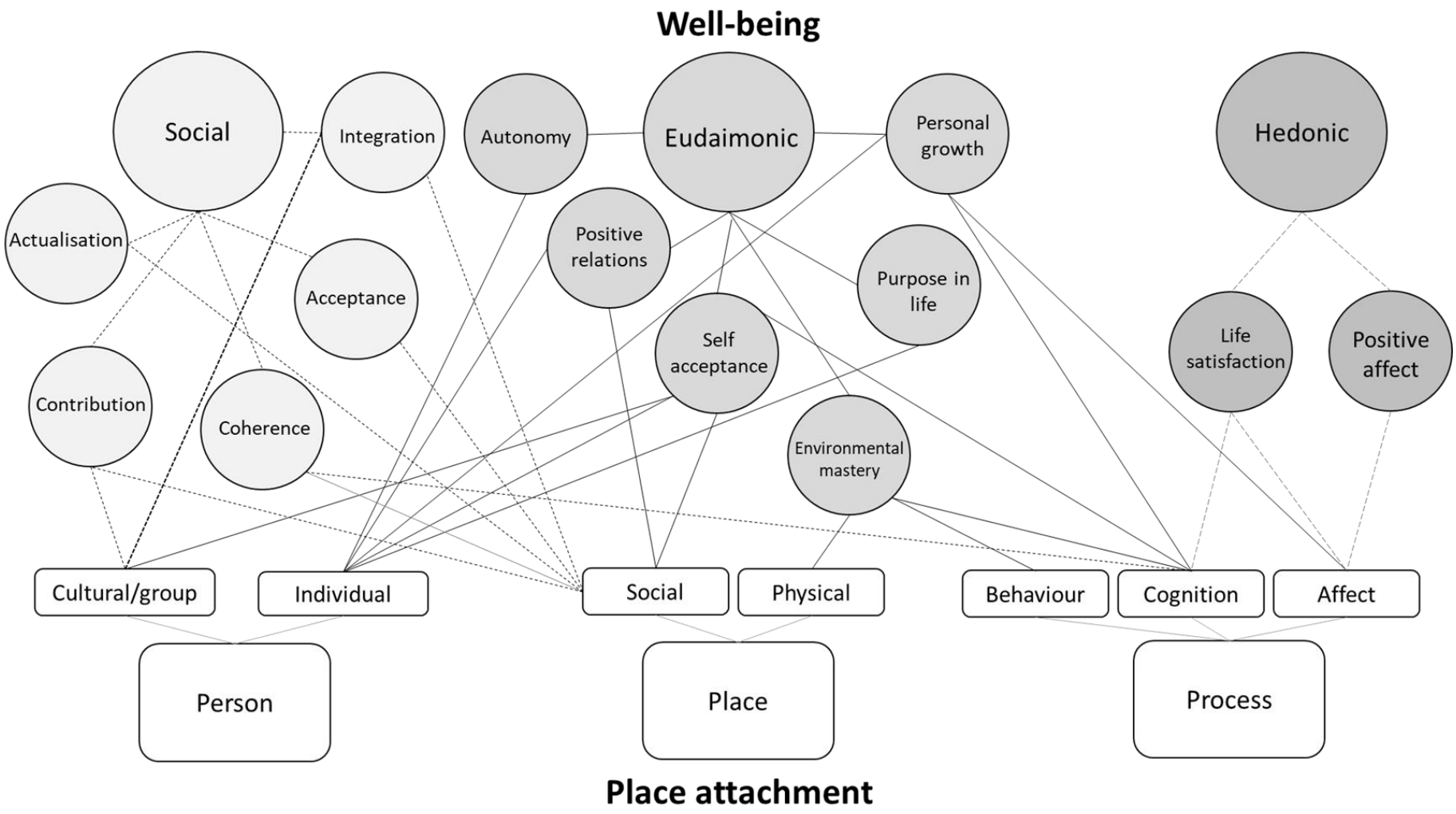
connections with places is seen as a key element. This is particularly relevant when types of place are referred to (Feldman, 1990). Places such as the seaside and homes provided prototypical places that were based in the schemas respondents had developed. These provided respondents with elements of a place that held meaning and were embedded in their memories and personal histories (Stokold & Shumaker, 1981). The incorporation of well-being within schemas relating to place could be pertinent to understanding how places could be used in a salutogenic way. The complex, multidimensionality of the person-place relationships described by participants suggested the PPP framework of place attachment proposed by Scannell and Gifford (2010) could offer an appropriate theoretical underpinning for understanding place/well-being relationships.

4.4 Mapping Person Place Process framework and well-being

It is apparent from the data from Study 1 that individuals' reflections on the bonds that they have with place, are interwoven with their narratives around well-being. The cross-mapping of the PPP framework (Scannell & Gifford, 2010) with hedonic, eudaimonic and social aspects of well-being (Figure 7) helps provide a richer understanding of the complex nature of place/well-being relationships. This mapping process illustrates how concepts, for example *positive affect* are common to both well-being and place attachment theoretical frameworks. This provides a visualisation of why place attachment as conceptualised in the PPP framework (Scannell & Gifford, 2010) may be central to the well-being outcomes associated with place/well-being relationships. Figure 7 presents a complex picture of the relationship between well-being and place attachment; however, the hedonic and social well-being aspects are straightforward. Hedonic well-being is closely aligned to the Process component of the PPP framework. Positive affect and life satisfaction both relate to the affect aspect of the Process dimension. This explores how positive and negative affect influence the strength of people's relationships to place. Social well-being most clearly maps onto the social aspect of the Place dimension of the PPP. The culture/group aspects of the Person component of the PPP, which covers how shared symbolic meanings and shared histories, values and experiences, maps onto social contribution and social integration from Keyes model of social well-being (Keyes, 1998). Eudaimonic well-being with its six components (Ryff, 1989) is more complex, and maps with aspects of all three of the Person, Place and Process components of the PPP.

Figure 7

Schematic of PPP framework mapped onto aspects of well-being



4.5 Behavioural determinants

In order for place/well-being research to have an impact for example through social prescribing (e.g., care farming, green gyms) highlighted in the 2018 green future plan (Defra, 2018), there is a need to optimise the suitability and effectiveness of interventions that have at their heart people-place relationships. This starts with understanding the factors that contribute to engagement with places that could elicit positive well-being outcomes. Research on engagement with potentially beneficial or supportive places typically relates to natural places, for example, The Monitoring Engagement with Natural England report (MENE) (Natural England, 2018) and Boyd et al. (2018). Study 1 respondents generated data on a number of factors that either facilitated or were potential barriers to engaging with place. These behavioural determinants effected the time they spent in places and in turn their opportunities for improved well-being. One model that can be used to better understand the factors that could impact the behavioural determinants (i.e., the facilitators/barriers) is the COM-B model of health-behaviour (Michie et al., 2010). The model is comprised of three main components: capability, opportunity, and motivation; and it explores the link between components of behaviour and the appropriateness of intervention strategies. The COM-B model identifies people's physical and psychological skills (capability) combined with the opportunities they are presented as defined by their physical and social environments, alongside their beliefs about their abilities (motivation). In terms of place/well-being relationships how people engage with place is determined by these combined Capability Opportunity Motivation components.

Working alongside Michie, Cane et al. (2012) identified 14 theoretical domains that were present across theories of behaviour and this framework was then interpreted in terms of the COM-B model (Table 3). This framework from Cane et al. (2012) has been used to gain a theoretical understanding of the facilitators and barriers that people perceive as impacting on their access to place. Using this approach helps to identify which components are most pertinent for a specific individual. The facilitator and barrier subthemes identified in Study 1 corresponded with a number of domains from the Theoretical Domains Framework (Cane et al., 2012) and with the COM-B, with some more clearly represented in Study 1 than others. For example, in terms of both facilitators and

Table 3

Theoretical Domains Framework linked to COM-B model

COM-B Component		TDF Domain
Capability	Psychological	Knowledge
		Skills
		Memory, Attention, Decision processes
	Physical	Skills
Opportunity	Social	Social influences
	Physical	Environmental Context, Resources
Motivation	Reflective	Social/professional Role and Identity
		Beliefs about capabilities
		Optimism
		Belief about Consequences
		Intentions
		Goals
	Automatic	Social/professional Role and Identity
		Optimism
		Reinforcement
		Emotion

Note: Reproduced from Cane et al. (2012) with the permission of Professor S. Michie

barriers the social influence and environment domains were prevalent, and these relate to the opportunity domain within the COM-B model. This suggests that for a number of individuals the opportunity to engage with their chosen place was a factor in their ability to utilise places to elicit well-being outcomes. Another important factor relates to beliefs about capability, which is part of the *motivation* domain in the COM-B; how capable people felt they were, impacted on their motivation towards health-seeking behaviour. There was a sociodynamic element to this with age, gender and income featuring in the data extracts. However, the sheer variety of responses again indicates the need to acknowledge individual differences in how people engage with place.

4.6 Conclusion

The data from Study 1 indicates that respondents' person-place bonds, specifically place attachment, play a role in their relationship to the physical environments they see as having a positive impact on their well-being. This is especially true when applying more complex and inclusive definitions of place attachment such as the PPP framework (Scannell & Gifford, 2010). Place attachment has been linked with perceived restoration

(e.g., Ratcliffe & Korpela, 2016) however the current research provides a rich source of data, broadening out from deficit focussed restoration theories to encompass a wider conceptualisation of well-being. Well-being outcomes discussed by respondents can be considered in terms of hedonic, eudaimonic and social well-being. People talked in terms of positive affect and life satisfaction (hedonic well-being), all six aspects of eudaimonic well-being (autonomy, environmental mastery, personal growth, positive relations with others, purpose in life and self-acceptance) (Ryff, 1989), and four of the five components of social well-being (social actualisation, contribution, integration, and coherence) (Keyes, 1998). Study 1 has helped emphasise the need to recognise the dynamic nature of the place/well-being relationship in order to further explore salutogenic applications and thus extending the notion of 'therapeutic' places. A further exploration of the theoretical frameworks discussed in this chapter (in particular well-being and place attachment) provided the basis for the design of Study 2 (Ch. 5) in this thesis. The iterative nature of qualitative research meant that on returning to the Study 1 data the importance of barriers and facilitators to health-seeking behaviours was recognised. These aspects of place-related behaviour then fed into the design of Study 3 (Ch. 6).

The findings presented in Chapter 3 began to address the perceived limitations in place-well-being research. Respondents reported positive well-being outcomes associated with engaging with place without reporting initial cognitive depletion, stress, or ill health. This emphasises the idea that place can play an enhancing, salutogenic role in health promotion. A wide range of places were reflected on, moving beyond the nature-urban dichotomy. The rich data in Study 1 suggested that individual differences, and person-place bonds were important when exploring place/well-being relationships. These findings confirmed the appropriateness of the original three research questions. As reported in Chapter 3, the addition of a fourth research question relating to behavioural determinants that impact on engagement with place was also added.

Thesis research questions:

1. In what ways can a range of physical environments be seen to enhance and maintain positive well-being outcomes in individuals? (RQ 1)

2. What characteristics across a range of physical environments impact on well-being outcomes? (RQ 2)
3. To what extent do person-place relationships impact on self-reported well-being outcomes for individuals? (RQ 3)
4. To what extent do behavioural determinants act as facilitators or barriers to accessing places individuals perceive as having a positive impact on their well-being? (RQ 4)

Chapter 5 (Thesis Study 2): 'I Don't Feel limited There', Self-report Accounts of Place/Well-being Relationships

The online survey presented in this chapter (*N* = 289) explored individuals' accounts of places they perceived to have had a positive impact on their well-being. The study aim was to build on Study 1 (Ch. 3) and the subsequent theoretical analysis presented in Chapter 4. A quantitative approach was used in the current study to explore the generalisability of aspects of well-being associated with place. The aim was to address the following broad thesis research questions:

- What characteristics across a range of physical environments impact on well-being outcomes? (Thesis RQ 2)
- To what extent do person-place relationships impact on self-reported well-being outcomes for individuals? (Thesis RQ 3)

5.1 Introduction

There were three main areas of focus for this study. The first was to explore well-being outcomes reported by participants in terms of hedonic, eudaimonic and social well-being. Second was the range, characteristics and types of places that participants chose as an example of a place that had a positive impact on well-being. Third was the role of person-place relationships in place/well-being interactions.

5.1.1 Well-being

This study focussed on the perceived well-being outcomes in relation to place and built on the conceptualizations of well-being explored in Study 1 (Ch. 3) and Chapter 4. Key study aims were to offer clear definitions of well-being linked with place and explore the relative importance of components of well-being.

The way in which well-being has been defined and operationalised in place/well-being research has been inconsistent (Hartig et al., 2014). Reviews suggest well-being measures are frequently invalidated or refer to mental distress, mental ill-health and Quality of Life as 'proxies' for well-being (Houlden et al., 2018, p. 3). When studies do use definitions of well-being aligned to multi-faceted theoretical frameworks, such as those offered by Ryff (1989) or Keyes (1998), they tend to focus on one of the dimensions, such

as hedonic well-being (e.g., Takayama et al., 2014), social well-being (e.g., Rollero & Piccoli, 2010), eudaimonic well-being (e.g., Webber et al., 2015) or even an *aspect* of one dimension such as 'happiness' (e.g., MacKerron & Mourato, 2014). The focus on these aspects of well-being can help provide a more detailed understanding of place/well-being relationships, however, clarity is needed when findings are generalised to 'well-being' as an overarching concept.

The well-being outcomes reported by participants in Study 1 (Ch. 3) suggested a clear division between hedonic, eudaimonic and social well-being outcomes. Participants reflected on the experience of well-being in the form of hedonic well-being and function of well-being in the form of eudaimonic well-being. These findings support the assertion of King and Napa (1998) that lay -person's understanding of well-being echo the theoretical conceptions of hedonic and eudaimonic well-being (MacMahan & Estes, 2011).

In Study 1 there was a strong focus on the social aspects of well-being that would merit further exploration. This aligns to Keyes inclusion of social well-being as a distinct, but hierarchically equivalent, dimension of well-being (Keyes, 1998). Keyes conceptualised well-being as consisting of three dimensions: emotional well-being which aligns to hedonic well-being, eudaimonic-psychological well-being which aligns to Ryff's (1989) definition of eudaimonic well-being, and eudaimonic social well-being. This social well-being dimension has been the topic of debate. Keyes proposed that the three aspects are all hierarchically equivalent dimensions of well-being. However, Cooke et al. (2016) suggested that aspects of Keyes social well-being were most appropriately aligned to the conceptualization of eudaimonic well-being with place social well-being *within* the eudaimonia category. Despite this they also note that some aspects of social well-being are not usually found within definitions of eudaimonic well-being, for example social actualization and social cohesion. Within the current study a distinction is made between hedonic, eudaimonic, and social well-being to establish the impact places have on the components of well-being.

5.1.2 Place.

Researchers focussing on place/well-being relationships, have typically tried to identify the features of an environment that are associated with positive well-being outcomes. This can refer to the *characteristics* of a place, which can be physical (e.g., the presence of wildlife, a view of the horizon) or less tangible (e.g., tranquillity). On a larger scale, environments can be categorised according to *type* of place, reflecting the dominant features of the environment e.g., green, blue, urban green space, urban (Akpinar et al., 2017; Barton & Pretty, 2010; van den Berg, 2010).

If the features of an environment are linked to well-being, or a specific aspect of well-being, then this could be exploited in design, landscape managements, policy, and practice development. At the macro-level, this could encourage the protection of 'valuable' environments. Within an anthropocentric view of place, environments are considered in terms of their benefits to humans, and this influences how they are valued (Diaz et al., 2015). If places contain features that are found to elicit positive well-being outcomes, then they may be more valued. At a micro-level this may manifest itself in the use of place for individual well-being benefits, for example through place-based therapies.

Characteristics of place. In Study 1 (Ch.3) participants described places that they perceived enhanced their well-being. The thematic analysis of these descriptions included physical and non-physical features or characteristics (see Table 4). When considering the links between the characteristics identified in Study 1 and theory, research into landscape preferences is pertinent as people may select places because they possess features that they value or are drawn to. Landscape preference theories are typically divided into those that consider an evolutionary perspective and those that are embedded in cultural or social psychological theory. Appleton (1975) offered an evolutionary explanation of place preference, categorising places that offer us prospect (an open view) or refuge (the shelter or cover offered). The characteristics identified in Study 1 that could be linked to prospect/refuge include openness, views, or vistas (prospect) as well as the presence of trees/vegetation or being enclosed (refuge). According to this theory there will be individual differences for preferences, considering how we perceive environments as containing potential threats. In a similar evolutionary vein, Biophilia (Wilson, 1984)

explores our preference and affinity with elements of our surroundings that are embedded in, or echo, the 'natural'. Even though these preferences developed in an environment that differs from our modern world, the preferences for these elements, such as plants, water and natural materials, persist.

Table 4

Characteristics of places mapped onto theoretical frameworks

Characteristic	Related theory
Physical characteristics[1]	
Light	ART and biophilia (Wilson, 1984))
Outside	
Open space	'Prospect' Prospect Refuge (Appleton, 1975)
View of the sky	Soft fascination ART (Kaplan and Kaplan, 1989)
Quiet	Cultural Values Model (Bieling et al., 2014)
Clean	Aesthetics of care (Nassauer, 1997)
Busy	
Enclosed	'Refuge' Prospect Refuge (Appleton, 1975)
Non-Physical characteristics[1]	
Immersion	ART (Kaplan & Kaplan, 1989)
Escape	'Being away' ART (Kaplan & Kaplan, 1989)
Tranquillity	Cultural Values Model (Bieling et al., 2014)
Spirituality	Place attachment (Scannell & Gifford, 2010)
Authenticity	Schemas (Stokols and Schumaker, 1981)
Ownership	Environmental mastery (Ryff, 1989)
Additional characteristics[2]	
Beauty	Cultural Values Model (Bieling et al., 2014)
Clear function	Ecological aesthetic (Carlson, 2009)
Uniqueness	Place attachment (Scannell & Gifford, 2010)
Clear routes	Wayfinding
Controlled	Environmental Mastery (Ryff, 1989)
Allow exploration	Place dependence
Contains wildlife	Fascination ART (Kaplan & Kaplan, 1989)

Note. [1]Characteristics identified in study 1 as having a positive impact on well-being.

[2]Additional relevant characteristics identified in research or theory other than study 1.

Restoration theories such as Attention Restoration Theory (ART, Kaplan & Kaplan, 1989), explain the restorative qualities of specific environments. Natural elements were identified as holding a 'soft fascination' for humans, allowing for recovery from directed attentional fatigue, whilst effortlessly attending to the environment (Kaplan, 1995).

Attempts have been made to identify characteristics of places that are most effective in producing restorative affects. In many cases research has addressed broader notions of the 'types of place' that are most restorative. For example, green and blue places are regularly identified as having a positive impact on cognitive restoration in comparison to urban environments (e.g., White et al., 2013). Research into specific characteristics within those environments is more limited, but research has considered the impact of the presence of wildlife (e.g., Bragg et al., 2015), water (e.g., Herzog, 1985), trees (e.g., Wheeler et al., 2015), ownership (e.g., Matilainen et al., 2017) and natural views (e.g., Bragg et al., 2015). Whilst these studies explored related concepts, the measure of restoration and well-being varied considerably, meaning that direct comparison of the beneficial outcomes of exposure to these specific characteristics is limited.

A number of alternative theories that consider our landscape preferences, look to socio-cultural rather than evolutionary underpinnings. For example, the landscape heritage approach considers cultural heritage (e.g., Fairclough et al., 1999), ecological aesthetic looks to the function of a place (Carlson, 2009), the aesthetics of care (Nassauer, 1997) explores the value placed on signs that a place is tended to, and the related notion of stewardship (Tveit, 2006). Bieling et al. (2014) explored characteristics of landscapes and highlighted features that resonate with the findings of Study 1 (e.g., water, tranquillity). They identified elements of landscapes (mainly natural) that had positive well-being outcomes, and explored these in terms of the ways that people value landscapes in both biophysical and socio-cultural terms. Whilst Bieling et al. (2014) present a clear theoretical framework for the ways that people value aspects of their natural environment, their research does not offer a clear theoretical framework for the well-being aspect of their findings.

The qualitative nature of Study 1, means that the list of characteristics of place identified through thematic analysis was exploratory and indicative, illustrating the complexity and richness of place/well-being relationships. It was not the intention to produce an exhaustive list of all the pertinent features of place associated with positive well-being outcomes; therefore, further exploration was required. Additional characteristics drawn from relevant research literature were considered for inclusion in the current study (Table 4). These include characteristics related to research and theories

already considered, such as beauty (Bieling et al., 2014), presence of wildlife (ART, Kaplan & Kaplan, 1989), as well as characteristics linked to well-being ('controlled' as an indicator of environmental mastery) and person-place relationships ('allows exploration', and 'uniqueness').

Type of place. Environmental Psychology typically uses 'type of place' to categorise environments according to their dominant features. These have been used as shorthand for understanding place well-being relationships; with the importance of 'green' or 'natural' places to human well-being dominating the narrative. This approach helps with planning, land management place-based solutions but can lead to an oversimplification of place/well-being relationships. There is evidence linking type of place with different well-being outcomes (hedonic, eudaimonic, social), for example, Houlden et al. (2018) conducted a review of research into greenspace and well-being and identified differential well-being outcomes according to how greenspace was defined and measured. They found that there was adequate evidence of a positive association between local greenspace and hedonic well-being, but this was not the case for eudaimonic well-being. Therefore, it is worth exploring how hedonic, social and eudaimonic well-being differentially relate to different types of place.

These broad type of place categories such as green/nature, blue, urban green space (UGS), and urban/built are used relatively consistently in research but have been operationalized in a much less consistent way. It has been suggested that despite a generally held view that nature had a positive impact on mental well-being there is a 'dearth' of evidence (Houlden at al., 2018, p. 1). A proposed reason for this is the inconsistent approach used within this field. In their review of greenspace/well-being research Houlden et al. (2018) identified six different ways in which greenspace was conceptualised and measured and each of these consisted of a plethora of methods used. For example, green places were operationalised by the use of land cover maps (e.g., Wood et al., 2017), land use databases (e.g., Alcock et al., 2014), self-report (e.g., Ward Thompson et al., 2014), on-street audits (e.g., De Vries et al., 2013), and field survey (e.g., Luck et al., 2011). It is possible that each of these approaches would return different type of place categorisations for the same location, meaning that comparison of results and generalisation from findings are problematic.

There also seems to be a lack of equivalence between the ways in which the different 'types of place' categories are operationalised. Some researchers have acknowledged the need to distinguish between different natural or green environments but treat urban or built landscapes as homogenous. For example, Takayama et al. (2014) make the distinction between different types of woodland but present a homogenous view of the urban locations used in their research. Another anomaly is the focus on 'outside' spaces. In their study on happiness and green places, MacKerron and Mourato (2013) used GPS and an iPhone app to gather real-time data, that indicated that different types of non-urban outdoor places were associated with significantly higher levels of happiness. Whilst outdoor type of place categories were explored, indoor spaces were largely side-lined despite representing 85% of the data points in the study.

As well as being defined and measured in different ways within research, the broader conceptualisations of types of place are subject to significant cultural or geographical associations that impact on how they are operationalised and perceived by participants. The way in which a 'natural' or green place is perceived in the UK may be very different to how it is conceptualised in Japan or Finland. In many cases these differences reflect variations in the physical environment within which research is positioned (Rainisio & Inghilleri, 2013) but also the cultural positioning of environment types such as 'natural' and blue.

An aim of this thesis is to explore and challenge the way in which these type of place categories are presented within place/well-being research. The literature suggests that type of place differentially impacts well-being outcomes, in as much as green and blue places offer greater well-being outcomes than for built places (e.g., Garrett et al., 2019; Souter-Brown et al., 2021). Urban green spaces have also been associated with positive well-being (e.g., Houlden et al., 2019). However, many of these findings are marginal and related to specific aspects of well-being, therefore the dominance of these type of place categories can be questioned. If type of place is limited in its impact on well-being outcomes, then perhaps research needs to look beyond the focus on the features of the environment, to consider the relationships people have with place.

5.1.3 Person-place relationships

As has been previously raised in this thesis, there is an ongoing debate about how person-place relationships are conceptualised, defined and operationalised. The disparities in the way that both place attachment and well-being have been operationalised, impacts on the clarity of the picture that is emerging.

In Study 1 (Ch. 3) people frequently discussed aspects of person-place relationships in the context of their chosen places. The Person, Place and Process (PPP) tripartite framework of place attachment (Scannell & Gifford, 2010) was offered as a suitable theoretical framework (Ch. 4). The PPP framework considers place attachment as an overarching concept, with place identity and place dependence falling within the Person, Place Process components. Research has supported the idea that person-place bonds play a role in well-being outcomes in relation to place. Place attachment has been found to have a positive impact on aspects of hedonic and eudaimonic well-being (e.g., Scannell & Gifford, 2017), and social well-being (e.g., Afshar et al., 2017). Research has also indicated the mediating role of place attachment (e.g., Basu et al., 2020) and components of place attachment: place identity (Knez et al., 2018) place dependence (Magalhaes & Calheiros, 2020).

A growing body of evidence suggests that researchers need to look beyond the physical features of the environment to better understand place/well-being relationships (e.g., Afshar et al., 2017; Korpela et al., 2009; Menatti et al., 2019; Uzzell & Moser, 2006). Whilst characteristics and type of place may have a differential impact on well-being outcomes, incorporating individual's perceptions, experiences, and bonds to place could provide a fuller picture.

5.1.4 Study aims and hypotheses.

A primary aim of the current study was to determine whether well-being outcomes were hedonic, as reported in prior studies (Keyes et al., 2008; Lamers et al., 2011; Perugini et al. 2017) or more nuanced as suggested in Study 1, with links to varied aspects of social and eudaimonic well-being. Further aims were to explore the variety and frequency of the characteristics of places that participants perceived as having a positive impact on their well-being, and to explore whether well-being outcomes differed by type of place. A final

aim was associated with an index of person-place relationships, exploring whether place attachment influences well-being outcomes. The exploration of the characteristics of place were descriptive in nature; well-being, type of place and person-place relationships were explored using hypothesis testing.

The following hypotheses were tested:

H_1: Across places, the relative importance of the three aspects of state well-being will differ. Specifically, participants will report higher levels of hedonic well-being compared to social well-being or eudaimonic well-being.

H_2: The three state well-being outcomes will differ by type of place.

H_{2A} Both green and blue places will elicit higher well-being scores than urban green space.

H_{2b} Green, blue and urban green spaces will elicit higher well-being scores than urban places.

H_3: Person-place relationship components will positively correlate with state well-being.

5.2 Method

5.2.1 Participants

Adult participants (N = 289, M_{age} = 34.2, SD_{age} = 14.76, age range: 16-72) were recruited through social media (Twitter) and educational organisations (Table 5).

Table 5

Descriptive characteristics of Study 2 sample

	Gender			
	Women (n = 220)	Men (n = 66)	Not given (n = 3)	All (n = 289)
	Age group			
16-24	76	27	2	105
25-44	76	17	1	94
45-64	67	22	0	89
65+	1	0	0	1
	Residential Location			
UK	213	40	1	254
Ireland	0	6	0	6
USA	0	6	1	7
Not Given	7	14	1	22

Participants were all provided with the same survey link, and they were not required to indicate where they were recruited from. As with Study 1, three organisations were approached for recruitment: a U3A learning cooperative group for older adults and a sixth form college group. Both were selected as they had previously offered their support to the research project and as they represented potential participants that cover a large age range, level of education and socio-economic background. The organisations are based in the north east of England and potential participants could be drawn from urban, rural, suburban and coastal communities. A link to the survey was also made available via social media (Twitter) (Appendix 8).

5.2.2 Design

Aspects of this study are descriptive in nature. Characteristics of places were summarised using the response frequency. A quasi-experimental design was used to test hypotheses 1 and 2. A within-subjects design assessed the relative importance of two well-being components (established by principal component analysis) as indicated by participants in relation to the places they selected (H_1). Type of place was a 4-level independent variable (green, blue, urban green, urban) and the two well-being component outcomes were treated as dependent variables(H_2). Hypothesis 3 the relevant variables were the two state well-being outcomes and a person-place relationship index.

5.2.3 Sampling procedures

Sampling was via opportunity and snowball sampling. The link to the on-line questionnaire hosted on Qualtrics was circulated to any potential respondents over the age of 16. For participants recruited via social media (Twitter) a recruitment link was 'tweeted' (Appendix 8) containing the link to the questionnaire. This was primarily circulated through two twitter accounts and was then available to be further disseminated (retweeted) to access a larger number of potential participants.

5.2.4 Measures

The on-line survey comprised 78 open and closed items (Appendix 9). In addition to demographic information, respondents were asked to identify and then describe a place that had a positive impact on their well-being; this description was used to categorise the function and type of place. Respondents were also asked how regularly they visited the

place and how long each visit typically lasted i.e., frequency and duration of their visits. This related to the concept of proximity maintenance, with frequency and duration of visits considered indicators of place attachment (e.g., Scannell & Gifford, 2010). The remaining items were designed to gather data in relation to three factors: state well-being, place characteristics and person-place relationships.

Well-being. A consideration within this study was to consider **state** i.e., well-being within a specific place, event, timeframe, or activity, rather than **trait** well-being. It was felt that there was a lack of an appropriate existing state well-being measure, in particular one that considered the three aspects of well-being. Therefore, a robust measure of trait well-being that addressed hedonic, social and eudaimonic well-being was adapted for use in this study. Permission was granted to amend the stem of the Mental Health Continuum Short Form (MHC-SF, Keyes, 2009). This well-being measure was chosen as it was consistent with both the findings from Study 1 and the theoretical underpinnings of well-being identified in Ch. 2 and Ch. 4. The MHC-SF was straightforward to adapt, requiring only small adjustments to the wording used in the stem to direct respondents to reflect on their well-being within a specific location. The stem of the original MHC-SF asks how individuals had been 'feeling in the past month' and asked respondents to indicate 'in the past month how frequently they felt…' with a Likert scale (1 = never, 6 = every day). The modified version asked individuals about how they felt in their chosen place by indicating 'When spending time in my chosen place I feel…' on a Likert scale (1 = strongly disagree, 7 = strongly agree). The measure was altered to utilise a 7-point (rather than 6-point) Likert scale in order to allow for a greater range of responses.

The modified version of the MHC-SF (Appendix 9) included 14 items relating to hedonic (emotional), social (eudaimonic- social) and eudaimonic (eudaimonic-psychological) well-being (Keyes, 2009). Hedonic well-being was measured by three items relating to positive affect, life satisfaction and interest in life. Eudaimonia was measured by items referencing the six elements of psychological well-being established by Ryff (1989); self-acceptance, positive relations with others, personal growth, purpose in life, environmental mastery and autonomy. Social well-being was measured through five items designed to assess social contribution, social integration, social growth, social acceptance, and social interest.

Characteristics of place. Two survey items related to characteristics of the place participants selected. Firstly, they could select any of the 19 characteristics identified from Study 1 and other theories (Table 5). They could tick as many characteristics as they felt were relevant. It was recognised that there may be further pertinent characteristics so respondents could provide this additional information in an open item.

Person-place relationships. Eight items (7-point Likert scale: 1 = strongly disagree, 7 = strongly agree) that addressed a range of concepts relating to person-place relationships were included (Table 6). The use of the 7-point Likert scale was adopted to align with the response options for the well-being measure used in this study.

Table 6

Person-place relationship items used in study 2

Item	Related concept	Mapped onto PPP
Item stem - ***The place I have chosen…***		
is personally meaningful for me	Place meaning/place dependence	Process – cognition
holds memories for me	Place identity	Process – cognition
has a cultural or spiritual meaning for me	Place meaning/place dependence	Person – Culture
is similar to other places that are important to me	Prototypical or Uniquness	Place
gives me a sense of ownership	Place identity	Process – proximity maintenance and Place - social
is an expression of who I am	Place identity	Person- individual and cultural
is the best place for doing the things I enjoy	Place dependence	Place – social and physical
is a place I am attached to	Place attachment	Place attachment

The items for this measure were developed with consideration of the findings from study 1, the existing literature, and the PPP framework. The 8 items were novel items developed for the study but were informed by items from existing measures (Jorgensen & Stedman, 2001; Raymond et al., 2007; Scannell & Gifford, 2017). Specifically, the eight place attachment items for this study were developed in order to reflect the key aspects of place identity, place dependence and place attachment that are at the core of conceptualisations of person-place relationships (Lewicka, 2011) The items

also reflected the understanding that bonds to place can be both personally meaningful as well as those that develop through shared group meanings such as culture or spiritual considerations as indicated by the PPP framework. A decision was made not to include a published measure of place attachment because most do not map onto the Person, Place, Process (PPP) framework of place attachment (Scannell & Gifford, 2010). At the time of the current study, the only existing measure aligned to this model had only been used in one study by Scannell and Gifford (2013) and it was felt that the measure needed further explanation and testing in order to be included. The items that were developed followed the established approach of using a statement about the participants relationship with a place, providing a Likert scale for response options (Williams & Vaske, 2013). Attention was paid to ensure that the items developed would allow differentiation of levels of attachment between participants and in response to the full range of places (Williams & Vaske, 2013).

5.2.5 Procedure

Once ethics approval was granted in accordance with BPS guidelines (BPS, 2018), gatekeepers were contacted (see Appendix 10) and permission was granted to recruit. Respondents accessed the on-line link to the survey, hosted on Qualtrics, which included a participant information sheet (Appendix 11). Participants were informed that by submitting their responses they were providing informed consent (Appendix 12) and only to proceed if they were over the age of 16. The survey took participants about 10 minutes to complete.

5.2.6 Analysis

Open items relating to descriptions of participants' chosen places were coded using thematic analysis, including the classification of *types of place* and *function* of place. Type of place categories adhered to those widely used in existing literature: urban/built, urban green space, green, blue. An 'other' category (n = 42) was also created for places that could not be categorised according to type of place, for example people who chose countries or regions as their place (e.g., Spain).

In relation to place function, the following categories were developed inductively: Education/Work, Spiritual, Domestic, leisure/hobby, Vacation/day out. In 55 responses

function could not be identified from the data provided, this was again frequently because the place was a country or region. Items relating to age, gender and duration of visit were all translated into categorical data. Descriptive analysis was conducted on characteristics of place, including open questions. These open questions were analysed to check for crossover with terms already provided and synonyms were discounted.

A principal component analysis (PCA) was conducted on the 8-item person-place relationship index in order to establish components that could inform the theoretical framework of person-place relationships and the hierarchical positioning of place attachment. Cronbach's alpha was used to establish internal consistency for the resultant components. A second PCA was used to assess the structure of the measure of state well-being. Although the MHC-SF has been used widely and validated (e.g., Perugini et al., 2017), the adapted measure created for this study had not been used before, so a principal component analysis was considered the appropriate method of component extraction. Cronbach's alpha was used to establish internal consistency for the resultant components.

A dependent t-test was conducted to see if there was a difference in the relative importance of well-being components reported by participants (H_1). A MANOVA was conducted in order to explore any differences in well-being outcomes by type of place (H_2). Pearson's product moment was used to explore any correlational relationships between person-place relationship and state well-being (H_3).

5.3 Results

5.3.1 Preliminary analysis

The full data set consisted of 392 responses; however, 95 incomplete responses were eliminated from the data set as the percentage of missing data was considered as too high for imputation (Huisman, 2000). The threshold for imputation was 1 missing data point per participant (approximately 1% of their data) and up to 4 missing data points per item across participants (approximately 1% of the data for that item). Twenty-two respondents had a single missing value that varied across items, median imputation was used for these values and the data included in the final analysis (N = 289). Of the 78 items

included in the survey, 14 Items had missing data; of these no item had more than 4 missing data points.

Two principal component analyses were conducted, one on the person-place relationship index and one on the adapted MHC-SF well-being measure. The initial PCA (varimax rotation, no factors specified) was conducted on the 8 items relating to person-place relationships (Table 8). The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis, KMO = 0.74 and all KMO values for individual items were above 0.70 which is well above the acceptable field of 0.5 (Field 2009). Bartlett's test of sphericity x^2 (15) = 411.00, p < .001, indicated that correlations between items were sufficiently large for PCA. An initial analysis was run to obtain eigenvalues for each component in the data. Two components had eigenvalues over Kaiser's criterion of 1 and in combination explained 62.55% of the variance. One item, (similarity), was eliminated as the communality value was too low. Another item linked to place attachment ('my chosen place is a place I'm attached to') was eliminated as it was cross loaded over the 2 resultant components; both loadings were above .32 (Tabachnick & Fidell, 2013) and were therefore deemed significant but with less than .20 difference between loadings (Hair et al., 2009).

Table 7 shows the factor loading after rotation. The items that cluster on the same component suggest that component 1 represents place dependence and component 2 represents place identity. Place dependence (variance: 32.07%) included 3 items relating to the function of a place in providing opportunities for goals and activities (Stokols & Schumaker, 1981). Place identity (variance: 30.48%) included 3 items relating to the meaning a place has for people (Kyle et al., 2005).

Cronbach's alpha was 0.72 for place dependence and 0.65 for place identity indicating an acceptable level for subscale use (Ursachi et al., 2015). Cronbach's alpha analysis indicated that the values would not be higher if any item were deleted, and both the inter-item and item-total correlations are all above 0.3 (Field, 2009). The component subscales for both well-being and person-place relationships were calculated using the mean of items with scores ranging from 1-7.

Table 7

Person-place Principal Component Analysis

Components (% variance)	$\bar{x}$	(*SD*)	Cronbach's α	Rotated loadings Comp.1	Rotated loadings Comp. 2	h^2
Place dependence (32.07)			0.72			
Self-expression	5.20	1.62		0.82		0.73
Ownership	4.55	1.78		0.76		0.62
Facilitation/Dependence	5.36	1.41		0.76		0.58
Place identity (30.48)			0.65			
Personally meaningful	5.86	1.34			0.79	0.69
Holds memories	5.92	1.44			0.76	0.60
Cultural / Spiritual meaning	4.15	1.97			0.71	0.53
Eliminated items						
Place attachment	5.73	1.48				
Similarity	4.45	1.68				

Note: Maximum scale value = 7.

A PCA (varimax rotation, no factors specified) was conducted on the 14 items relating to state well-being adapted from the MHC-SF (Keyes, 2009). The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis, KMO = 0.84 and all KMO values for individual items were above 0.76 which is well above the acceptable field of 0.5 (Field, 2009). Bartlett's test of sphericity x^2 (36) = 1050.64, p < .001, indicated that correlations between items were sufficiently large for PCA. An initial analysis obtained eigenvalues for each component. Two component had eigenvalues over Kaiser's criterion of 1 and in combination explained 60.6% of the variance. Table 8 shows the factor loading after rotation. The items that cluster on the same rotation suggest that component 1 represents eudaimonic/social well-being and component 2 hedonic well-being.

The eudaimonic/social well-being component (variance: 39.04%) includes 6 items, 4 of which came from the 'eudaimonic' aspects of well-being (personal growth, environmental mastery, purpose in life, autonomy) in the original MHC-SF (Keyes, 2009), and two of which are from 'social' aspects of well-being (social actualization, social coherence). The hedonic well-being component (variance: 21.56%) includes 3

components echoing the hedonic well-being items in the original MHC-SF. The 5 items that were eliminated from the scale during the PCA were cross loaded over components.

Table 8

State well-being Principal Component Analysis

Component (% variance)	$\bar{x}$	(*SD*)	Cronbach's α	Rotated loadings Component 1	Rotated loadings Component 2	h^2
Eudaimonic/Social WB (39.04)			0.81			
Personal growth	5.63	1.33		0.75		0.63
Environmental mastery	5.24	1.50		0.74		0.62
Purpose in life	5.62	1.41		0.70		0.59
Social actualization	4.72	1.61		0.68		0.80
Social coherence	4.44	1.61		0.66		0.71
Autonomy	5.62	1.22		0.55		0.53
Hedonic WB (21.56)			0.83			
Happy	6.33	.86			0.85	0.73
Satisfied in life	5.93	1.21			0.83	0.78
Interested in life	6.06	1.13			0.81	0.68
Eliminated items						
Positive relations	5.89	1.20				
Social contribution	4.89	1.61				
Social acceptance	5.24	1.47				
Social Integration	5.26	1.63				
Self-acceptance	5.42	1.41				

Note: Maximum scale value = 7

A number of studies have tested the validity of the MHC-SF in its original form (Lamers et al., 2010) and translated into several languages (e.g., Echeverria et al., 2017; Perugini, 2017; Luitjten et al., 2019). The internal consistency of the original scale was calculated for hedonic well-being (α = 0.83), eudaimonic well-being (α = 0.83) and social well-being (α = 0.74) (Lamers et al., 2010). The hedonic well-being and eudaimonic/social well-being subscales of the state well-being scale in the current study (adapted MHC-SF)

consisting of the 9 items identified by the principal component analysis all had high reliabilities. The alpha levels for the eudaimonic/social subscale (α = 0.81) and the hedonic subscale (α = 0.83) both indicated high internal consistency.

5.3.2 Well-being

The hedonic and eudaimonic/social well-being component subscales identified in the PCA were analysed using a repeated-measures t-test. This was to assess their relative importance as identified by participants in relation to places they perceived as having a positive impact on their well-being. Irrespective of the type of place or its function, hedonic well-being (*M* = 6.11, *SD* = .93) was significantly higher than eudaimonic/social well-being (*M* = 5.26, *SD* = 1.03), *t* (288) = 15.20 p< .01 (1 tailed). The effect size for this analysis (*d* = .87) was found to exceed Cohen's (1988) convention for a large effect.

5.3.3 Place

Range of places. A wide range of places were generated by participants when they were asked to reflect on a place that had a positive impact on their well-being. Home/house was the most commonly cited location, but workplaces, beaches, sea, town/city, hobby spaces and vacation locations were all also salient. Whilst it is interesting to note that some locations were more popular choices, it is the range of places that is particular noteworthy.

Proximity maintenance. In terms of frequency of visit, 37.4% of respondents visited their chosen place nearly every day, with the second highest category being once a year (22.5%) representing family visits or holidays. Places that people had only visited once or twice ever were indicated by only 8.3% of participants. This suggests that people were unlikely to select places they were less familiar with, and that 'everyday' rather than 'extraordinary' places were most likely to be represented in the data.

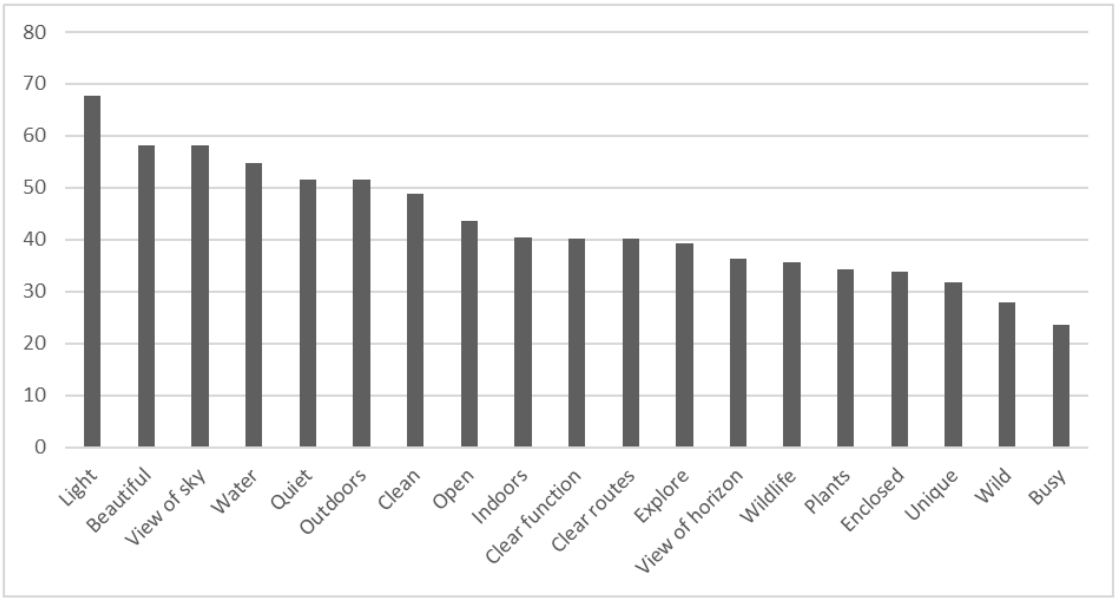
Duration of visits reflected these everyday choices, with most people visiting their chosen place for less than a day (64.7%) and the most frequently selected category for duration of visit was 1-3 hours (21.5%). Participants also reported visits lasting 1-2 week (18.7%) again reflecting the choice of holiday destinations.

Characteristics of places. Participants were presented with 19 characteristics of place (Figure 8). The most frequently selected of these characteristics was 'light', which was

selected by 67.8% of respondents, and the least frequently selected was ‘busy’ (23.5%). This indicates that characteristics identified in the design of the measure were all salient. As indicated in Figure 8, the most frequently selected items were light, beautiful, view of sky, quiet and outdoors. The least frequently selected characteristics were busy, wild, unique, enclosed and the presence of plants. Frequency data for additional characteristics of place were gathered in an open item in the survey. Synonyms to existing characteristics already cited in the study were excluded and the 282 terms were filtered with 48 relevant terms occurring twice or more. The terms most frequently used (5 or more participants) were warm, safe, social and friendly.

Figure 8

Percentage frequency of characteristics selected by participants



Types of places. Following coding of participants description of their chosen place the data was categorised according to type of place: urban/built, urban green space (UGS), blue, green, and other. Participants most commonly selected places that could be categorised as ‘built’ 54.33% (Table 9).

Table 9

Type of and Function of Places Chosen by Participants

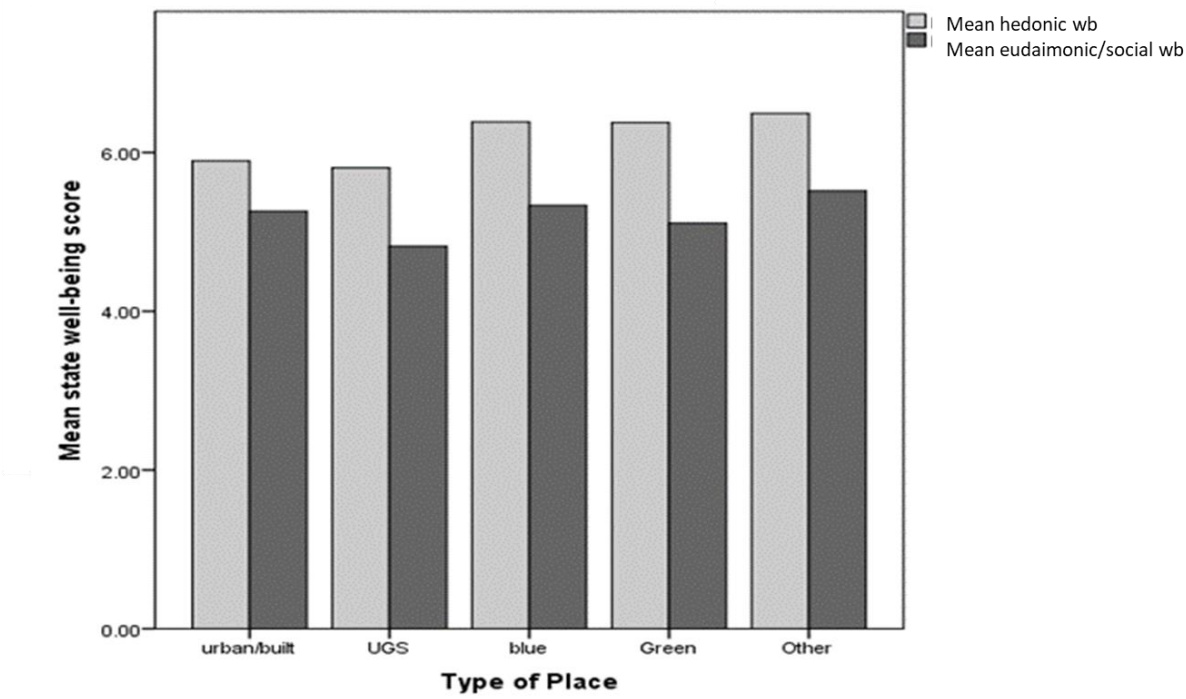
	% of respondents
Type of place	
Urban/built	54.33
Green	15.92
Blue	11.07
UGS[1]	4.15
Other	14.53
Function of place	
Domestic	22.49
Vacation/day out	22.15
Leisure/hobby	18.69
Education/work	14.88
Spiritual	2.77
Not stated	19.03

Note. UGS[1] – Urban Green Space

Given how few people selected places categorised as urban green space (4.15% of participants), the data in relation to this type of place category is limited. Urban or built places were more commonly selected by younger respondents, with a mean age of 29.22 years compared with the mean age of the respondents who chose a place that could be coded as green (43.35 years). Given the most commonly selected place was home, it is unsurprising that the 'domestic' category was the most frequent function of place, (22.49%) with vacation/day out and leisure/hobby representing similar percentages of the places chosen. The mean values for hedonic and eudaimonic/social well-being were analysed according to type of place (Figure 9).

Figure 9

Mean well-being by type of place



A MANOVA was conducted to explore the relationship between type of place and well-being outcomes using the well-being subscales (eudaimonic/social and hedonic well-being) identified in the PCA. The results showed that there was a small but statistically significant difference in well-being based on type of place selected, Multivariate *F* (8, 566) = 4.57 *p*=.01; Wilk's ƛ = .88, partial η^2 = .06. The univariate analysis for hedonic well-being was significant *F*(4,284) = 6.30 *p*=.01, partial η^2 = .08 and was not significant for eudaimonic/social well-being *F(*4,284) =1.36 *p*=.25. Post hoc analysis (Bonferroni) indicated that the only significant differences were between hedonic well-being for urban/built places and both blue (*p* = .05) and green places (*p* = .01) with the effect size indicating a moderate effect (Cohen, 1988).

Although there was no hypothesis linked to function of place, an additional MANOVA was also conducted to explore the relationship between function of place and well-being outcomes using the well-being subscales (eudaimonic/social and hedonic well-being). Similarly, there was a small but statistically significant difference in well-being based on the function of place selected, Multivariate *F* (10, 564) = 5.35 *p*<.001; Wilk's ƛ = .83, partial η^2 = .09. The univariate analysis for hedonic well-being was significant *F*(5,283) = 6.77 *p*<.001, partial η^2 = .11 and was not significant for eudaimonic/social well-being

*F(*5,283) = 1.45 *p*=.25. Post hoc analysis (Bonferroni) indicated that the only significant differences were in the level of hedonic well-being reported in education settings compared with both leisure/hobby places (*p* = .04) and vacation/day out places (*p* <.001), as well as between domestic and vacation places (*p* = .01) Again the analysis indicated this was a moderate effect size (Cohen, 1988).

5.3.4 Person-place relationships

Of the 8 items considered within the person-place relationship index (7-point Likert scale, 1 = strongly disagree, 7 = strongly agree), a score of 5 or more indicates agreement that that particular person-place factor was of importance. The lowest mean score was for 'cultural/spiritual meaning' with a mean score of 4.15 and the highest mean score was for 'hold memories' with a mean score of 5.92. The person-place subscales (place dependence and place identity) as indicated by the PCA, were analysed in terms of the well- being subscales (hedonic and eudaimonic/social well-being). A significant positive correlation was found between place dependence and hedonic well-being and, $r = .33$ $p < .001$ (1 tailed) $r^2 = .11$, and place dependence and eudaimonic/social well-being $r = .38$ $p < .001$ (1 tailed) $r^2 = .14$. A significant positive correlation was found between place identity and hedonic well-being $r = .29$ $p < .001$ (1 tailed) $r^2 = .08$ and place identity and eudaimonic/social well-being $r = .27$ $p < .001$ (1 tailed) $r^2 = .07$. The effect size analysis indicated that these were trivial or small effects (Cohen, 1992).

5.4 Discussion

The aim of the study reported in this chapter was to address the following broad thesis research questions:

- What characteristics across a range of physical environments impact on well-being outcomes? (Thesis RQ 2)
- To what extent do person-place relationships impact on self-reported well-being outcomes for individuals? (Thesis RQ 3)

The aims were addressed by three hypotheses that related to well-being, type of place and person-place relationships.

5.4.1 Well-being

The principal component analysis of the well-being measure items (adapted MHC-SF) resulted in two components: hedonic, and eudaimonic/social well-being. Hedonic well-being contained the original three items of *positive affect* (happiness), *life satisfaction* and *interested in life*, which corresponds with the definitions of hedonic or emotional well-being in the MHC-SF and the underpinning theoretical frameworks (Keyes, 2009; Ryff, 1989). Hedonic well-being is defined and conceptualised in a consistent way across research (Cooke et al., 2016). The findings from this study support the inclusion of life satisfaction within hedonic well-being, which has been a point for debate (Cooke et al., 2016, Huta & Waterman, 2013).

The eudaimonia/social component identified by the PCA, contained four of the original aspects of eudaimonia outlined by Ryff (1989): environmental mastery, personal growth, autonomy, and purpose. It also contained two aspects of social well-being: social actualization and social coherence. It may be tempting to see the results of the PCA as evidence that well-being is a binary concept as it resulted in two components as proposed by some well-being theorists (e.g., Ryff, 1987; Seligman & Csikesntmihalyi, 2000). Component 1 is clearly aligned to hedonic well-being, while component 2 contains a mix of eudaimonic and social well-being items. This could be taken as an indication that social well-being constitutes concepts that should be subsumed *within* more established definitions of eudaimonic well-being. Thus, providing evidence against a tripartite conceptualization of well-being that sees hedonic, social and eudaimonic well-being being hierarchically equivalent. However, closer examinations of the items retained by the PCA, raises an interesting point. Despite indicating concern for a 3-dimension model of well-being, Cooke et al., (2016) identified two aspects of social well-being that were not usually found within definitions of eudaimonic well-being: social actualization and social cohesion. These were the two items from the social well-being dimension of the adapted MHC-SF that were retained in the PCA in component 2. Had the analysis resulted in the exclusion of these items, then the resulting components could be confidently taken to be 'hedonic' and 'eudaimonic' well-being (Ryff, 1989), but their inclusion makes such conclusions less robust. As this is the first time the adapted MHC-SF has been used to measure state well-being it would be premature to reassess the model based on this single study.

Both hedonic and eudaimonic/social well-being subscale mean scores were positive (above 4 out of a maximum score of 7) indicating people associated their chosen place with positive well-being outcomes. The hedonic subscale scores were significantly higher than the eudaimonic/social subscale scores, with analysis indicating a large effect. This indicates that people's subjective experience of their chosen place was higher than how they rated the potential and functionality of the place (Luijten et al., 2019). Hypothesis 1 was partially supported in that across places the relative importance of aspects of well-being did differ, and hedonic well-being outcomes were significantly higher. However, the hypothesis references the *three* aspects of state well-being and the PCA identified two components of well-being, meaning that the hypothesis could only be partially supported.

5.4.2 Place

Many studies that explore place/well-being relationship offer participants a preselected place to respond to, for example an image of a natural scene. This can mean that the focus is solely on the physical features of an environment and overlooks the role of relationships with place. The study reported in this chapter gave people a free choice of place they felt had a positive impact on their well-being including those which held meaning for them or that they had a bond with.

Korpela's work on favourite places (e.g., Korpela et al., 2008) allowed for the exploration of personally meaningful places. However, by selecting a single 'favourite' place it may overrepresent places that are 'special' and qualitatively different, downplaying the potential of everyday places to provide positive well-being outcomes. Korpela partially mitigates this by on occasions limiting analysis to places within Finland (Ratcliff & Korpela, 2016) or that are within 15km of the participant's home (Korpela et al., 2010) but by classifying them as 'favourite' these may still represent 'extraordinary' rather than ordinary everyday places. The Landscape Convention (Council of Europe, 2000) emphasised the importance of everyday places for well-being (Ward Thompson et al., 2014). Scannell and Gifford (2017) also conducted research on the range of places that elicit well-being outcomes. Similar to Korpela, their research focussed on places that were meaningful for people and that they felt 'particularly connected to' (Scannell& Gifford, 2017. p. 258) increasing the likelihood of an emphasis on extraordinary places.

In the current study people were asked to pick ‘an example’ of a place, and this meant that participants were likely to include everyday places not just the extraordinary. As much as extraordinary places may leave an impact on people, places that offer the opportunity for more frequent visits can arguably offer more opportunities for enhancing well-being. The findings reported in this chapter suggest that some of the places people selected were extraordinary or represented being away from the everyday (e.g., Snowdonia, Natural History Museum) and yet many people chose a place that was more accessible that they visited very regularly (e.g., a loft room at home, Pilates class) i.e., everyday places. The highest participant response in terms of frequency of visit was ‘every day’ category with the duration of visit typically lasting 1-3 hours.

Characteristics of place. One aim of this study was to explore the variety and frequency of the characteristics of places perceived as having a positive impact on well-being. The results of this study suggest that the 20 preselected characteristics derived from Study 1 and additional literature, were appropriate. All the characteristics were identified by at least a fifth of respondents as being present in their chosen place with few additional items suggested in the open item.

The most commonly selected characteristics in the current study (light, beautiful, view of sky, water, quiet and outdoors) can be linked back to the findings of Study 1. ‘Light’ was the most frequently selected characteristic, and this may because it is relevant to both indoor and outdoor places. The findings reinforce the prominence given to light in Study 1, where light was discussed in terms of ‘open’ vistas, views of the sky, access to ‘natural’ light, control of light, and the links between light and aesthetics.

The role of light may also be linked to theories such as prospect and refuge (Appleton, 1975), with light playing a role in openness, views and vistas. These characteristics can be interpreted as high prospect elements. Gatersleben and Andrews (2013) found that places high in prospect were more likely to offer restorative potential. As well as measuring perceived restoration and danger, they also measured affect where the finding indicated a slight increase in affect in more open places (High prospect/low refuge). This finding has direct relevance to hedonic well-being as well as the Process component of the PPP framework (Scannell & Gifford). Light spaces also facilitate behaviour that makes a place valued, for example effective lighting can mean that indoor

places can be used for a wider range of purposes. This may be pertinent to people who selected places that related to hobbies and workplaces and links to the concept of place dependence (Jorgensen & Stedman, 2006).

A less frequently selected term was ‘enclosed’, this may have more negative connotations implying being shut in. Given the current trend for hygge, an alternative term such as *cosy* may have more positive associations than enclosed. The same issue is relevant to the term ‘wild’ which could relate to the remoteness of a place, lack of human interference or the overall feel of the place. Colley and Craig (2019. p. 72) provide an account of how challenging the term wild is to define and suggest that perceived wildness is associated with place attachment. Given the large number of people who selected built places it is to be expected that terms such as ‘wild’ may be less relevant but the association a word holds, particularly in a cultural context, is important to consider.

In response to the open-ended item within the survey, participants suggested the additional characteristics of ‘warm’ and ‘safe’ and these may be worth including in any future research. Staats and Hartig (2004) suggest that when safety is an issue, the presence of others has a mitigating effect on restorative potential of a place suggesting the inclusion of ‘safe’ as a characteristic in further study would be meaningful. Additional concepts cited by more than five respondents in response to the open item were ‘people’ and ‘friendly’: both terms relating to the social aspects of place. In Study 1 people talked about the value of places that facilitate social interaction, and the ability to regulate it. Whilst it is clear that social aspects of place are important for some, the fact that social well-being was less clearly and consistently reported by participants may mean that this was not uppermost in participants considerations when exploring characteristics of their chose place.

When considering the characteristics of places indicated by participants in the current study, landscape preference theories and cultural value models were useful. However, there were additional characteristics of place that have received little attention in terms of research. Specific characteristics are difficult to explain in the context of a single theoretical framework, there may be a need to consider a range of approaches that are applicable in different contexts. Individual preferences and experiences may also play an important role, and it may be that there is no set of universal characteristics.

Type of Place. The second hypothesis (H_2) that 'state well-being outcomes will differ by type of place' was only partially supported but the effect size was small. There was no significant difference in well-being outcomes between blue, green and urban green spaces (H_{2A}). The next sub hypothesis (H_{2B}) that blue, green and urban green spaces would be significantly higher than urban places was partially supported. There were no significant differences between eudaimonic well-being outcomes elicited by green and blue places compared to urban/built places. The only significant findings related to hedonic well-being. Hedonic well-being outcomes elicited by green and blue places were significantly higher in comparison to urban/built places.

Type of place categories can provide a focus for our understanding of what it is about a place that makes it more or less likely to promote well-being benefits, and the use of these broad categories are useful in positioning research within existing literature. The findings of this study, that hedonic well-being was highest in green and blue places (compared to urban) supports the findings of previous research (e.g., Houlden et al. 2019; MacKerron & Mourato, 2012). Research has established a link between physical activity in natural rather than built environments were linked to positive hedonic well-being outcomes (e.g., Kinnafick & Thorgersen-Ntoumani, 2014). The findings could support an evolutionary approach that green and blue spaces offer survival advantages. It may be the case that the experience of well-being (hedonia) is what makes us want to spend time in places that offer advantages for the function of well-being (eudaimonia), in this context feeling happy makes us seek out behaviour that is good for us.

The difference in well-being between these places can also be explained through sociocultural factors. Volker and Kistemann (2011) presented a review of the health effects of water, and suggest that alongside restorative and psychological benefits, water plays a role in many spiritual and sacred systems, suggesting an historical and cultural element to the importance and benefits of blue spaces. We are socialised to see green and blue places as enhancing, the view of nature as wholesome and good for you is prevalent in society. Even within environmental psychology research there is a tendency to idealise the natural. Gatersleben and Andrews (2013) state that the representation of nature and urban in restoration research is biased, with the use of 'non-threatening natural environments' and 'stressful built environment' as the norm.

It could be easy to assume that because the findings of the current study indicate that hedonic well-being outcomes were greater for green/blue places, that these types of place *necessarily* produce higher hedonic well-being outcomes. Research has indicated that the perception of green places (Milligan & Bingley, 2007) and blue places (e.g., Pitt, 2018, Wilkie & Clouston, 2015) in a negative way also needs to be considered. Research by Gatersleben and Andrews (2013) suggest that certain types of green places do not improve well-being. Places high in refuge (places to hide) and low in prospect (open views) are unlikely to serve a restorative function. As the current study asked people to self-select places rather than presenting them with preselected environments, it is likely that the places involved in this study fall into the category of what Gatesleben and Andrews call 'non-threatening' natural environments. Within his Stress Reduction Theory (SRT) Ulrich suggests that nature offers a greater potential for recovery from stress (restoration). However, this is particularly the case when natural places are perceived as unthreatening (Ulrich, 1979, Ulrich et al., 1991) as according to SRT recovery is seen as stemming from a shift to a 'positively-toned emotional state' (Ulrich et al. 1979 p. 201) at odds with threatening environments.

The key finding from the study reported in this chapter is that people who self-selected blue and green spaces, were more likely to report higher levels of hedonic well-being than those who selected urban places. However, the findings only partially supported the hypotheses as no differences in eudaimonic well-being were found, and there were no significant differences in well-being between green, blue and urban green spaces. This suggests that green, blue and urban green spaces can all support positive well-being outcomes. Exploring places in relation to type of place categories can be useful to help us understand broad notions of place but can also be limiting given the variation of places that fall within each category, for example the category of built included a bedroom, a synagogue, and The Natural History Museum. The use of type of place categories is showing no signs of decline in place/well-being research but the oversimplification of the 'green is good/urban is bad' narrative is unhelpful. Whilst the effect size was moderate this was only for hedonic well-being and suggests that when it comes to places that impact other aspects of well-being other factors come into play. Potentially there is a need to refine how typography is considered in terms of broader

aspects of well-being. It may be however that the impact on social and eudaimonic well-being lies outside of the physical nature of the environment.

The functions of place had a moderate effect for hedonic well-being. People who selected places that had a leisure/hobby and vacation/day out functions had significantly higher levels of hedonic well-being compared to those who chose education settings and vacation/day out compared to domestic places. This suggests, unsurprisingly, places we spend time in for recreation make us happier than education settings and holidays make us happier than being at home to some extent. But it is important to note that a full range of places were linked to positive hedonic well-being outcomes. However, the analysis also indicated that when it came to eudaimonic/social well-being a wide range of places support our well-being not just those where the primary function is pleasurable. Future research could consider the interplay between type and function of place and how these relationships may alter over time and according to the well-being needs and priorities of individuals.

5.4.3 Person-place relationships

The eight items in the person-place index all had mean scores of over 4 (on a 7-point Likert scale) indicating that on average respondents reported that each of the person-place items were relevant to their experiences in their chosen place. Cultural/spiritual meaning was closest to a neutral response, this could be because people have not thought about their place in these terms. However, the standard deviation is high in relation to this item (*SD*=1.98) suggesting there is considerable variation in respondents' replies. The relationship between place and culture will be influenced by individual differences in this data set. G*eomentalities* are culture bound with eastern societies adopting a view of culture and environment, particularly nature, less anthropocentric and more mutually interdependent than western views (Rainisio & Inghelliri, 2013). Mazumdar and Mazumdar (2004) suggested that religion and spirituality can play a role in place attachment for some people. This is embedded in features of a physical environment or through associations with sacred sites and can be highly personal or represent shared symbolic meanings. The findings from the study reported in this chapter suggest that cultural/religious factors may hold no meaning for some participants and be highly relevant to others.

The place attachment item was heavily cross loaded in the PCA and this has implications for understanding the hierarchy between person-place concepts. The place attachment item (*The place that I have chosen is a place that I am attached to*) did not fall into either of the resultant components of place identity and place dependence. This could be because people interpreted the wording differently, *being attached* could have been viewed as more aligned with the meanings the place held, or with ideas around ownership. This could be an indication that place attachment is an overarching concept as suggested by Scannell and Gifford in their PPP framework of place attachment (Scannell & Gifford, 2010). The data from this single analysis is not sufficient to draw a conclusion in relation to the hierarchy of person-place components however it does offer a contribution to the debate.

The frequency and duration of visits can be seen as evidence of proximity maintenance and the results show that respondents chose places that they visited regularly with daily visits of 1-3 hours being the most commonly chosen options. Proximity has been taken as an indicator of place attachment (Scannell & Gifford, 2010) suggesting that respondents saw places that they found enhancing in terms of their well-being, as places they wanted to stay close to and therefore potentially sources of attachment.

The third hypothesis from the study reported in this chapter: (H_3) 'person-place relationship components will positively correlate with state well-being', was supported. The two components identified in the PCA, place identity and place dependence, correlated positively with both well-being components identified in this study (hedonic wellbeing, eudaimonic/social well-being). It is important to note that all of the effect sizes in relation to person-place relationships were either trivial or small (Cohen 1992) and whilst these findings contribute to the body of research that highlights the importance of person-place relationships in place/well-being research (Afshar et al., 2017; Basu et al., 2020; Knez et al., 2018; Scannell & Gifford, 2017; Magalhaes & Calheiros, 2020), they should be treated as tentative.

5.4.4 Limitations and further research

There are a number of limitations with the current research. Despite attempts to recruit from an organisation for older adults (U3A) there was only 1 participant over the age of

65. Female participants also outnumbered males 3:1. Neither age nor gender were specifically analysed in the study but the limits in representativeness in the sample needs to be noted.

The adapted MHC-SF was a suitable measure to employ but has only been used with this sample so needs further use to assess the suitability as a measure of state well-being in the context of place well-being research. The wording of the survey focused on personal well-being, and it may have seemed to indicate a solitary pursuit, the idea of places offering opportunities for social well-being may be less obvious to participants. This could offer an explanation of why responses to the social well-being items were lower than for the other items on the adapted MHC-SF. The timing of the data collection for the study may have also been pertinent to people's responses. The items that received the lowest social well-being scores were social coherence and social growth. This data was collected during a time of political upheaval with divisive campaigns around BREXIT which may have impacted on people's perception of society. In terms of further research there is a need for person/well-being researchers to clearly situate their work in order for the context of the findings to be fully comprehended.

A further limitation of the study is that by asking people to conjure a mental image of the place, rather than immersing themselves in the place itself, people are more likely to think about the idyll rather than the reality of a place. Certainly, there is a body of work reflecting on the way in which places, particularly nature, are idealized (e.g., Gkartzios & Remoundou, 2018) and are socially constructed, which alters the meanings attached to place (Greider & Garkovich, 1994). However, the practicalities of giving people a free choice of place then assessing well-being within that place are limiting. Taking the research forward it is clear a compromise needs to be made in this respect.

5.4.5 Conclusion

The current study has helped in the understanding of the range of places that people feel has a positive impact on their well-being. In the context of thesis research question 2 (RQ 2) 'What characteristics across a range of physical environments impact on well-being outcomes?', the findings from this study indicate that the features or characteristics of the environment such as light and an open view are common to many of the places individuals chose. Within this data set type of place was limited in its impact on well-

being outcomes, there was a small but significant positive impact of green/blue elements on hedonic well-being. Addressing thesis RQ 3 'To what extent do person-place relationships impact on self-reported well-being outcomes for individuals?' the findings of this study suggest that an important consideration is the perceptions people have of places as enhancing their well-being. Part of this perception is bound up with person-place relationships; the bonds people have with a place were found to be related to their reported well-being outcomes. By focusing on individual choices of place, their perceptions and relationship to the place, the current study challenged the narrow focus on solely the physical attributes of a place, present in much of the research in this field.

Chapter 6: (Thesis Study 3)
Libraries, Lidos, Nature Reserves and Naturist Venues: The Perceived Impact of Place on Well-being Outcomes.

The study in this chapter (*N*=530) explored the relationship between characteristics and types of place with well-being, the influence of place attachments on place/well-being relationships, and the behavioural determinants of accessing places. The study was built on the studies reported in Chapter 3 and Chapter 5. The aim was to address the four main thesis research questions:

- In what ways can a range of physical environments be seen to enhance and maintain positive well-being outcomes in individuals? (Thesis RQ 1)
- What characteristics across a range of physical environments impact on well-being outcomes? (Thesis RQ 2)
- To what extent do person-place relationships impact on self-reported well-being outcomes for individuals? (Thesis RQ 3)
- To what extent do behavioural determinants act as facilitators or barriers to accessing places individuals perceive as having a positive impact on their well-being? (Thesis RQ 4)

These include those initially identified in Chapter 1 (RQ 1, RQ 2, RQ 3), as well as an additional research question relating to behavioural determinants (RQ 4) that was developed through the iterative nature of the qualitative Study 1 (Ch. 3 and Ch. 4).

6.1 Introduction

The final study of this thesis aimed to further explore the impact of place on state well-being outcomes, while also considering the role of place attachment and behavioural determinants in this place/well-being relationship. The findings in the first two thesis studies, indicates a need to consider place/well-being relationships from two different perspectives. First, '*What is the place like*?' Are there certain characteristics (e.g., a view of a horizon) or types of place (e.g., green, or blue) that are more closely linked to positive hedonic, eudaimonic and social well-being outcomes? Second, '*What is the relationship the person has with the place?'* Does place attachment make it more likely people will benefit from time spent in a specific place or type of place? Are there additional factors

that make it more or less likely that a person will access or engage with places (behavioural determinants)? Does the function of a place impact on well-being outcomes? The study reported in this chapter addresses each of these questions, taking into consideration the findings from Study 1 (Ch.3) and 2 (Ch.5), theoretical frameworks and research literature discussed across the first 5 chapters of this thesis.

6.1.1. In what ways can a range of physical environments be seen to enhance and maintain positive well-being outcomes in individuals? (Thesis RQ 1)

In the two studies in this thesis (Ch. 3 and 5), evidence suggested that well-being associated with place encompassed more than immediate responses consistent with **hedonic well-being**. Clear and strong linkages between aspects of hedonic well-being such as positive affect and life satisfaction, were identified; but participants also explored aspects of well-being that resonated with **eudaimonic well-being** or 'a life well lived'. In study 1 (Ch. 3), participants did not just select places that made them happy. They also selected places that challenged them, facilitated positive relationships with others and enabled autonomy and personal growth. King and Napa (1998) suggested that the general populations' lay conceptions of well-being tend towards the inclusions of aspects of both hedonic and eudaimonic well-being and this was clearly the case in the interviews conducted in Study 1. This was further supported in Study 2 (Ch. 5), where high levels of both hedonic and eudaimonic well-being were reported in relation to time spent in a chosen place.

Whilst the distinction between hedonic and eudaimonic well-being is well established, **social well-being** as a distinct concept has been harder to consolidate. Keyes (2002) identified social well-being as hierarchically equivalent to emotional (hedonic) and psychological (eudaimonic) well-being and this three-component structure has been supported in research (Luijyen, 2019; Perugini et al., 2017). Researchers and theorists who challenged this assumption (e.g., Machado, 2015; De Bruin & du Plessis, 2015; Jovanovic, 2015) have suggested that the elements that Keyes (2002) referred to as social well-being belong within eudaimonia; to align with the more established two-component structure. In Chapter 5, the results indicated that a two-component model of well-being was most appropriate in the context of place-associated state well-being. Specifically, reported hedonic well-being was consistent with existing research and with other

measures (Cooke et al., 2016); but elements of social well-being and eudaimonic well-being contributed to a combined well-being factor when considered in relation to place. Study 2 findings (Ch. 5) suggested the structure of well-being in the context of place requires further investigation. Relatively little research has focussed on considering this within a place/state well-being context and other researchers have also raised this concern (e.g., Cooke et al., 2016). The current study addressed this by including items related to social well-being alongside those exploring hedonic and eudaimonic well-being.

6.1.2 What characteristics across a range of physical environments impact on well-being outcomes? (Thesis RQ2).

The **range of places** participants identified as positively impacting on their well-being in both Study 1 and Study 2 were incredibly varied in terms of their characteristics, scale, function, frequency of use, and personal meaning. This has highlighted the idiosyncratic nature of place/well-being relationships and open up the narratives around the places typically perceived as holding salutogenic potential.

A key aim of the research across this thesis has been to explore whether there are **characteristics of place** that are consistently perceived to be present in places that maintain or enhance positive well-being: Studies 1 (Ch. 3) and 2 (Ch.5) explored characteristics people identified in a primarily inductive way. The current study aimed to confirm which (if any) of these characteristics were 'universals' i.e., common to most places that elicit well-being. If these universals can be identified, then this may promote the idea that such characteristics should inform design for well-being within both the 'natural' and built environments. However, if there is little consensus about which characteristics are present in these well-being promoting places, then this would suggest the emphasis has to move away from the 'place' and focus on the person and their relationship to place.

As well as considering the characteristics of a place in terms of their direct links to well-being outcomes, there was also a need to consider how characteristics could play an indirect role, for example through place attachment. Suggestions that we bond with a place *because* of the physical characteristics they possess (e.g., Shumaker & Taylor, 1983) have been challenged as oversimplistic (Stedman, 2003), but there is evidence that the

characteristics of a place impacts on its use; and use is the basis of meanings attributed to that place and this underpins place attachment (Greider & Garkovich, 1994; Stedman, 2003).

The use of **types of place** to categorise places linked to positive well-being has been investigated in Study 1 and 2; but the usefulness of these categories required further exploration. In Study 1, the primary focus for interviewees was to talk about the qualities that their chosen places possessed and the meanings it held for them, but there was also clear reference to 'types' of place e.g., forests, seaside. These narratives could be aligned to current academic research by considering them in terms of widely accepted 'types of place' categories (green/nature, blue/water, urban green space, and built/urban). In Study 2, significantly higher levels of hedonic well-being linked to green and blue places was reported but there was no significant differentiation in eudaimonic/social well-being by place type. This suggests that whilst the specific place was important to individuals, the 'types' of place that impact on eudaimonic/social well-being outcomes are more varied and nuanced. The emphasis on type of place, particularly the impact of 'green' places, in existing research in this field rarely makes this distinction between different aspects of well-being, and the findings from the studies reported so far in this thesis supports the need for further exploration. The persistence of these categories within person-place research means that they continue to be relevant and worthy of critical focus.

The **function of place** was discussed by participants in Study 1, with the subthemes of domestic places and workplaces being developed through Inductive Thematic Analysis from the interviewees' responses. Domestic places (including gardens) were talked about in terms of hedonic well-being, specifically positive affect. Workplaces were discussed in terms of eudaimonic well-being. In Study 2 a larger sample further evidenced function of place was a factor worth consideration, with the function of place identifiable in over 80% of the responses which produced five categories (domestic, workplace, leisure, spiritual and vacation). The links between the function of a place and the corresponding state well-being outcomes are further explored in this current study.

Whether or not people were in **company or alone** when they spent time in their chosen place differs in the interviews conducted in Study 1 and was incorporated within

the social aspect of place theme. In Study 2, the inclusion of a number of items relating to social context both within the social well-being and the behavioural determinants of place used (Appendix 14) meant that there was greater consideration of how well-being outcomes could be affected by whether or not someone had company in their use of place. The current study consolidates and further explores the findings from Study 1 and Study 2

6.1.3 To what extent do person-place relationships impact on self-reported well-being outcomes for individuals? (Thesis RQ 3).

When considering the role person-place relationships play in place/well-being outcomes, the findings from Study 1 were clear: the bonds people held with places were integral in their narratives around positive well-being outcomes. Childhood memories, proximity maintenance and feelings of belonging were among the many aspects people reflected on in their interviews. The results from Study 2 reinforced these findings with significant correlations between person-place components (place identity and place dependence) and well-being outcomes (hedonic and eudaimonic/social well-being).

The bonds people had with places in Study 1 related to place dependence, place identity and place attachment. Whilst some theories such as Sense of Place (Jorgensen & Stedman, 2006) consider these three distinct aspects as equivalent in their importance to person-place relationship hierarchy, Stedman himself emphasised that the three dimensions could be attributed to **place attachment** as a single 'encompassing dimension' (Stedman, 2003). The Inductive Thematic Analysis of the interviews in Study 1 of this thesis (Ch.3 and Ch.4) alongside the survey data from Study 2 (Ch.5), which investigated specific aspects of person-place relationships (Appendix 9), together suggested that a framework for place attachment such as that proposed by Scannell and Gifford (2010) may offer an appropriate organisational framework for further investigation. The picture of place attachment developed so far in this thesis indicates that the complex, often messy aspects of place-well-being relationships are best represented with frameworks and models that allow for individual differences and a flexibility of focus, rather than narrow, rigid theoretical models. This is why the PPP framework has been viewed as an appropriate choice for inclusion in this thesis (Scannell & Gifford, 2010). A further aspect of place attachment that links to the behaviour of

place/well-being relationships is proximity maintenance, the **frequency** and **duration** of visits to a place can be considered as indicators of maintenance and strength of place attachment (Scannell & Gifford, 2014). Increased proximity maintenance (the more frequent the visits and the longer the time spent there) is linked to higher well-being outcomes. By considering place attachment as an integral aspect of place/well-being relationships, the potential for places to play a role in promoting well-being, emphasises the individual relationship with place rather than the focus being on the physical attributes of the place itself.

6.1.4 To what extent do behavioural determinants act as facilitators or barriers to accessing places individuals perceive as having a positive impact on their well-being? (Thesis RQ 4).

It is important to consider how the potential for places to enhance well-being could be practically applied. A key aspect to consider is how access to places may mitigate whether people are able to utilise place/well-being relationships in a salutogenic way. The study of health inequalities emphasises equitable access to resources as a key factor in well-being outcomes (NHS, 2021). In this thesis potential barriers and facilitators that people face when accessing place were explored in Study 1 (Ch. 3) and Chapter 4. Barriers and facilitators impact how people perceive and access places; and consequently, impact the well-being outcomes elicited. By understanding the behavioural determinants (barriers and facilitators) that guide people's interaction with place, it is possible to consider how this may impact on the salutogenic potential of place/well-being relationships.

The People and Nature Survey (PANS) conducted by Natural England (the UK government's advisor for natural environments in England) was developed to supersede the Monitor of Engagement with the Natural Environment (MENE) which ran from 2009-2019 (Natural England, 2020). The PANS (Natural England, 2021) now incorporates items relating to barriers to how people access natural green spaces, acknowledging the importance of barrier and facilitators in understanding person-place relationships. In Chapter 4 barriers and facilitators to access places described by interviewees in Study 1 were explored in terms of the COM-B model of behaviour (Michie et al., 2010) and the Theoretical Domains Framework (Cane et al., 2013). This has been further integrated into the current study. Different components of the COM-B (capability, opportunity, and

motivation) can be considered in terms of their **behavioural determinants**, factors that impact on the behaviour of individuals in relation to accessing place. The COM-B model offers a structured insight into the factors that contribute to place related behaviour but also indicate how this information could be further developed; 'While this is a model of behaviour, it also provides a basis for designing interventions aimed at behaviour change' (Michie et al., 2011. p. 4). The different components of the COM-B model can be aligned to different types of well-being outcomes (Table 10).

Table 10

Links between COM-B and well-being components

	COM-B Component	Well-being component
Capability		
Psychological	Skills, competence, ability, decision making	Eudaimonic
Physical	Skills, competence, ability, decision making	Eudaimonic
Opportunity		
Social	Social influences	Social
Physical	Environmental stressors	Hedonic
Motivation		
Reflective	Social and group identity	Social
Automatic	Self-confidence, beliefs, optimism	Hedonic

For example, the 'capability' COM-B component consists of two sub-components: psychological and physical capability. Both of these subcomponents relate to skills, competence, ability and decision making; and these elements link most clearly to aspects of eudaimonic well-being including environmental mastery and autonomy. For example, a person's perceptions of their skills levels, may contribute to the level of environmental mastery they feel they have. So, it can be predicted that behavioural determinants will have differential relationships with well-being outcomes.

The current study explored the relationships between well-being, characteristics of place, place attachment and behavioural determinants. It develops and consolidates the work conducted in the previous studies in this thesis, to increase understanding of place/well-being relationships.

The following hypotheses were investigated:

H_1 Some aspects of perceived state well-being will be impacted differentially by type of place:

H_{1a} Hedonic well-being will be higher for green places than blue places, which will both be higher than for urban green spaces (H_{1b}) Hedonic well-being will be lowest for built places (H_{1c}).

H_{1e} Social well-being will be higher for green and blue places than built places.

H_2 Some aspects of perceived well-being will be impacted differentially by primary place function:

H_{2a} Hedonic well-being outcomes will be highest for domestic settings.

H_{2b} Eudaimonic well-being outcomes will be highest for Education/work settings.

H_3 Proximity maintenance will influence state-wellbeing outcomes.

H_{3a} Well-being outcomes will be higher the more frequent the number of visits.

H_{3b} Well-being outcomes will be higher the longer the duration of visits.

H_4 Well-being outcomes will be highest for individuals who prefer company on their visit.

There were also some descriptive and predictive hypotheses:

H_5 Characteristics of place will positively influence perceived well-being outcomes, as evidenced by the characteristics most endorsed overall by place type.

H_6 Overall well-being will be positively associated with place attachment.

H_{6a} Total well-being will be positively correlated with place attachment.

H_{6b} Hedonic, social and eudaimonic well-being will be predicted by different aspects of place attachment and the strength of these associations should be equivalent.

H_7 Behavioural determinants will differentially influence perceived state well-being outcomes:

Automatic Motivation (H_{7a}) and Physical Opportunity (H_{7b}) will have the greatest influence on hedonic well-being.

Reflective Process Motivation (H_{7c}) and Social Opportunity (H_{7d}) will have the greatest influence on social well-being.

Psychological Capability (H_{7e}) and Physical capability (H_{7f}) will have a greatest influence on eudaimonic well-being.

6.2 Method

6.2.1 Participants

Adult participants (*N*=530, 84%, M_{age} = 44, $Median_{age}$ = 45, SD_{age} = 11.35, age range: 17-74) (Table 11) were recruited through social media (Twitter). The majority of participants were resident in the UK (90.1%).

Table 11

Demographic Information of Study 3 Sample

Gender	All (*n* = 530)	Women (*n* = 445)	Men (*n* = 84)
Age			
16-24	29	23	5
25-44	226	196	30
45-64	260	218	42
65+	14	7	7

Note. One person chose not to state their gender and there was one piece of missing data for this item

6.2.2 Sampling procedures

Opportunity and snowball sampling was implemented. The on-line survey link was circulated to potential respondents over the age of 16 via Twitter. A recruitment 'tweet' contained a link to the survey and was circulated through two already active personal twitter accounts (Appendix 13). The link was available for further dissemination (by retweeting) to access a larger number of potential participants. The decision to just use Twitter for recruitment was in part based on the success of this form of recruitment in comparison to the direct recruitment methods both of which were used in Study 2 (Ch. 5). In addition, Wasilewski et al. (2019) suggest that Twitter-based samples are comparable to non-Twitter samples. Twitter provides a low-cost recruitment approach and increased exposure to snowball sampling as well as accessing participants from a larger geographical area (Lafferty & Manca, 2015; Lane et al., 2015). By including the link to the

online survey in a recruitment tweet, there is a greater chance of a retweet (Wasilewski et al., 2019). Twitter's large platform and its use of predominantly 'public' accounts means that it has a wider reach than other social media platforms such as Facebook. Response to the recruitment tweet was very rapid and positive with 35,426 impressions (times people saw the tweet) and 125 retweets; 1,257 people clicked the survey link. The final sample size was 530 participants. Once participants had followed the link to the survey, they were presented with the participant information sheet (Appendix 14). It was made explicit that they should only progress if they were at least 16 years old and by submitting the completed survey they had indicated consent.

6.2.3 Design

Participants were asked to describe places they felt had a positive impact on well-being, and this was used to categorise places into a quasi-independent variable (type of place). A quasi-experimental design was used to test hypotheses 1-4 investigating the impact of type (IV_1) and function of place (IV_2), frequency, and duration of visit (proximity maintenance) and whether individuals were on their own or with others on state well-being outcomes. In these analyses, overall well-being and three well-being components (hedonic, social, eudaimonic) were treated as dependent variables. Between subject quasi-independent variables were **place type** (green, blue, urban green, built and other), **place function** (education or work, spiritual, domestic, hobby, leisure or fun, holiday or other), **visit frequency** (rarely, once or twice, once a month, couple of twice a month, once a week, several times a week, every day), **visit duration** (up to an hour, a few hours a day, whole day, a few days. a week, a few weeks, a month or more), and whether participants were **alone or with others** on their visits (alone, with someone else or varies). Hypothesis 3 required a descriptive narrative. Hypotheses 6 and 7 involved a correlational design with the influence of **place attachment** (place identity, affective attachment, place dependence, proximity maintenance) and **behavioural determinants** (Security motivation, social barriers/facilitators, physical barriers/facilitators, reflections on motivation) and each **state well-being** outcome (hedonic, social and eudaimonic).

6.2.4 Measures

The on-line survey comprised of 114 open and closed items (Appendix 14). In addition to demographic information (age, gender, place of residence), respondents were asked to

identify and then describe a place that they felt had a positive impact on their well-being. This also involved gathering information on how far the place was from their place of residence, how regularly they visit the place and how long each visit typically lasted (frequency and duration). As with Study 2 (Ch. 5), a decision was made to ask participants to recall places pertinent to them, rather than present them with a generic image or a range of places they could select from. As well as the difficulty in standardizing images, for example the quality of light or aesthetic elements, the self-selection of places allows for greater consideration of person-place relationships. Respondents were also asked the function of the place and whether they typically visited the place alone or with others. The remaining items were measures designed to gather data in relation to four factors: state well-being, place characteristics, place attachment and behavioural determinants of accessing place.

Well-being. The modified MHC-SF measure that assessed state well-being implemented in Study 2 (Ch. 5) was also used here. In Chapter 5, the principal component analysis indicated two key components of state well-being (hedonic and eudaimonic/social well-being), which did not support the identification of three separate component as suggested by Keyes (2002). However, as Study 2 (Ch. 5) was the first time the adapted measure had been used, the original 14 items that relate to hedonic, social and eudaimonic well-being were retained for this study. This was to establish more confidently whether it was an appropriate measure of state well-being in the context of person-place relationships. As with Study 2, a 7-point Likert-style scale (1 = *Strongly disagree*; 7 = *strongly agree*) was used, rather than the original 6-point scale used in the MHC-SF in order to allow for a wider variety of scores.

Place Characteristics. A 20-item measure was developed for the purposes of this study. It captured both physical and non-physical characteristics of place. A 7-point Likert-style scale (1 = *Strongly disagree*; 7 = *strongly agree*) was used to be consistent with other measures in this study. The items were devised from the characteristics identified in Study 1 and Study 2, as well as existing research. These items were grouped into six theoretical categories: type of place, outlook, wildness, indicators of care, indicators of function and uniqueness. Four items related to the type of place categories widely used in Environmental Psychology: the presence of built elements, urban green elements, blue,

and green spaces (e.g., Abkar et al., 2011; Akpinar, 2017; Dempsey et al., 2018; Engemann et al., 2018). There were 4 items that related to outlook (view of the horizon, clear view of the sky, open in its expense and light), this linked to a number of theoretical aspects such as clear views which are central to prospect/refuge theory (Appleton, 1975) as well as elements such as light and view of the sky that may offer 'soft fascination' as outlined in ART (Kaplan and Kaplan 1989) and are elements of Biophilic design (e.g., Beute & de Kort, 2014). Seven items were included as indicators of care. These related to concepts such as being clean, quiet, and safe, and were linked to theories such as Cultural Values Model (Bieling et al., 2014) and Aesthetics of care (Nassauer, 1997). The two items that relate to wildness includes the presence of wildlife which has been identified as a factor that can elicit well-being outcomes (e.g., Bragg et al., 2015). The 2 items relating to function of place can be viewed in terms of place dependence as well as being clearly identified in both Study 1 and 2 as being important to individuals was the concept of uniqueness hence its inclusion as an item.

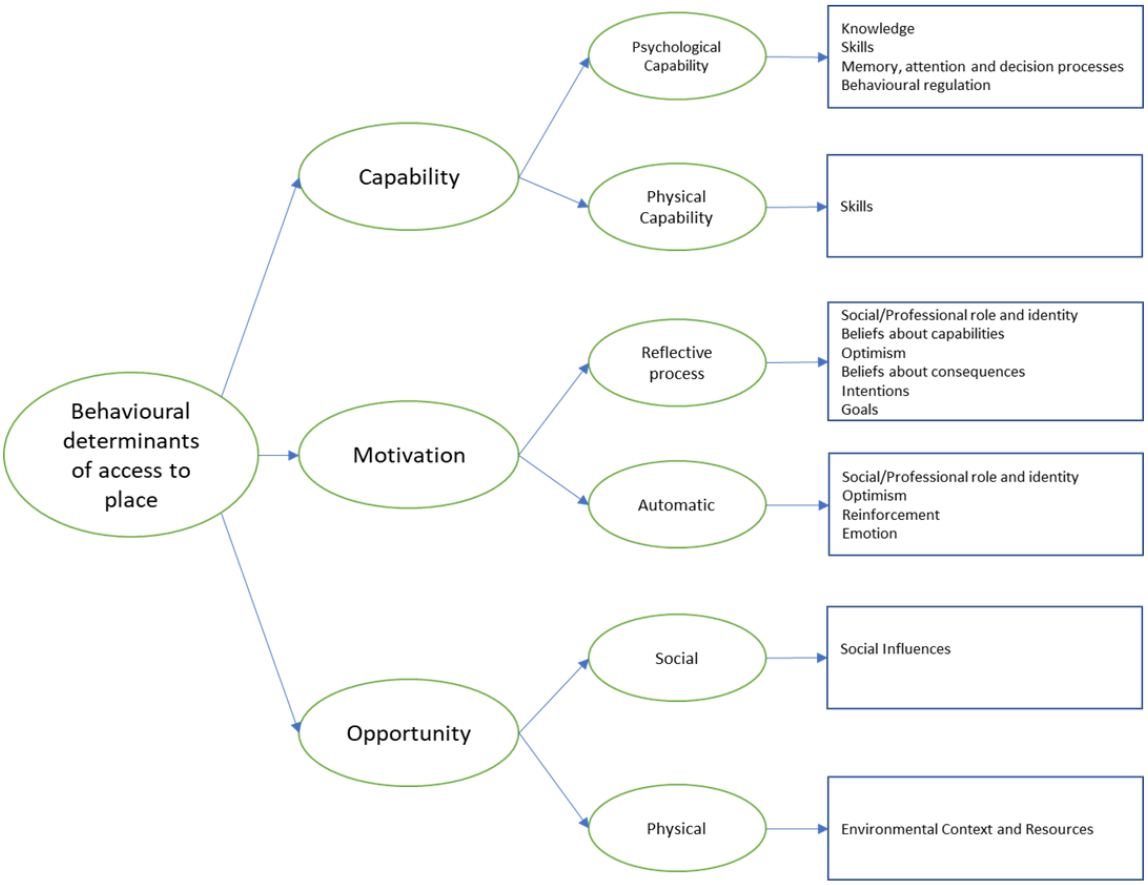
Place Attachment. Place attachment was measured using an adapted form of the measure developed by Scannell and Gifford (2013) to align to their Person Place Process framework of place attachment. It uses a 7-point Likert 20 item scale (1 = *strongly disagree*, 7 = *strongly agree).* Their original measure has been used in a number of studies (Scannell & Gifford, 2013, 2017). The items represent sub-scales of place identity, affective attachment, place dependence and proximity maintenance within the overarching concept of place attachment. Permission was granted by Dr Scannell to adapt and use the measure to suit the aims of the current study, with the wording of the 20 items altered slightly (e.g., *this place* in the original scale was altered to *my chosen place*) to relate more closely to the place selected by participants as having a positive impact on their well-being.

Behavioural determinants. A Likert measure was developed for this study based on the findings from the inductive analyses discussed in Chapter 3 and Chapter 4. This 49-item measure was designed to capture barriers and/or facilitators to people's access to places they felt had a positive impact on their well-being. A 7-point Likert-style scale (1 = *strongly disagree*; 7 = *strongly agree*) was used for consistency with the other measures in this study. The items used in this measure corresponded with 49 of the 84 component

constructs identified by Cane et al. (2012) within their theoretical domains framework (TDF) as contributing to health-related behaviour. A number of the behavioural determinants outlined by Cane et al. (2012) were identified as component constructs within COM-B but as not as directly relevant in the current context so were excluded, for example, professional goals, procedural knowledge, and organisational commitment. The three components (capability, opportunity, and motivation) and the six subcomponents (psychological capability, physical capability, reflexive process, automatic process, social opportunity and physical opportunity) used in this study relate directly to those constructs deemed relevant to behaviours required to access places that impact positively on well-being (Figure 10).

Figure 10.

Theoretical domains mapped onto the COM-B components



These study items were mapped onto the COM-B model according to the structure identified by Cane et al. (2012) (Figure 10). For example, one of the behavioural

determinant items in this study was '*Spending time in my chosen place is influenced by feeling I need to fit in with how other people behave*'. This was designed to relate to *group conformity* within the *social conformity* domain in the TDF (Cane et al. 2012) and this relates to the *social opportunity* component of the COM-B (Michie et al., 2011).

6.2.5 Procedure

Once ethics approval was granted in accordance with BPS guidelines (BPS, 2018) recruiting tweets were made live. Respondents accessed the on-line link to the survey which included a participant information sheet and prompt to only proceed if they were over the age of 16, they were also asked to provide their age to confirm participation. Participants were informed that by submitting their responses they were providing informed consent. In total the survey took participants about 15 minutes to complete.

6.2.6 Analysis strategy

The analysis strategy for the study was designed to identify significant differences in well-being outcomes according to type and function of place using a MANOVA. The relative influence of place attachment components and of behavioural determinant components in predicting well-being outcomes was explored using linear multiple regression analysis. Characteristics of place are explored using descriptive analysis. SPSS v25 and NVIVO v12 were used for analysis.

6.3 Results

Initial data screening for missing values was conducted before further analysis. One participant omitted their age, so this participant's data was excluded in any analysis where age was a variable. Three participants did not provide descriptions of their chosen place, but a decision was made to include their data as they had named their chosen place which allowed for further analysis. One participant had chosen their motorbike so was unable to answer the question relating to distance from main residence, their data for this item was not imputed but excluded from analysis relating to distance. There was no missing data on any of the four measures used in the survey (well-being, place attachment, characteristics, or behavioural determinants). In order for further analyses, initial data preparation was conducted on the data derived from the four main measures used in the survey (state well-being, characteristics of place, place attachment and

behavioural determinants), including dimension reduction where appropriate and determining measures of internal consistency.

6.3.1 Dimension reduction

Dimension reduction was only required for the behavioural determinants scale. This measure had not been used before, so a dimension reduction process was conducted. The six initial components identified in the creation of the measure were derived from the components and subcomponents of the COM-B model of behaviour and behaviour change. Principal Component Analysis was used to identify whether these components existed within the scale and the extent to which these align with the theoretical model.

Principal Component Analysis explores variation. Therefore, before conducting the dimension reduction, any items that show very little variation between participants need to be identified; particularly where the mean score is very high or very low and SD is low. The following behavioural determinant item was identified from the descriptive statistics as lacking variation: *How much free time people had*. Over 70% of participants agreed or strongly agreed that how much free time they had impacted on their ability to visit their chosen place. Therefore, this item was excluded from the dimension reduction analysis as there was a lack of variation in the data.

A Principal Component Analysis (oblimin rotation, no factors specified) was conducted on the remaining 48 items relating to behavioural determinants (Table 12). The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis, KMO = 0.93 and all KMO values for individual items were above 0.41. Bartlett's test of sphericity x^2 (406) = 6438.14, $p < .001$, indicated that correlations between items were sufficiently large for principal component analysis (Field, 2018). An initial analysis was run to obtain eigenvalues for each component in the data, six component had eigenvalues over Kaiser's criterion of 1 and in combination explained 59.31% of the variance. However, two components only contained 2 items which is not recommended (Zwick & Velicer, 1986) therefore these four items were eliminated. Table 12 shows the factor loading after rotation.

Table 12

Principal component analysis for behavioural determinant items

Component (% variance)	$\bar{x}$	*SD*	*α*	Rotated loadings 1	Rotated loadings 2	Rotated loadings 3	Rotated loadings 4	h^2
Security Motivation (32.14)			.80					
Perceived competence – vulnerability	3.72	1.73		.86				.73
Anxiety	4.08	1.84		.67				.63
Scared	3.16	1.65		.85				.70
Safe	4.26	1.74		.51				.53
Social barriers and facilitators (8.07)			.86					
Self as part of a group	3.39	1.77			.89			.73
Part of a group	3.40	1.81			.86			.68
Community	3.76	1.84			.82			.66
Support	3.80	1.75			.67			.56
Social skills	3.55	1.72			.54			.51
Encouragement	3.63	1.68			.49			.49
Identity	4.26	1.75			.30			.51
Physical Barriers and facilitators (6.69)			.85					
Physical skills	3.69	1.79				-.88		.73
Physical competence	3.43	1.75				-.86		.73
Develop physical skills	3.69	1.82				-.83		.65
Physically able	4.23	1.84				-.67		.58
Confidence to complete	4.00	1.85				-.56		.56
Wayfinding	3.41	1.75				-.32		.43
Reflections on motivation (3.80)			.81					
Stability of intentions	4.69	1.65					.75	.66
Behavioural regulation	4.65	1.65					.67	.55
Perceived competence – wellness	4.84	1.59					.62	.57
Positive mood	4.55	1.71					.57	.62
Tiredness	4.45	1.67					.31	.46
							$\bar{x}h^2$ =	.66

Note. α > .80 is excellent (Cortina, 1993)

In total 27 items from the original 49 behavioural determinant scale were deleted. The component structure after a further run of the PCA suggested four components: security motivation, social barriers and facilitators, physical barriers and facilitators, and reflections on motivation.

For the other three measures used in the survey (well-being, characteristics of place, place attachment), dimension reduction analyses were not implemented. In the design of this study participants were asked to identify places that *positively* impacted their well-being and then rate their well-being outcomes. Consequently, ratings were relatively high. For these reasons, some non-normality in the data was anticipated in the current study, However, skewness and kurtosis were so pronounced for the well-being scales that dimension reduction analyses, were considered unviable (Tabachnick & Fidell, 2013). A decision was made to score the adapted MHC-SF scale for further analysis as recommended by Keyes (2009) generating three subscales, hedonic, social and eudaimonic well-being.

The particular focus of the analysis of **characteristics of place** was on identifying 'universals' or those characteristics the majority of participants believed applied to their place, as well as those characteristics that showed greatest variability. 'Universals' provide some insight into the consistency between places, while characteristics that varied indicate the potentially unique profile linked to specific places. The following characteristics were identified from the descriptive statistics: Item 5: View of the sky (mean 6.04, *SD* 1.67), Item 6: open (mean 5.76, *SD* 1.62), Item 10: Light (mean 6.04, *SD* 1.14), Item 15: Safe (mean 5.90, *SD* 1.14), Item 17: friendly (mean 5.75, *SD* 5 1.16).

With so many universals any analysis that explores variance such as dimension reduction or analysis of variance, would not be appropriate. Dimension reduction was also not deemed appropriate for the **place attachment** measure as there was also evidence of a ceiling effect for a number of items (Table 13). A decision was made to use the scale including all 20 items in further analysis if internal consistency analysis indicated this was appropriate.

Table 13

Descriptive data for place attachment items

Item	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree	*Mean*	*SD*
Place identity									
I feel that my chosen place is a part of me	0.75%	5.66%	5.28%	11.13%	20.94%	**29.25%**	**26.98%**	5.42	1.47
My chosen place says very little about who I am (R)	2.26%	5.47%	9.43%	12.64%	19.62%	**34.34%**	**16.23%**	5.64	0.92
I feel that I can really be myself in my chosen place	0.38%	1.13%	0.94%	9.25%	16.60%	**41.70%**	**30.00%**	5.86	1.09
My chosen place reflects the type of person I am	0.19%	1.13%	2.08%	11.32%	25.47%	**37.36%**	**22.45%**	5.63	1.1
I feel a connection to the visual landscape of this area	1.70%	3.40%	2.26%	3.77%	10.94%	**27.92%**	**50.00%**	6.03	1.34
Affective attachment									
I feel relaxed when I'm in my chosen place	0.19%	0.38%	0.57%	1.13%	7.55%	**35.47%**	**54.72%**	6.41	0.81
I feel happiest when I'm in my chosen place	0.38%	4.34%	4.91%	13.21%	31.32%	30.75%	15.09%	5.23	1.28
My chosen place is my favourite place to be	1.13%	4.72%	4.34%	15.09%	29.43%	28.87%	16.42%	5.19	1.36
I really miss my chosen place when I'm away from it for too long	1.13%	5.66%	4.91%	10.19%	21.32%	**31.70%**	**25.09%**	5.4	1.47
I am proud of my chosen place	0.00%	1.89%	1.51%	18.68%	15.47%	**32.26%**	**30.19%**	5.65	1.23
Place dependence									
My chosen place is the best place for doing the things that I enjoy most	0.94%	5.28%	8.30%	18.11%	28.49%	25.66%	13.21%	4.98	1.39
For doing the things that I enjoy most, no other place can compare to my chosen place	3.02%	12.26%	15.47%	19.62%	24.91%	16.04%	8.68%	4.34	1.57
My chosen place is not a good place to do the things I most like to do (R)	1.70%	5.28%	6.79%	15.85%	14.53%	**34.91%**	**20.94%**	5.7	0.99
As far as I am concerned, there are better places to be than in my chosen place (R)	2.08%	12.26%	20.38%	22.83%	18.49%	18.30%	5.66%	5.23	0.89
The spiritual nature of my chosen place ties me to this place	7.17%	11.13%	4.15%	21.51%	17.92%	20.75%	17.36%	4.64	1.82
I feel that this place is my home	5.47%	13.96%	7.92%	14.15%	18.11%	22.45%	17.92%	4.65	1.85
My roots are in this place	7.55%	22.08%	10.19%	14.72%	17.55%	14.53%	13.40%	4.1	1.9
Proximity maintenance									
I intend to continue spending time in my chosen place for the next 3 years	1.13%	2.26%	0.94%	3.96%	9.25%	**31.32%**	**51.13%**	6.16	1.21
I wish to continue spending time in my chosen place for the rest of my life	0.75%	3.21%	2.08%	8.87%	19.25%	**29.62%**	**36.23%**	5.76	1.32
Place attachment									
I feel attached to my chosen place	0.19%	1.32%	1.70%	4.72%	14.72%	**34.53%**	**42.83%**	6.07	1.08

Note. Values may not sum to 100% due to rounding.

6.3.2 Internal consistency

Internal consistency statistics were calculated for each measure (well-being, place attachment and behavioural determinants) and their subscales/components. Cronbach's alpha was assessed against published criteria (Cortina, 1993). The internal consistency values ranged from .66 to .92. See tables 14 to 16 for specific values. There is no evidence that deleting any items would increase the internal consistency of any subscales.

Table 14

Descriptive data for well-being items

Adapted MHC-SF[1]	$\bar{x}$	*SD*	α
Hedonic well-being	6.20	0.77	0.71
Happy	6.43	0.87	
Interest in life	6.17	0.95	
Life satisfaction	6.01	1.06	
Social well-being	4.89	0.90	0.68
Social contribution	5.17	1.30	
Social Integration	5.15	1.53	
Social growth/Social actualization	4.40	1.35	
Social acceptance	5.48	1.64	
Social coherence	4.23	1.42	
Eudaimonic well-being	5.51	0.81	0.76
Self-acceptance	5.38	1.11	
Environmental mastery	5.34	1.29	
Positive relations with others	5.68	1.21	
Personal growth	5.35	1.40	
Autonomy	5.66	1.12	
Purpose in life	5.65	1.19	
Total state well-being	5.44	0.71	0.85

Note. Maximum scale score = 7,

[1] Adapted from Keyes (2005)

Table 15

Descriptive data for place attachment items

Place attachment component and items[1]	$\bar{x}$	*SD*	α
Place identity	5.71	0.80	0.67
I feel that my chosen place is a part of me	5.42	1.47	
My chosen place says very little about who I am (R)*	5.64	0.92	
I feel that I can really be myself in my chosen place	5.86	1.09	
My chosen place reflects the type of person I am	5.63	1.10	
I feel a connection to the visual landscape of this area	6.03	1.34	
Affective attachment	5.58	0.88	0.74
I feel relaxed when I'm in my chosen place	6.41	0.81	
I feel happiest when I'm in my chosen place	5.23	1.28	
My chosen place is my favourite place to be	5.19	1.36	
I really miss my chosen place when I'm away from it for too long	5.40	1.47	
I am proud of my chosen place	5.65	1.23	
Place dependence	4.80	0.91	0.69
My chosen place is the best place for doing the things that I enjoy most	4.98	1.39	
For doing the things that I enjoy most, no other place can compare to my chosen place	4.34	1.57	
My chosen place is not a good place to do the things I most like to do (R)*	5.70	0.99	
As far as I am concerned, there are better places to be than in my chosen place (R)*	5.23	0.89	
The spiritual nature of my chosen place ties me to this place	4.64	1.82	
I feel that this place is my home	4.65	1.85	
My roots are in this place	4.10	1.90	
Proximity maintenance	5.96	1.1	0.66
I intend to continue spending time in my chosen place for the next 3 years	6.16	1.21	
I wish to continue spending time in my chosen place for the rest of my life	5.76	1.32	
Place attachment			
I feel attached to my chosen place	6.07	1.08	
Total Place attachment score	5.40	0.75	0.88

Note. Maximum scale value = 7. [1] adapted from Scannell & Gifford (2013)

Table 16

Behavioural determinants subscales

Component	$\bar{x}$	*SD*	α
'Security' Motivation	3.80	1.38	.80
Motivation Reflective Practice Perceived competence – vulnerability	3.72	1.73	
Motivation Automatic – anxiety	4.08	1.84	
Motivation Reflective Practice – scared	3.16	1.65	
Motivation Reflective Practice – safe	4.26	1.74	
Social barriers and facilitators	3.68	1.29	.86
Motivation Reflective Practice – self as part of a group	3.39	1.77	
Opportunity Social – part of a group	3.40	1.81	
Opportunity Social – community	3.76	1.84	
Opportunity Social – support	3.80	1.75	
Capability Psychological - social skills	3.55	1.72	
Motivation Automatic – encouragement	3.63	1.68	
Motivation Reflective Practice – identity	4.26	1.75	
Physical barriers and facilitators	3.74	1.35	.85
Capability Physical -physical skills	3.69	1.79	
Capability Physical - physical competence	3.43	1.75	
Capability Physical - develop physical skills	3.69	1.82	
Capability Physical - physically able	4.23	1.84	
Motivation Reflective Practice - confidence to complete	4.00	1.85	
Capability Psychological – wayfinding	3.41	1.75	
Reflections on motivation	4.50	1.20	.81
Motivation Reflective Process - stability of intentions – motivation	4.69	1.65	
Capability Psychological - behavioural regulation	4.65	1.65	
Motivation Reflective Process - perceived competence – wellness	4.84	1.59	
Motivation Automatic - positive mood	4.55	1.71	
Capability Psychological – tiredness	4.45	1.67	
Total Behavioural determinants scale	3.94	1.01	.92

Note. Maximum scale value = 7

6.3.3 Subscale correlations

The correlation between subscales for the three measures (well-being, place attachment and behavioural determinants) were calculated (Table 17) to screen for their appropriateness for inclusion in regression analysis.

Table 17

Measurement Subscale Correlations

		1	2	3	4	5	6	7	8	9	10	11
	Well-being											
1	Hedonic well-being	-	.44**	.60**	.34**	.34**	.25**	.27**	-.08	.10*	.10*	-.03
2	Social well-being		-	.63**	.19**	.23**	.27**	.14**	.08	.42**	.12**	.16**
3	Eudaimonic well-being			-	.37**	.36**	.33**	.23**	.04	.31*	.16*	.14**
	Place attachment											
4	Place identity				-	.66**	.64**	.44**	.08	.12**	.60	.02
5	Affective attachment					-	.68**	.46**	.16**	.16**	.12**	.10*
6	Place dependence						-	.40**	.14**	.20**	.17**	.09*
7	Proximity maintenance							-	.01	.07	.01	.02
	Behavioural determinants											
8	Security motivation								-	.50**	.44**	.63**
9	Social barriers/facilitators									-	.52**	.54**
10	Physical barriers/facilitators										-	.60**
11	Reflections on motivation											-

Note. ** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed

None of the subscales had correlations that were deemed ‘too high’ (.80 or.90) for extreme co-linearity (Field, 2018). Multicollinearity was assessed by calculating Variance Inflation Factors (VIF) for the subscales. The place attachment subscales all had VIF values between 1.3 and 2.3, the behavioural determinant subscales all had VIF values between 1.6 and 1.9. These are all at an acceptable level to proceed with multiple regression (Bowerman & O’Connell, 1990). All three well-being subscales (hedonic, social and eudaimonic well-being) were positively correlated with each of the place attachment subscales (place identity, affective attachment, place dependence and proximity maintenance). None of the well-being subscales correlated with the security motivation

components of the behavioural determinants measure. Social and eudaimonic well-being correlated with the other three behavioural determinants components (social barriers/facilitators, physical barriers/facilitators and reflections on motivation). Hedonic well-being correlated positively with both social and physical barriers and facilitators. Proximity maintenance (a place attachment component) did not correlate with any of the behavioural determinant components. Affective attachment and place dependence positively correlated with the other three behavioural determinant components.

6.3.4 Place

Range of places. The range of places participants selected as enhancing or maintaining their well-being was extensive and often surprising. They ranged from the everyday (the gym, the allotment or work) to the more unusual (a naturist venue, therapists office and a NATO base) (see Appendix 15). The scale of places also varied from very large scale (e.g., countries or regions such as the lake district) to the very specific, (e.g., The Centre for Alternative Technology or even a sofa). Regular references were made to libraries, theatres, art galleries, cafes, pubs, as well as places that facilitates specific activities such as a yoga studio, football stadia or choir practice.

Participants were asked about the **distance** between their chosen place and their main residence, 51% of participant selected a place within 10 miles of their place of residence with a minimum distance was 0 miles when people selected their homes. The maximum distance was 14,000 miles.

Characteristics and types of place. From participants' descriptions of their chosen place, the frequency of different words used were counted using NVIVO and terms that were very similar were grouped together. The most commonly used terms are presented in Table 18. Terms that describe the characteristics of the chosen place related to the qualities a place possess such as being 'quiet', 'small' or 'old'; another prominent point was references to 'views' or being 'open'. There were also value judgements linked to aesthetics (beautiful) or more abstract concepts such as 'lovely' or 'calm'. Words used by participants could be considered in terms of 'types of place'. References to coastal places (beach, seaside, coast etc.) were the most frequent (161), with inland bodies of water also featuring prominently (50 mentions).

Table 18

Frequency of terms used to describe chosen places

Most frequent places		Descriptive terms	
Beach, seaside, coast, sea, harbour	161	Quiet (including peaceful)	60
Trees, woodland, wooded and forest	62	Beautiful	49
Hills and mountains	56	Views (including 'overlooks')	41
Town and city	54	Small	36
Lakes and rivers	50	Open	25
Garden	38	Calm	20
Village	33	Lovely	19
Park	29	Green	18
Island	15	Old	15
Nature	13		

This was followed by references to trees/woodland and hills/mountains. Words relating directly to built places were less frequent despite built places featuring prominently in participants choice of place. The characteristics of place scale descriptive statistics confirmed the findings of Study 1 and Study 2 that characteristics are varied but there are 'universals' that feature prominently in places people chose as eliciting positive well-being outcomes. There were four items in the characteristics of place scale that were linked strongly to traditional types of place categories. The mean score for places that have lots of plants or natural elements was high at 5.84 (maximum score = 7) (Table 19) with a total of 74.15% of participants agreeing or strongly agreeing with the statement of their chosen place 'having lots of plants or natural elements'. The mean score for the item relating to the presence of built aspects was low at 2.88 indicating that participants disagreed that their chosen place was mainly built.

Type of place. Participants' descriptions of the place they felt positively impacted their well-being were coded into five-level 'type of place' quasi-independent variables: built, urban green space, green, blue and other. An 'other' category was used for places that could not be categorised according to type of place for example countries or regions (e.g. Spain). The most commonly reported type of place was built, with 33% of the places described by participants being coded as built places (Table 20). This contrasts with the data from the characteristics of place scale where fewer than 20% of participants agreed or strongly agreed that their chosen place was mainly built or urban.

Table 19

Descriptive data for characteristics of place

Latent characteristics of place components	$\bar{x}$	*SD*
Types of place indicators		
Built/urban	2.88	2.11
Urban green space	3.41	2.18
Blue	5.23	2.05
Green/natural	5.84	1.82
Outlook		
View of the horizon	5.09	2.19
View of the sky	6.04	1.67
Open	5.76	1.62
Light	6.04	1.16
Indicators of care		
Enclosed	3.45	2.09
Warm	5.00	1.57
Quiet	5.39	1.60
Clean	5.66	1.38
Safe	5.90	1.14
Cosy	4.41	1.84
Friendly	5.75	1.16
Wildness		
Having wildlife	5.30	2.06
Wild	4.61	2.01
Indicators of function		
Clear function	5.46	1.50
Opportunity to explore	5.43	1.64
Uniqueness	5.20	1.64

Note. Maximum scale score = 7

Table 20

Type of Place

	Coded from qualitative data		Characteristic of place rating	
	f	%	$\bar{x}$	*SD*
Built	175	33	2.88	2.11
UGS	27	5.1	3.41	2.18
Blue	156	29.4	5.23	2.05
Green	111	20.9	5.84	1.82
Other	61	11.5		
Total	530	100		

Note. Scale maximum = 7

6.3.5 Multi-variate Analyses of Variance (H_1-H_4)

Correlations between well-being subscales (Table 17) were reviewed to determine whether three one-way ANOVAs or MANOVA would be most appropriate to test hypotheses where these were the dependent variables. Bi-variate Pearson's correlation coefficients indicated that MANOVA was the most appropriate analysis (Tabachnick & Fidell, 2014). It would have been advantageous to conduct 2 MANOVAs (frequency x duration x company; type x function) on the three well-being outcomes. This would have allowed for interactions between the variables to be tested. However, due to the number of categories within several variables, cell sizes were too small (Tabachnick & Fidell, 2014). Therefore, five MANOVAs were conducted on well-being outcomes: 1. **type of place**, 2. **function** of place, 3. **frequency** of visits, 4. **duration** of visits, 5. **company** on visits. ANOVA was used to determine significant univariate effects and post-hoc (Bonferroni) comparisons, to protect against Type I error alpha was adjusted to .01.

Well-being by type of place (H_1). The result of the MANOVA using Pillai's trace indicated, there was a significant multi-variate main effect of type of place. Separate univariate tests on the outcome variables revealed significant type of place effects on social well-being (Table 21) Scores for social and eudaimonic well-being were significantly different between built and green places but not between any of the other type of place categories. With social and eudaimonic well-being higher for participants who chose places that could be coded as built than green places. The separate univariate test revealed a significant effect for hedonic well-being but only between the green and other category. All the significant results for well-being and type of place had small effect sizes (Table 21). Hypothesis 1_a was not supported as the only differences in hedonic was between the *green* and *other* types of place. Hypothesis 1_b was not supported as social well-being outcomes were higher for *built* than *green* places. However, the data elicited from coding of 'type of place' according to participant's description, seems at odds with the data elicited from the characteristics of place scale. Within the characteristics of place measure, participants rated their chosen place according to how built, green, blue and urban green space their place was (1 = strongly disagree; 7 = strongly agree).

Table 21

Multi-variant Analysis of Variance for Type and Function of Place

Variable	Hedonic Well-Being					Social Well-Being					Eudaimonic Well-Being				
			ANOVA					ANOVA					ANOVA		
	Mean	SD	*F*	*p*	η^2	Mean	SD	*F*	*p*	η^2	Mean	SD	*F*	*p*	η^2
Type of Place			2.62	.03	.02			5.44	.01	.04			4.45	.01	.03
Built	6.18	.80				5.10	.93				5.69	.81			
UGS	6.24	.72				4.87	.80				5.31	.71			
Blue	6.27	.66				4.86	.84				5.48	.80			
Green	6.06	.88				4.61	.84				5.32	.80			
Other	6.42	.67				4.89	.96				5.51	.81			
MANOVA			Pillai's trace = 0.84, $F(12,1575) = 3.78$, $p < 0.01$												
Function of Place			0.74	.62	-			0.65	.69	-			1.08	.38	-
Education/work	6.25	.54				4.99	.75				5.39	.78			
Spiritual	6.17	.94				4.89	.89				5.56	.80			
Domestic	6.28	.74				4.97	.84				5.62	.70			
Hobby	6.23	.75				4.78	.88				5.44	.72			
Leisure/fun	6.16	.72				4.83	.93				5.47	.80			
Holiday	6.31	.67				5.00	.82				5.63	.75			
Other	6.11	1.02				4.84	1.01				5.38	1.04			
MANOVA			Pillai's trace = 0.21, $F(18,1569) = 0.61$, $p = 0.90$												

Note. Scale maximum = 7; α was .01 to control for Type I error rates.

Table 22

Multi-variant analysis of variance

Variable	Hedonic Well-Being					Social Well-Being					Eudaimonic Well-Being				
			ANOVA					ANOVA					ANOVA		
	Mean	*SD*	*F*	*p*	η^2	Mean	*SD*	*F*	*p*	η^2	Mean	*SD*	*F*	*p*	η^2
Frequency of visit			1.79	.10	-			1.25	.28	-			0.65	.69	-
Rarely (33)	6.09	1.16				4.63	.92				5.37	1.05			
Once or twice (162)	6.34	.69				4.86	.89				5.50	.76			
Once a month (84)	6.17	.63				4.96	.86				5.51	.75			
Twice a month (69)	6.14	.76				4.77	.89				5.45	.82			
Once a week (59)	6.00	.73				4.99	.94				5.51	.84			
Several/week (71)	6.21	.85				5.04	.80				5.52	.85			
Every day (52)	6.21	.80				4.84	1.01				5.69	.79			
MANOVA			Pillai's trace = 0.61, $F(18,1569) = 1.82$, $p = 0.02$												
Duration of visit			5.28	.01	.06			1.22	.30	-			3.95	.01	.04
Up to an hour (107)	6.00	.82				4.81	.92				5.29	.84			
Few hours day (206)	6.10	.82				4.83	.89				5.44	.82			
Whole day (61)	6.25	.70				4.99	1.01				5.60	.84			
A few days (62)	6.40	.53				5.12	.64				5.62	.67			
A week (49)	6.53	.55				4.82	1.00				5.69	.74			
A few weeks (29)	6.47	.87				4.97	.85				5.80	.71			
A month or more (16)	6.20	.47				4.94	.91				5.99	.70			
MANOVA			Pillai's trace = 0.09, $F(18,1569) = 2.83$, $p < .001$												
Company			5.35	.01	.02			5.02	.01	.02			4.78	.01	.02
Alone (99)	5.98	.89				4.64	1.00				5.29	.94			
With someone (257)	6.27	.75				4.96	.84				5.55	.78			
Varies (174)	6.23	.69				4.92	.90				5.58	.76			
MANOVA			Pillai's trace = 0.31, $F(6,1052) = 2.717$, $p = 0.01$												

Note. Scale maximum = 7; α was .01 to control for Type I error rates

It would be expected that these ratings would align to the 'Type of Place' categories their place was coded as (built, urban green space, blue and green). However, the results seem incongruent, with the highest mean rating for green elements being central to their chosen place (5.84 out of a maximum 7) and a low mean score (2.88) for built elements (see Table 21).

Well-being by function of place (H_2). Participants indicated the primary function of the place they had chosen, self-selecting from the 7 categories: education or work, spiritual, domestic, hobby, leisure or fun, holiday or other. The most frequently selected category was leisure or fun (40% of responses) with education or work being the least frequently selected option (3.8% of responses). The descriptive data indicated very little variation in well-being outcomes. A MANOVA was conducted to explore the relationship between function of place and well-being outcomes. Using Pillai's trace, there was a non-significant effect of function of place on the well-being outcomes (Table 21). Hypotheses H_{2a} and H_{2b} were not supported.

Well-being by frequency and duration of visits (H_3). To assess proximity maintenance participants indicated the frequency and duration of their visits. **Frequency** of visit was indicated by participants using the following 7 categories: rarely, once or twice, once a month, twice a month, once a week, several times a week, every day. The multi-variate main effects of visit frequency was non-significant at the reduced alpha level of .01 (see Table 22). Hypothesis H_{3a} that well-being will be higher the more frequent the number of visits was not supported.

Duration of visits was indicated by participants using the following 7-level categories: up to an hour, a few hours a day, whole day, a few days, a week, a few weeks, a month or more. Using Pillai's trace, there was a significant effect of duration of visits on the state well-being outcomes (Table 22). Separate univariant tests on the outcome variables revealed significant duration of visit effects on hedonic well-being ($p < 0.001$) with a moderate effect size ($\eta^2 = .06$), and eudaimonic well-being ($p < 0.001$) with a small effect size ($\eta^2 = .04$) but was not significant for social well-being ($p = .30$) (Table 22). The hedonic well-being outcomes were highest for 'a week'
($\bar{x} = 6.53$, $SD = .55$) compared to shorter durations, but well-being outcomes then declined for visits longer than a week. Whereas eudaimonic well-being was rated higher

the longer the duration of visit. Hypothesis H_{3b} was supported. The well-being outcomes were significantly higher for hedonic and eudaimonic well-being as duration of visit was longer.

Well-being by company on visits (H_4). Participants were asked whether when they visited their chosen place, they tended to be alone, with someone else or if it varied. Overall, 48.5% of respondents had company on their visits with 18.7% tending to visit places alone. Using Pillai's trace, there was a significant effect of who people visited their chosen place with on the state well-being outcomes (Table 22). Separate univariate tests on the outcome variables revealed significant effects on hedonic well-being, social well-being and eudaimonic well-being. The mean well-being outcomes for hedonic, social and eudaimonic well-being were all significantly higher when people were with someone compared to when they were alone (all $p < 0.01$) but the effect size was small (all $\eta^2 = .02$). Hypothesis 4 (H_4) is supported.

6.3.6 Place attachment (H_6)

A Pearson's product moment correlation was conducted to determine the relationship between total well-being and total place attachment score. There was a positive correlation between well-being and place attachment which was statistically significant ($r = .40$, $n = 530$, $p < .005$), however the effect size was small ($r^2 = .16$). Thus, the hypothesis that there is a positive correlation between place attachment and state well-being (H_{6a}) is supported.

Predicting well-being through place attachment. Multiple regression was used (Table 23) to determine whether each of the three well-being outcomes (hedonic, social and eudaimonic) were predicted from four place attachment components (place identity, affective attachment, place dependence and proximity maintenance). As there were 3 regressions used, $\alpha = .017$ to control for type I errors. A simultaneous forced entry method (enter) was used to ensure that all predictor variables were given equal importance and entered in a single step.

Hedonic well-being was significantly predicted by 3 of the 4 place attachment components, $p < .001$. Place dependence was not a significant predictor. In the final model, place identity, affective attachment and proximity maintenance accounted for

14% of the variance in hedonic well-being. Proximity maintenance was the least influential based on adjust beta weights. Social well-being was significantly predicted by 1 of the 4 place attachment components, p < 001. Place dependence was the only predictor and in the final model, it accounted for 7% of the variation in social well-being. Eudaimonic well-being was significantly predicted by 2 of the 4 place attachment components, $p < .001$. In the final model place identity and affective attachment accounted for 16% of the variation in eudaimonic well-being. Place identity had the higher influence based on adjust beta weights.

Table 23

Summary of multiple regression on place attachment predictors of state well-being

	Hedonic well-being				Social well-being				Eudaimonic well-being			
	b	*SE B*	*β*	*p*	*b*	*SE B*	*β*	*p*	*b*	*SE B*	*β*	*p*
Full model												
Place identity	.18	.06	.18	.002	-.02	.07	-.02	.782	.20	.06	.20	.001
Affective attachment	.17	.06	.20	.002	.07	.07	.07	.276	.15	.06	.16	.009
Place dependence	-.04	.05	-.41	.482	.22	.06	.23	.001	.08	.05	.09	.143
Proximity maintenance	.18	.03	.12	.014	.03	.04	.03	.525	.03	.03	.03	.469
R^2		.15				.07				.16		
F		22.86*				11.21*				25.73*		
Final model												
Place identity	.16	.53	.17	.002					.23	.05	.23	.001
Affective attachment	.16	.49	.18	.001					.19	.05	.20	.001
Place dependence					.27	.04	.27	.001				
Proximity maintenance	.08	.32	.11	.015								
R^2		.14				.07				.16		
F		30.34*				42.83*				49.98*		

Note: * p < 0.001

Place attachment was positively correlated with well-being however, there were differences in how much each subscale contributed to the regression models. Place identity and affective attachment both significantly influenced hedonic and eudaimonic well-being but not social well-being. Place dependence only significantly influenced social

well-being and Proximity maintenance only significantly influenced hedonic well-being. Thus, hypothesis H_{6b} that all three types of state well-being (hedonic, social and eudaimonic) are positively associated with place attachment is supported. As shown by the R^2 values in Table 23, the proportion of variance attributed to place attachment was roughly equal for hedonic (14%) and eudaimonic well-being (16%) but was lower for social well-being (7%).

6.3.7 Behavioural determinants (H_7)

Predicting well-being through Behavioural determinants. A multiple regression was conducted (Table 24) to predict well-being outcomes (hedonic, social and eudaimonic) from behavioural determinant components (security motivation, social barriers and facilitators, physical barriers and facilitators, reflections on motivation). Hedonic and social well-being were significantly predicted by 3 of the 4 behavioural determinant components and eudaimonic well-being was significantly predicted by 2 of the components $p < .001$. In the final model, security motivation, social barriers/facilitators and physical barriers/facilitators accounted for 4% of the variance in hedonic well-being, 20% of the variance in social well-being. Security motivation and social barriers/facilitators accounted for 11% of the variance in eudaimonic well-being. For hedonic, well-being components had roughly equal influence based on adjusted beta weights. The social barriers/facilitators component had higher influence based on adjusted beta weights for both social and eudaimonic well-being (see Table 24).

Security motivation social barriers /facilitators influenced all aspects of well-being. Each aspect of well-being was negatively associated with how much participants took security motivation into consideration. The more emphasis participants placed on factors such as safety, perceived capability, being scared or anxious the lower the well-being outcomes. Well-being increased with higher participants rating of their consideration of social barriers and facilitators. Component 3 (Physical barriers and facilitators) had an influence on both hedonic and social well-being. The more that emphasis participants placed on physical factors such as barriers and facilitator the higher the associated hedonic well-being outcomes but the lower the social well-being outcomes.

Table 24

Summary of multiple regression on behavioural determinant predictors of state well-being

	Hedonic well-being				Social well-being				Eudaimonic well-being			
	b	*SE B*	*β*	*p*	*b*	*SE B*	*B*	*p*	*b*	*SE B*	*β*	*p*
Full model												
Security motivation	-.09	.03	-.16	.01	-.11	.03	-.16	.01	-.10	-.03	-.18	.01
Social barriers/ facilitators	.09	.03	.15	.01	.37	.03	.53	.01	.22	.05	.35	.01
Physical barriers/ facilitators	.08	.03	.15	.01	-.07	.03	-.10	.04	.02	.03	.03	.64
Reflections on Motivation	-.06	.04	-.09	.14	.03	.04	.04	.49	.04	.04	.05	.38
R^2		.04				.20				.11		
F		6.04*				33.71*				16.53*		
Final model												
Security motivation	-.11	.03	-.20	.01	-.02	.01	-.15	.01	-.09	.03	-.15	.01
Social barriers/ facilitators	.08	.03	.13	.01	.05	.01	.54	.01	.24	.03	.38	.01
Physical barriers/ facilitators	.07	.03	.12	.02	-.01	.01	-.09	.05				
R^2		.04				.20				.11		
F		7.35*				44.83				32.32		

Note: * $p < 0.001$

Component 4 (Reflections on motivation) did not significantly influence any aspect of well-being. As can be seen from the R^2 values in table, 4% of the variation in hedonic well-being outcomes are due to behavioural determinants, 20% in the variation of social well-being, and 11% of the variation in eudaimonic well-being outcomes. As the Principal Component Analysis (PCA) identified components that in the most part did not align with those derived from the COM-B, it was difficult to directly address the hypotheses. Overall, the behavioural determinants did differentially influence perceived state well-being outcomes (H_7) however not in the ways predicted. No items from the *Physical Opportunity* component in the original behavioural determinants measure presented to participants, remained within the measure following the PCA thus H_{7b} cannot be answered.

Reflective Process Motivation (H_{7c}) items were present across all four components identified in the PCA so again the influence of this component as a distinct aspect could not be addressed. The same issue occurred with *Automatic Motivation* (H_{7a}) and *Psychological Capability* (H_{7e}), with items distributed across three components following the PCA. *Social Opportunity* items were clustered largely within component 2 (Social barriers/facilitators) following the PCA. Whilst the beta weights suggest social well-being was the most influential, the influence was significant across each of the well-being outcomes rather than differentially towards social well-being as predicted thus the hypothesis (H_{7D}) is not supported. The hypothesis relating to *Physical Capability* (H_{7f}) predicted a greater influence on state eudaimonic well-being than other behavioural determinants. All the items from this theoretical component were present within component 3 following the PCA. The results suggested physical capability had no significant influence on eudaimonic well-being outcomes. Hypothesis (H_{7f}) is not supported.

6.4 Discussion

The aim of this study was to address the four main thesis research questions:

- In what ways can a range of physical environments be seen to enhance and maintain positive well-being outcomes in individuals? (Thesis RQ 1)
- What characteristics across a range of physical environments impact on well-being outcomes? (Thesis RQ 2)
- To what extent do person-place relationships impact on self-reported well-being outcomes for individuals? (Thesis RQ 3)
- To what extent do behavioural determinants act as facilitators or barriers to accessing places individuals perceive as having a positive impact on their well-being? (Thesis RQ 4)

This discussion section addresses each of these research questions in relation to the findings of this current study. The integration of these findings with those from Study 1 (Ch. 3) and Study 2 (Ch.5) can be found in Chapter 7.

6.4.1 In what ways can a range of physical environments be seen to enhance and maintain positive well-being outcomes in individuals? (RQ1)

Well-being. Well-being outcomes reported by participants in relation to their chosen place, were high across all three aspects of well-being (hedonic, social and eudaimonic), to the extent that a ceiling effect occurred with very little variation in the data. When the MHC-SF (Mental Health Continuum Short Form, Keyes, 2008) is employed it is typical for the items that relate to the core components of hedonic well-being to score higher than those that relate to eudaimonic or social well-being (e.g., Lamers et al., 2011; Reinhardt et al., 2020; van Erp Taalman Kip & Hutschemaekers, 2018). The data from Study 2 and from the current study (Study 3) followed the same pattern. The high level of reported hedonic well-being indicated that participants selected places that made them happy, with some participants even describing the place as their 'happy place'. Giuliani (2002) proposed that positive affect such as happiness could lead to the development of positive associations with place that result in the development of place attachments. Respondents could be selecting places that hold positive associations for them at an 'affective' level. The high rates of social and eudaimonic well-being suggest that additional factors also formed part of decision-making processes to engage with particular places. As participants were offered a free choice of place rather than responding to pre-determined places (e.g., images of woodland), it is probable that individuals selected an 'optimum' place that fulfilled a wide range of well-being outcomes. It is certainly apparent that when given free choice within place/well-being research, participants select places that fulfil a range of functions (Scannell & Gifford, 2017) and restorative benefits (Korpela & Ylen, 2009).

6.4.2 What characteristics across a range of physical environments impact on well-being outcomes? (RQ2)

The **range of places** that participants identified as having a positive impact on their well-being (Appendix 15) echoed the variety of places in Studies 1 and 2. The **function of place** had no impact on state well-being outcomes for the participants, either in terms of overall state well-being or for hedonic, eudaimonic or social well-being.

Characteristics of place. Participants indicated the presence and prevalence of a range of characteristics of place. Some of these characteristics were considered as

universals were excluded from further analysis that aimed to explore variance in the data. Universals were taken to be items that were agreed by most participants to be present in the environments they had chosen to focus on. A number of 'universal' were identified: view of the sky, open, light, safe and friendly. These characteristics were present to a greater extent in participants chosen places and indicated 'outlook' was particularly relevant. One explanation for the high number of these universals could be the characteristic as described was too vague (e.g., light), suggesting that further exploration of the characteristic wording is required. This may involve a more nuanced approach to enhance the wording of the measure used in Study 3. Or a different methodological treatment such as use of qualitative approaches involving extended descriptions. An alternative interpretation is that the characteristics were universal as they aligned to an underlying direct pathway. Many of these characteristics link to theories that are embedded in evolutionary assumptions, for example 'view of the sky' and 'open' are aspects of prospect/refuge theory (Appleton, 1975), which provide clear sightlines for prospect, facilitating scoping for potential threats or locating of resources. These cognitive appraisals indicate that certain characteristics of place are preferred or contribute to an environment that is of value. In the same way that threats that were present in our Environment of Evolutionary Adaptiveness (EEA) elicit an adapted physiological and psychological response, characteristics that may have proved beneficial in the EEA, may now be associated with positive responses (Bennett, 2019). Ulrich (1991) suggested that the way in which characteristics of our environments impact our well-being can be understood from an evolutionary perspective through 'multimodal processes' (Ulrich, 1991. P. 203) involving the cardiovascular, neuroendocrine and parasympathetic nervous system, in addition to attention and affect.

Elements such as light and view of the also may offer 'soft fascination' as outlined in ART (Kaplan & Kaplan, 1989) and are elements of Biophilic design (e.g., Beute & Kort, 2014). Again, these approaches are embedded in an evolutionary perspective but with a narrower focus emphasises how certain characteristics of environments place fewer demands on our focussed attention. These are typically elements that were present in our EEA and provided some type of adaptive advantage.

Research literature on these characteristics of place provide a range of evidence supporting their role in well-being. Qualitative research (Hurley & Walker, 2019)

emphasised the feelings of freedom associated with vistas of the Canadian countryside which seemed limitless to the participants. The preference for woodlands that offered open areas (view of the sky) were identified (e.g., Lothian, 2017) and associated with higher rates of perceived restoration (e.g., Gatersleben & Andrews, 2013). Access to natural daylight was associated with higher levels of psychological well-being in a review of office spaces (Colenberg et al., 2021). Hypothesising the precise nature of any underlying direct pathway is beyond the scope of the current research and would require a more experimental, physiologically-based research approach. The focus of the current research is on exploring individual responses to place/well-being relationships and making assumptions about the importance of any universal factors may detract from an understanding of individual differences.

Type of place. The most reported type of place was built, followed by blue, green then urban green spaces respectively. This reflected a similar pattern to Study 2. Unlike Study 2 in this piece of research social and eudaimonic well-being were significantly higher for built than for green places. Potentially people perceived that built places were best for facilitating valued activities. Packer and Ballantyne (2002) considered the relative benefits of time spent in built environments such as museums and art galleries, the factors that motivated people to visit included learning and discovery, social interaction and self-fulfilment. These factors could be seen to contribute to eudaimonic and social well-being. The built places that participants selected in the current study included homes, workplaces, spiritual places, and specific 'activity' places such as yoga studios, libraries and theatres. Each of these places affords the opportunity for activities that people find rewarding, and directly link to aspects of eudaimonic well-being such as personal development and purpose**.**

These built places can also be linked to the idea of place dependency, the extent to which a place meets the needs of an individual, an aspect of place attachment that could indirectly result in positive well-being outcomes. The data from this current study suggests that type of place had no impact on hedonic well-being. This is at odds with the findings of Study 2 (Ch. 5), which suggested green places were significantly more likely to elicit hedonic well-being outcomes, however the effect was small. It is important to

consider that as the hedonic well-being scores were so high overall, that people appear to have selected places primarily that made them happy irrespective of type of place.

These type of place findings relate to the coded descriptions of the places people felt positively impacted on their well-being, a process that was used consistently across Study 2 and 3. However, the additional data gathered in this study meant that it was possible to compare this coded categorisation of types of place, with items within the characteristics of place measure that related specifically to green, blue, urban green space and built places respectively (e.g., presence of natural elements). There was an important discrepancy between these two methods of measuring type of place, with the data coded by the researcher showing a much higher representation of built environments than the self-selected responses to the items relating to green, blue, urban green space and built elements.

One explanation of this discrepancy in the data is that participants subjective judgements about their chosen place reflect biases around how they view green, blue, urban green spaces and built environments. Internalised narratives around different types of place, carry associations or meanings that shape their judgements about to what extent their place shares these physical characteristics (Stedman, 2003). The use of terms like 'natural' carry a cultural meaning that creates a bias in the perceptions, cognition or reporting of the details of people's chosen places (Greider & Garkovich, 1994; Procter, 1998; Rainisio & Inghilleri, 2013; White, 2018)**.** This bias could be driven by evolutionary factors, for example a perceptual preference for green and blue elements of an environment (e.g., Orians, 1980; Ulrich, 1983) or by sociocultural factors that impact the meanings attributed to words such as *natural* (e.g., Proctor, 1998; Tuan, 1977). Both of these factors would lead participants to show a bias towards reporting green or natural elements of their environments over built elements. These discrepancies have implications for the way the variable 'type of place' has been operationalised in place/well-being relationship research. White (2018) suggests that a huge variation in the way 'nature' is used in research, and in many cases the terms used are not explicitly defined. The findings from this current study add to the debate about how *type of place* categories are defined and operationalised within research (e.g., Taylor & Hochuli, 2017).

6.4.3 To what extent do person-place relationships impact on self-reported well-being outcomes for individuals? (RQ3)

Place attachment (overall) was positively correlated with overall well-being and hedonic, eudaimonic and social well-being. The proportion of variance attributed to place attachment was roughly equal for hedonic (14%) and eudaimonic well-being (16%) but was lower for social well-being (7%). These findings add support to the findings from Study 1 (Ch. 3) and Study 2 (Ch. 5) and confirmed the importance of person-place relationships, specifically place attachment, in the link between place and well-being relationships.

The link between the affective attachment component of place attachment and hedonic well-being was to be expected. A key element of hedonic well-being is positive affect (e.g., Diener, 2012) and *affective attachment* directly referenced positive affect (happiness, pride and relaxed). In the current study place dependence only significantly influenced social well-being. This was a surprising result as place dependency relates to how effectively a place meets the needs of an individual, often in relation to activity within the place. Therefore, it would be expected that this aspect of place attachment would influence eudaimonic well-being. However, the results may indicate that it was the social needs of participants that were being met by the place that they selected.

Casakin and Kreitler (2008) propose that the associations between place attachment and well-being are rooted in the role significant places play in creating a sense of coherence. Attached places help with an understanding of personal continuity, linking memories and meanings attributed to place with present place identities (Twigger-Ross & Uzzell, 1996). In the Person, Place, Process framework (Scannell & Gifford, 2010) a sense of coherence can be understood in terms of the Person and Process dimensions. Within the Person dimension, the individual meanings and memories associated with place, as well as symbolic shared meanings, contribute to a coherent sense of self. The process dimensions involve affective and cognitive processes related to self-concept. This corresponds to Antonovsky's emphasis on sense of coherence as a core component in his Salutogenic model of health and well-being (Antinovsky, 1979). Sense of coherence shapes our perception of stressors and our motivation and capability in managing those stressors (Mittelmark & Bauer, 2017). This could offer one possible explanation of why

place attachment is associated with positive well-being. Places that provide us with a sense of coherence and help us understand who we are, contribute to aspects of both place attachment and well-being.

Another approach to understanding the link between place attachment and well-being is to consider how the *functions* of place attachment relate to well-being outcomes. Participants in Scannell and Gifford's 2017 study were asked to reflect on their experiences of place attachment. In a content analysis of survey responses, participants reflected on places that fulfilled a range of functions such as positive affect, activity support, belonging, security and personal growth. Whilst not the focus of their study, many of these categories, that were developed inductively, fall within well-being conceptualisations. For example, the function of 'positive affect' identified in their study is an aspect of hedonic well-being, 'personal growth' reflects one of Ryff's (1989) dimensions of eudaimonic well-being, and 'belongingness' can be viewed in the context of the social integration dimension of social well-being (Keyes, 1998).

Proximity maintenance was rated highly, suggesting it was an important aspect of place attachment for individuals. However, the results to the regression analysis suggest that proximity maintenance significantly influenced hedonic and eudaimonic well-being. Comparative analysis indicated there was no difference in well-being by **frequency** of visit. Hedonic and eudaimonic well-being was higher as visit **duration** increased. For eudaimonic well-being the relationship was very clear. The longer people spent there, the more beneficial it was. However, the picture for hedonic well-being was less clear. There appeared to be an 'optimal' duration for hedonic well-being where durations of a week were associated with higher hedonic well-being than for shorter durations, but visits longer than a week did not result in higher hedonic well-being outcomes. This could be explained through dose theories, such as the Nature Dose-response framework (e.g., Shanahan et al., 2015; Cox et al., 2017), which suggests that there are optimal exposures to environments that are most beneficial. However, an alternative, and more parsimonious explanation, is that when people chose places they typically visited for a week at a time, they were reflecting on holiday destinations. Is it simply a case that holidays made people happy? Scannell & Gifford (2017) identified place attachment benefits associated with vacation places (memory support, relaxation, belonging,

entertainment, connecting to nature and positive affect) and many of these benefits directly link to well-being outcomes.

These findings are at odds with previous research. The MENE survey (Natural England, 2019) suggested positive affect and life satisfaction aspects of hedonic well-being were associated with more frequent visits to natural places. Cox et al. (2017) found that whilst both aspects of proximity maintenance (frequency and duration) contributed to higher levels of mental and social health, they found that frequency of nature exposure was a stronger predictor of positive health/well-being outcomes than duration.

As proximity maintenance can be seen as an aspect of place attachment (e.g., Scannell & Gifford, 2014) and place attachment is correlated with positive well-being outcomes, these findings indicate that *quantity* of time spent in a place is an important factor in place/well-being relationships. This has implications for research into the 'dose' concept which suggests that there is an optimal exposure to green environments that can benefit well-being in some way (Barton & Pretty, 2010; Cox et al., 2017, Shanahan et al., 2016). Outside academia, the ideas of 'vitamin N' (N is for nature) as a way of combatting 'nature deficit disorder' (e.g., Louv, 2016) or 'vitamin sea' which extols the virtues of the sea, in particular 'wild swimming', reinforce the idea that a regular dose of 'nature' or blue space is necessarily beneficial. Whilst there is a growing body of work providing evidence of the potential benefits of green and blue spaces, the narrative around a necessary dose to rectify a deficit is growing in its dominance. This reinforces a view that it is the physical attributes of a place that are central to their value and impact. This does not align with the findings of the studies reported in this thesis, that whilst the characteristics and type of place may have some effect on well-being outcomes, our *relationships* with places are integral to understanding place/well-being relationships.

Participants reflected on the amount of time they *chose* to spend in a particular place, so there cannot be a causal assumption that the longer the time there, the better. There may be additional mitigating factors such as personal control. The relationship between duration of visit and positive state well-being outcomes could be an indirect one mediated by place attachment; the findings could indicate that for participants in this study, the stronger the place attachment the longer the time *they chose to spend* there. Cox et al. (2017) also highlight an issue with assuming a causal effect from proximity

maintenance data. Frequency and duration of visits could be an indicator of mood or mental health. Rather than more frequent/longer visits supporting well-being, they could be an outcome of an individual's well-being levels.

6.4.4 To what extent do behavioural determinants act as facilitators or barriers to accessing places individuals perceive as having a positive impact on their well-being? (RQ4)

Behavioural determinants. When considering the factors that impact on people's engagement with their chosen place, the behavioural determinants items developed for this study used the COM-B model of behaviour (Michie et al., 2010). The model was useful in understanding how different components of behaviour contribute to how people may use place. The use of the Theoretical Domains Framework (Cane et al., 2012) meant that survey items were positioned within theory. Dimension reduction on the items resulted in four components (security motivation, social barriers and facilitators, physical barriers and facilitators, reflections on motivation). There was some alignment with the COM-B but there were also discrepancies. The components did not always fall neatly into the COM-B domains. This means that the applications of these findings to specific intervention approaches as directed by the behaviour change wheel developed by Michie et al. (2011) are not clear cut.

There was a difference in types of well-being outcomes according to behavioural determinants. Physical barriers/facilitators as an indicator of *physical capability*, one of the COM-B sub domains influenced social and hedonic well-being, but not eudaimonic well-being. It would be reasonable to assume that an individual's physical capabilities (e.g., skills, competence, ability) would influence their behaviour in ways that relate most clearly to aspects of eudaimonic well-being, for example environmental mastery and autonomy; but the findings of this study did not support this assumption. Instead, physical capabilities had a greater influence on aspects of well-being such as happiness, positive affect, life satisfaction (hedonia) and social well-being outcomes. People's perceptions of their physical capabilities were associated to positive affect (e.g., happiness) and life satisfaction. This may be that those who saw themselves as physically capable were more likely to engage in physical activity in the context of their chosen place. Physical activity has been associated with positive affect in existing research (e.g.,

Kinnafick & Thogersen-Ntoumani, 2014). It may be that concerns about physical capability was a barrier to accessing place and thus individuals were unable to benefit from the well-being benefits associated with place. In Study 1 (Ch. 3) a number of participants reflected on how their perceived physical capabilities had limited their use of places that they felt had the potential to elicit well-being benefits.

Social well-being, particularly the dimensions of social integration and social contribution, can also be influenced by physical capabilities. If people are excluded from activities due to their perceived physical capabilities, then their social well-being could be affected (Cramm et al., 2013; Katz & Yelin, 2001). If people perceive physical capabilities as a barrier to engaging with place, then this can impact on their relationships to groups and communities, and the value they place on their contribution to society. The link between perceived physical capability, self-efficacy, and social well-being in relation to place is beyond the scope of this research but deserves further consideration.

The behavioural determinant component of *social opportunity* had an influence on well-being. These social opportunity items refer to concepts such as community, group membership, social support and group identity (Cane et al, 2012), and it would be predicted that these factors would influence social well-being outcomes (e.g., Rollero & De Piccoli, 2010). However, the influence of social opportunity as indicated by social barriers/facilitators component in the regression analysis, was across hedonic and eudaimonic well-being as well. This indicates that factors such as life satisfaction and positive affect (hedonic well-being) and components of eudaimonic well-being, such as positive relation with others and self-acceptance (Ryff, 1989) could also play a role.

It is clear that in order to understand place/well-being relationships fully, there is a need to consider social aspects; people's social identity, how they relate to others including the wider community, and how people relate to others who share their places. There is further elaboration of how social well-being, social behavioural determinants, and social factors within place attachment such as the social dimensions of the Person, Place Process model (Scannell & Gifford, 2010) in Chapter 7.

Social context. A further social factor that was considered in this study was the extent to which spending time with others (social context) in their chosen place was

associated with higher well-being outcomes. Existing research has indicated that 'company' acted as a facilitator to time and well-being benefits gained from walking in green and urban green space environments (e.g., Johansson et al., 2011; Annesi, 2002). The importance of social context in understanding the well-being outcomes associated with time spent in specific places was emphasised by the result of the MANOVA. The findings indicated that whether people spent time in their chosen place in company or not, had a significant impact on state well-being outcomes. Hedonic, social and eudaimonic well-being outcomes were all significantly higher if a person was with someone rather than alone. As with proximity maintenance, there is a need to acknowledge the importance of choice and control. The well-being outcomes were significantly higher for those who had *chosen* to share their place with others. Staats and Hartig (2004) suggest that company was a factor where safety was a concern, specifically when in an urban environment. Where safety was not a concern for the individual, being alone enhanced the restoration potential of a place. It may be the case that the choices people make about whether to spend time alone or with others were influenced by considerations over personal safety. And this indirectly impacts on well-being outcomes.

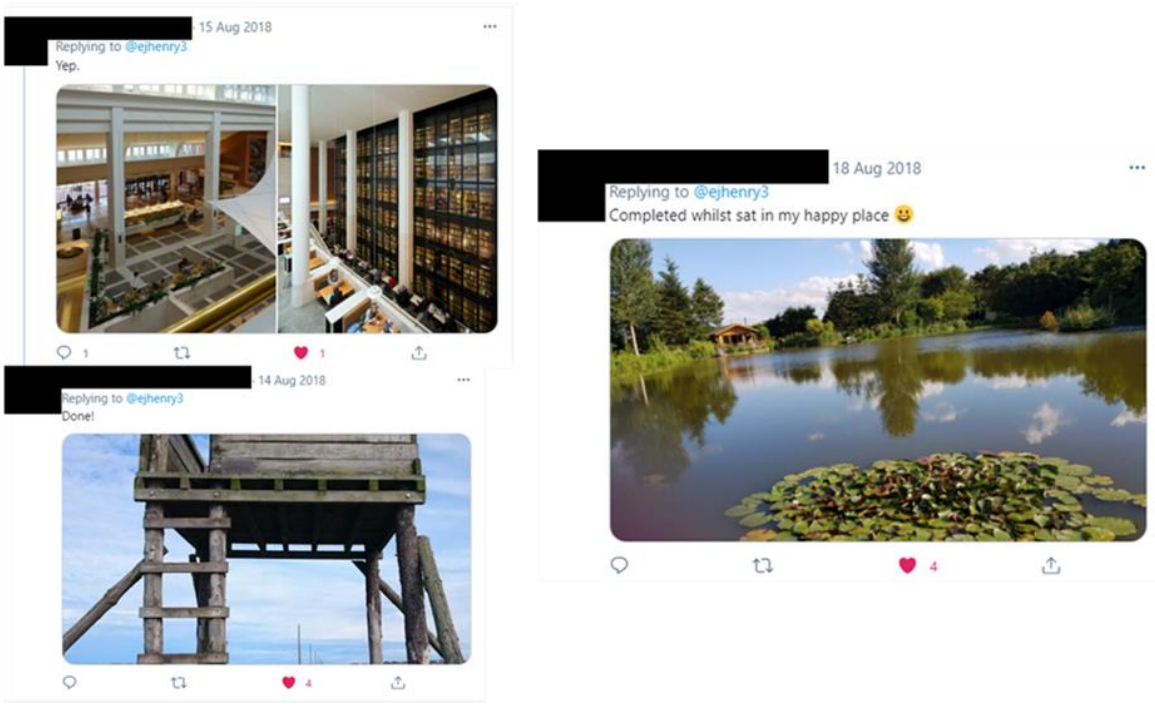
6.4.5 Limitations

The completion rate for the survey was good, with very few non-completions suggesting the survey was straightforward and/or enjoyable to complete. One of the interesting aspects of recruiting via social media is that some participants replied to the recruitment tweet, providing feedback on the survey. A small number of people had an issue with completing and submitting the survey on Qualtrics. This was checked but the problem was not with the design of the survey and most respondents did not experience any issues. One person replied that they 'couldn't think of a place' and another felt that the items relating to behavioural determinants were too ambiguous 'I started to think about how being in that place influenced me not how those influenced whether or not I'd be in that place. Had to keep rereading the question!' but overwhelmingly the people who replied did so to say that they had completed the survey, with some expressing an interest in the topic and some even posted pictures of their chosen place (Figure 11). This had the potential to present 'leading' images for those yet to complete their surveys but

conversely it seems to have piqued people's interest and may have motivated others to act as participants.

Figure 11

Example of images posted in response to the recruitment 'tweet'



A key limitation with the design of the study relates to the ceiling effect for the well-being outcomes data. This occurred because people were selecting places they perceived as having a positive impact on their well-being, therefore well-being levels were expected to be high, and it was interesting to note the extent to which places *really* impacted state well-being. However, the lack of variation in these scores meant that the statistical analysis possible on the data was limited. Whilst there were a number of statistically significant findings reported in both Study 2 (chapter 5) and Study 3 (chapter 6), many of the effect sizes reported were small. This could potentially limit the practical application of the research however, there are a number of points to consider in this regard. The relatively small effect size could indeed be a result of methodological limitations, in particularly the fact that given that participants were asked about positive well-being the data reflected these high well-being outcomes allowing less room for variation. It is difficult to circumvent this issue using quantitative methods whilst still focusing on participants choice of place, with all the positive personal meanings and bonds imbued therein. However, what this does indicate is the diverse range of places

that were associated with positive well-being outcomes which is very promising when considering the scope of the salutogenic potential of place.

Whilst the measures used in this study captured meaningful data on related concepts and as standalone measures, they are appropriate. However, there is a concern that the complex interconnectedness of the concepts involved, compromised the independence of the measures when used together. Research into complex open systems such as the relationship between people and places mean that compartmentalising aspects of this relationship into entirely independent phenomena is not possible therefore the measures that measure each of these aspects are bound to overlap conceptually. For example, aspects of eudaimonic well-being such as environmental mastery and aspects of place attachment such as place dependence clearly correspond conceptually. Conceptualising and measuring phenomena independently that are interlinked is difficult and lends support for the need to acknowledge the complexity of the models required to understand place/well-being relationships. In future, this complexity should be further explored by potentially adopting a grounded theory approach or by the use of advanced modelling techniques (e.g., structural equation modelling) that can account for any overlap, while distinguishing unique contributions of the higher order constructs.

6.4.6 Conclusion

The study reported in this chapter has emphasised the potential for place/well-being relationships to play a salutogenic role. However, the focus needs to be on the person and their relationship with place rather than on the physical attributes of the place itself. There is a usefulness in considering characteristics and types of place that are more or less likely to elicit positive state well-being outcomes, however a preoccupation with designing or selecting prototypical places for optimal benefits, at the expense of recognising individual differences may limit the effectiveness of interventions.

Chapter 7: Discussion

This discussion chapter will position the findings of the studies reported in Chapter 3, 5 and 6 of this thesis within existing literature and wider theoretical frameworks. Implications of the findings for practice and policy are proposed. The limitations of the research are considered with suggestions for further research before the final concluding section synthesising the key implications.

7.1 Challenging narratives: Contribution of a salutogenic orientation to place/well-being research.

The work in this thesis aimed to address three perceived limitations in place-well-being research. Typically, environmental psychology research exploring environment-well-being associations has been based on the premise people must be cognitively fatigued, stressed, or ill to obtain benefits from engaging with specific types of place (e.g., ART, Kaplan & Kaplan, 1989). Existing place/well-being research also tends to utilise an urban vs. nature dichotomy that does not fully capture the range of environments individuals use for well-being purposes. The importance of people-place relationships as an individual-differences factor in the link between place and well-being has also been frequently overlooked. These perceived limitations were used to develop the thesis research questions, with a focus on acknowledging the range of places, the diversity of well-being outcomes, the importance of individual relationships with place, and the determinants that influence engagement with place.

The following research questions were used to guide the studies in this thesis:

1. In what ways can a range of physical environments be seen to enhance and maintain positive well-being outcomes in individuals?
2. What characteristics across a range of physical environments impact on well-being outcomes?
3. To what extent do person-place relationships impact on self-reported well-being outcomes for individuals?

4. To what extent do behavioural determinants act as facilitators or barriers to accessing places individuals perceive as having a positive impact on their well-being?

The research findings presented across the thesis are synthesized around each of these four research questions.

7.1.1 In what ways can a range of physical environments be seen to enhance and maintain positive well-being outcomes in individuals?

The studies within this thesis recruited ostensibly healthy or 'apparently well' individuals (Souter-Brown, 2021. p. 1) as participants, with the aim of exploring whether places were perceived to have a positive impact on well-being. In Study 1 (Ch. 3), interviewees talked in terms of both *restoration* and *salutogenesis*. The narratives around restoration from a position of depletion (i.e., a less than optimal state) such as being stressed or fatigued were clearly present but did not dominate the narratives of participants. Instead, prevalent discourses were around broader considerations of how places enhance and maintain well-being i.e., the salutogenic potential for place to support a range of well-being outcomes. As reported in Chapter 3 and Chapter 4, Study 1 respondents reflected on well-being in a way that indicated a distinction between hedonic, eudaimonic and social well-being (e.g., Keyes, 1998; Ryff, 1989; Seligman & Csikesntmihalyi; 2000; Waterman, 1993). These aspects of well-being were further explored in Study 2 (Ch. 5) and Study 3 (Ch.3) through the use of an adapted form of the MHC-SF (Keyes, 2009).

Hedonic well-being. In comparison to other aspects of well-being, hedonic well-being has been relatively consistently conceptualised in research literature (Cooke et al. 2016). Typically, it includes the two core components of *positive affect* and *life satisfaction* (Cleary et al., 2017; Fowers et al., 2010; Huta & Waterman, 2013; Ryff & Singer, 2008). Across all three studies in this thesis, affect and life satisfaction were explored in relation to place; in Study 2 and Study 3, *interest in life* was also included as part of the measure of well-being that was used, an adapted form of the MHC-SF (Keyes 2009). In Study 1 (Ch.3), affect was a recurring concept across respondents. The interviews focused on places that had a positive impact on well-being, so affect was typically discussed in positive terms (e.g., pride, comfort, delight, pleasure). Terms used in

Study 1 were not quantified as this was inconsistent with the Inductive Thematic Analysis design of the study, but *happiness* was apparent as a particularly pertinent example of positive affect in many of the participant's accounts. Given the context of the data that featured happiness, it is reasonable to suggest that respondents were talking about *feeling happy* as an affective response to place, rather than *being happy* which is more of an enduring evaluation of quality of life (Medvedev & Landhuis, 2018; Shin & Johnson, 1978). However, this is a distinction that would merit further exploration in the context of place-well-being relationships. Comparison of trait and state 'happiness' would help support this distinction, particularly through the use of real time measures of state well-being such as the happiness app used by MacKerron and Mourato (2013).

According to the PANAS (Watson et al., 1988) being *afraid* and *jittery* are examples of negative affect. Respondents in the current study also generated data about what could be considered *negative* affect with terms like *fear, anxiety* and *challenging* being used. These examples of *negative* affect were discussed as an integral part of experiencing places respondents felt elicited a positive impact on their well-being. Places that facilitated valued activities provided respondents with challenge and *both* positive and negative feelings. This was one way in which respondents recognised that both positive and negative affect are part of place/well-being relationships (Scannell & Gifford, 2010).

In Study 2 and Study 3 hedonic well-being was conceptualised around happiness, life satisfaction and interest in life based on the MHC-SF (Keyes, 2009) and, specifically, in reference to a single place that respondents chose themselves. In Study 2 (Ch. 5), higher levels of hedonic well-being were reported in reference to participants chosen places, compared with levels of eudaimonic/social well-being. This pattern was also apparent in research studies that used the MHC-SF in a range of contexts (e.g., Lamers et al., 2011; van Erp Taalman Kip & Hutschemaekers, 2018). The data from both survey studies (Study 2 and Study 3) produced data where happiness scored very highly. This was particularly the case in Study 3 where the mean happiness rating was 6.43 (maximum = 7) and confirmed that respondents chose places that emphasised positive affect and the subjective experience of place (Luijten et al., 2019).

Eudaimonic well-being. Ryff's conceptualization of psychological well-being identified six core concepts of eudaimonic well-being: self-acceptance, environmental mastery, positive relations with others, personal growth, autonomy, and purpose in life (Ryff, 1989). This formed the basis for how eudaimonic well-being was defined and operationalised in this thesis.

Respondents in Study 1 looked beyond places that simply made them happy and included places that provided opportunities for functioning and fulfilling their potential (Luijton et al., 2019). Each of the six core components were apparent in the data, with some places cited as meeting multiple eudaimonic needs. Workplaces were a good example of this. Respondents discussed how workplaces provided them with challenges, skill development, goal achievement, sense of ownership and belonging, impacted their identity and provided opportunities for interactions and self-reflection. The data clearly related to all six components of eudaimonic well-being (Ryff, 1989). For example, workplaces provided a source of *self-acceptance*; individuals' gained an appreciation of multiple aspects of themselves as demonstrated in their environments. Personalised desks showed different aspects of self and having ownerships of an office or teaching space provided evidence of their positive personal qualities. These examples also demonstrate *environmental mastery*; people were making effective use of workplaces in manipulating places to best support their personal needs and reflect their values (Keyes & Ryff, 1995).

In Study 2 and Study 3, eudaimonic well-being was again measured via six items on the adapted form of the MHC-SF (Keyes, 2009). The results from both studies were very similar, with mean ratings for all six aspects of eudaimonic wellbeing ranging from 5.24 and 5.89 across both studies (Maximum = 7). In both studies, the environmental mastery components elicited the lowest mean score and positive relation with others was the highest. This suggests that all six components of eudaimonic well-being were relevant to the places that were selected by participants. Eudaimonic well-being is important in health-seeking behaviour, acting as a buffer to support long term health and health inequalities (Ryff, 2017). The findings across all three of the studies in this thesis indicated participants were reflecting on places that encourage a nuanced and potentially impactful view of well-being. This ability to reflect and select places beyond those driven by positive

affect, is encouraging when considering individuals ability to use of place/well-being relationships in a salutogenic way (Ryff, 2017).

Social well-being. Whilst hedonic and eudaimonic well-being address the personal or 'primarily private' aspects of well-being (Keyes, 1998. p. 121), social well-being was conceptualised to supplement existing theory in order to take account of social context. Within this thesis, social well-being followed the structure proposed by Keyes (1998) with five core components: social actualization, social contribution, social integration, social acceptance, and social coherence. In Study 1, four of the five core components were apparent in the data set. Social acceptance refers to the 'trust in others ability and qualities' (Keyes, 1998. p. 122) and was not directly referred to by participants. One very clear example of the role places play in supporting social well-being, was how cities and historic places were perceived to confer social actualization. Respondents explained how cities provided an indicator of the potential and achievements of society, in their eyes a positive sign of progress. In a similar way, historical properties demonstrated the skills of people in the past and an understanding of how our past human endeavours shape our futures and provide a sense of continuity. Places also acted as indicators of an individual's contribution to society (social contribution, Keyes, 1998) through the value placed on achievements as symbolised through their workplaces and homes. In some cases, this was also particularly pertinent when people considered the wider social context (social coherence), for example when part of their identity was as a member of a working-class community. In Study 2 and Study 3 social well-being data was generated using the adapted form of the MHC-SF (Keyes, 2009). In both studies all five social well-being items were rated above 4 (maximum scale score = 7) indicating that these same aspects of positive social well-being were again reported by participants.

There is growing concern over the consequences for well-being of social isolation (Afshar et al., 20017; Wiles et al., 2012), displacement from communities due to conflict or natural disasters (Brown & Perkins, 1992; Fullilove, 2021; Lewicka, 2011; Swapan & Sadeque, 2021; van Liempt & Miellet, 2020) or through the process of gentrification (Versey, 2020). At present social well-being is often not the focus of place/well-being research. However, social context is an increasingly important aspect of place well/being relationships as evidenced in the studies presented in this thesis.

Collectively, the findings across the three studies (Ch. 3, Ch.5, Ch.6) support the idea that positive well-being outcomes are multifaceted (Finch et al. 2014; Huta & Waterman, 2014). The components hedonic, eudaimonic, social well-being were all apparent in all of the studies reported, with the exception of social acceptance which was not apparent in the data set for Study 1. These positive well-being outcomes related to participants that were not specifically responding to place from a depleted state of cognitive fatigue or stress.

7.1.2 What characteristics across a range of physical environments impact on well-being outcomes?

The second thesis research question was developed to explore the variety of places that people associated with positive well-being outcomes. Participants in the three thesis studies generated data in relation to a range of places they felt supported their well-being and the characteristics or features of these places. The places were categorised according to the type of place, by dominant physical features and also by function.

One size does not fit all. The examples chosen by participants across studies provided overwhelming evidence of the variety of places associated with positive well-being. The inductive nature of Study 1 meant that the range of places went beyond those typically cited in literature, which tend to be grouped around type of place (e.g., natural environments, coastal locations) (Dempsey et al., 2018; Engeman et al., 2019). In this first study, respondents could talk about a number of different places, and they generated data in relation to places that met different well-being needs. In other words, one size does not fit all. For example, one respondent explained how the beach provided the opportunity for a valued activity, Prague offered a challenge, being away and novel surroundings, home supported their sense of security and belongingness, a designated workplace supported their sense of self and social contribution, and nature and being in their car provided a sense of freedom and restoration from stress.

The range of places people selected was very diverse across the studies. There was a mix of the everyday and the exceptional, from the mundane (e.g., a settee in a home, Starbucks in the Arndale centre) to the extraordinary (Antarctica, Chefchaouen, the blue city in Morocco); but it is important to consider that, whilst these extraordinary

places may not represent realistic regular destinations for health-seeking behaviour, they can represent optimum places and are valuable to consider. These ideal or optimum places contain elements that are incorporated into our schemas of place which can be generalized to other potentially supportive places (Scannell & Gifford, 2010; Stokols & Schumaker, 1981). This process also reflects the dynamic nature of place/well-being relationships, as individuals encounter new places or are faced with a change in circumstances, the person-place bonds, and place-related schemas shift to accommodate the new situation.

One line of research that has consistently acknowledged the range of places that people gain well-being benefits from, is *favourite place* research (e.g., Knez et al., 2020; Korpela & Ylen, 2007; Korpela et al., 2008, 2009, 2010; Ratcliffe & Korpela, 2016). The focus on favourite places may mean that every day, even mundane places, are overlooked in favour of the exceptional or extraordinary, which may be less accessible to individuals. Dobson et al. (2021) emphasise the importance of everyday 'mundane' interactions with urban nature for positive well-being outcomes. However, the *best places* identified by respondents may also help in understanding the optimal places that form the foundations of place/well-being relationships.

Does it have to be green? Throughout this thesis there has been an acknowledgement that 'type of place' categories (e.g., green/nature, blue, urban green space and urban/built) are widely used in place/well-being research. Whilst these broad categories mean there is a loss of nuance in exploring the richness of place/wellbeing relationships, there is a value in the simplification of the complexity of environments to allow for comparison. As such, one of the aims of this thesis was to explore relationships between type of place and well-being outcomes, but also to extend our understanding of their impact by investigating the appropriateness of the categories.

A frequent categorization present in published work is a particularly broad one according to dominant physical features (green/nature, urban/built, UGS, blue). In Study 1 themes were developed that categorised place as *built* and *non-built*. These broad themes reflected the narratives presented by respondents. Built places such as home and work were discussed in terms of positive affect, but also tended to address the function that the place served. Non-built places were also associated with function (e.g., as a place

for recreational activity and restoration); however, there was a stronger emphasis on the aesthetics of the environment and a direct affective response elicited by multisensory experiences.

In Study 2, the only significant difference based on the type of place was for *hedonic* well-being, which was higher for green and blue places compared to built places. The effect was small, and the finding was not replicated in Study 3. In Study 3, social and eudaimonic well-being were significantly higher for built over green places. These findings present a mixed picture meaning comparisons with existing research is rather limited. Perhaps these mixed findings were because places, whether green (natural), blue (waterscapes), urban green spaces or built/urban, are complex and diverse. Therefore, assumptions of homogeneity on which categories depend may present an account of place that is too broad. This means that it is difficult to compare research findings that use different operational definitions of a particular category. Green or natural places, in particular, are defined and operationalised in a myriad of ways, but all carry assumptions of a shared meaning that underplay the complexity of person-place relationships.

> "Nature is one of the most complex and polysemic concepts for human imagination" (Rainisio & Inghilleri, 2013. p. 6)

The cultural context within which research occurs is also pertinent; does 'nature' mean the same thing to different groups and in different countries? (e.g., White, 2018). Western narratives around nature have shifted over time; our geomentalities are shaped by environmental history and vary according to sociocultural context (Rainisio & Inghilleri, 2013). Terms such as 'nature' and 'built' carry meanings that are worth considering in the context of the sample used in the current research. The idealisation of nature and demonisation of the built or urban environment are narratives so widely communicated and reinforced within the UK, that they appear as 'universal'. Merchant (2003) suggests that narratives around nature are positioned within our cultural heritage and that contemporary movements such as 'return to nature' are an attempt to reconstruct Eden. Urban places such as cities do undoubtedly carry stressors, and research has suggested urban environments can act as a risk factor for mental well-being (Fitzgerald et al. 2019).

Despite these limitations research continues to focus on the relationship between green spaces and well-being, with reviews by Pritchard et al. (2020) and Wendelboe-Nelson et al. (2019) reporting 70% of the included articles claimed a positive link between nature or green places and well-being. The evidence is less clear cut on how types of place differentially impact hedonic, social and eudaimonic well-being, with research frequently focussing on one aspect of well-being (e.g., MacKerron & Mourato,2013; Houlden et al. 2018). The value of built environments within place/well-being relationships has also been recognised but to a lesser degree. Packer & Bond (2010) established that museums, cinemas and art galleries were linked to positive perceptions of restoration benefits, but also found that these were less than for 'green places' such as national parks, beaches and botanic gardens. It is also important to distinguish between studies that try to establish a causal link between green places and well-being and those who suggest that nature provides a place where 'wellbeing effects may be obtained' (Dobson et al., 2021. p. 3). The danger is that by exaggerating the differences type of place can have on well-being outcomes, there is further demonisation of certain places, typically our built environments.

An important point to consider when comparing the relative well-being benefits between types of place is that psychological or mental well-being does not exist in isolation of other factors. Green places offer more in terms of environmental benefits such as air quality, noise abatement, water management and carbon dioxide emission offsetting, which have significant impacts on health and well-being (NHS Forest, 2021). So, whilst assumptions about the overwhelming dominance of the 'green' vs 'urban' narrative may be problematic in terms of individual place/well-being relationships, the societal benefits of reinforcing the 'green is good' narrative may also be desirable.

Reductionist theories such as Attention Restoration Theory (Kaplan & Kaplan, 1989) and Stress Reduction Theory (1971) are well supported in research literature and are useful in understanding how cognition and affect respectively, impact on the restoration potential of places. Yet to fully understand the salutogenic potential of place in terms of benefits to well-being, there is a need to consider a more holistic approach. This has been attempted for example the Cultural Values model (Stephenson, 2008) which acknowledges the dynamic and temporal nature of people's relationship to place,

incorporating an understanding of form, practices and relationships. However, the focus tends to be on land use and ecosystem management rather than the potential for health promotion. This thesis has shown that the physical attributes a place possesses such as characteristics and types of place are not unimportant, but they are *one* aspect of place well/being relationships.

Function of place. Another way to categorise types of place is according to primary use or function. This is a less commonly applied categorisation but one which is not based on the predominant physical features of a place but rather focusses on a rather more anthropocentric, functionalist approach. It considers how the value of a place and the well-being elicited could be tied in with the function a place provides.

In Study 1, the subthemes of domestic settings and workplaces were developed but additional functions such as holiday and recreation were also mentioned. It was clear the way in which people *used* places impacted on the different aspects of well-being they reported. For example, in terms of eudaimonic well-being, domestic settings provided self-acceptance, environmental mastery and autonomy for some people and for others it was a source of purpose in life and personal growth (Ryff, 1989). It was not the case that one type of place, served one function, and this elicited one type of well-being. The findings from Study 3 suggested that function of place has little impact on hedonic, social and eudaimonic well-being, but these categorisations can be useful in conceptualizing the range of places available for health-seeking behaviour.

Scannell and Gifford (2017) conducted a content analysis on participant responses to free choice of places that they were especially connected to. Their aim was to explore the relationships between place attachment and psychological benefits. They developed type of place categories that included those based on physical features (city/town, country) as well as those based on function (house, vacation place, commercial place, place of worship). They reported that prevalence of different well-being benefits varied according to these different types of place, with houses providing a sense of security and vacation places linked to positive emotions and memory support. As with Study 1 in this thesis, the qualitative data used by Scannell and Gifford (2017) indicated that the type of place may differentially impact well-being outcomes. However, when this was further investigated in Study 3, place function did not significantly impact hedonic, social or

eudaimonic well-being. As with choice of place the relationship between type of place, function of place and well-being may be idiosyncratic. The role of affordances in these individual differences could be relevant. Affordances involves the direct perception of places in terms of their potential function, how this is matched by the environment itself and the characteristics and abilities of the person (Raymond et al., 2017). The function of place will be individually decided according to the attributes of the physical environment but also the direct perception of places as impacted by individual experience and socio-cultural factors (Raymond et al., 2017). The well-being outcomes will therefore be mediated via this process and will reflect individual differences.

Characteristics of places: Are there universals? In Study 1, interviewees regularly reported on the physical characteristics of place, described by Bieling et al. (2017) as 'material aspects'. This suggests that there was an awareness amongst the participants of the pertinence of features to place/well-being relationships. The physical characteristics reported by participants Included light, a view of the sky, cleanness. The characteristics cited were predominantly visual but there were references to other senses such as the sound of the wind in trees and children playing. Non-physical characteristics such as authenticity, spirituality, and tranquillity, were also important to participants.

The findings of Study 2 and Study 3 were similar. The most frequently reported characteristics in Study 2 were light, beauty, view of the sky and quiet; light, view of the sky, and openness were all important in Study 3. Some of these characteristics were very highly represented in the data across all three studies, suggesting that some of these characteristics were *universals*. These universal characteristics were linked to positive well-being irrespective of the choice of place. So, whether an individual is at work or in a park, a view of the sky is a common feature that is valued. This suggests that some elements of the place itself *are* important, which has implications for designing for well-being. The universals within this body of research; view of the sky, open, light, safe and friendly were not unexpected. They provide empirical evidence to support existing theory such as prospect refuge (Appleton, 1975), savannah (Orians, 1980) and biophilia (Wilson, 1984). All of these theories are embedded in an evolutionary perspective and could indicate an adaptive advantage to preference for these particular characteristics. However, the sample was predominantly UK based so there is likely to be a shared

cultural 'reading' of place amongst participants. What represents optimum places could contain shared elements that reflect cultural narratives for example around openness and light. Cross cultural comparisons suggest that preferences for elements and characteristics reflect the environments and landscapes that people are familiar with (Rainisio & Inghilleri, 2013).

The collective findings across the three thesis studies support the idea that there are a wide range of characteristics across a variety of physical environments that impact positively on well-being. Type of place had limited impact on well-being outcomes and the research identified a small number of universal characteristics that were common in many of the places participants reflected on.

7.1.3 To what extent do person-place relationships impact on self-reported well-being outcomes for individuals?

The third thesis research question was developed to explore the way in which person-place bonds impact place/well-being relationships. The research reported in this thesis has provided evidence that person-place relationships play a key role in understanding the salutogenic potential of place. In Study 1, respondents reflected on their relationship with place, and how these impacted on the aspects of well-being they experienced. For example, in discussing homes a number of respondents talked about how childhood memories and schemas of 'home' impacted on future relationships with houses they lived in. Shared social values in a range of places was valued, such as the importance of community or historical/cultural context of place. These shared symbolic meanings supported connections to specific valued places.

Study 2 provided further evidence of the role of place attachment, demonstrating a positive correlation between place attachment components and hedonic, social/eudaimonic well-being. In Study 3 analysis indicated that place attachment components (place identity, affective attachment, place dependence and proximity maintenance) predicted all three aspects of well-being. The proportion of variance was roughly equal in importance for hedonic (14%) and eudaimonic well-being (16%) but lower for social well-being (7%).

In their research on place attachment and social well-being Rollero & De Piccoli (2010) used an extended social well-being scale covering the same five dimensions addressed in the MHC-SF. They found that scale of a place (i.e., its size) impacted on perceived well-being outcomes; and concluded that, as well as mediating well-being in a positive way, place attachment could impact negatively on certain aspects of social well-being. Having a strong attachment to place could limit an individual's ability to see beyond their preferred place, so aspects of social well-being such as *social actualization* and *social coherence*, which consider the potential of the wider society, may be affected. These findings found resonance within the current research. In Study 2 and 3, participants tended to select places with which they had an attachment, correspondingly *social actualisation* and *social cohesion* mean scores were rated the lowest across the well-being items. This could indicate that participants attachments meant that wider societal social well-being considerations were not viewed as positively; they were so bonded to a place that the 'outside world' was unimportant. However, as discussed later in this chapter the Study 3 data could indicate methodological limitations for these items.

The evidence from the current research, clearly supports the view that place attachment is associated with state well-being outcomes, however there was no claim of a causal relationship. This question still needs further exploration. Do the well-being outcomes result from the strength of attachment to place, or did people become attached to places because their well-being needs were met? Rainisio & Inghilleri, (2013) suggest that place attachment (and place identity) help to provide a secure basis for exploration, this is an empowering process and therefore provides well-being outcomes. Wilkie & Savridou (2013) emphasise the role of place identity in influencing place preference and this in turn impacts the perceived restorative potential of place, but also mediated by place-related identity congruence, particularly in those who displayed a nature preference (Wilkie & Clouston, 2015; Wilkie & Clements, 2017). Experiential approaches to understanding place attachment assume that "meanings of places are constructed through their dominant mode of interaction" (Stedman 2003 p 684); so, if use of place changes, then the meaning changes, if meaning changes then place attachment changes, and this helps explain the dynamic nature of person-place relationships.

Whilst understanding the role of place attachment in place/well-being relationships offers further evidence for the idiosyncratic nature of person-place bonds, it also offers the potential for trying to nurture attachments in order to promote well-being outcomes. However, any attempts to manipulate or design places to encourage place attachment need to be approached with caution. Stedman (2003) emphasises the need to understand personal and cultural meaning associated with place.

The collective findings of Studies 1,2 and 3 provided compelling evidence that person-place relationships, specifically place attachment had a positive impact on well-being. The components of the PPP organisational framework (Scannell & Gifford, 2010) were all apparent in all of the studies reported.

7.1.4 To what extent do behavioural determinants act as facilitators or barriers to accessing places individuals perceive as having a positive impact on their well-being?

No matter how invested individuals, researchers and other stakeholders are in the capacity of place to enhance well-being, none of this really matters if people perceive that they are unable to access places that are associated with positive well-being outcomes. Consequently, there needs to be a better understanding of the barriers and facilitators to place-based health-seeking behaviour. In Study 1, participants indicated that there were a number of factors that meant they were more or less likely to engage with places. These included physical barriers such as distance and transport, social barriers such as social perceptions and family responsibility as well as perceptions of associated risks and their own personal capabilities. It was clear that there were behavioural determinants that had the potential to impact on engagement with place.

In Study 3 the exploration of these behavioural determinants was extended to include a range of factors that aligned to the Capability, Opportunity and Motivation components of the COM-B model of behaviour (Michie et al., 2011). Study 3 findings indicated that behavioural determinants accounted for 4% of the variance in hedonic well-being, 20% of the variance in social well-being, 11% of the variance in eudaimonic well-being. This suggests barriers and facilitators are seen as contributing factors to place engagement and can impact well-being.

The findings across both Study 1 and Study 3 provided evidence that perceptions of behavioural determinants (barriers and facilitators) were important in place/well-being relationships. This evidence could help inform the design of place to consider factors that impact engagement with positive places, but also emphasises the importance of the way in which concerns about barriers and confidence about facilitators can impact well-being outcomes too. Houlden et al. (2018) conducted a systematic review of studies that examined the relationship between green spaces and well-being and found that evidence about engagement with place was limited. Bragg & Atkins (2016) authored a review of nature-based interventions for Natural England that provided a thorough account of the use of green care to support mental wellbeing and address mental ill-health. Despite the thoroughness of this review, factors that impact on engagement with the array of different programmes available are not considered. The desired outcome for any place-based intervention are high levels of participation, and retention combined with positive well-being outcomes. Understanding the behavioural determinants of health-seeking behaviours in relation to place would help with this.

The findings from Study 1 and Study 3 supported the idea that behavioural determinants can act as facilitators or barriers to engaging with places that impact positively on well-being. The impact these barriers and facilitators have on levels of engagement is worth further consideration.

7.2 Application of findings to theoretical models

In the prior sections, the findings were synthesised to provide a picture of the body of evidence across studies. This subsection provides an overview of how the findings are interpreted in terms of their contributions to the wider, relevant theoretical frameworks (salutogenesis, well-being, the PPP and COM-B). The research within this thesis was embedded in critical realism which adopts an ontological realist perspective but also acknowledges that links between different elements of a system are complex and that place/well-being relationships are not contained within a closed intransitive system. Current theories that attempt to account for these relationships such as the PPP and COM-B are useful but could be seen to limit our understanding within these constrained models. Place/well-being relationships are complex and not easily explained through the use of a single model so the analysis within this section of the thesis relates the findings

to the various theoretical frameworks and models but acknowledges the limit of this approach. The restrictions placed on conceptualising person-place/well-being by trying to align to current models should not be seen as failure of existing frameworks but a call to accept the messiness of our relationships with places we spend time in.

7.2.1 Salutogenesis

A salutogenic orientation was seen as an appropriate approach to adopt for this thesis (Antonovsky, 1979). Place/well-being relationships have often been approached from a deficit perspective, viewing place as a way of addressing a position of depletion. People who are stressed, ill or cognitively depleted can use places, particularly green and blue places, to restore or recover their deficit (e.g., ART, Kaplan & Kaplan, 1989; Stress Reduction Theory, Ulrich, 1981). A salutogenic orientation aligns with WHO definition of health which emphasises a focus on supporting positive health and preventing ill-health rather than a pathogenic view of health as the absence of disease. This approach to place/well-being relationships encourages researchers to consider how places can support the maintenance and enhancement of well-being in ostensibly well individuals. This allows the use of places in a wider public health context to support well-being rather than just in the form of green care interventions (Bragg & Atkins, 2016).

Across all 3 studies, there was evidence of the salutogenic use of place. For example, in both Study 2 and 3, high levels of state well-being were associated with time spent in a self-selected place which was not specifically linked to rectifying a deficit. These findings suggest that place/well-being relationships could play a role in improving well-being, irrespective of the starting point (i.e., depleted or not). This challenges the assumption that place/well-being relationships are predominantly of use in 'restoring' cognition from a position of depletion. These findings align to research such as Beute & de Kort (2014) who reported the beneficial effects of nature for participants who were not previously depleted and suggested that place, in this case nature, worked as a buffer providing 'instorative' effect.

Restoration theories such as Attention Restoration Theory (Kaplan & Kaplan, 1989) and Stress Reduction Theory (Ulrich, 1991) are well researched, and evidence has supported their validity, but when cited as the basis for place-based interventions, the

mechanism for an improvement in well-being outcomes is frequently viewed as an irrelevance or erroneously referenced. By considering how places hold a salutogenic potential for all, there is an attempt to situate place-related health-seeking behaviour and health promotion within relevant literature and theoretical frameworks.

7.2.2 Well-being

The structure of well-being adopted in this thesis distinguished between hedonic, eudaimonic and social well-being. Examples of each of these types of well-being were evident in the data generated in Study 1 and was assessed using an adapted form of the MHC-SF in Study 2 and Study 3. As well as providing evidence to address the research questions, the well-being data can be considered in terms of the conceptualization of well-being.

There has been little debate about what constitutes hedonic well-being with agreement about the inclusion of positive affect, particularly happiness, across most definitions (Cleary et al., 2017). There has been some discussion about the inclusion of 'life satisfaction' (e.g., Sumner, 1996), and the dimension reduction process in Study 2 supported its inclusion. Eudaimonic well-being was also apparent in the data across all three studies and the six components established by Ryff (1989) offered a clear structure for the eudaimonic well-being within this thesis. There is clear evidence from validation of the original MHC-SF, that social well-being can be viewed as distinct and hierarchically equivalent to hedonic and eudaimonic well-being in a variety of countries (e.g., Perugini et al., 2017; Petrillo et al., 2015). Findings from Study 2 and 3 in the current research, however, gave mixed results when it came to its use in an adapted form to measure social well-being in reference to place. In Study 2 the dimension reduction suggested a 2-factor model of well-being consisting of hedonic and eudaimonic components, with social well-being items largely subsumed into the eudaimonic component. This conflation of social and eudaimonic well-being means that comparison of findings with other studies that use the tripartite approach to well-being is limited. However, many models of well-being broadly distinguish between hedonic and eudaimonic well-being. The current research does not claim to fully address issues relating to the model of well-being that is most appropriate for use in place/well-being research, but it adds to the debate. The MHC-SF has been thoroughly validated in its original form (e.g., Lamers et al., 2011; Luijten et al.,

2019; Perugini et al., 2017; Pertrillo et al., 2015; Reinhardt et al., 2020). The principal component analysis was utilized in Study 2 (Chapter 5) in order to address any concerns over the changes made to the stem however on reflection a more appropriate approach to dealing with the minor changes to the measure that were implemented would have been to keep the measure intact in terms of its factor structure and assess subscale validity using Cronbach's alpha.

In Study 1 a qualitative approach provided evidence of the relevance of Keyes' components of social well-being (1998) in gaining greater insight into the nature of place/well-being relationships. Whilst the distinction of hedonic and eudaimonic well-being is clear the role of social well-being deserves further exploration.

7.2.3 The Person Place Process (PPP) framework

The PPP framework was proposed by Scannell & Gifford (2010) as an organisational framework to help clearly conceptualize place attachment. The components (person, place, process) and subcomponents (culture/group, individual; social and individual aspects of place; affect, cognition and behaviour) were developed to provide a structure to explain the different factors that play a part in forming place attachment. The findings from Study 1 were mapped onto the framework in Ch.4 (Figure 6) and helped illustrate the multifaceted nature of place attachment (Scannell & Gifford, 2010). This analysis also highlighted the connections between well-being and place attachment (Figure 7). Many of the aspects of place/wellbeing relationships were present in both the PPP and well-being. For example, if a person feels happy when they are on a beach, this positive affect is common to both hedonic well-being and the process dimension of the PPP. This mapping process helps to illustrate the ways in which places that people are attached to are important in the development and maintenance of well-being. There are also aspects of the PPP that have relevance to the COM-B model of behaviour (Michie et al., 2011) and the Theoretical Domain Framework (Cane et al., 2012). For example, an individual's attachment to a place is influenced by a shared sense of community in the village they live in; this can be understood through the social subcomponent of the Place aspect of the PPP. This sense of community also reflects a group identity which shapes behaviour, which can be understood through identifying the role social influences play in the social opportunity subcomponent of the COM-B.

The PPP framework does not negate or supersede influential models of person-place relationships such as Sense of Place (e.g., Jorgensen and Stedman, 2006), but provides a synthesis of existing models in order to provide a more comprehensive description of place attachment (Scannell & Gifford, 2010).

7.2.4 COM-B

The COM-B model (Michie et al. 2011) was used in this thesis to gain a better understanding of how perceived barriers and facilitators can act as behavioural determinants and thus impact on engagement with place. Just because people reported that they valued a place for its potential to support positive well-being does not mean they will engage with it regularly. The COM-B model components (Capability, opportunity, and motivation) and the subcomponent provided a clear structure for the data generated in Study 1 relating to barriers and facilitators. The use of the Theoretical Domains Framework (Cane et al., 2012) provided additional detail and allowed for a further exploration in Study 3. The dimension reduction analysis of the items used to measure behavioural determinants did not replicate fully the structure indicated by Cane et al. (2012) but there was some alignment for example *social opportunity* and *physical capability*. The use of the COM-B model of behaviour within this thesis has helped provide a theoretical underpinning for understanding the behaviour of the participants in Study 1 and Study 3. This process can help develop a picture of common barriers to access, and a more nuanced understanding of why not all places are seen as open to everyone.

7.3 Methodological Considerations

Self-report measures were used extensively in this research and the aim of this subsection is to reflect on how effective they were in generating data.

Well-being. The focus within this thesis on subjective measures of well-being provided a useful insight into how place/well-being relationships can contribute to well-being outcomes. Whilst there may be concerns with subjective measures, our understanding of what is ‘happy’ or what is a ‘good life’ is also hugely subjective, particularly with reference to state well-being which is temporally and/or situationally defined, and as such may be fleeting. Such subjective measures of well-being have historically been overlooked in official data and even where it is present it has felt a bit

like an afterthought, for example in the ONS measures of well-being (ONS, 2019). Increasingly understanding a populations' well-being in all its facets, is seen as important and governments are implementing measures that capture this data. Current measures use to judge the state of national well-being and thus inform policy are not comprehensive enough to claim confidence in the conclusions drawn.

Across the studies in this thesis, participants were asked to identify and reflect on places that positively impacted their well-being. This might seem tautological - asking people to think about positive places would naturally mean they would report positive outcomes associate with those places. However, the research approach implemented in this thesis allowed a nuanced exploration of **the range of the places that elicit positive outcomes**, the way in which bonds with place are experienced (both similarly and differently), the different aspects of well-being that individuals reported experiencing, and the determinants that influenced their place- related behaviour. Although there may be some recognised aspect of tautology in this approach, there was also unique value in leveraging this tautology into an investigation on how these varied places can impact varied between the aspects of well-being.

MHC-SF. The measure used in Study 2 and 3 of this thesis was a version of the Mental Health Continuum – Short Form (MHC-SF) which was adapted for the current research from the original MHC-SF (Keyes, 2009) in order to measure state rather than trait well-being. This proved a largely effective measure within the current research, and Keyes' perspective on well-being as 'flourishing', provides a challenge to the homeostasis, deficit models, aligning with the salutogenic orientation used within this thesis. Internal consistency measures suggested a high level of consistency for the adapted MHC-SF measure as a whole, with adequate consistency for hedonic, eudaimonic and social well-being subscales. There were some items within the social well-being subscale that were problematic in the context of place-related well-being. Nearly a third of participants rated *social growth/actualization* and *social cohesion* as neutral (neither agree nor disagree). The wording of these two items referred to society being a '*good place*', *becoming better* and *making sense* (Appendix 14). Context may play a role here, with data collection happening at a time of political uncertainty surrounding the Brexit vote in the UK. However, the large number of neutral scores could imply that participants did not see the

relevance of these items to the topic of the survey. Both social actualization and social cohesion were represented in the data from Study 1 indicating the relevance of the concepts to place/well-being relationships. It may be that further development of the wording of these items is appropriate in order to draw more clear relevance to social well-being outcomes in relation to place.

Place attachment scale (Scannell & Gifford, 2017) was used in Study 3 to measure place attachment. The scale was adapted slightly for use in this research but was very close to the original scale. The scale raised no issues in terms of comprehension by participants that were made apparent to the researcher, and this impression was supported by completion rates which were very good. As with the MHC-SF Internal consistency measures suggested a high level of consistency for the place attachment measure as a whole, with adequate consistency for the subscales (place identity, affective attachment, place dependence and proximity maintenance). Whilst the measure does address the six subcomponents of the PPP (see Scannell & Gifford, 2013) there is an emphasis on place identity and place dependence. Whilst this allows findings to be more readily compared to existing research it may mean that other aspects of the PPP are side-lined, particularly those that fall within the *Person* dimension of the framework. Place identity and place dependence are seen as key elements incorporated within the PPP framework (Scannell & Gifford, 2013; Boley et al, 2021), and are important aspects of person-place relationships. The strength of Scannell & Giffords approach is that the PPP incorporates wider aspects of place attachment than other approaches, for example models like sense of place (Jorgensten & Stedman, 2001). This enables the full range of functions of place attachment to be explored (Scannell & Gifford, 2017) but also allows for links between place attachment and well-being, and place attachment and behavioural determinants, to be more readily understood. The place attachment scale used in this study (adapted from Scannell & Gifford, 2013) has not yet been widely used in research but proved an appropriate measure in the current research. However, in order to capture the richness of the PPP framework in a streamlined, manageable way, it may need further development.

Type of place. Despite these type of place categories being widely used in place/well-being research, there is very little agreement on how the categories are

defined and operationalised (e.g., Rainision & Inghilleri, 2013; White 2018). As reported in the discussion section of Chapter 6 the way in which type of place was operationalised may have impacted on the findings of Study 2 and Study 3. The Study 3 data generated by the self-report items in the characteristics of place scale was incongruous with that generated from the coding of participants descriptions of place. This discrepancy brings into question the validity of the measures used (Linton et al., 2015; Cooke et al., 2016); however, this depends on whether the impact of type of place on well-being is cited in a response to the physical features of place or to the perception of those places (Camfield & Skevington, 2008; Clark, 2002).

7.4 Implications for practice and policy

In this subsection the findings are considered in terms of their practical applications. The use of place/well-being research to inform practice and policy is already well-established and the findings of this thesis can contribute to this evidence base.

7.4.1 Practice

Implications for individual health-seeking behaviour. Helping individuals to understand the role that place plays in the enhancement and maintenance of their well-being could support empowerment and autonomy. A person can use place to regulate aspects of their hedonic, social and eudaimonic well-being in the same way they use diet and exercise to support their physical health. The studies within this thesis showed people have an understanding of the potential of place in supporting their well-being, and, certainly in terms of the samples used in the current research, an interest and willingness to be reflective about place/well-being relationships including the barriers they may face in engaging with place.

There is already evidence of self-regulation of well-being through accessing place, for example through the membership of clubs that facilitate health-seeking behaviours in specific locations such as wild swimming and park runs. They provide a range of well-being outcomes including environmental mastery and positive relations with others and address potential barriers to engagement. Membership, whether formal or informal, provides legitimacy for behaviour seen as risky or ‘odd’; managing barriers related to safety and competence (by support from coaching) as well as providing company. The

impact of COVID-19 on access to these available places has meant that this type of self-regulation has been difficult for many, and people may need support in re-establishing these behaviours. For many of the participants across the 3 research studies in this thesis, their ability to access place in the ways they described, will have been disrupted.

A focus for public health programmes that use place, particularly natural places as a core aspect, has been on the benefits associated with the location (e.g., a park or forest) (Bragg et al., 2016) and the activities that occur there (e.g., exercise or gardening), but rarely has there been any focus on the barriers and facilitators that impact on engagement with these places or these behaviours. There is evidence that engagement with nature reflects social inequality in the UK (Natural England, 2005, 2020, 2021). In order for place/well-being relationships to translate into health seeking behaviour, the insights gained in this thesis from considering the behavioural determinants, through the use of the COM-B model (Michie et al., 2011), need to be taken into account in future place/well-being initiatives.

The findings of the studies within this thesis suggests that the way in which individuals respond to place, particularly those that they are bonded to, means that well-being interventions needs to be adaptable and personally appropriate. One approach to this could be the use of theoretical frameworks to ensure that there is clear alignment of an individual's pre-existing relationships to place and the intended outcomes of place-based well-being interventions. A recent scoping review into nature-based interventions found that theoretical underpinning were largely lacking, with only 6% of their sample referring to behaviour change theory (Wilkie & Davinson, 2021).

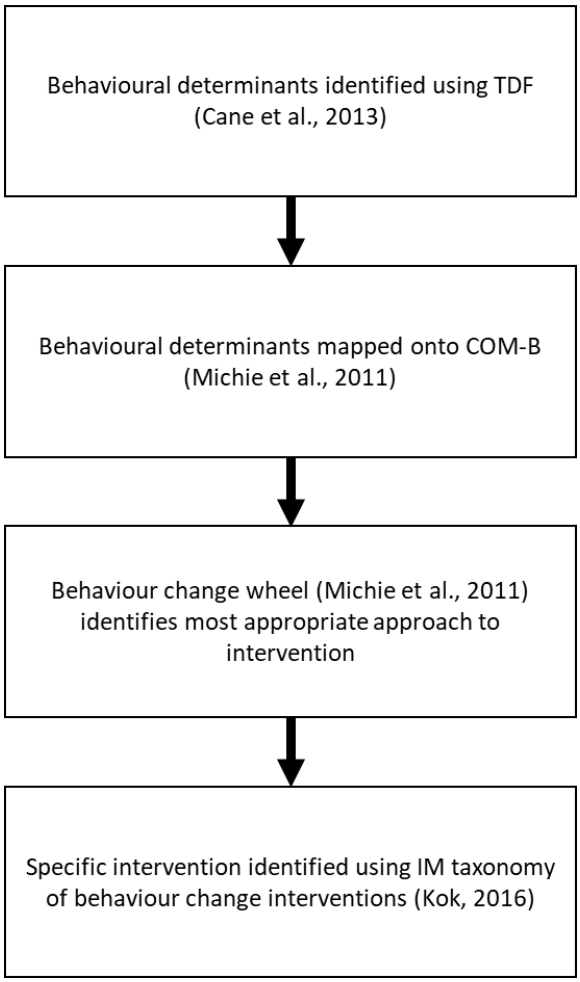
Within this thesis the COM-B model was adopted in order to develop a clearer understanding of the behavioural determinants that influence individual's use of places that support positive well-being. The items developed for the behavioural determinant measure used in study 3 (chapter 6) were developed using the theoretical domain framework (TDF: Cane et al., 2012) and the COM-B (Michie et al. 2011) to ensure that they were embedded in theoretical understanding. This could form the foundations of an approach to individualised place-based interventions. Once the behavioural determinants that act as facilitators and barriers to accessing place are established for an individual, an appropriate intervention to enable places to be used to support positive well-being can

be developed. Michie et al. (2011) proposed that the use of the behaviour change wheel can help broadly indicate the most appropriate form of intervention based on the aspects of behaviour that are the focus of change. If an individual identifies the places that would be most appropriate in supporting their well-being, they could then explore through therapeutic discussion or awareness training, the barriers they face to spending time in these places.

The Theoretical Domain Framework and COM-B can be used in combination to help identify these factors. For example, they may relate that their perceived physical abilities prevent them from attempting to access places, this is an example of reflective process within the motivation aspect of the COM-B. The behaviour change wheel would suggest that an appropriate intervention would be based on training or coercion. Wilkie and Davinson (2021) made the recommendation that a useful approach in terms of selecting appropriate approaches for nature-based interventions is to refer to Kok et al. (2016) taxonomy of behaviour change methods (see Wilkie & Davinson, 2021b). This would be entirely appropriate to adopt in broader place-based interventions. This taxonomy maps interventions in terms of their characteristics and focus. This enables interventions to be matched appropriately to those suggested by analysis of behavioural determinants. This intervention mapping taxonomy of behaviour change could be used alongside the behaviour change wheel to ensure that interventions are appropriately aligned for an individual and based firmly within theoretical understanding rather than convenience or preferences (figure 12).

Coaching is one approach to using places to support well-being that may lend itself to the type of approach suggested in this thesis. Coaching could involve supporting a client with identifying and working towards goals in relation to accessing places that support their well-being. In some ways, it would align well with the “person” aspect of the PPP model. As well as being able to respond to individual differences, coaching could account for and indeed embrace, the wider *person* aspects outlined in Scannell and Gifford’s PPP model. The PPP framework identifies two aspects of the person dimension: individual made up of experiences, milestones and realizations, and cultural/group comprising of religious and historical aspects.

Figure 12
Pathway for intervention development



The coaching process would be able to incorporate these aspects into any intervention and work with clients or groups to tailor to their individual experiences. It is an approach that has been used in a limited way within some nature-based interventions such as Walk and Talk coaching (e.g., van den Berg, 2021); but, as with other nature-based interventions, tends to lack robust theoretical framing. In a review of the use of nature as a therapeutic setting, Cooley et al. (2020) suggest that a small number of practitioners are adopting *active* therapeutic approaches including coaching and CBT that are positioned in place. However, the use of a coaching rather than a broader therapeutic approach is not the focus of their analysis. The review does however encompass some barriers and recommendations for working in situ which would have relevance to any place-based intervention. The potential of a coaching approach in supporting the salutogenic use of place has not been fully explored and could be a useful

direction that acknowledges the importance of individual differences and individualised health and well-being support.

Implications for social prescribing. Social prescribing is a response to a recognition that 'health' needs to be considered in a more holistic way, and that by considering what is important to an individual, healthcare can be individualised and therefore be more likely to be impactful (NHS, 2021). Social prescribing involves the use of non-medical interventions to support people's health and well-being, for example by engaging with a local walking for health group, a creative arts group, or green gym. A focus for many of these activities is their positioning within a green environment, with the presence of natural elements at their core. Green social prescribing can either be in the form of interventions aimed at addressing stress, mental ill-health or green care, or public health programmes that adopt a more salutogenic orientation (Bragg & Atkins, 2016). Social prescribing can offer individuals access to places and activities that they do not have the opportunity to engage with and/or that they may perceive as beyond their capability. By facilitating access to resources, social prescribing can help to tackle health/well-being inequalities (NHS, 2021). Bragg and Atkins, (2016) provide an overview of the myriad of nature based (or green care) interventions in the UK including an assessment of their success.

Whilst most activities and interventions used as green social prescribing view the presence of nature as core to their effectiveness, there is debate over whether the concept of a 'dose' of nature is valid or not. The idea that there is an optimal dose of nature that can be prescribed has received support (Cox et al., 2017; Barton & Pretty, 2010; Shanahan et al., 2016). Yet, the findings from Study 3 (Ch. 6) in this thesis suggested that frequency of visits to places had no impact on well-being outcomes. Whilst there did seem to be a link between duration of visits and well-being, the pattern across different aspects of well-being was not straightforward. Bell et al. (2019) suggest that this represents a reductionist understanding of place/well-being relationships and cautions against a dose approach to nature interventions.

A further concern is that many place-based social prescribing activities are based on the view that 'green' or natural places necessarily facilitate restoration, or improved

well-being outcomes. For example, in their review of nature-based interventions Bragg and Atkins state:

> 'Throughout this published evidence base, there is therefore consensus that nature contributes to enhanced wellbeing, mental development and personal fulfilment.' (Bragg & Atkins, 2016. p. 12)

Which appears at odds with those who suggest that the evidence is not as clear cut (Houlden et al., 2018). As has already been established in this thesis, the oversimplification of a specific type of place, without reference to the person or processes involved may be missing part of the picture. It may be the case that rather than place being at the core of place-based social prescribing as is suggested by green care, it is the structure and interaction provided by activities. A key aspect of effective social prescribing is the '*what matters to me'* approach advocated by the NHS (NHS, 2021), which reinforces the importance keeping place/wellbeing relationships rather than simply *place* at its core. By taking into account the individual and cultural/group components of the person dimension of the PPP (Scannell & Gifford, 2010), social prescribing could more meaningfully reflect the way in which individuals respond to place. However, this aspect social prescribing is rarely the focus of reviews of their appropriateness or effectiveness (e.g., Bragg et al, 2016).

Implications for childhood experience. Given the importance of place attachment in shaping life-long relationships to place, and its use in enhancing and maintaining well-being, it seems logical to assume that the wider the range of places that children develop bonds with, the greater their access to potential health-seeking resources. Green places have been the particular focus for understanding the importance of place/well-being relationships (Walker et al, 2021). For many children in the UK the places they have access to is limited, with an estimated one in five young people having no access to a garden in the UK (Pardo, 2020). Movements such as Forest Schools (Forest Schools, 2021) aim to widen access to green places. By encouraging children to see forests as places for activity that they value, the aim is to help children develop place identity, place dependence and place attachment to a type of place they may not otherwise perceive as available to them. Milligan & Bingley (2007) found that childhood unstructured play in woodlands was associated with an increase in seeing such places as a positive resource as

young adults. However, the impact of such activity was limited, with parental anxiety, myth and negative media all impacting on perceptions of place.

For many children, interactions with places widely perceived to have the most benefits (green, blue, urban green spaces) are linked to the potential perils the places contain. Safety education around the dangers of the sea or accessing the countryside unprepared are of course necessary, and have undoubtedly saved lives, however if this is the dominant narrative associated with these places then they may view engagement with them as undesirable. Natural and blue places are also frequently linked to the need for specialist resources (e.g., Duke of Edinburgh scheme kit lists, media representations of activities in nature) which again are very important in terms of safety, but for many are unattainable, with cost acting as a barrier to participation (Natural England, 2005). This reinforces the narrative that these are not 'everyday places' and are alien to their place identity. If people do not feel comfortable or welcome in these places, they will not form attachments to them and they are, therefore, less likely to provide positive well-being outcomes in the future (Stokols & Shumaker, 1981). Positive place/wellbeing relationships with a range of places can encourage engagement with places that can help address health inequalities by supporting well-being outcomes (Ryff, 2017).

7.4.2 Policy

The United Nations has placed an emphasis on a move from measuring economic production to measuring people's well-being. As a result, there is a need for accurate indicators of well-being to support the development, implementation and monitoring of policy (UN, 2011). However, the UK Office for National Statistics and Natural England (MENE survey) (Natural England, 2018) both use just 4 items to measure subjective well-being: positive affect, life satisfaction, sense of worth and anxiety. There are no items that relate specifically to eudaimonic well-being. Social well-being is partially addressed by the social capital measures (ONS, 2020) which address some aspects of social well-being such as social acceptance (trust in other people's abilities and qualities) (Keyes, 1998), however, not all five components are included. This thesis has presented evidence to support a more multifaceted approach to defining and measuring well-being, that would support policy makers understanding of the priorities for improving well-being (Forgeard et al., 2011). In order for places to effectively utilised as an asset for public health, then

the full scope of well-being needs to be taken into account. Policies and reports such as those addressing workplaces (e.g., All Our Health; GOV.Uk, 2019) access to nature (e.g., MENE; natural England, 2020) and mental health (e.g., the Prevention Concordat for Better Mental Health; Public Health England, 2017) can all benefit from a more comprehensive understanding of well-being.

When it comes to policies that impact on place/well-being relationships, countries approach policies very differently. For example, Riediker and Koren (2004) compared policies towards noise, aesthetics, and recreational impact on land use between USA and Switzerland, they found considerable differences in priorities and their implications for policy. The current research allows for a greater understanding of people's relationships with place and UK policy needs to reflect the changing needs of its citizens alongside those that control and own our valued places.

Policy plays a role in weighing up the rights of different users. Interviewees in Study 1 referred to places they could not access and how they negotiated the different people who used 'their' place. Dobson et al. (2021 p.3) state that 'People, place, and policy are in a constant state of tension and motion'. Managing the UK 'natural capital' is clearly defined in terms of balancing the needs of different ecosystem services (ONS, 2021) and it is interesting to consider how this dynamic, impacts on place/well-being relationships. Issues around ownership and access to green spaces including those within our towns and cities has long been a source of conflict. A fifth of young people having no access to a garden so public places such as parks and the 27.000 urban green space in the UK helps to address these inequalities (Pardo, 2020). However, parks and urban green spaces are under threat due to inaction and poor funding implemented under austerity measures by the UK Government (Dobson et al., 2021; Pardo, 2020). Since 2014 £9 billion has been raised from the sale of public assets including green spaces and building stock such as libraries and leisure facilities. Access to place and issues around ownership have a strong history in the UK and often become politicized and symbolic of wider struggles (e.g., the mass ramble, right to roam, the rights of travellers). There is a growing concern over the lack of transparency of land ownership and registry in the UK (e.g., Cahill, 2002; Shrubsole, 2019). Whilst this conflict between users and stakeholders is undoubtedly also a consideration in our management of built landscapes, there is less of a coherent

position with the focus very much on the importance of green places. The impact of social policy around ownership and access to places has a huge impact on how people engage with place. If assets that are perceived as public move into private, restricted ownership then opportunities to access places that support well-being are also limited.

7.5 Reflections on the research

The interviewees in Study 1 reported that they enjoyed the process and had an interest in the outcomes, which helped in the generation of rich qualitative data. The inductive nature of this first study meant that ideas were covered that both confirmed and challenge research narratives within the field. The surveys used in Study 2 and 3 successfully recruited and completion rates were excellent suggesting an ease of use and an interest from participants in the topic.

An initial concern with conducting the interviews in study 1 (chapter 3) was that rapport building in relatively short interviews would be difficult. However, the interviews were free flowing and open. As the interviews were arranged with a clear purpose that the participants were aware of and had shown an interest in, there were no clear instances of tension or reluctance. The interviews had been framed within an academic context, so this no doubt impacted on the way interviewees and interviewer approached the interactions (Brewis, 2014). The interview questions were kept open initially to establish broad concepts and to allow respondents space to explore their reflections of the places they spent time in and the extent to which they supported well-being. However more focussed questions were also used to clarify and allow for more detailed explanation. For example, after an initial description of a beach that respondent 9 was spending time in they were asked the following question as a probe:

> *"Do other beaches do it as well or is it…is there something special about that particular place?" [R09]*

The iterative process followed in this study meant that whilst the interview protocol remained the same the specific questions asked differed according to the flow of individual interviews and refining of questions from previous interviews.

As the qualitative study (chapter 3) formed part of a suite of studies there was a need to restrict the size of that element of the thesis in order to maintain balance and

work within the restrictions of a PhD thesis. Brewis (2014) described the frustration of needing to balance the requirements of academic commentary and maintaining the voices of the participants. An attempt was made to ensure this balance was established however there was certainly a concern that the participants voices became 'quieter' as the academic analysis developed (Brewis, 2014. P857).

Conducting inductive thematic analysis on the data from study 1 was a detailed and thorough process. Following the steps outlined by Braun and Clarke (2006) ensured that the systematic process resulted in themes that reflected the narratives divested by participants. Care was taken in the coding process to try to approach the data inductively; data was read through several times before coding began and visual mapping process was done to ensure that any links between data codes were clear to identified. The mapping of the data onto underpinning theoretical framework was done after the thematic analysis had been completed. This ensured that data was not coded in a way that was designed to fit into theory-rather and at a later point in the process, theory that aligned with the data became the focus. However, it is important to acknowledge that even when the process is inductive, I (as the coder) would have been impacted by dominant discourses within the field. For example, it is difficult to escape embedded dichotomy of nature/urban present within Environmental Psychology. Viewing the data along these lines has advantages as it is useful to consider places identified by participants in the context of existing research. It is perhaps intuitive to consider the dominant physical characteristic of a place but on reflection places could have been categorised in other ways for example according to whether they were personally meaningful or culturally significant. The aspects of the places that were built or non-built could have been secondary to the meaning they held for the individual.

The sample used for the study 1 interviews were volunteers in response to approaching three organisations. Two of these organisations were based in education and the third was a learning cooperative for older adults. Whilst this could indicate that the sample shared a common characteristic of *education* this is an oversimplification. A number of participants were only linked to education in the loosest possible term, for example attending a belly dancing class as part of the U3A group. To see them as homogenous is inaccurate; the sample were drawn from the same locale but contained

people from a range of ethnic, socioeconomic and educational backgrounds. The aim of study 1 was to explore people's reflections of the link between the places they spent time in and positive well-being outcomes, the themes that were developed resulted from analysis across the sample. Whilst it is clear that a different sample would have generated different data – their responses to the interview questions would have been idiosyncratic, this is not to say that the themes that would have been constructed would have differed. Clearly exploring the same concepts in a variety of contexts would contribute to our understanding of place/well-being relationships but this can be the case without undermining the findings of study 1. The approach to sample size in study 1 was to consider when saturation had occurred i.e., additional interviews were not generating new themes. Whilst saturation of codes may emerge within a very small number of interviews theme saturation typically requires a larger number, between 16-24 (Hennink et al., 2017). The research conducted in study 1 (chapter 3) fell into this pattern with saturation occurring after 19 interviews. This approach is in line with a good deal of qualitative research and criticisms of sample size insufficiency are embedded within nomothetic assumptions (Vasileiou et al., 2018). The primary aim of study 1 was not generalisability of the specifics of the participants lived experiences, but an exploration of the narratives around place and well-being that were felt to be apparent across the data generated.

The design of studies 2 (chapter 5) and 3 (chapter 6) both adopted a convenience sampling strategy. Whilst this approach draws criticism in terms of external validity this is not necessarily justified. Landers and Behrend (2015) caution against assuming that convenience sampling is 'poor sampling' (p160). The concern with convenience sampling is that the participants' data will not be representative of the target population, that it in some way contains characteristics that act as moderators creating biased results, i.e., an 'omitted variable' that is not accounted for in the design of the research (Landers & Behrend, 2015). The samples for study 2 and 3 share two characteristics that potentially are not represented in the general population: 1) participants largely engage with social media and 2) by agreeing to participate, shared at least a passing interest in the way places support well-being outcomes. The extent to which these two characteristics compromise or limit the relevance of the findings to the wider population needs

considering. Engagement with social media may exclude some individuals from participating in the research. Whilst the ONS (Office for National Statistics, 2020) claims that in 2020 96% of households had access to the internet, this was lower (80%) for household where there was a person over the age of 65. Where household income was under £10,000 per annum only 51% of households had internet access (Local Government Association, 2021). This may mean that some potential participants were excluded from inclusion in the research. However, the extent of social media usage does not mean that users should be seen as a homogenous group. In fact, research suggests that social media users can be quite diverse and demographically comparable to non social media samples (Wasilewski et al., 2019). An interest in the topic area could mean that individuals are better able to reflect on their own place/well-being relationships. It could also mean that their bonds to place are different to that of the general population. In terms of the research reported in this thesis, the impact of the omitted variables discussed here are further minimised as the research is largely exploratory, trying to establish if the variables are in some regard interrelated and to what extent. In this context internal, rather than external validity is prioritised, and convenience sampling is less contentious (Sackett & Larson, 1990). On balance the trade-off between gathering a large data set and the perceived limitations of using a convenience sample were felt to be considered and appropriate.

This PhD thesis was completed part-time over seven years; it was inevitable there were developments in theory and research during this time. There was also time to reflect on how these developments impacted the design of the research between the studies. For example, whilst the place attachment measure used in study 2 (chapter 5) did generate insightful data, it was felt that by the time study 3 (chapter 6) was being planned a more established measure designed by Scannell and Gifford (2017) would be an appropriate choice to inform the design of the third study. This meant that direct comparison of the data was not as straightforward; yet it also meant the research provided perspectives using multiple measures. Given that reviews and meta-analyses of research regularly draw comparisons between research studies with a diverse range of measures and ways of conceptualising person/place bonds (e.g., Daryanto & Song, 2021), it was felt that the cross-chapter comparisons between the findings of study 2 and 3 were

appropriate. Study 3 was designed to build on the reflections on the strengths and limitations of study 2 as part of the research journey. Each piece of research provided valuable research experience and learning opportunities for development of research skills.

An attempt was made to provide consistency across studies through the use of underpinning conceptualisation of core concepts such as well-being, place-attachment and behavioural determinants of accessing place. In the case of the well-being measure the adapted MHC-SF was used across studies 2 and 3. There was however inconsistency in the way that the data from the well-being measures was dealt with. In study 2 a principal component analysis was conducted that suggested a two-component model of well-being. In study 3 a principal component analysis was not conducted due to a ceiling effect in the data, and this is an inconsistency that needs noting. A number of studies have been conducted using the MHC-SF that established its validity as a measure in a wide range of contexts. As the MHC-SF measure used in this thesis was an approved adaptation of the original measure it was felt that a component analysis was required on the first use in a new context – that of place. However, on reflection the impact of removing variables and continuing analysis based on the components resulting from the PCA, whilst an appropriate choice, was not required and made comparisons with existing research using the MHC-SF possible but less straightforward.

A note of interest that potentially impacted the result of each of the studies, relates to the dynamic nature of place/well-being relationships. There is an importance for research to be socially, culturally and temporally situated in order for context to be fully transparent. This is frequently overlooked in the reporting of research, implying that these factors have no impact on the findings or reporting of the research (Bryman, 2012). Data for both Study 2 and Study 3 was collected in the summer months in the UK which is where most of the participants were resident, so factors such as weather and seasonal variations could impact on people's reflections on their use of place. One of the studies (Study 2) also took place around the time of the UK vote on exiting the European Union, which could impact on place identity and particularly items within the social well-being scale as discussed in Chapter 6. The research data reported in Chapters 3, 5 and 6 were all collected prior to the global COVID 19 pandemic but highlighted the need for researchers

to communicate the context of their research particularly when relationships to place are likely to be affected significantly.

A limitation of the research in this thesis is the focus on visual aspects when considering the characteristics of place. Whilst the studies included both physical and less tangible characteristics of place, on reflection the design of Study 2 and 3 overly focussed on the visual aspects of place characteristics. In Study 1 participants also made reference to other senses; smell, sounds and touch, but apart from noise levels, characteristics relating to other senses were overlooked in both Study 2 and 3. Research has suggested that other sensory inputs play a role in place/well-being relationships; for example the role of birdsong (e.g., Ferraro et al., 2020; Ratcliffe, Gatersleben & Sowden, 2016, 2018) and the importance of sensory experiences in the development of place attachment (Poe et al., 2016). This omission from the design of Study 2 and 3 should be noted.

7.6 Further research

As well as developing and validating the measures used within the survey studies (Ch. 5 and Ch. 6), there are areas for further development of the work reported in this thesis. As well as considering the characteristics and types of place, there should be a stronger consideration of how people's relationships to place, particularly place attachments, can be incorporated into individuals' understanding of their place/well-being relationships and guide their place-based health-seeking behaviour.

Whilst the current research attempts to capture the complexity and richness of place/well-being relationships, it was beyond the scope of this thesis to also consider the mediating effect personality traits can have on place-related well-being given the complex research aims presented. Yet, it is important to recognise that aspects of eudaimonic well-being have been linked to personality (e.g., Costa & McCrae, 1980; Diener et al, 1999; Lampropoulou, 2018; Salvera et al., 2020). Personality may also have links to place preferences; for example, Oishi et al. (2015) suggested that introverts and extroverts show preferences for different environments with introverts preferring mountains and extrovert showing a preference for living in open and flat regions. They suggest this is based on the preference for environments people find rejuvenating. The characteristics of places preferred, the importance of the presence of others, assumptions about well-being

dimensions that are valued, may all be impacted by additional factors such as personality. Future research would benefit from further exploration of these aspects of personality as a way to further operationalise the *person* component of the PPP model.

There is growing evidence of a reduction in well-being outcomes over the course of the COVID -19 pandemic in 2020. Ruiz et al. (2021) discussed this in the context of perceived health behaviours such as physical activity, sleep and diet, but could place/well-being relationships also play a role? COVID-19 restrictions meant additional barriers to accessing place for many people around the world, and in some cases, this may have resulted in a disruption in place attachments. For individuals who saw places such as IKEA, or a pub, as a well-being enhancing place, the increased risk posed by close contact with people could change the perceived value of the place, conversely challenges to proximity maintenance due to lockdown restrictions may have enhanced the importance of the place, place attachment, place dependence and place identity. It would be interesting to see if respondents' relationships to place had shifted following such changes in how we use and relate to place, particularly those who participated in Study 1.

Further exploration of the use of the Theoretical Domains Framework (Cane et al., 2012) and the COM-B model of behaviour (Michie et al., 2010) is needed to gain a better understanding of the barriers and facilitators that impact place/well-being relationships. This could also be further developed through the use of the Behaviour Change Wheel (Michie, van Stralen & West, 2011) which was designed around the COM-B model to support planning of place-based intervention. If interventions are based on an individual's understanding of place and the behavioural determinants that shape those interactions with place, then these could provide a viable alternative to a 'one size fits all' approach to social prescribing.

7.7 Conclusion

Place is a resource that can be accessed to produce positive well-being outcomes. Research that focuses on the generic 'well-being' place provide some insight into the places that are *good for us*, but the hunt for a prototypical well-being place is likely to fail. This thesis has presented evidence of the salutogenic potential of a range of places. In order for potential to be realised, there needs to be a recognition that person-place

relationships are complex and multifaceted. As suggested by Dobson et al. (2021) acknowledging the ‘complexity of relationships and opportunities, rather than seeking to isolate linear cause and effect’ is likely to lead to a better understanding of place/well-being relationships (Dobson et al., 2021. p. 3). The full value and salutogenic potential of place/well-being relationships, is embedded in the bond we share with a wide range of places, including our everyday environments.

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Appendices

Appendices		
Chapter 3	Appendix 1	Study 1 Interview schedule
	Appendix 2	Study 1 Participant information sheet
	Appendix 3	Study 1 Consent form
	Appendix 4	Study 1 Example transcript extract
	Appendix 5	Study 1 Example of initial coding
	Appendix 6	List of generic places chosen by participants in study 1
	Appendix 7	List of named places chosen by participants in study 1
Chapter 5	Appendix 8	Study 2 recruitment tweet
	Appendix 9	Study 2 Survey
	Appendix 10	Study 2 Gatekeeper letter
	Appendix 11	Study 2 Participant information sheet
Chapter 6	Appendix 12	Study 3 Recruitment tweet
	Appendix 13	Study 3 Participant information sheet
	Appendix 14	Study 3 Survey items
	Appendix 15	List of participants' chosen places in study 3

Appendix 1: Interview schedule for study 1

Interview Schedule

Study title: Boosting environments: exploring the links between place and well-being.

Study aims:

1. To what extent can physical environments be seen to enhance and maintain positive subjective and psychological well-being outcomes in non-depleted individuals?
2. What characteristics across a range of physical environments could be seen to impact on subjective and psychological well-being outcomes?
3. To what extent do prior experiences and emotional connections to place influence the impact they have on well-being?

This study will be made up of semi structured interviews so a rigid interview schedule is not appropriate.

The topics that may be addressed within the interviews:

Places/ environments: Use of places, elements of environments, frequency, temporal aspects of place use, familiarity

Emotional connection to place: Place and memory, place and childhood links, connectedness, favourite/ important places, affective states, control/ownership, belonging.

Social aspects of place: social interactions, escape, personal safety, impact of other place 'users', perceptions of others

Aspects of psychological and subjective well-being linked to place: vitality, flourishing, happiness, purpose, satisfaction, pleasure, personal meaning,

Participant's reflections on the role of environments/ place in well-being: reflections on the interview process in terms of gaining insight.

The use of environment as a salutogenic resource: maintaining and enhancing well-being through the use of environments.

Appendix 2: Participant information sheet for study 1

Participant Information Sheet

Participant code: _____

Study Title: Boosting environments: exploring the links between place and well-being.

What is the purpose of the study? The aim of the study is to explore how people use and respond to different places that they spend time in.

Why have I been approached? You have been approached because you are over the age of 16.

Do I have to take part? No, you do not have to take part. Participation is entirely voluntary. If you change your mind about taking part in the study, you can withdraw at any point during the study and up to two weeks after the interview. If you do decide to withdraw, you can contact me (Liz Henry) by email with your participation code (at the top of this sheet) and your data will not be used in the study and would be safely deleted. There will be no consequences for you deciding to withdraw.

What will happen to me if I take part? You will take part in an interview with myself. This interview will last about half an hour and will be recorded so I can transcribe the interview and analyse the details. The only people with access to the recordings are myself, the transcribers and members of the supervisory team.

What are the possible disadvantages and risks of taking part? There are no predicted disadvantages or risks in taking part in this study. However, if taking part in this study brings up emotions or thoughts that make you feel uncomfortable or distressed then you can seek support from Sunderland Samaritans (08457909090)

What are the possible benefits of taking part? Hopefully you will find talking about places and how you use and respond to them interesting and rewarding. You may find that it helps you understand how places can affect your well-being. More generally, you will be contributing to our understanding of the links between our environment and our well-being.

What if something goes wrong? If you have any concerns or feel you were adversely affected by your participation, please inform the researcher immediately. Alternatively,

you may email either my supervisor or the chair of the ethics committee after the study. Contact details are provided at the end of this sheet.

Will my taking part in this study be kept confidential? Your audio recording will be transcribed, and this will be given your participation code. These transcriptions will therefore not contain your name. Any other personal details that may come up during the interview (such as other names mentioned) will be anonymised. All the consent forms will be stored in a secure location. The data from the interviews will be stored securely on a computer but will not include any personal details; they will only be identified through the participation code. Responsible members of the University of Sunderland may be given access to data for monitoring and/or audit of the study to ensure that I comply with regulations.
All data (including the audio recordings) and consent forms will be destroyed after the required time for retaining data for the purpose of completing the PhD programme and publication.

What will happen to the results of the research study? The results will be written up and presented as part of my PhD thesis. They may also be used as the basis for publication and/or presentation in academic journals, research events or conferences. Completely anonymised data from this project may also be used for teaching purposes.

Who is organising and funding the research? The research is organised by Liz Henry who is a PhD student at the University of Sunderland, Department of Psychology. This project is not externally funded.

Who has reviewed the study? A departmental subcommittee of the University of Sunderland Research Ethics Committee has reviewed and approved the study.

Contact for further information

Liz Henry

Email: Liz.Henry@sundeland.ac.uk

Stephanie Wilkie (Supervisor)
Email: stephanie.wilkie@sunderland.ac.uk

Dr Etta Evans (Chairperson of the University of Sunderland Research Ethics Committee)
Email: etta.evans@sunderland.ac.uk
Phone: 0191 515 2624

Thank you for your interest in this research. If you wish to go ahead with the interview, please read and sign the consent form.

Appendix 3: Participant Consent form for study 1

Participation Consent Form

Study title: Boosting environments: exploring the links between place and well-being.

Participant code: _____

Please tick as appropriate

- I am over the age of 16 ☐
- I have read and understood the participation information sheet and, by signing below, I consent to participate in this study ☐
- I understand that by signing below I consent to an audio recording of my interview being made ☐
- I understand that I have the right to withdraw from the study without giving a reason at any time during the interview itself ☐
- I understand that I also have the right to withdraw my data for a two week period after the interview ☐
- I understand that by signing below I consent to my anonymised data being used for the purposes of teaching and publication ☐

Signed: _____

Print name: _____

Date: _____

Witnessed by: _____

Print name: _____

Date: _____

Appendix 4: Example transcript extract R05

R05: If I had a bad day there's nothing I like more than just going for a walk (right) so it needs to be out in open spaces (right) when I lived in the countryside I used to, there was a nature reserve over, and I could have had the worse day of my life and I would get the dog and go over to there and just walk around and see the trees you know and smell some flowers and I was fine (right) go and feed the ducks

LH: So, it really worked in a kind of restoring way

A restoring way definitely and I like that type of thing and now I don't live in the country I live in the, in the town now but my back garden is my haven (oh ok) I have a swing (yeah) a garden swing which I go on now which I sit on and the law is if I'm sitting on the hammock when I've come in straight from work I f I've come straight in the door (yeah) I've gone out with a cuppa or a glass of wine and I'm sat on the hammock you don't talk to me for half an hour (ok) and then I regenerate and I'll come in and I'll be fine

That's really interesting (yeah) so tell me a bit about your garden then.

it's not a massive garden it's um bigger than the postage stamps of some houses but um it's, it's got a concreted area at the backdoor and then we've got like a raised grass area which goes on probably twice t size of this room um and at the very back I have my garden swing and we have the little dog shed the Wendy house (yeah) for the dog and the garage, the garage wall etc. and the garage is where the cats live on a day time (ok right) as I say they've got their cat flap into the garage and things and it's just it's got um next door has a tree so that leans over um hasn't got any flowers in (no?) because I kill flowers you know um but it's just peaceful

So that's important that it's ...is it literally peaceful, is it literally quiet (no no) or is it the sense of peace?

it's the sense of peace, children in the garden next door and we have children in the garden the other side as well and they can be playing and I like that I'll listen to that or it could be just the bird can be tweeting and I like listening to that you know (yeah) and sometimes I'm sitting there and now the cats 'll come up and sit on my knee and I'll stroke them and that makes me feel better do you know (mm) what I mean and the dog 'll sort of wander up and have a wag of the tail (laughter) just no people (whispered) (Laughter) um yeah it's...

So, it's important for you that even though there are people around there's nobody in

There's nobody in wanting my attention...

Appendix 5: Example of initial coding for R01

Appendix 6: Generic places identified by participants in study 1

Generic places chosen by participants in study 1		
Coded place	Place mentioned	Participant's number who mentioned place
Domestic	Home/House	1,2,3,4,5,6,8,12,14,15
	Parent's/family/friend's house	3,6,12,16,18
	'Hometown'	6
	Specific rooms including living room, Conservatory, Kitchen	2,11
	Settee	6,8
	Fireside	2
Work	Work	1,5,6,12,19,20
	Classroom	1,3,6,7
	Office	2,3,6,7
Holiday	Caravan, tent	1,5
	Hotel	1,6
	Plane	12
	Cruise ship	5
	Abroad	1
	Travelling	1,20
Inside	'Inside'	2
	Library	5,16
	'Leisure' venues including shops, café, night clubs, pubs, cinemas, bath house	2,3,5,6,9,16
	Historical properties	3,4,11,12,14,18
	Cathedrals	14
Outside	'Outside'	1,2,3,5,8,11,12,16,19,20
	Water including seaside, beach, coast, sea, ocean, lake, tarn, pond, river, stream, creek	1,2,3,7,8,10,11,13,14,15,16
	'natural' including countryside, woodlands, fields, moors, mountains, nature reserves	1,2,3,5,7,9,11,13,14,18
	Public parks	4,6,8
	Gardens	2,3,4,5,8,10,15,17,18,19
	Built including village, towns, city, housing estate, edge of town/village	1,2,3,7,10,13,18,19
Other	Car, motorways	1,2,3
	New places	3,9,10,19,20
	Personal spaces	4,11,14,19

Appendix 7: Named places identified by participants in study 1

Specific named places chosen by participants in study 1		
Coded place	Place mentioned	Participant's number who mentioned place
Countries	Tunisia, Italy, Ireland, Croatia, Australia, Portugal, Antarctica	1,3,7,8
Cities/towns	Prague, Moscow, Madrid, Florence, New York, Las Vegas, Stoke on Trent, Nottingham, Birmingham, Hanley, Wollington, Stockton, Stirling, Glasgow, London	1,3,4,10,14,16,17,18
Waterside location	Crimdon Dean beach, Seaton Carew, Saltburn, Redcar, River Tees, Tees barrage	1,2,3,10
Rural location	Yorkshire dales, Hamsterly Forest, Lake district, Arran, Snowdon, Skiddaw, Rhinod Mountains, Named Spanish agricultural commune	1,2,7,19
Retail	Metro centre, Ikea, Morrison's/Asda	2,5
Education	Named U3A classes, named sixth form college	10,18,5
Other	Stadium of light (Football stadium)	2
	RVI (hospital)	12
	King's cross station	20
	Wallace monument	3
	Central Park (NYC)	4
	Disneyworld Florida	6

Appendix 8: Study 2 recruitment tweet

"Psychology research volunteers needed (16yrs+) for a 10 min survey about places and how they make you feel.

https://sunduni.eu.qualtrics.com/SE?SID=SV_3I4j1yok4kQlQLH&Q_CHL=social&Q_SocialSource=twitter"

Appendix 9: Study 2 Survey

Thank you for taking time to complete this questionnaire about place and wellbeing. It will take you about 10-15 minutes to complete and all the data collected will remain anonymous.

Please continue only if you are over 16 years old

Age: Gender:

Residential postcode or zip code:

The first part of this questionnaire is about your general wellbeing.

(MHC-SF Keyes, 2009)

Please answer the following questions about how you have been feeling ***during the past month***. Place a mark in the box that best represents how often you have experienced or felt the following:

During the past month how often did you feel…	Never	Once or twice	About once a week	About 2 or 3 times a week	Almost every day	Every day
happy						
interested in life						
satisfied with life						
that you had something important to contribute to society						
that you belonged to a community (like a social group, or your neighbourhood)						
that our society is a good place or is becoming a better place, for all people						
that people are basically good						
that the way our society works makes sense to you						
that you liked most parts of your personality						
good at managing the responsibilities of your daily life						
that you had a warm and trusting relationship with others						
that you had experiences that challenged you to grow and become a better person						
confident to think or express your own ideas and opinions						
that your life has a sense of direction or meaning to it						

The next section of the questionnaire is focused on a place you have spent time in and that you feel has a positive impact on your wellbeing.

Think about ***one*** specific place and use this to answer the following questions.

Name of place:

How often do you visit this place?

I have only visited the place once or twice ☐ I spend time there about once a year ☐

I spend time there about once a month ☐ I spend time there about once a week ☐

I spend time there nearly every day ☐

When you spend time in this place approximately how long do you spend there?

____days _____months ____days _____hours ____minutes

Please describe the place that you have chosen:

Brief description of your place

The next group of questions explores the place you have described in more detail.

Please answer the following questions about **your chosen place**.

Check the box that best represents your experiences.

The place I have chosen…	Strongly disagree	Disagree	Slightly disagree	Neither agree or disagree	Slightly agree	Agree	Strongly agree
is personally meaningful for me							
holds memories for me							
has a cultural or spiritual meaning for me							
is similar to other places that are important to me							
gives me a sense of ownership							
is an expression of who I am							
is the best place for doing the things I enjoy							
is a place I am attached to							

Still focussing on your chosen place, think about the emotions you feel when you are there and tick ***all*** that apply.

When I'm in this place I tend to feel…

pleasure	☐	enjoyment	☐	interested	☐
comfort	☐	excitement	☐	strong	☐
calm	☐	fearful	☐	enthusiastic	☐
proud	☐	grateful	☐	inspired	☐
contentment	☐	anxious	☐	attentive	☐
challenged	☐	relaxed	☐	confident	☐

Please list any other emotions you tend to experience in the place you have chosen.

Of all of the emotions you have experienced in your chosen place, which one do you feel is the most important to you?

Still thinking about your chosen place, which of the following characteristics does your place have? Please tick ***all*** that apply.

The place I chose…

is enclosed	☐	is open	☐
has lots of light	☐	has a view of the sky	☐
is quiet	☐	is busy	☐
is wild	☐	is controlled	☐
has lots of plants	☐	has lots of water	☐
is indoors	☐	is outdoors	☐
I find beautiful	☐	is clean	☐
has a clear function/use	☐	lets me explore	☐
I feel is unique	☐	contains wildlife	☐
has clear paths/routes to follow	☐	has a view of the horizon	☐

Please list any other characteristics/features of the place that you have chosen:

The following questions are similar to those you answered about your general well-being, but these should now be answered in reference to the place you are using as your chosen example. (Adapted for the purposes of this study from MHC-SF Keyes 2009)

Please answer the following questions about how you felt **when spending time in your chosen place**. Please check the box that best represents your experiences.

When spending time in my chosen place I feel…	Strongly disagree	Disagree	Slightly disagree	Neither agree or disagree	Slightly agree	Agree	Strongly agree
happy							
interested in life							
satisfied with life							
that you had something important to contribute to society							
that you belonged to a community (like a social group, or your neighbourhood)							
that our society is a good place or is becoming a better place, for all people							
that people are basically good							
that the way our society works makes sense to you							
that you liked most parts of your personality							
good at managing the responsibilities of your daily life							
that you had a warm and trusting relationship with others							
that you had experiences that challenged you to grow and become a better person							
confident to think or express your own ideas and opinions							
that your life has a sense of direction or meaning to it							

Thank you for taking part in this questionnaire. By submitting your answers, you are agreeing that the anonymous data collected can be used for research and education purposes and may be published.

If you have any questions about the questionnaire, please contact:

Elizabeth.Henry@research.sunderland.ac.uk

Appendix 10: Study 2 Gatekeeper letter

Liz Henry (PhD candidate)
Department of Psychology
Shackleton House
Silksworth Row
Sunderland
SR1 3QR

Elizabeth.Henry@research.sunderland.ac.uk
07967131340

To: (*recipients address*)

Date:

Dear (*name*)

My name is Liz Henry and I am a Psychology PhD candidate at the University of Sunderland. I am currently conducting research into how the environments people spend time in are linked to their well-being.

I am contacting you in your role as (*state role*) in order to gain your permission to recruit some of my participants from (*state group/organisation*). Participants who respond to my request for volunteers would complete a questionnaire lasting approximately 20 minutes. They would be provided with clear instructions and are free to withdraw their participation at any point during the completion of the questionnaire and all responses would be anonymous. Completion of the questionnaire would be taken as consent for data inclusion in research, teaching and publication.

In order to recruit participants, I would welcome the opportunity of (*address the group as appropriate/ email/flyer*).

(*Where appropriate the offer of conducting a presentation on my research would be made*)

I have attached a copy of the questionnaire and please do not hesitate to contact me for clarification or with any questions you have.

If you would like to consent to me recruiting participants from (state group/organisation) then please sign the reply slip below and return it to me via (*either e mail or SAE provided*).

Yours sincerely

Liz Henry

I (insert name) consent to the recruitment of participants from (organisation)

Name: ……
Date:……

Appendix 11: Study 2 participant information sheet

Participant Information Sheet

Study Title: Exploration of the relationship between characteristics of physical environments and perceived wellbeing outcomes.

What is the purpose of the study? The aim of the study is to explore the links between places and wellbeing.

Why have I been approached? You have been approached because you are over the age of 16.

Do I have to take part? No you do not have to take part. Participation is entirely voluntary. If you change your mind about taking part in the study, you can withdraw at any point during the questionnaire. There will be no consequences for you deciding to withdraw. If you complete and submit your responses to the questionnaire, you have given your consent for the data to be used for research and education purposes. The study findings may be published using anonymized data.

What will happen to me if I take part? You will complete either an online or paper copy of a questionnaire. This questionnaire will take about ten minutes.

What are the possible disadvantages and risks of taking part? There are no predicted disadvantages or risks in taking part in this study. However, if taking part in this study brings up emotions or thoughts that make you feel uncomfortable or distressed then you can seek support from Sunderland Samaritans (08457909090).

What are the possible benefits of taking part? Hopefully you will find thinking about places and how you use and respond to them interesting and rewarding. You may find that it helps you understand how places can affect your wellbeing. More generally, you will be contributing to our understanding of the links between our environment and our wellbeing.

What if something goes wrong? If you have any concerns or feel you were adversely affected by your participation, please inform the researcher immediately. Alternatively, you may email either my supervisor. Contact details are provided at the end of this sheet.

Will my taking part in this study be kept confidential? The data from the questionnaires is anonymous. Responsible members of the University of Sunderland may be given access to data for monitoring and/or audit of the study to ensure that I comply with regulations.

All data will be destroyed after the required time for retaining data for the purpose of completing the PhD programme and publication.

What will happen to the results of the research study? The results will be written up and presented as part of my PhD thesis. They may also be used as the basis for publication and/or presentation in academic journals, research events or conferences. Completely anonymised data from this project may also be used for teaching purposes.

Who is organising and funding the research? The research is organised by Liz Henry who is a PhD student at the University of Sunderland, Department of Psychology. This project is not externally funded.

Who has reviewed the study? A departmental subcommittee of the University of Sunderland Research Ethics Committee has reviewed and approved the study.

Contact for further information

Liz Henry

Email: Liz.Henry@sundeland.ac.uk

Stephanie Wilkie (Supervisor)

Email: stephanie.wilkie@sunderland.ac.uk

Thank you for your interest in this research.

Appendix 12: Study 3 recruitment tweet

"Psychology research volunteers needed (16yrs+) for a 20 min on-line survey about places that have a positive impact on your well-being. Just follow the link below to find out more:

(hyperlink provided here) "

Appendix 13: Study 3 participant information sheet

Participant Information Sheet

Study Title: Exploration of the relationship between place attachment and perceived well-being outcomes from enhancing places.

What is the purpose of the study? The aim of the study is to explore the links between places and well-being.

Why have I been approached? You have been approached because you are over the age of 16.

Do I have to take part? No, you do not have to take part. Participation is entirely voluntary. If you change your mind about taking part in the study, you can withdraw at any point during the questionnaire but just closing the browser. There will be no consequences for you deciding to withdraw. If you complete and submit your responses to the questionnaire, you have given your consent for the data to be used for research and education purposes. Once data is submitted it is immediately anonymised so withdrawal at this stage is only possible if you note your response number and contact the researcher within a week of submission. The study findings may be published using anonymized data.

What will happen to me if I take part? You will complete either an online or paper based questionnaire. This questionnaire will take about ten minutes.

What are the possible disadvantages and risks of taking part? There are no predicted disadvantages or risks in taking part in this study. However, if taking part in this study brings up emotions or thoughts that make you feel uncomfortable or distressed then you can seek support from Sunderland Samaritans (08457909090).

What are the possible benefits of taking part? Hopefully you will find thinking about places and how you use and respond to them interesting and rewarding. You may find that it helps you understand how places can affect your well-being. More generally, you will be contributing to our understanding of the links between our environment and our well-being.

What if something goes wrong? If you have any concerns or feel you were adversely affected by your participation, please inform the researcher immediately. Alternatively, you may email my supervisor or the chair of University of Sunderland ethics committee. Contact details are provided at the end of this sheet.

Will my taking part in this study be kept confidential? The data from the questionnaires is anonymous. Responsible members of the University of Sunderland may be given access to data for monitoring and/or audit of the study to ensure that I comply with regulations. Data gathered will be stored and used in line with Data Protection Act 2018 and in compliance with GDPR.

All data will be destroyed after the required time for retaining data for the purpose of completing the PhD programme and publication.

What will happen to the results of the research study? The results will be written up and presented as part of my PhD thesis. They may also be used as the basis for publication and/or presentation in academic journals, research events or conferences. Completely anonymised data from this project may also be used for teaching and/or training purposes.

Who is organising and funding the research? The research is organised by Liz Henry who is a PhD student at the University of Sunderland, Department of Psychology. This project is not externally funded.

Who has reviewed the study? A departmental subcommittee of the University of Sunderland Research Ethics Committee has reviewed and approved the study.

Contact for further information

Liz Henry

Email: Elizabeth.Henry@research.sundeland.ac.uk

Dr Stephanie Wilkie (Supervisor)

Email: stephanie.wilkie@sunderland.ac.uk

Dr John Fulton (Chair of ethics research group)

Email: john.fulton@sunderland.ac.uk

Thank you for your interest in this research.

Appendix 14: Study 3 Survey items (paper copy, online Qualtrics survey incorporated participant information sheet and informed consent)

Thank you for taking time to complete this questionnaire about place and well-being. It will take you about 15 minutes to complete and all the data collected will remain anonymous.

Please continue only if you are over 16 years old

Age: Gender:

Country of residence: Residential postcode/zip code:

The aim of this survey is to focus on a place that you feel in some way has a **positive** impact on your well-being. Imagine yourself in this place and think about how you feel when you are there.

Think about ***one*** specific place and use this to answer the following questions.

Name of place:

Approximately how far from your place of residence is your chosen place?

Please describe the place that you have chosen:

Brief description of your place

What is the function of the place you have chosen? (Please circle)

Education or Work Spiritual Domestic (e.g. home)

Hobby Leisure or fun Holiday Other

When you spend time in your chosen place do you typically spend time there… (Please circle)

On my own With someone else* It varies

*Please elaborate:

How often do you visit this place?

I have only visited the place once or twice	I spend time there about once a year	I spend time there about once a month	I spend time there a couple of times a month	I spend time there about once a week	I spend time there several days each week	I spend time there every day
1	2	3	4	5	6	7

When you spend time in this place approximately how long do you spend there?

Up to an hour	A few hours	A whole day	A few days	A week	A few weeks	A month or more
1	2	3	4	5	6	7

Answer the following questions in relation to the place you have been visualising
(Adapted for the purposes of this study from MHC-SF Keyes 2009)

Please answer the following questions about how you felt **when spending time in your chosen place**. Please check the box that best represents your experiences.

When spending time in my chosen place I feel…	Strongly disagree	Disagree	Slightly disagree	Neither agree or disagree	Slightly agree	Agree	Strongly agree
happy	1	2	3	4	5	6	7
interested in life	1	2	3	4	5	6	7
satisfied with life	1	2	3	4	5	6	7
that you had something important to contribute to society	1	2	3	4	5	6	7
that you belonged to a community (like a social group, or your neighbourhood)	1	2	3	4	5	6	7
that our society is a good place or is becoming a better place, for all people	1	2	3	4	5	6	7
that people are basically good	1	2	3	4	5	6	7
that the way our society works makes sense to you	1	2	3	4	5	6	7
that you liked most parts of your personality	1	2	3	4	5	6	7
good at managing the responsibilities of your daily life	1	2	3	4	5	6	7
that you had a warm and trusting relationship with others	1	2	3	4	5	6	7
that you had experiences that challenged you to grow and become a better person	1	2	3	4	5	6	7
confident to think or express your own ideas and opinions	1	2	3	4	5	6	7
that your life has a sense of direction or meaning to it	1	2	3	4	5	6	7

The following questions still relate to the place you are thinking about, they are about how attached to the place you feel (adapted from Scannell and Gifford 2013)

The questions that follow assess your feelings and thoughts about the place you have chosen as being one that maintains or enhances your well-being. Please think about and answer each question separately, and as accurately as possible. Check the number that best represents how you feel.

	Strongly disagree						Strongly agree
I feel that my chosen place is a part of me	1	2	3	4	5	6	7
My chosen place says very little about who I am	1	2	3	4	5	6	7
I feel that I can really be myself in my chosen place	1	2	3	4	5	6	7
My chosen place reflects the type of person I am	1	2	3	4	5	6	7
I feel relaxed when I'm in my chosen place	1	2	3	4	5	6	7
I feel happiest when I'm in my chosen place	1	2	3	4	5	6	7
My chosen place is my favourite place to be	1	2	3	4	5	6	7
I really miss my chosen place when I'm away from it for too long	1	2	3	4	5	6	7
My chosen place is the best place for doing the things that I enjoy most	1	2	3	4	5	6	7
For doing the things that I enjoy most, no other place can compare to my chosen place	1	2	3	4	5	6	7
My chosen place is not a good place to do the things I most like to do	1	2	3	4	5	6	7
As far as I am concerned, there are better places to be than in my chosen place	1	2	3	4	5	6	7
I feel attached to my chosen place	1	2	3	4	5	6	7
I am proud of my chosen place	1	2	3	4	5	6	7
The spiritual nature of my chosen place ties me to this place	1	2	3	4	5	6	7
I feel a connection to the visual landscape of this area	1	2	3	4	5	6	7
I feel that this place is my home	1	2	3	4	5	6	7
My roots are in this place	1	2	3	4	5	6	7
I intend to continue spending time in my chosen place for the next 3 years	1	2	3	4	5	6	7
I wish to continue spending time in my chosen place for the rest of my life	1	2	3	4	5	6	7

The questions that follow focus on the characteristics of the place you have chosen as being one that maintains or enhances your well-being. Please think about and answer each question separately, and as accurately as possible. Check the number that best represents how you feel.

I would describe my chosen place as…	Strongly disagree						Strongly agree
primarily built rather than natural	1	2	3	4	5	6	7
a green place within a built-up area	1	2	3	4	5	6	7
a place where water is a central feature	1	2	3	4	5	6	7
a place with clear views of the horizon	1	2	3	4	5	6	7
having a clear view of the sky	1	2	3	4	5	6	7
that is open in its expanse	1	2	3	4	5	6	7
is generally enclosed	1	2	3	4	5	6	7
a place where plants or natural elements are a central feature	1	2	3	4	5	6	7
warm	1	2	3	4	5	6	7
light	1	2	3	4	5	6	7
quiet	1	2	3	4	5	6	7
clean	1	2	3	4	5	6	7
where wildlife is present	1	2	3	4	5	6	7
a place that feels like a wilderness	1	2	3	4	5	6	7
where I feel safe	1	2	3	4	5	6	7
that feels cosy	1	2	3	4	5	6	7
friendly	1	2	3	4	5	6	7
that has a clear function for me	1	2	3	4	5	6	7
unique	1	2	3	4	5	6	7
a place that gives me the opportunity to explore	1	2	3	4	5	6	7

Next you will be presented with factors that *may* influence you choosing to spend time in the place you have selected. For each statement, please indicate how much you agree that it has an influence on whether or not you spend time in your chosen place. Please think about and answer each question separately, and as accurately as possible.

Spending time in my chosen place is influenced by…	Strongly disagree						Strongly agree
my problem-solving skills	1	2	3	4	5	6	7
how good I am at finding my way	1	2	3	4	5	6	7

the opportunity the place gives me to develop my psychological skills (such as map reading or learning something new)	1	2	3	4	5	6	7
how well I get on with other people	1	2	3	4	5	6	7
my ability to focus on tasks	1	2	3	4	5	6	7
how good I am at making decisions	1	2	3	4	5	6	7
how tired I am	1	2	3	4	5	6	7
my ability to manage my time and plan	1	2	3	4	5	6	7
my physical skills	1	2	3	4	5	6	7
the opportunity the place gives me to develop my physical skills	1	2	3	4	5	6	7
how competent I am at specific physical skills	1	2	3	4	5	6	7
how generally physically able I am	1	2	3	4	5	6	7
the expectations others have of the way I behave	1	2	3	4	5	6	7
considering If my behaviour is appropriate	1	2	3	4	5	6	7
feeling I need to fit in with how other people behave	1	2	3	4	5	6	7
comparing my behaviour to other people	1	2	3	4	5	6	7
support from other people	1	2	3	4	5	6	7
conflict with other groups of people who use the place	1	2	3	4	5	6	7
being part of a group	1	2	3	4	5	6	7
feeling part of a community	1	2	3	4	5	6	7
seeing other people visit places like the one I have chosen	1	2	3	4	5	6	7
environmental factors, such as the weather	1	2	3	4	5	6	7
noise levels	1	2	3	4	5	6	7
how busy the place will be	1	2	3	4	5	6	7
the resources I have available, such as money	1	2	3	4	5	6	7
transport	1	2	3	4	5	6	7
how far away the place is	1	2	3	4	5	6	7

how much free time I have	1	2	3	4	5	6	7
my family responsibilities	1	2	3	4	5	6	7
how I see myself	1	2	3	4	5	6	7
seeing myself as part of a group	1	2	3	4	5	6	7
confidence in my ability to complete activity in my chosen place	1	2	3	4	5	6	7
how well I feel	1	2	3	4	5	6	7
my age	1	2	3	4	5	6	7
how vulnerable I feel	1	2	3	4	5	6	7
how good I am at handing situations	1	2	3	4	5	6	7
how much control I feel I have about my life	1	2	3	4	5	6	7
how good I feel about myself	1	2	3	4	5	6	7
my optimistic outlook	1	2	3	4	5	6	7
how safe I feel	1	2	3	4	5	6	7
how motivated I feel	1	2	3	4	5	6	7
having a specific goal that I set for myself	1	2	3	4	5	6	7
the rewards I get	1	2	3	4	5	6	7
the encouragement I get	1	2	3	4	5	6	7
how scared I feel	1	2	3	4	5	6	7
how anxious I feel	1	2	3	4	5	6	7
the emotions I experience	1	2	3	4	5	6	7
the stress levels I experience	1	2	3	4	5	6	7
how positive my mood is	1	2	3	4	5	6	7

Thank you for taking part in this questionnaire. By submitting your answers, you are agreeing that the anonymous data collected can be used for research and education purposes and may be published.

If you have any questions about the questionnaire, please contact:
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Appendix 15: Study 3 Participants chosen place and descriptions.

Name of your chosen place	Please describe the place you have chosen
Southampton	A place visited often, with fond memories, and things we enjoy doing
Salts Mill, Shipley	The best and most relaxing bookshop I've ever visited.
Spencefield Lane, part of running route.	It's a lane I run along and it is tree lined, I love seeing it changing with the seasons.
Caravan	Holiday home
Sutton Stop	Canal side
Mote Park	A beautiful park with a lake.
Dufton near Appleby-in-Westmorland	A small village near to the Pennines, on the edge of the lake district. It has one main street, a pub and a part-time shop
Waterstones coffee shop	Cosy, sunny, quiet, away from responsibilities, book fille
Portland, Dorset	My grandparents house which over looks Chesil beach. The view over the beach is my favourite view anywhere.
Poole	Holiday camp by the sea
National Theatre	The whole building of the National makes me feel calm but in particular sitting in the auditorium of one of the theatres
Alwalton - choir practise	Village hall
Isles of Scilly	Beautiful islands.
Crosby Beach	Long stretch of beach and sand dunes, boating lake, picnic area, fresh air sea breeze, long walks
Lake Dunmore, Vermont	It is a quiet, peaceful small lake in the Green Mountains of Vermont.
Ardnamurchan, Scotland	Edge of Loch Sunart, lodge overlooking the water's edge.
The Mendip Hills (although I could have chosen a number of other places too!)	The Mendip Hills are an area of high ground in Somerest. They are sparcely populated, full of archeology and skylarks fly overhead. From the South Western edge you can see across the So erset levrls to Glastonbury
Howth Cliffs	It's a secluded spot, under a tree, on top of a cliff overlooking Dublin Bay.
SamsÃ¸	a Danish island in the Baltic sea, which I have known from childhood on
Yosemite National Park	Mountains and valleys
Yorkshire Sculpture Park	Open Parklands with art sculptures and exhibitions. Some are permanent, some visiting.
Hayle beach	Beautiful beach and estuary
Skipton Castle Woods	Deciduous woodland containing walking trails, a beck and a dam
Whitby	Coastal town in North Yorkshire
My home	A detached very rundown house we bought 2 years ago with my redundancy money as the deposit. Slowly correcting the problems. It's a building site and a money-sink-hole but it's ours.
Seaside, moelfre	Holiday house a short walk from beach. Beautiful coastline.
Beach	Calm, quiet, windy, fun,
Planet Ice, Milton Keynes	It is the ice rink where I go each week to watch my team, Milton Keynes Lightning, play ice hockey
Westray, Orkney	A small peaceful island where I can see the sea and be myself
Seaton Delaval Hall	English Baroque Hall and grounds
Freddie's field	A small field next to where I live
Lizard Peninsula, Cornwall	Coast, beaches, seafood, geology
Centre Parcs	Holiday destination
Snowdonia	Rural and mountainous
London	City
Peterborough Rowing Lake	Rowing lake with path around for walking, trees, plants, wildlife. Sometimes an ice cream van in summer! Free parking.

Ballaugh Beach, Isle of Man	It's a quiet, pebbly beach near low sandy cliffs, but once you get over the pebble banks, you've lovely soft sand.
My therapist's office	It's calm, neutral colors with a warm feel. Large, comfy couch with many pillows. Soft lighting, pretty nature artwork and smells good.
Anglesey (beach)	Beach, coast line, sentimental family place
Pembrokeshire wales	Beaches, calm, seaside, old-fashioned towns.
Boxing Gym	A gym that specializes in boxing and kickboxing. It is staffed by trainers who specialize in martial arts and offers heavy bags, a ring, mats, and other specialized equiptment not usually found in general gyms.
Studland	Beautiful beach
Isle of Lewis	It is one of the outer Hebrides and has a mixed terrain of beach, peat bogs and rocky hills
Woolacombe Beach	Peaceful, open, light, fresh, invigorating.
In my lounge	On my sofa, in my lounge at home
Rivington	A hill, part of the pennines, from the summit you can see for miles .
Arran	Small island in the inner hebridies
Garden	My garden
Warwick riverside	Path through park, along river, in local town.
Weardale .	Moorland and former industrial lead mining
Lissadell Beach, County Sligo, Ireland	Beach on a bay surrounded by mountainscape and woodland. Low tide recedes so far you can walk for ages.
Maui	Tropical island
Broadhaven	Seaside village in Pembrokeshire
Camborne wood	A nature reserve
Northumberland	Countryside
St Ives	A small fishing village at the end of the world, full of light and beauty, even when it rains
Aunt's cottage in North Wales	Picture-postcard cottage - rMBLING WITH NO WI-FI ACCESS!
Malham Cove	Well known tourist spot, in summer the views are green, lambs are everywhere, the river rushes through the rocks. In the snow, the cove is covered in a thick white blanket and the landscape is so pure!
Golden Cap	High point on the Jurassic Coast path. Beautiful coastline towards Portland and Lyme Bay. Hinterland has the ruins of a medieval church - St. Gabriels. It is my 'think place' where I walk to reflect and recharge
The Centre for Alternative Technology	An establishment that works and educates on environmental issues
Blaen Bran	An accessible Welsh hillside
Slipper Mill Pond	A man made pond near to the coast, surrounded by reefs.
Grandfather's Bottom - sorry, that's the name! Part of Butser Hill, South Downs	A folded hillside, forming part of Butser Hill, covered in cropped grass - lots of rabbits - and stands of beech trees
Gurdwara	It's a calm temple
Lake District	Hills. Rain. Lakes.
Parsonage Spa	Relaxed environment, swimming pool surrounded by glass so looking out at beautiful scenery. Jacuzzi and steam rooms, relaxing lounge, loungers in the garden
Iron Monger Row Baths, Old Street, London	Restored Victorian thermal spa
My garden	My back garden - approximately 50m long made up of flower and vegetable borders and lawn.
My home	Where I live with my dog and husband
Las Vegas	City
Tooting lido	Its an open air swimming pool

Seaham seafront	rocky beach with marina
Norfolk coast	Long, sandy beaches
Village Hall	Village Hall
Home- where I grew up	It is the house where I grew up and where my parents still live.
Isles of Scilly	A group of islands off the coast of Cornwall, sparsely populated and with little traffic or development
Yoga studio	Tranquil peaceful safe
Bradfield, South Yorkshire	Village- divided into 2 areas, High Bradfield and Low Bradfield. Close to Peak District. Farmland, forests, river, reservoir, recreation area.
Whitstable beach	A Peebles beach on the edge of the Thames estuary
Living room sofa	Room
Tate Modern	An art gallery ; a meeting place ; a room with a view
Achill Island Co Mayo Eire	Remote, beautiful beaches, quiet, picturesque
Lough Corrib Ireland	a quiet lough that my parents always aspired to visit but could never afford to. Serene. Turbulent. calming.
British Camp	An ancient Celtic fort in the Malvern hills. It sits at the crest of one of the hills, and from it you can look across Worcestershire and Herefordshire
Chatsworth House	Stately home in beautiful countryside with stunning gardens with woodland and water features
Dartmoor	Expansive area of open moorland, woodland and Tors - stunning in the sunshine, â€˜atmospheric' in inclement weather.
Sennen Cove	Small Cornish cove close to Lands End
Allotments in Wolviston	It's an allotment. We have - as a family one of over 50 plots that sit just off the High Street in the village.
Riverfront	Beautiful, modern, clean, next to new houses, a river, coffee shops quiet paths for running, lots of benches where there can occasionally be homeless or people drinking.
Ladye Bay	A cove with a pebble beach, accessible only by coastal footpath. On the Bristol Channel N Somerset.
Nephin beg mountain	Huge mountain. Covered in clover and purple heather. Open to the elements
Siclo	It is a spinning studio
Felbrigg Woods	Tranquil woods which are manag d by the National Trust.
Underhill at Hambridge	3 grass fields at the top of two fields there is an awesome 360 degree view of the Somerset Levels with some church spires and other landmarks in the distance.
The Lake district	Idyllic
Salou	Holiday
Keeper's Pond	The summit of a mountain road
Dawlish Warren beach	Beach. My spot is a bench looking over the sand and sea
Lawrence Country - Eastwood environs	Semi-rural with significant historical industrial and literary connection
My home	It's my home and I feel safe and loved there
Lanzarote	Volcanic island. Hot and sunny. Breezy.
Garden	It has a lawn (mostly wildflowers and grass), borders with wildlife friendly flowering plants, hanging baskets, pots on decking and around an overly large studio at the back of the garden. It is very sunny.
Scartin books cafe	It is the quirky and homemade cafe of an lovely independent book shop close to wear I live. The food is simple and the service is slow but that is just right because you can read a bit of all the books you have choosen before deciding which you have to put back in order not to break the bank. It's warm in winter, cool in summer and the shops opening times are simply all day, every day except Christmas Day.
The British Museum	Museum of ancient artefacts from around the world
The Outwoods	English woodland
Home	My home
Strinesdale reservoir	Reservoir surrounded by woodland and fields

Mogg Eye Beach	Wild, desolate, quiet beach on the east coast.
Tynemouth Beach	A quiet beach with coffee shops
The beach	Shingle sloping beach with far reaching views of hills, cliffs and the Isle of Portland
Galicia	Beautiful, simple way of life. Relaxed.
Aberavon Beach	Three miles of golden sand and a steel works to the left
My garden	Large, rambling and overgrown, but quiet, private and mine.
SHAPE	NATO base
Aylestone meadows	Grasslands, wood and canal area
The Lake District	beautiful scenery, peacefulness
Bosisio Parini	It's a lake in the north of Italy.
Ogmore by sea	A beach in South Wales which is really long when the tide is out
Sea Palling	Beach environment with lots of defences
Saltburn Pier	The piers just out into the sea and covers part of the sand. All of my worries wash away and I feel as though my head is cleared
Coachmakers Pub	Quiet local pub
My living room	It's quiet, my own space, furnished with an oversized armchair and sofa, lots of cushions in my favourite colour, just my cats for company. There's only direct sun first thing in the morning so it's always cool and has a little balcony for fresh air
Taverna	It's a Polish pub with some boats and a fish tank.
Croyde	Peaceful surfer village
Old Leigh	A sea side resort, but very old fashioned and quaint. No arcades or modern day seaside traps.
TRamore beach, co. Waterford	A beach with a long walk and amusements, we always went there when I was a child.
Kendal	Home
Moors	Open moorland on the Pennines, with long views of wilderness, hills and reservoir
Local Park	Public park
Woods	A wooded area with trees, grass and a river
Cyprus - Dreamers Bay	Beautiful!!! Unspoilt coastline - small golden sandy beaches and rocks....beautiful blue-green crystal, clear sea.
Esherness	Remote coast
Joss bay	sandy beach undeveloped, has one shop, one toilet and one cafe. Nothing else. Huge bay, rarely full of people.
Marco Island, Florida	Idyllic small area that is near the sea,warm weather and beautiful wildlife
Burgh Marsh	A flat straight road that runs along the Solway Estuary.
Church - Hull Minster	Church
Boston USA	Distant relatives home - beautiful town by the sea
West wittering beach	A wide windswept beach with sandunes and beach huts and space and the sound if the sea and when the tide goes out you can paddle for miles.
Saltburn beach	Friendly, calm, peaceful, adaptable, ever changing
Cambridge	I studied there, it is an old town with narrow streets and a lot of history. About most streets I have very fond memories of friends
South of France	The French Riveria full of beautiful beaches and quaint towns
Mexico	Hot exciting best views
Brighton	Beach Town
Parents home	It is the house I lived in from 13-25
Humber bridge	Curved bridge, great views, can see the ferry that used to take us to our old home in Germany.
The canal	Beautiful canal
Bedroom	It's my bedroom

Newborough beach	Beach
My balcony in Peckham	6th floor balcony overlooking South London.
Library	Main library for Manchester City Centre. Designed with modern influences but retains original architecture.
Neighbour's kitchen	Kitchen of close friend where I regularly have coffee with her
Allotment	Peaceful, alive, green
New York	Clean vibrant breathtaking
Home	My home: has all my books.
Langdale , Lake District	Steep mountain pass , with panoramic views down into the valley
Castleton	Hilly rocks, crystals
The Meadows	Countryside, long grass, winding river, peace and quiet
Silver Park	It is a public park in Alliance, Ohio. It is a lot of green space with walking paths. The paths have varying elevation, though you could stick to one elevation if you do laps around the pond. There are several gazebos and picnic areas. There are multiple playgrounds. There are sports areas though I mainly stick to the periphery. There are lots of trees around the edges as well, so you can plan walks mostly in the shade if you like. Dogs are welcome. There are ducks and geese and a creek. Many events are held here, including several things for the annual city festival.
University Library	The city campus library of my uni
Witley	Small village in Surrey; lived there from birth until age 22
My mums garden	A large garden with a view of a lake and the pennine fells
White Horse Hill	The site of an iron age fort and the oldest hillside white horse in England.
Llyn peninsula	Coastal peninsula in North Wales where I have a caravan
Willi.Howard School	Work
Tindale Tarn	Remote, yet accessible tarn in the north pennines
My art studio	It's small with a work table, lots and lots of boxes and baskets of wool and fabric, book shelves, Little found objects such as seed heads and drift wood
Ireland	Anywhere in the country of Ireland
Applecross Pass, Scotland	The very top of a mountain road from Strathcarron to Applecross. The stopping place at the top is remote, silent & looks out across to Skye. Stunning scenery but the silence is the thing I love.
St Kitts	Idealic, serene, calm, beautiful, peaceful
Tenter End (home)	I live in a quiet, house 4 miles from the nearest town, Kendal. There is minimal to no light pollution. There are calming views to the East and North and we have lived here for twenty years.
Belvoir Park Forest	Protected forest park that follows the route of the river Lagan
Sirimi	Salon
Bramble Bush Bay	Quiet beach - nature reserve
Gym	Gym
Naturist foundation	A Naturist venue
Bethany Beach	American east coast beach resort
Manchester City Art Gallery	Art gallery with various exhibitions
Mauritius	Flat Golden sand turquoise sea empty as far as the eye can see
Ramsgate	Beach, home, family, calm, happy, escapism
Beach	Seaside- preferably devoid of other people
Brighton	Seaside town on the South coast
Queen Elizabeth country park	Woodland
Chester	A beautiful, historic city
The beach	Beautiful, summer or winter, low or high tide. It just makes me realise how powerful, relentless and mesmeric the sea is. Helps to totally detach myself from work.

Library	Public library
Sidcup Place	Public park, steeply sloped. Bottom grass & wooded parts, top more formal includes walled garden, paved walkways, play equipment & tennis courts
Oxton Hill Fort	A site of iron age earth works
Seaham beach	Cold, windswept in winter and lively in summer
Chew River	An ancient bridge over a shallow river. Ducks. Willows.
Whitby	Whitby in Yorkshire is a coastal fishing town.
Surrey Street Primary School	School where I work
On a mountain in the Rhondda	No people, lots of vegetation allowed to grow naturally, fresh clean air
Home	Garden terrace with a view of the whole town
Rickmansworth Golf Club	Golf course
Bristol Harbour	Open water, lots of cafes& bars overlooking water, lots of people enjoying both the water and land around
Lake District mountains	Mountains and countryside
The beach	The British seaside
London Rd station bright N	Lovely old Victorian suburban station 1877, railway line lined with trees, feels unlike surroundoing urban environment. Site of our community garden
Paddy's Gap	Shingle beach, high cliffs, multicoloured beach huts, rolling surf, seagulls, salt in the air,
Old Sarum	An old brother nee age/Roman/ Norman Hill fort
My garden	My garden, which has beautiful across to the Yorkshire Moors. The garden is small but has a rose garden, a pond and a winter garden bed. We built it in memory of our darling son who died aged 15.
My gym/leisure centre	It is quite a luxury place. It is immaculately clean and smells good. It has dimmed lighting. The facilities are excellent.
Bakewell	Village in the peak district
Downhill Beach	A quiet beach
Pavilion Gardens, Brighton	Outdoor cafe space overlooking Brighton Pavilion
Taylor Park	Local park with lake, woodland areas, play areas & cafe
My own garden table	Wooden table and bench, very weather worn, in small garden
RHS Harlow Carr	It is a Royal Horticultural Society grounds containing a variety of settings, ponds, streams, kitchen gardens, woods, bird hides etc.
Lake District	Calm
Golf course	Golf course, 9 holes and run by members. On hill overlooking village
Bath	It's the place where I get peace and quiet and feel relaxed.
School	My place of work
Wasdale Head	The end of the road, the head of the valley, surrounded by mountains and tumbling streams. Smells of broken and sounds of water over stones and sheep.
Grotto in Lourdes	Cave in religious sanctuary. Place of pilgrimage at which a child is said to have seen visions of Mary, mother of God 160 years ago.
My conservatory	Quiet let's in lots of light views of green garden can see the sky
Uplands	10 acres of grassland on a south facing hillside. Woods behind. View across towards the Mendip Hills
Beechenhurst	Area in forest with various activities, as well as plenty of space
Whitby	Seaside town on NE Enland coast
North dean leisure centre	Council run leisure centre
Beer	Quaint seaside fishing village
Ile de Sein, FinistÃ¨re, France	Flat island, few inhabitants, connected to mainland by a daily boat service in good weather. Site for migrating wader birds, resident unusual bird and fauna. Stony shoreline, exposed to the Atlantic weather. The island takes the full force of nature whether it be a microclimate of sun and warmth in the summer or gales and storm.

Holy Island	A small ialand off the coast of northumberland
East Beach	It is a part sandy part rocky beach on the edge of a harbour town
Holy Rood Church	A church
Local outdoor swimming pool	Outdoor swimming pool
Grasmere	Village in the lake district
Garden	Green, organised, planned, structured, healthy, calm, reflective, peaceful.
Lee on Solent beach	Old fashioned seaside town, beach. One arcade, fish and chip shop. Tea rooms Chinese restaurant. Beach is long and part pebbly. Overlooks the Isle of Wight. In winter the sea is bracing and majestic, in the summer it is calming and fresh
Falls of the clyde	Woodland with historic significance and seven unique waterfalls.
Adelboden, Switzerland	Beautiful village in a valley of the Swiss Alps.
Bergen	Mountain village in Switzerland. Still looka th3xsame as 100 years ago. The air is fresh. The weather varies.The sun sets early as the village lies in a valley.
Home	My house..an old converted parlour
My garden	Small Victorian terrace garden in a row of 3 houses - Waist height fences so it feels very open. The garden of a neighbours bigger house is behind the end fence and it slopes down towards a canal. From my garden I can see the canal and the other side of the canal with mature trees and fields behind that stretch for miles to a neighbouring village. My garden is bee friendly and although it is small there are lots of plants some that have been given as presents and others chosen by myself. It's very quiet and it feels like we are in the middle of no where.
Blickling Hall and Grounds	A large, open park
Minster Church Southwell	A tranquil exquisite old building in established grounds. Walked my wife around them while she was in labour before I drove her to hospital
Swanage	A beach and seaside town
Lake district	Rural landscape with mountains and lakes
Switzerland	Lake Geneva with the mountains behind it
Castell Dinas Bran, Llangollen	Ruins of a castle on top of a hill overlooking Llangollen in North Wales.
Overcombe Corner beach Weymouth	A pebble beach part of Weymouth bay
Gnoll Country Park	Country park with lake, playground, forest and cafe
Yumquera Andalucia Spain	Peaceful mountain village surrounded by olive groves
Beach	Wide open beach, very quiet and relatively untouched, gentle waves and blue sea.
Libraries	It is a place with books. Books of the philosophy, history and social sciences kind make me feel empowered and happy.
Garden	It is my back garden that I have worked on and cultivated over the past 10yrs
Garden st home	Quiet calm uncluttered safe
Weymouth	Weymouth is the seaside town where I go for a week's holiday every summer. It has a sandy beach, a harbour and is a traditional English seaside resort.
My garden and pool area	A green paradise
Home	It is an ordinary semi in a London suburb. It has a lovely bright kitchen over looking a wide green garden.
Winterbourne Gardens	Beautiful, well kept gardens. Always something to look at. Usually peaceful.
On My Motorbike	On my motorbike
Southwold	Coastal location in Suffolk
Clogher	The south western coast of Ireland, rural with rolling hills, beaches and cliffs
Warley Woods	Wood park
Lake District	National park with mountains and lakes, villages and views
Gym	Fairly new (less than 2 years old) gym privately run for the local council
Brighton beach.	Cobbled beach, steeply shelving.
Port gaverne cornwall	A cove, sea, pub

Rspb Sandwell	Nature reserve
Villa Park Football Stadium	Aston Villa football stadium
No a surf board behind the break	The sea facing the beach
Cot Valley	Serene, beautiful, calm, picturesque, relaxing
Parents house	Residential house in main road
Weare Street	A long country lane with woods on one side and fields on the other. Very quiet. Long hill.
Polzeath Beach	A beach
Maer Woods	Gently rolling hills and deciduous woodland. Bluebells in May.
Parents' home	An old house on a farm, miles from town
Abington Park	It is a park with lots of trees and lakes and a bird sanctuary
Horsell Common (Forest)	It's woodland that was across the road from where I grew up in Surrey. I live in Lincolnshire now which is rural but I will always miss the forest in Horsell Common, it's thick with heath, fern and evergreen trees.
Lesconil Harbour	Harbour in a small Brittany town we stay near on holiday. Small harbour with fishing boats. 4 or 5 bars/cafes. Nautical Centre. Small beach.
Elland road	Football ground
Mousehole	Small harbour in Cornwall
Depot, Lewes	Cafe, arts space, cinema, garden in centre of market town
-	A woodland camping site.
Uffculme Allotments	Community Allotment
Portreath beach	It's the closest beach to where I live. On the north coast of Cornwall - in the summer it's full of families and dog walkers, in the winter the sea can crash over the cliffs.
Boundary Park Lake	It is a small lake where open water swimming takes place l
LochTay Scotland	Mountains, loch, peace, quiet, beautiful views
Semerwater	Lake
Parents home	The place where I grow up and have spent most of my life at. Located at the countryside in the North of Sweden. Very quiet place and not a lot of people nearby.
Norway	Beautiful landscapes, frozen glaciers, pure white snow, northern lights
My garden	An oasis of calm in the humdrum of life
Meedhupparu, The Maldives	Paradise. Turquoise sea, flour like sand, unspoilt, peaceful.
Canterbury	It is the city where I grew up
My garden	Flower beds and trees, a small stream along two edges, vegetable patch, greenhouse and sheds
St Fagans National Museum of History	It's a place where buildings from all over Wales have been rebuilt to give a picture of life in Wales dating back to the iron age.
Liverpool	I lived in Liverpool most of my life And all of my family are still there. I no longer live there but visit as often as I can. Whenever I am there I feel safe, at home, surrounded by my loved ones and very nostalgic.
Bredon Hill	A hill
Garden at home	My terraced garden at the back of my house
furness abbey	ruin of a cistercian abbey and surrounding parkland and cafe
Beacon Hill Park	Park
La Rocque Beach	A beach with a small harbour
My garden	A fairly natural, wildlife and insect friendly acre of mixed planting and grassland
Beauty salon	A place where you can pay for treatments and chat to friends
Craster, Northumberland	There's a small fishing village, rock-pools, cliffs, cliff-top moorland, a ruined castle and a long sandy beach.
Falmouth	Seaside town in Cornwall
River Thames	Rover

Garden at parents house	Garden which has a stream next to a field of cows
A park in my town	Is a beautiful park with trees, grass zones and wooden benches.
North-y-Gest	Quiet beach, lots of jellyfish, you can see dolphins in the bay, beautiful sunsets
Parke estate (national trust)	Parkland with stream and various walks. Lots of trees.
Parish Church	Local chuch
Work - supermarket	Happy, fun, joyful, chatty
Treyarnon Bay	Beach
Budapest	The laid back, vibrant and warm capital of Hungary.
Bath tub	Hit it bubble bath with candles in a warm bathroom
My garden	Leafy, green, burgeoning, densely planted
Kefalonia	My favourite Greek Island
The Field	A field on a hill with some sheep, feral cats and a stable block
Back garden	100 foot long, surrounded on one side by trees, lots of fruit bushes & kids toys
My house in France	A newly built house in the French countrside
National Gallery	The national Art Gallery in Ireland
Home	It's my home. It is warm and safe and full of the things and people i love
Rowing lake	It is a manmade rowing lake but next to it is a river, which I like to walk by to feed the birds.
Cuningar Loop forestry park	It's a park with a play park and a bike track
Solomon's Temple	A stone folly on top of a hill that looks over the town with a wooded area below
South shields beach	Wide open sandy beach
Bristol	My home town
Kerry Republic of Ireland	Green, Quiet & peacefil
Moscow	Capital of Russia
Cambridge University Botanical Garden	Large Victorian botanical garden with a variety of flora, landscaping, grass, fountains, glasshouses and a RIBA award-winning cafe building
Llanddwyn Island	Sandy peninsula with lots of secluded coves and views of the Snowdonia mountain range
Home	End of terrace 3 bed
Brancaster beach	Sandy beach
Roundhay park, Leeds	Beautiful, open green space, a clean lake with swans, a lakeside cafe, trees, young peoole, hustle bustle
lac leman ,Geneva,Ch.	lake and Alp mountain region
Latsch	Mountain village in the Alps
The Quarter, Hanley	Bistro/restaurant
Hothfield Common	Heathland/woodland
Ravenor Park	Park
MoorGreen Fields	It is miles of golden corn fields with hills and the occasional dwelling. Its quiet qirh no road noise and an occasional chicken that might hop out of the corn. The fields are aurrounded by rough paths.
Garden	Leafy, green, pear and apple trees, space, sky
Saltburn by the Sea	Seaside with pebbly beach, sand, pier and little else.
Beach	Open spaces, sea, sand, breezy, sunny
The New Forest	Forests and moors with lots of stones and inclines, and wild horses.
Delapre Park, Northampton.	Historic House, gardens, parkland, woodland, golf course, historic Eleanor Cross.
Gym	Local gym to get fit
My parent's home	Large bungalow filled with love in the countryside. Peaceful and calming

The beach at newton by the sea	It’s a fabulous stretch of Northumberland coastline
Kilve beach	A pebble beach with big cliffs and little ponds and caves
Pub	It's a traditional pub
Llandudno	Beautiful seaside
My garden	It is small, quiet and my piece of heaven, It has a patio surrounded by over 20 pots of colourful flowers, a lawn and two huge weeping willow trees are its backdrop.
Malahide-Portmarnock coastal walk, Co. DUBLIN Ireland	Coastal walk
Prussia Cove, Cornwall	An area of Cornwall I've been going to with my family since I was born. It's next to the sea, quiet and secluded. I go every year and always spend some of the trip reflecting on the year past and planning for the year ahead.
Work place	Large, busy, welcoming
Auroville, India	It’s based out of city has a forest vibe. Very peaceful
West beach	Sandy beach
Mum and Dad’s house	Lived there for around 27 years- moved in and out as an adult. Only ‘home’ I’ve known. It’s where my mum, dad and cat live.
London	I always go every year with university friends to explore the capital city, the theatre and we have such a laugh.
Home	My family home
Home	My house
Guildford Cathedral	It is beautiful cathedral on top of a hill overlooking a city and university campus
Cala Llevado	Campsite
In front of the fire in my home house	It's a small living room in the house I grew up in. I think of it in the evenings when the fire is lit during winter months
Camber Sands beach house	Rented house on beach with views directly out onto sea, not overlooked, no street lights
Lake District	Woodland national park
York	Historical city with a minster
River Nene	It's a stretch of river at the end of Wadenhoe villahe
Garden room of my house	A light airy room, minimally furnished, big windows and bifold doors opening onto patio and garden.
My garden	Fresh spacious place of opportunity
Reigate Hill	Top of North Downs. Viewpoint. Cafe. Picnic area with walk along downs past Reigate Hill fort.
Wanamaker New Zealand	Resort on the edge of a lake
Back garden	Back garden
Aberystwyth	Welsh seaside town on the west coast.
Airlie beach, Queensland Australia	A beach
Starbucks, Manchester arndale	A quiet pocket within a bustling city.
Langdon Park Football Pitch	Grass and Goals but I bring my own equipment and this makes it feel like mine.
Zoo	Zoo
Naples, fl	Beautiful beach, warm weather, constant sunshine
Ogmore-by-sea	A beach
Pells Pool	It's a spring fed outdoor pool. Oldest in the country.
Central Park New York	The park has so many beautiful hidden spots - the lake, the flower gardens. I like the contrast between the peace of the park and the city.
Holbox	Island beach
Cilgerran	It’s a small village in rural West Wales. Very green and very quiet!

Brecon	Green, distant place. Away from all the stresses of work and home life. The views are spectacular and the air is clear.
Loch Carron	West coast of Scotland. Mountains, Sea, Lochs,Rivers, few people,
The Perch	Seafront cafe
University	Home away from "home"
Barton Broad	An expanse of water in Norfolk
Brookbottom	Country path in the hills. View across a farm with random animals.
Alpe d'Huez, France	Alpe d'Huez is a mountain in the French Alps.
Costa	A chain coffee shop that's only a small cafe and looks out onto the Harbourside Walk so you can people-watch
Eythrop	Countryside
France	Calm, good food, fresh air.
My bath	A lovely deep bubble bath in my ensuite bthrrom
Ellis Beach	Beach
Edinburgh	It's a busy city with loads of lovely people. Buildings are very old and quite gothic. The weather is usually raining, however it doesn't matter because rain or not it's still beautiful. The best view would be from the top of the Camera Obscura. You can see for miles.
British Library foyer	This is a beautiful architectural space with a cafe, near to King's cross train station. It is light and uplifting and contains a huge multi-storey glass display of exquisite books
Allotment	Beautiful allotment plot with views of hills
Filey Beach	beach
Summer home	It's a cottage by the lake
Gym	Small gym in a local leisure centre
St Ives	Seaside town south west Cornwall
Perry Hall Field	Large field surrounded by trees in centre of residential estate - pathways, exercise equipment, play area for children.
Chelston	Real community, greenary and child friendly
Assiniboine Foresr	A forest with walking trails in the middle of the city
Beech Avenue	A lane for pedestrians which has beech trees either side and views of corn fields and hills and town.
Chanonix	A ski resort in winter and a mountain sports resort in summer.
Conway Hall - the location of my favourite salsa social night	This is a multifunction Hall which is hired out regularly (1-2 times per month) for a salsa social event
Brighton beach	Clean, clear, nice smelling,
Nettle Hill	Open access Moreland. Flat hill top over300m
Study	A small room at the top of the house (two floors up) where I have my books, musical instruments and recording gear.
My garden	Recently finished after years of dreaming, planning and indecision, and yet always a happy work in progress. It has different places to sit, to eat, to play, and some of my favourite plants. Yet there is still place to grow and I enjoy seeing it change from day to day.
My Bed	Cosy, comfy, mine
My Garden	1/2 acre w flower beds, potager, wild area, ponds, greenhouse, writing hut, shed.
The beach	Calm, relaxing, soothing.
Walthamstow Wetlands	It is a wildlife and bird sanctuary, and a working reservoir
Woods	A little woodland
Tate Modern	It's an art gallery in London: enormous, spacious, gorgeous.
Book shop	The local Waterstones with cafe
Delaney	Friends flat overlooking estuary castle conwy

Bookshop	It's a bookshop selling old and new books in a pedestrianised street in the town centre and it's my business
Heathfield school	School- work place
Exercise class	Organised large group fitness class
the river stort	a river path with woodland and marshes
Home	My house
Skiathos	Greek island
Scarborough	A British seaside resort
The woods at the back of our house	Area of woodland
es castell	a recent holiday destination
Liverpool my grandads home	A city where I was born and lots of my family live
Anglesey	A rugged, coastal, peaceful island
Newgale beach	Beach
Derbyshire Peak District	The beautiful, dark rolling hills of Derbyshire.
Quaker Meeting House	A building which used (very long ago) to be a school, now a Quaker Meeting House. Single storey, in a residential street. One main room and three smaller spaces plus a lovely garden.
York	City
Home-Hebden Bridge	My front door opens on to a balcony over a little river, then there's a towpath and a canal. All this is at the bottom of a gorgeous green valley, about twenty minutes' scenic walk from Hebden Bridge
Newcastle	It is a city on the bank of the River Tyne. It has a variety of universities and colleges and great nightlife. I love the friendly northern vibe and whenever I go it's usually for an exciting reason like a concert.
Seaside	Open, peaceful, windy, by the sea
Front garden	My front garden
Hunstanton beach	A traditional seaside town with fun for all the family.
Blyth river	country park- river and woods
Thames path	Is the path that runs along the river Thames, running north from Osney up to Port Meadow
Jubilee Fields	Sports Club and pitches
Local nature reserve	Green, quiet, full of birds.
The Hive library	Large library
HSD73	Dance school
Blackrock, Co. Louth, Ireland	This is my home village which is by the sea. It overlooks beautiful moutains on the far side of the bay. And all of the small village shops overlook the bay.
Thornleigh Salesian College	A high school campus, with chapel, Provincial House for the Salesians in Great Britain, lovely grounds
Hope Cove, Devon (Karrageen campsite)	Beautiful view of hope cove. No traffic. Bird song, rolling hills, quiet, peaceful. Sunshine.
Whitby	It is a seaside tourist attraction town with links to the goth culture.
Squirrel Park	Park and Footpath through trees
Old Trafford Football Ground	Football ground
Wytham Woods	Mixed broadleaf woodland
The Ridgeway	It is an old route across England. Now it is a natural broad path running across the crests of hill south of Oxford. It runs through mainly farmland and has wide views.
Lower Coldwell Reservoir	Upland reservoir- approx 14.5 acres in size
Paignton	Seaside resort
Cap d'adge	Beach and campsite

Mylor Yacht Harbour	A bustling yacht harbour with sailors tending to their boats. The sounds of tbe sea, seaguls and people enjoying the beach and the summer sailijbg season.
St Bridget’s Nursery	Garden centre
Woodland and at my family home	Deciduous woodland bear a road and next to fields
Parents house	The house where my parents live
Vallee d'Ossau, Pyrenees France	Countryside mountains everywhere and rivers streams cascades.
Langkawi	A beautiful bungalow by the beach. Has a garden. Can see the expanse of the sea from its balcony. Calm & secluded.
PollenÃ§a	Tip of an island with beautiful beaches
STAITHES	Seaside village
St Martins Church, Broadmayne	This is a traditional old village C of E Church in the village that I grew up in. It is by the main road, next to the graveyard.
MossLea	Lake with log cabin amd lots of trees
Parents	Comfort
Kirby Hall	English Heritage site, partially ruined building and restored formal garden
Beaver Island, Michigan	An island in the center of Lake Michigan
Framlingham mere	Body of water opposite castle
The paddock	A paddock field with wild flower meadow and seating
Birling Gap	Coastal cliffs with are being eroded by the sea. I love the to feel the power of nature that there is on this place.
Story house chester	Library, theatre, cinema, bar, restaurant
Newcastle town centre coffee shop	Coffee shop
Conwy	Medieval walled town at the mouth of the River Conwy, castle, marina, parks.
Norfolk Broads	Big skies, rivers, peaceful, nature.
Methana	Home in Greece
North Yorkshire Moors	A National Park of moorland, hills and valleys. Open to all elements and natural in every way.
Pontefract park	Lots of open air walks, lake with birds, race track used for race meets, playing park for children
My childhood home	Warm, welcoming, comforting, cosy, full of love and laughter
Bridgewater Canal, Sale, Manchester	A stretch of the Bridgewater canal that runs between Sale and Altringham
Bee	Warm and comfy, no danger
My garden	My garden is outside my flat. It’s messy but I love it.
Lake	A lake
Kirkcudbright	Town in Galloway, SW Scotland
Thurstaston Hill	A wooded hill with views out to sea
Brecon Beacons	Mountainous, natural, open, deserted, quiet, beautiful.
Ponteland	Large village. Lots of amenities, loacsl shops, good schools.
Potters Leisure Resort Norfolk	Fun, comfortable, exciting, family, sea, beach, open
East Runton	Holiday destination
Brighton	It’s the seaside
Band on the Wall	A live music venue
Allen’s gdns	Allotments and eco house
My home	The place I chose is my home. Near the front balcony isn’t favourite spot because it’s so bright and sunny and I can open the door and breathe in fresh air
The beach	Shoreline. Beach. Cafes. Coffee shops.

Nova Scotia	By the sea, remote, wild, nature
River Thames	Beautiful river winding through south east England
Spain	Warm, relaxing
Beauvale	Open country side, country lanes, tea shop
Barmouth	A caravan walking distance to the beach at Tal-y-bont, lots of fresh air, space and walks. The sound of the sea can be heard constantly along with the sound of birds and children playing.
Old Trafford	A football ground - 85000 people
Sligo	Relations family home where I spent many childhood holidays
Brighton	Town and beach
Chefchaoen	Blue city of Morocco
Banstead Woods	Woods
Costa Coffee	A symbol of me relaxing away from things that stress me
Granville, France	A small French town and seaside resort in Normandy
Dublin	Friendship
Garth Mountain	A mountain that straddles the two villages my parents were born in, with views as far as Cardiff on one side, the Brecon Beacons the other. It's just beautiful, and I have so many memories attached to it, from waking up there with my gramps to just getting the feeling of home when I see it.
Sheringham beach	A beach
Clontarf	A residential seafront area approx. 20 minutes from the city centre. It has a walk way by the sea and cafes.
Saddlewirth moor	Moorland area with villages and stunning scenery
My home library, a distinct room in my house, bookshelves on every wall	Room, bookshelves, desk, Persian carpet, green walls, two leather armchairs, piles of books and magazines and literary supplements.
Beach	Sandy, pebbly beach with sea that's a surfers paradise
Phoenix Park	Largest urban park in Europe
VC office	
Saltburn	Beach
Wengen	A small swiss mountainous village
Meditation group West Kirby, Wirral	My friend's conservatory
Entwistle reservoir	Lovely reservoir which is accessable to all. Great footpaths and bridleways for walking, cycling and running. Good pubs near too!
Garden at parents'	
Constantine Bay Cornwall	Beautiful beach
Broadstairs	Small seaside town on the Kent coast
Jamyang Buddhist Centre	Buddhist Gompa
Punblic library	It is the local public library (still run by the council - not volunteers). It is not large and it doesn't have a lot of technology or events but it is my haven.
Braemar	Small village in the cairngorms, Scotland
Grasmere	Lake District village
Millhouses Park	A reasonably quiet park with a river
2000 Trees Festival	A relatively small, independent music festival
Muker	typical English countryside
Crail in Scotland	Beautiful, tranquil and lots of family memories
My garden	its my garden - a blank canvas that I am slowly transforming into my own piece of gorgeousness
My allotment	Peaceful, beautiful, safe, quiet & friendly

library	
The lake	A man made lake
Richmond Park	A very large public park (with roaming wild deer on it)
Maldon, Essex	My home town, the place I was born and raised.