

Negotiating place :
**an exploration of the educational potential of practising
spatial design with primary and secondary pupils in three
schools in England**

Thomas Samuel Bellfield

Homerton College
University of Cambridge
April 2019

This dissertation is
submitted for the degree of
Doctor of Philosophy

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This thesis is the result of my own work and includes nothing which is the outcome of work done in collaboration except as declared in the Preface and specified in the text.

It is not substantially the same as any that I have submitted, or, is being concurrently submitted for a degree or diploma or other qualification at the University of Cambridge or any other University or similar institution except as declared in the Preface and specified in the text. I further state that no substantial part of my thesis has already been submitted, or, is being concurrently submitted for any such degree, diploma or other qualification at the University of Cambridge or any other University or similar institution except as declared in the Preface and specified in the text.

It does not exceed the prescribed word limit for the relevant Degree Committee.

Negotiating place:

an exploration of the educational potential of practising spatial design with primary and secondary pupils in three schools in England // Thomas Samuel Bellfield

Abstract

This thesis investigates the educational potential of practising spatial design within primary and secondary schools in England. Four gaps in the literature were identified: the possibilities of children engaging proactively in the relationship between architecture and education; a theoretical and empirical understanding of ‘negotiation’ as a model of transformative participation; accounts of participatory design that interrogate and make visible the messy and complex; and qualitative analytic approaches that are relational and spatial.

The thesis first develops a relational understanding of the practice of spatial design as inescapably contingent and political, able to operate in both dominant and nondominant modes, each with different educational purposes and potentials. Second, it investigates how the mode of spatial design is operationalised through exploring empirically how different negotiations manifest and unfold during its practice, including the effects of the methods and methodology used. The empirical research drew on a Design Anthropological approach, supported by elements of Critical Art Practice, and was undertaken through the researcher’s active role in three spatial design projects, each using various design methods: explorative walks, examining precedent projects, drawing, and physical modelling. Two took place in English primary schools and one in an English secondary.

In this study, *material*, *care*, and *time* are identified as key elements of method and approach that directly affect the mode of participation operationalised within spatial design practices. The study also demonstrates how schools continually produce and are produced-by negotiations between the human, material, policy, regulatory, and financial threads that comprise them; how these negotiations manifest and unfold during design and inhabitation through *uses of material*, *care*, and *time*; and how the particular qualities of materials, care, and time used are thus central to the nature of negotiations and by-extension practices of design and inhabitation.

The spatial analytic approach taken shows architects and educationalists the importance of attending to what happens during spatial design, not simply its methods and outcomes, and offers a means to do so. Architects and designers will realise through this study that reflexive, attentional participation is essential to developing relational understandings of inhabitation within schools, and that serious consideration of material-, care-, and time-use is fundamental to this. The study demonstrates to educationalists and policy makers the negotiated, contingent nature of architecture and education’s relationship and thus the value of practising spatial design in schools as a means to continually raise and engage with questions concerning the how, why, and where of education.

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List of abbreviations and acronyms

AHRC	Arts and Humanities Research Council	
BA	Bachelor of Arts	
BB	Building Bulletin	
BSF	Building Schools for the Future	(2003 — 2010)
CABE	The Commission for Architecture and the Built Environment	(1999 — 2011)
DA	Design Anthropology	
DBS	Disclosure and Barring Service	
DCMS	Department for Culture, Media, and Sport	(since 1997)
DfES	Department for Education & Skills	(2001 — 2007)
DfCSF	Department for Children Schools and Families	(2007 — 2010)
DfE	Department for Education	(2010 — 2017)
EFA	Education Funding Agency	(2017 — present)
EFSA	Education Funding and Skills Agency	(since 2017)
eFSM	Eligibility for Free School Meals	
MArch	Master of Architecture	
MAT	Multi Academy Trust	
PSBP	Priority School Building Programme	(2011 — 2015 — 2021)
RIBA	Royal Institute of British Architects	
SCABAL	Studio Cullinan and Buck Architects Ltd.	
SSoA	Sheffield School of Architecture (The University of Sheffield)	

Key definitions

Education

Unless explicitly stated or in reference to another's usage, this thesis understands education thus: Following Biesta (2010, 2013/2016, 2015) the term 'education' is understood and used herein to encompass three "functions". Namely: "qualification", "socialization", and "subjectification" (2009, p. 36). The first concerns the development of "knowledge, skills, and dispositions" (2013/2016, p. 128). In this way, it is closely linked with – although not restricted too – the contribution of education to "the preparation of the workforce" and by extension "economic development". It is therefore, Biesta writes, "one of the major functions of organized education". The second is about the "many ways in which, through education, we become members of and part of particular social, cultural and political 'orders'" (2009, p. 40). Biesta contends that because "education is never neutral" *socialisation* is "one of the actual 'effects' of education", whether "actively pursued" or not (*ibid.*). The third function of education is to do with how education shapes processes of "becoming a subject" (*ibid.*) – or, to use Ingold's phrasing: processes of "*human becoming*" (Ingold, 2018a, p. 32, original emphasis). This third function, Biesta notes, works counter to that of 'socialisation' in that it is about the ways in which "any education worthy of name should always contribute to processes of *subjectification* that allow those educated to become more autonomous and independent in their thinking and acting" (2009, p. 41). Biesta acknowledges this is the most contentious of the three functions, with some arguing the "actual influence of education can be confined" to the former two functions alone (*ibid.*). These three functions, Biesta continues, do not work in isolation but overlap, with their 'balancing' an ongoing task that concerns "judgement about what is educationally *desirable*" and that falls to the responsibility of the 'educator' (2013/2016, p. 130, original emphasis). I develop these ideas further in chapter 2 (particularly 2.5).

Spatial Design

Unless explicitly stated or in reference to another's usage, the term 'spatial design' is used herein to refer to situated social practices concerned with the design of 'space' and/ or 'place', where the terms 'space' and 'place' are defined as per the radical geography of Doreen Massey (2005). See chapter 2 (2.3) for further detail. Accordingly, while the term 'spatial design' may refer to the 'design' element of 'participatory design' practices it might also be used in ways that are far from 'participatory'. In seeking to balance the advantages of specificity with breadth, this definition seeks to avoid limitations brought about by rigid linkages with the 'physical realm' or particular definitions of 'architecture', which can themselves be overly narrow, broad, or complex.

Preface:

One of three

This is the third of three doctoral studies to unfold within a collaboration between Dr Catherine Burke – an historian of education in the Faculty of Education at the University of Cambridge – and Dominic Cullinan – a practising architect and partner at SCABAL, a small architecture practice specialising in the design of educational environments, with a focus on schools. One of three, it benefits from collaboration between myself, Emma Dyer, and Karolina Szynalska: three doctoral students treading individual paths that both intertwine and diverge along their many tangents. Each study also gains from collaboration between academia and practice: connecting with a wealth of perspectives and experience within the Faculty of Education (the University of Cambridge) and the wider academic community; as well as within SCABAL and the wider communities – professional and other – of design, architecture, the built environment, and education. All three studies are funded by the Arts and Humanities Research Council (AHRC), under the Collaborative Doctoral Award (CDA) scheme, whose guidance explicitly states that research should: (1) emerge from genuine collaborations of mutual benefit; and (2) contribute to “a significant gap in our thinking” within the interdisciplinary field of school design (Arts and Humanities Research Council (AHRC), 2013).

ed pupil numbers

ers underpin the allocation of both Condition Allocations. These allocations to reflect a number of factors:

Phase and type of pupils – primary boarding pupils have different weightings. These weightings apply to allocations.

School modernisation – schools placed or refurbished in the last Property Data Survey. For any school, pupils has a 50% weighting and have lower maintenance need. Phases one and two of the Priority above modernisation criteria below summarises the treatment only to School Condition Allocation.

School location – location numbers to reflect the different factors apply only to School Condition Allocation.

Voluntary aided schools (no more than 90% to the circumstances), so will not have access to a Condition Allocation.

Type of school
PFI schools
Modernised schools
PSBP school modernised
PSBP school modernise

⁵ Building C
⁶ DFC typical
⁷ Calculator

Devolved Formula Capital methodology

Devolved formula capital (DFC) is direct funding for individual institutions to their buildings and fund small-scale capital projects. It is allocated to maintain nursery, primary and secondary schools, special schools, pupil referral units, academies and free schools, non-maintained special schools and sixth form colleges. It is also allocated to those specialist post-16 institutions that have eligible state-funded pupils.

Each institution gets a lump sum of £4,000 and a variable amount based on the pupil numbers multiplied by the appropriate rate per pupil^{8,9}. These weightings are applied at the pupil rather than school level. This means that a school with 50 primary pupils would have phase-weighted pupils of $(50 \times 1) + (500 \times 1) = 550$. The number of phase weighted pupils is multiplied by the per-pupil rate of £11.25. The number of phase weighted pupils is multiplied by the per-pupil rate of £11.25 to get the pupil numbers based element of DFC. For the previous example, the school would receive $550 \times £11.25 = £6,187.50$; in addition to the lump sum this would result in a total DFC allocation of $£6,187.50 + £4,000 = £10,187.50$.

Figure 3: Funding rates for Devolved Formula Capital allocation

Phase	Phase-related weighting	Non-boarding pupil rate	Boarding pupil rate
Nursery / Primary	1.0	$1.0 \times £11.25 = £11.25$	$3.0 \times £11.25 = £33.75$
Secondary	1.5	$1.5 \times £11.25 = £16.88$	$3.0 \times £11.25 = £33.75$
Post-16	2.0	$2.0 \times £11.25 = £22.50$	$3.0 \times £11.25 = £33.75$
Special / PRU	3.0	$3.0 \times £11.25 = £33.75$	$3.0 \times £11.25 = £33.75$

The allocations are calculated afresh each year to reflect the latest pupil numbers. In order that DFC allocations can be paid alongside SCA, the 2019–20 allocations are based on the spring 2018 school census and 2017/18 Individualised Learner Record. Pupil numbers taken from the census are all pupils on roll and registered as a sole or dual main enrolment. Any new schools or academies opening after the spring 2018 census will not receive a DFC allocation for 2019–20.

Local authorities receive the DFC payments for their maintained schools and the LAs are required to pass on these allocations to the schools. Academy trusts and other institutions receive their DFC direct from the DfE. Local authorities will receive a DFC payment for all those maintained schools that convert to academy status after 1 April 2019. They are required to pass this on to schools in the usual way, regardless of conversion status.

⁸ For voluntary aided schools, both the lump sum and per pupil rates are uplifted by the VA factor.
⁹ Specialist post-16 institutions will only receive DFC or SCA if they have any eligible state-funded pupils.

1 Introduction

1.1 Working to work in a minor¹ key

A minor key is always interlaced with major keys—the minor works the major from within. What must be remembered is this: neither the minor nor the major is fixed in advance. The major is a structural tendency that organizes itself according to predetermined definitions of value. The minor is a force that courses through it, unmooring its structural integrity, problematizing its normative standards (Manning, 2016, p. 1).

This thesis works to work in a minor key. It works to ‘unmoor’ and ‘unsettle’ the “normative standards” of the major keys that course through the fields of design, education, and research (*ibid.*). It is not always successful. It does not always break free, but often remains tied by how and what major keys determine can and can’t be done, what can and can’t be said. In this way, the effects of major keys can be found and felt throughout: within the research’s rationale, approach, and undertaking, as well as within this document’s contents and format. In places such influence is visible: the use of printed 12-point text on A4 paper and a line spacing of 1.5. In others it is less so: the parameters set by the research being situated within a social science rather than humanities faculty², for example. Likewise, some effects are more important than others.

The primary (minor) narrative of this thesis comprises 5 parts. To represent the major keys that course through the fields of education and design and which this thesis aims to unsettle, an additional narrative is woven through these – manifesting in the divides between them. Comprising photographed snap-shots of pages from some of the *major* documents that currently influence the lived reality of school design and education, its purpose is to re-connect the reader with this reality, tethering them to it in reading, as I have been in its undertaking.

¹ The concept of ‘minor’ and ‘major’ is developed by Deleuze and Guattari (e.g. 1983, 2004). It is explained more fully in chapter 2, section 2.5.

² The ‘limits’ faced by architecture students who find themselves studying within social science, humanities, or engineering faculties exemplify such hidden parameters.

1.2 Rationale

This thesis is about the educational potential of practising spatial design within school as a means to expose, generate, and support ongoing negotiations concerning the *how*, *why*, and *where* of education in ways that support imaginative explorations into how education might otherwise be. The thesis, explores, describes, and analyses the nature of emergent interrelations between designers, children, and materials engaged in negotiations by means of spatial design. Through doing, it demonstrates how such negotiations manifest and unfold during design and inhabitation through varied use-practices and how particular elements of methods and approach are central to the nature of negotiations and by-extension practices of design and inhabitation. The empirical research draws on a Design Anthropological approach, supported by elements of Critical Art Practice, and is undertaken through my active involvement in setting up, facilitating, and analysing three participatory spatial design projects, two within English primary schools and one within an English secondary.

Existing literature is by no means united as to the nature and significance of the relationship between education and the environments in which it takes place (e.g. Higgins et al. 2005; Weinstein, 1979; Woolner, Hall, Higgins, McCaughey, Wall, 2007). It is suggestive nonetheless of the possibilities of children engaging pro-actively in it by means of spatial design (e.g. Birch et al., 2014; Blundell Jones, 2007; Blundell Jones, Petrescu, & Till, 2005; Hofmann, 2014; Parnell, 2015).

The divergent positions found within the literature is reflected in the differing approaches taken by the Building Schools for the Future capital investment programme (BSF) and the Priority School Building Programme (PSBP) that replaced it. BSF aimed to create transformational environments that were themselves instrumental in transforming the social and educational processes that play out within them, making ‘participation’ in the design process mandatory (Futurelab, 2008, p. 4; Department for Education and Skills (DfES), 2003). PSBP seeks to control uncertainty in both cost and time, arguing there is little evidence to support

the expense of either beyond the bare minimums required, banishing participation accordingly (James, 2011; Parnell, 2015).

In 2013, the *Farrell Review of Architecture and the Built Environment* was published (Farrells). In the first of five concluding sections it argues the ‘built environment’ should be taught across the primary and secondary curriculum to help “young people to develop the widest creativity and problem-solving skills, which are essential for the creative industries, and to develop an understanding of what the built environment professionals do” (p. 160). While this call is to be broadly welcomed, its positioning of built environment education as subservient to market forces is deeply problematic: for it frames the purpose of spatial design practice as a means to perpetuate, not to challenge or transform, dominant agendas. Likewise, while the RIBA’s recently launched National Schools Programme (2018) is also to be welcomed for supporting the practising of spatial design in school, this too is a participation-in-waiting – a ‘promise’ of future participation once the requisite knowledge and skill has been acquired – and is therefore also problematic.

Instead, I contend the foremost purpose of spatial design practice within school must be the empowerment of people (individually and collectively) to bring about change within their everyday lives, within and beyond the school, through their participation in processes of questioning, developing, subverting, and adapting the environments in which education takes place, as well as the methods and purposes of education itself. This builds on the work of, among others, Biesta, Burke, Cullinan, Deleuze & Guattari, Giroux, Ingold, Manning, Massey, Parnell, Till, Ward & Fyson, and Woolner, and is driven by my experiences working with children and adults across a range of design projects (Appendix J).

In developing new knowledge about how human and nonhuman interrelations manifest and unfold during spatial design with children, including the effects of the methods and approach used, this thesis develops a theoretical and empirical understanding of ‘negotiation’ as a model

of transformative participation, contributing to Till (particularly 2005; also 2009b) and Massey's (e.g. 2005) respective theories of 'participation' and 'space' through doing. The spatial analytic approach and detailed accounts of practising spatial design with children developed respond to calls for research concerning participation with children to " 'go relational' and 'go spatial' " (e.g. Mannion, 2007, p. 417), extending this to include nonhuman relations too. This contributes to the identified paucity of qualitative analytic approaches that are relational and spatial; and of existing literature concerning spatial design with children that moves beyond focusing on methods and outcomes to interrogate and make visible the "complex, incomplete, and messy process" in-between them (Gallacher & Gallagher, 2008, p. 508).

The study touches with work in a number of fields not explicitly engaged with: the established literatures of student-voice, play, art education, environmental education, and design technology education, for example. This is not because these literatures are irrelevant. For instance, the kind of art education articulated and called for by Biesta (e.g. 2019) resonates deeply with the nature and purpose of practising spatial design in school developed herein, as well as with the kind of art practice Ingold aligns with the particular anthropology he develops (e.g. 2013b, 2018a, 2019), on which I draw. Rather, their omission is simply the result of walking other paths, as guided by the study's focus, coupled with the limits imposed by the overarching doctoral framework.

This study will assist architects, building contractors, children, designers, educationalists, teachers, and researchers in practising spatial design within schools as a means to expose, generate, and support ongoing negotiations concerning the *how*, *why*, and *where* of education in ways that develop relational, spatial understandings of inhabitation and support imaginative explorations into how education might otherwise be.

1.3 Research questions

This study addresses three research questions. The first emerged in collaboration with SCABAL and served as the departure point for the review of literature presented herein (chapter 2). The second two were developed through this review and in continued collaboration with SCABAL. They are explored through the empirical work undertaken.

rq.01

What might be the educational potential of spatial design within the context of the English primary and secondary school?

rq.02

How do place negotiations manifest and unfold during spatial design with children?

rq.03

How do aspects of the methods and approaches used affect how place negotiations manifest and unfold?

1.4 Research approach

Applying an anthropological approach to educational research

This study contends that the educational potential of spatial design practice lies in its *minor* use as a means to ‘expose, generate, and support ongoing negotiations (of place) concerning the *how*, *why*, and *where* of education, in the context of school’. Central to the practice of spatial design conceived this way is the active raising of and engagement with questions concerning how and why we live together, a practice which – following the anthropologist Tim Ingold – lies at the heart of Anthropology: in his words, to practise anthropology is to undertake “a

generous, open-ended, comparative, and yet critical inquiry into the conditions and potentials of human life in the one world we all inhabit” (2018a, p. 22).

This thesis uses anthropology in two ways: first, proposing it as a methodology through which spatial design practice can become minor, enabling it to realise its educational potential; and second, employing it as a methodology that guides the empirical educational research presented herein.

Anthropology by means of design

The approach to empirical research taken draws on Gatt and Ingold’s approach: “anthropology *by means of design*”, which is “inherently experimental and improvisatory”, aiming to “[move] forward with people in tandem with their desires and aspirations rather than looking back over times past” (2013, p. 141, original emphasis). Situated within the relatively new field of Design Anthropology, this approach is underpinned by a particular understanding of the world – as ‘a meshwork of things’, rather than ‘a network of objects’ – wherein human and nonhuman trajectories (life lines) relate with one another according to the principles of ‘correspondence’ rather than ‘interaction’. This particular anthropological approach guides the empirical research in the following key ways:

(1) *It frames the purpose of spatial design as speculative rather than deterministic*: not a means to “zero in on the best solution” (Brown, 2009, cited in Halse & Boffi, 2016, p. 91) but to “raise new questions” through “playful, experimental and open-ended” methods that “insist on the importance of specific manifestations, yet explore issues that are unsettled, speculative and imaginative” (Halse & Boffi, 2016, p. 91).

(2) *It foregrounds the importance of my “active participation [...] in building relationships and making things – that is, in contributing to the unfolding happenings in fieldwork”* (2013, p. 148, my emphasis). This guides my taking an active role in setting up, facilitating, and analysing the three spatial design projects undertaken.

(3) *It re-frames participant observation as ‘observant participating’*: whereas the former describes the role of the researcher who researches the ecosystem of a stream by observing it from a position upon its banks (or indeed from the safety of a boat or bridge), the later describes the role of the researcher who dives into the mid-stream, joining *with* the multiple life lines of the ecosystem – moving forward with them attentively, following wherever they might lead.

(4) *It frames the mode of analysis as speculative rather than descriptive*. This shifts the purpose of analysis away from the investigation of events through “descriptive fidelity” (Ingold, 2018a, p. 23) and toward their exploration in ways that bring them into presence, thereby developing new understandings in ways that create new openings by which life might continue. Guided thus, I employ the analytic practice of ‘Site Writing’ (Rendell, 2010), supported by techniques found in layered approaches to auto-ethnography (e.g. Pitard, 2016; Ronai, 1995).

Three spatial design practices, in three schools

Three spatial design processes were undertaken in three English schools, two primary and one secondary. Each employed various design methods – explorative walks, examining precedent projects, drawing, and physical modelling, for example – as a means to expose, engage in, generate, and support negotiations concerning: how particular places within the school are used, including what for and by whom; how such places might be used in different ways, for different purposes, and by different people; as well as how, through its re-imagining, a place’s design can support and encourage its use in different ways, for different purposes, by different people.

School T and S were chosen due to existing relationships and the understanding that the proposed research would work to support and enhance ongoing work to the school’s existing fabric. School U was approached due to it representing a valuable opportunity to interrogate the workings of a newly built and carefully designed school *with* those who inhabit it.

1.5 Chapter synopsis

I

Chapter 01: Introduction

II

Chapter 02: Literature review

Chapter 2 brings together conceptual and theoretical resources from the fields of design, education, geography, anthropology, and philosophy in novel ways that shed new light on practising spatial design with children, in the context of school.

Departing from *rq.01*, it begins by identifying the need for and potential of children participating in the relationship between education and the environments in which takes place; as well as the need for a new model of participation. Responding to this, it draws on the work of Jeremy Till (particularly 2005), among others, to frame participation as processes of negotiation and to posit *spatial design practices* as modes of negotiation that are particularly suitable.

Next, Till's framing of 'participation as negotiation' is developed, particularly the concepts of 'transformation' and 'negotiation': first, through Massey's relational conceptualisation of space (particularly 2005); and second, using Deleuze and Guattari's philosophy of the minor (1983, 2004). This leads to discussion concerning the educational potential of negotiating *by means of* spatial design: with a weak education (Biesta, 2013/2016) and poor pedagogy (Masschelein, 2010) aligned to the minor key posited as a model of spatial design practice that might enable the exposition, engagement in, and generation of ongoing negotiations (of place) concerning the *how*, *why*, and *where* of education. This leads to the posing of research questions 02 and 03. It concludes by continuing to draw on a 'minor' philosophy, together with the anthropologist Tim Ingold's theory of correspondence (2016) to develop the theoretical lens

of ‘*human and nonhuman relating*’, which guides the subsequent empirical investigation into research questions 02 and 03.

Chapter 3: Methodology

This chapter sets out the methodological approach taken in order to investigate empirically the research questions posed. First, the particular research approach taken – *anthropology by-means-of design* (Gatt and Ingold, 2013) – is set out, and then situated within the broader currents of Design Anthropology. Second, the overall research design is presented. And third, the spatial design and qualitative methods used to generate and interpret data through my active involvement in setting up, facilitating, and analysing the three spatial design projects undertaken are discussed. Ethical considerations weave through the discussions of methodology and methods.

III

Chapter 4: Research narratives & emergent findings

Analysis and findings build upon the knowledge pertaining to design, education, and participation developed and reported in II. Research questions 02 and 03 are investigated through describing and analysing some of the human and nonhuman relations experienced through my active involvement in three spatial design projects: primary school T, secondary school S, and primary school U, respectively. This is done through the construction of three analytic ‘site-writings’, which together form a stand-alone account of practising spatial design in school, contributing to a key gap identified in the existing literature. Key emergent findings are identified and set out at its conclusion.

IV

Chapter 5: Discussion

Chapter 5 discusses and interprets the study's findings in relation to the literature through the respective lenses of the research questions posed. It also considers the contribution of a design anthropological approach to educational research, including consideration as to how it offers an innovative approach, as well as some of the challenges it raises.

V

Chapter 6: Conclusion

This chapter begins by responding to each of the research questions posed, before continuing to explain how the thesis contributes to knowledge. Next it suggests directions for future work in the form of recommendations for research, action, and policy. It concludes with an afterword.

Basic teaching for primary
Basic teaching area for primary

- classrooms (enclosed opening onto shared)

1. Basic teaching

The total area (except for classrooms in main)

Figure 8 shows the area

- la
- alle

Whatever types of activities shows the area 9 illustrates the

Activity
Group discussion teaching
Table-based classroom work
Individual, group based work
Science and art and glue
2D and 3D Design working with a as card or work
All activities a

Figure 8: Act

gross area range:
 $430 + 7.85N$
of maximum net

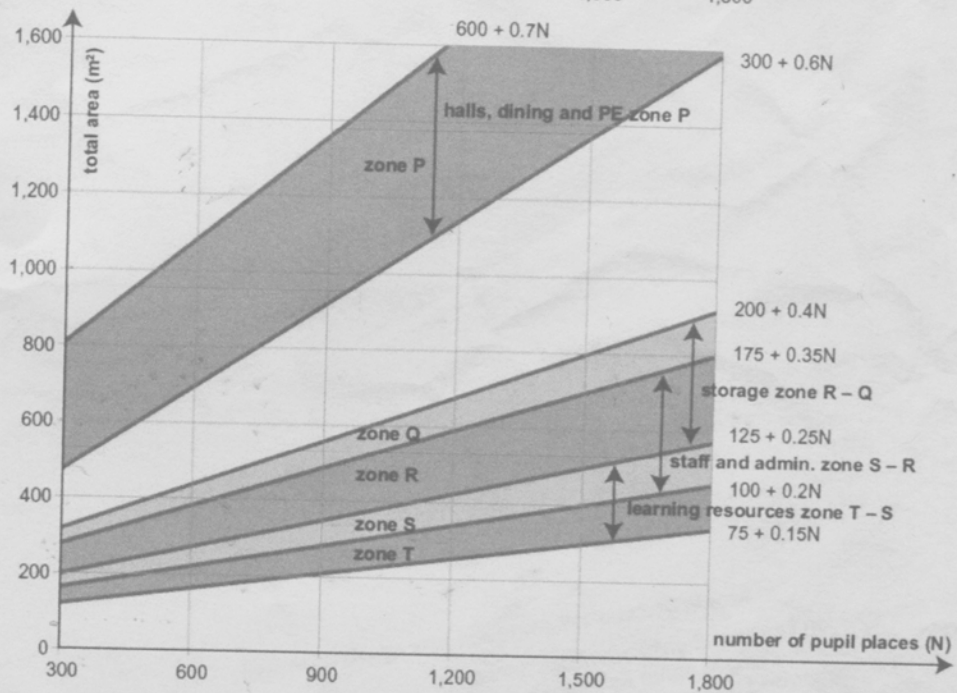
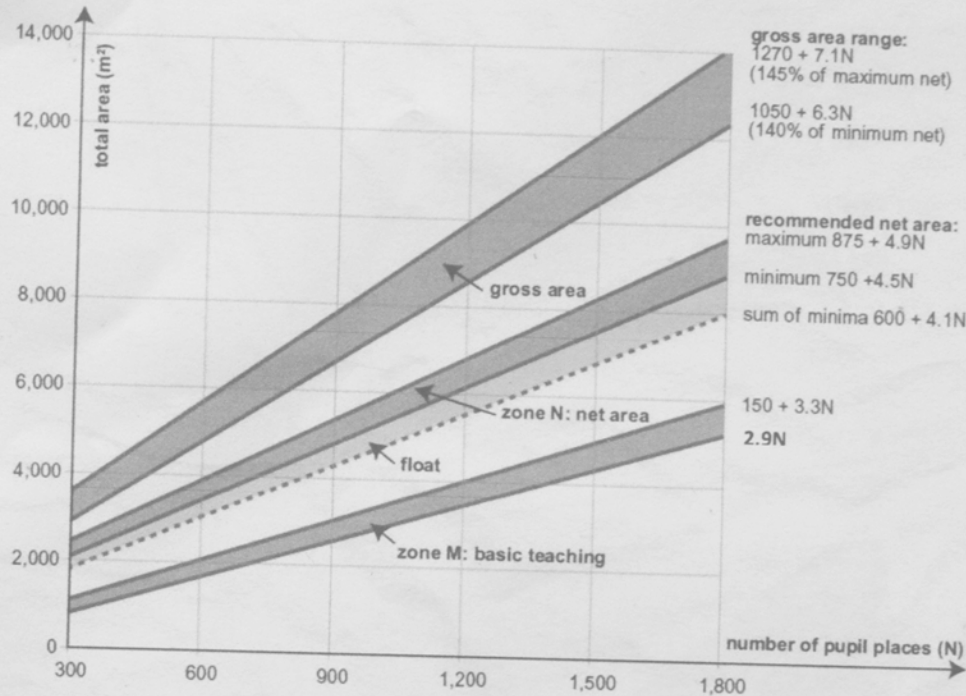


Figure 4: Gross and net areas for 11 to 16 schools

The top graph shows 'zones' recommending the overall net area and basic teaching area, with the related formulae, as well as the recommended range of gross. The bottom and top of each zone denote the recommended minimum and maximum area. The bottom graph shows zones recommending the area and related formulae for the remaining four of the five categories of space. Note that the scale of the 'total area' axis is different in the two graphs.

2 Literature Review

This chapter addresses the overarching question

rq.01

What might be the educational potential of spatial design within the context of the English primary and secondary school?

In doing, it brings together conceptual and theoretical resources from the fields of design, education, geography, anthropology, and philosophy in novel ways that shed new light on practising spatial design with children, in the context of school. It is organised in five sections.

The first two sections work together. 2.1 is about the potential of children participating in the relationship between education and the environments in which it takes place, as well as the need for a transformative model. 2.2 responds to this, discussing Jeremy Till's framing of 'transformative participation' as 'processes of negotiation' and positing the practise of spatial design as a means to negotiate.

Sections 2.3, 2.4, and 2.5 also work together, each developing the framing of 'transformative participation' as 'negotiation by means of spatial design' in a particular way. In 2.3 I unpack and develop the concepts of 'negotiation' and 'transformation' used by Till, developing the conceptual framework of 'place negotiations in minor and major keys' through doing. In 2.4 I turn to discuss the kind of education needed in order to realise the transformative (minor) potential of practising spatial design within the context of school. And finally, in 2.5 I explore what the characteristics of minor and major spatial design practices might be, thereby developing the theoretical lens of 'human and nonhuman relating'.

Through chapter 2, I raise the following questions:

rq.02

'How do place negotiations manifest and unfold during spatial design with children?'

rq.03

'How do aspects of the methods and approaches used affect how place negotiations manifest and unfold?'

These questions constitute the primary focus of the empirical research presented herein, which is guided by the theoretical lens of *'human and nonhuman relating'* developed in 2.5, as well as the methodological approach set out in chapter 3.

2.1 The potential of participating in the relationship between Architecture & Education, in the context of school

In this first section I explore the relationship between education³ and the environments in which it takes place, in the context of school.

First, through the lens of school procurement, standards, and regulations. Second, through the lens of existing design and educational research, highlighting the divergent nature of existing evidence, as well as the potential in actively involving users in the relation. I conclude by identifying the need for a new model of participation.

2.1.1 Lens 01: school procurement, standards, and regulations

Ideology, procurement processes, design standards, performance standards, and regulations all affect the design, construction, and use of primary and secondary school environments, which in-turn affect the many lives that unfold within, through, and around them, on both a long term and day-to-day basis. Whereas the detail of such policies is debated and decided at national and international levels, away from the lives of users, the effects of such “processes, decisions and events” (Ansell, 2009, p. 204) are felt on local, personal, and fingertip levels: the cold metal touch of a secure door access panel that may or may not grant passage, for example. Although such policies contribute to the safety and well-being of those who fund, design, construct, and use school buildings (children and adults), they also reflect the ideologies, values,

³ ‘Education’ is used here to encompass all three functions described by Biesta (see **Key definitions**).

concerns, and priorities of those who determine them: government and professional bodies, for example.

New ideologies, new models of procurement

In his 1943 manifesto for educational reform Herbert Read poses the rhetorical question, “is it not possible, not merely to conceive, but to build and introduce into the existing educational system, schools which provide the essentials of an educative environment?” (Read, 1943/1974, p. 299). Answering “yes”, he cites Impington Village College, designed by Henry Morris, Walter Gropius, and Maxwell Fry, as clear evidence (*ibid.*). Still in use today, this school is a rare example of the potential that lies in architects and educationalists collaborating with the shared aim of transforming education holistically, through the synthesis of architectural and educational practice.

Fast forward 60 years and in 2004 the Building Schools for the Future (BSF) capital investment programme was launched with the goal of rebuilding or refurbishing every secondary school in England over a fifteen-year period. As for Morris’s village college programme, at the heart of BSF was a desire for complete “educational transformation” (Education & Skills Committee, 2007, p. 12). As such, its aim was not simply the construction of modern spaces for the continuation of old practices, but the creation of transformational environments that were themselves instrumental in transforming the social and educational processes that play out within them (Futurelab, 2008, p. 4; Department for Education and Skills (DfES), 2003). However, despite research finding positive outcomes (e.g. Royal Institute of British Architects (RIBA), 2010; Partnership for Schools (Pfs), 2010) BSF was scrapped in 2010, with the then Secretary for Education informing parliament that it was suffering from “massive overspends, tragic delays, botched construction projects and needless bureaucracy” (Curtis, 2010, July 5).

The Priority School Building Programme (PSBP), informed by the James Review (James, 2011), was launched in 2011 as a replacement initiative, with a mandate to address the needs

of schools in most urgent want of repair⁴ (Department for Education (DfE), 2012). Yet, under its remit only 261 schools out of 567 applicants would be rebuilt in phase 01 (RIBA, 2014). Although phase 02 (launched in 2015) aims to re-build or refurbish a further 277 schools by 2021, it too is facing rising delays, in part due to a continued lack of interest from potential contractors (Department for Education (DfE), 2018). Moreover, to help reduce costs by up to 30% new schools are to be smaller than those built under BSF, 5% for primary schools and 15% for secondary schools (RIBA, 2014), “based on a clear set of standardized drawings and specifications that will incorporate the latest thinking on educational requirements and the bulk of regulatory needs” (James, 2011, p. 6), and built in batches to maximize benefits from economies of scale. Such a narrow focus on efficiency limits the built environment’s purpose to the containment of specified educational processes, with opportunities for design teams and schools (staff and pupils) to engage in dialogue actively repressed, limited to ‘feedback’ post hoc at best rather than a means to drive transformation pro-actively through design and construction. As the RIBA note, such an approach gives little consideration to long term social and economic impacts of reduced space and facilities on student learning and well-being, maintenance, and rental revenue streams (2014).

Standards and regulation

Design standards, performance standards, and regulations relevant to school design are spread across a myriad of documents. Building regulations and associated technical guidance are set out in the Approved Documents, which comprise 16 individual parts: A – P. Building Bulletins (BB##) provide an alternative source of guidance, often more relevant than equivalent Approved Documents⁵ (Wilkinson, 2013). Schools must meet relevant regulations. However, in the real world competing priorities means work to improve particular aspects of design can

⁴Although this is the same motive which drove BSF, in BSF ‘repair’ referred to the school as a community, rather than to the physicality of its buildings only (D. Cullinan, personal interview, November 30, 2018).

⁵ Although, as Wilkinson notes, the alternative guidance set out in the Building Bulletins can be conflicting (2013), Cullinan suggests that this should perhaps be seen within the evolving nature of guidance and therefore, while potentially problematic, not in itself the real issue (personal communication, November 30, 2018).

impact negatively on another, especially when the effects of long-term use are considered (Koutamanis & Majewski-Steijns, 2011; Woolner et al., 2007; Woolner & Hall, 2010).

Further, the specifications required by building regulations often differ depending on the intended use of spaces. For example, acoustic standards set out in BB93 – *Acoustic design of schools: performance standards* (DfE, 2015a) – do not apply to the “acoustic conditions in administration and ancillary spaces not used for teaching and learning except where they affect conditions in neighbouring teaching and learning spaces” (p. 9). Moreover, even where applicable, BB93 states that the acoustic qualities of a particular space need only be “suitable [in] regard to the nature of the activities which *normally* take place therein” (*ibid.*, emphasis added). This is especially significant within the context of overall reductions to area guidelines (DfE/EFA, 2014) and budgets, with particular spaces increasingly likely to be used for multiple purposes, including the unintended. An example of how real world uses of space collide with the intended use of specifications can be found in Dyer’s recent research into “how beginner readers read in the English, mainstream primary school” (2018). In particular, Dyer demonstrates how acoustic specifications do not always serve beginner readers well as many, particularly those who are struggling, learn to read in places that were not intended for such use.

2.1.2 Lens 02: design and educational research

Divergent evidence

For many, the existence of a relationship between education and the environment in which it takes place is unequivocal (e.g. Dudek, 2000; Nicholson, 2005; Read, 1943/1974; Woolner, 2010, 2015). Yet, a review of recent and historic literature reveals a lack of consistent evidence to support this hypothesis (e.g. Blackmore, Bateman, Loughlin, O'Mara, Aranda, 2011; Higgins, Hall, Wall, Woolner, McCaughey, 2005; Temple, 2007; Weinstein, 1979; Woolner et al., 2007; Woolner, 2010). Arguing that a lack of evidence is not in itself grounds for disproving the hypothesis, Weinstein contends the paucity of supporting evidence is due to a failure to “acknowledge the complexity of environment-behaviour relationships” (Weinstein, 1979, p. 600). She thus calls for educational researchers to increase the number of physical variables tested, to place more emphasis on the connections between them, and to reflect in research, design, and interpretation the complex relationship between “physical design and educational program” (pp. 599-600); in particular, the recognition that “different educational activities have varying environmental requirements” (*ibid.*). In focussing on how places are negotiated within the context of school, this study can be understood as responding to this call.

The importance of environmental factors

Despite Weinstein's call, there has remained a failure to synthesise research into different environmental variables. Although literature published in the last two decades has repeatedly found evidence in support of the positive effect environmental factors such as, temperature, noise, and air quality can have on teaching and learning⁶ (e.g. Fisher, 2001; Higgins et al. 2005, Horne Martin, 2006; Woolner et al., 2007), because research and resultant recommendations have often remained limited within the lens of individual factors, the potential for conflict has remained. For example: in one study, research undertaken into the reduction of noise

⁶ The term ‘teaching and learning’ is used in this sub-section to reflect the focus within the literature reviewed on the first of the three functions of education described by Biesta; that is, on ‘qualification’ (2010, 2013/2016; also, **Key definitions**).

recommended increasing soft furnishings without considering the subsequent impact on air quality (Woolner et al., 2007). The effect of lighting and colour is a further example: while most agree both can have positive and negative effects, evidence can be contradictory and depends greatly on the specific variables considered (e.g. type of lighting) and how they are measured (Earthman, 2004; Temple, 2007; Weinstein, 1979; Woolner et al., 2007). Overall, the majority of evidence is largely built on observed performance deficits in sub-standard school buildings (Woolner et al., 2007) with the time spent in poor environments identified as having a cumulative negative impact on teaching and learning (Earthman, 2004). However, the extent to which buildings need to be more than adequate is a contested topic (Higgins et al., 2005) and Woolner et al. conclude that beyond the meeting of minimum standards there is (currently) not enough evidence to determine priorities with regard to funding specific design initiatives (2007, p. 60).

Buildings alone are not enough

The lack of evidence concerning the impact of environmental factors on learning leads Blackmore et al. to argue, “buildings alone are not enough; it is about relationships and changing cultures and practices” (2011, p. 37). Indeed, Earthman and Higgins et al. identify a number of studies that have found additional factors, not specific to the technical performance of a building, to also impact upon teaching and learning. These include, overcrowding (Earthman, 2004; also, Horne Martin, 2006), catering, community involvement, communication and navigation (Higgins et al., 2005).

While buildings alone may well not be enough, that does not mean they are un-important. Nor does it mean their physical attributes do not affect those who teach and learn within them (Nicholson, 2005).⁷ Exemplifying the need for a symbiotic relationship between architecture and pedagogy is the Reggio approach, within early-years education (Nicholson, 2005). In this

⁷ Nicholson’s argument might, I suggest, be understood as a call to widen the focus on ‘qualification’ to include all three educational functions – qualification, socialisation, and subjectification (Biesta, 2009; 2013/2016; also, **Key definitions**).

pedagogy children are viewed as “rich in potential, strong, powerful and competent” (Thornton & Brunton, 2009, p. 15) and their learning is developed “out of first-hand experiences and their theories about the world” (*ibid.*). Therefore, that it takes place in a “rich, complex environment that provides a wealth of sensory experiences” is thought to be fundamental (p. 42). Accordingly, in both new and re-purposed Reggio schools maximising the potential of space is paramount, with design paying particular attention to the use of light, shadow, and reflection; materials and finishes; as well as the connectivity, flexibility, and adaptability of spaces (Thornton & Brunton, 2009).

The capacity to “grow and change” is essential (Blundell-Jones, 1987/2016, p. 1). Buildings’ lives start when construction finishes. Over their lifespan pedagogies change; teachers come and go, bringing new approaches and agendas; and class sizes fluctuate (Horne Martin, 2006). Therefore, a symbiotic relationship between architecture and pedagogy must be both responsive and inclusive. For example, researchers agree the behaviours and attitudes of teachers towards a new space affects how they use it, whether they trial new pedagogies or revert back to old methods, and by extension have considerable impact upon student’s learning and learning experiences⁸ (Blackmore et al., 2011; Higgins et al., 2005; Temple, 2007). Additionally, reporting on research into teacher-pupil consultation, Rudduck and McIntyre (2007) argue, central to improving academic achievement is the forging and fostering of a bond of trust between pupils and teachers as well as pupils and school through an honest desire to discover and act on pupil’s views on which learning strategies and experiences are most and least helpful to them (p. 188). Importantly, they identify the actual process of consultation, when carried out “under suitable conditions” (p. 151) and if “pursued wholeheartedly” (p. 151), through signifying, creating, and nurturing a shift in pupil-teacher and pupil-school relationships from “passive and oppositional” to “active and collaborative” (pp. 151-152), has the potential to transform “life and learning in classrooms” (p. 150).

⁸ As the term ‘learning’ is understood as referring to the ‘qualification’ function of education, that of ‘learning experiences’ might, I suggest, be understood in the given context as referring to the second function: ‘socialisation’ (2009, 2013/2016; also, **Key definitions**).

2.1.3 The potential of actively participating in the relationship between architecture and education⁹

Overall, existing literature suggests genuine participation inclusive of all and undertaken both during and after construction in ways that are dynamic and un-mediated by schedules or structures imposed by one dominant party, is essential to improving education¹⁰ in schools and has the potential to generate benefits that extend beyond the school, geographically, socially, and temporally.

Child-adult relations

The first decade of the 21st century witnessed participation with children become central to the process of designing schools (e.g. through the Building Schools for the Future (BSF) programme). Yet this wasn't always the case. Historically, childhood and children's lives were predominantly studied "through the views and understandings of their adult caretakers" (Woodhead, 2009, p. 25). However, following a paradigm shift towards the end of the 20th Century, which repositioned children as the subjects rather than the objects of research (James & James, 2008), a contemporary model emerged. This new model sought to emphasise the social construction of childhood, the status of children, their rights, activity, and agency (*ibid.*); as well as to be "inclusive of diversities related to age, gender, ethnicity, place and time" (Woodhead, 2009, p. 25). In this model, children take on the position of "independent social actors" (James & James, 2008, p. 3) and are understood as capable of making decisions about matters affecting them, of expressing their own opinions, thoughts, and ideas; and, as 'agents', able to act or not-act, to bring about, through action or inaction, social and physical change (James & James, 2008). In sociological discourse 'agency' forms one half of the 'structure-agency' debate, which concerns to what extent 'structure' affects people's capacity to act freely (*ibid.*). While not the only perspective, Giddens's is perhaps most relevant. He submits that

⁹ This section draws on some source material originally engaged with during my MArch thesis *The Garden Project* (Bellfield, 2015a).

¹⁰ 'Education' is used here to encompass all three functions described by Biesta (see **Key definitions**).

structure and agency are “intertwined” (Giddens, 1979, as cited in James & James, 2008, p. 4). Thus, although “social structures provide the means through which people act, [...] the form these structures take is a result of their actions” (*ibid.*).

Agency is another term open to ambiguity. It is also open to abuse, which at worst results in it meaning no more than “acting on behalf of” (Schneider & Till, 2009, p. 97) – a far cry from when used in its transformative sense as referring to “action that effects social change” (*ibid.*). Through the research project ‘Spatial Agency’ Schneider, Till and Awan bring discourse on ‘agency’ into the spatial realm (Awan, Schneider, & Till, 2011).¹¹ Drawing on Giddens’ understanding of agency as presuming “the capability of acting otherwise” (Schneider & Till, 2009, p. 98), Law and Latour’s Actor-Network-Theory (ANT), in which objects are treated as part of social networks, and a Lefebvrian understanding of space as social-setting, they present ‘spatial agency’ as an “ideological position” (p. 99) taken in relation to the production of space (Schneider & Till, 2009; Curti, Caines & Schneider, 2011). From this position, the production of space (read: social-setting) is seen as a continual process of “action and occupation” (Schneider and Till, 2009, p. 99) in which agents (human and non-human) are tied by a “temporal chain” (*ibid.*) that forces them “to face up to their social responsibility” (*ibid.*). It is a process, “motivated in the first instance by intent, and then open to adjustment, ‘acting otherwise’ as it unfolds in time” (*ibid.*).

Central to this conceptualisation of agency is that the voices of agents can be heard, are listened to, and have the potential to be acted on at all times, both in the first instance and then subsequently as time unfolds. In the contemporary field of childhood studies, the shift to understanding children as agents has resulted in a drive towards “authentic and meaningful” (Malone & Hartung, 2010, p. 30) participation methodologies which extend the role of children in research to both co-researchers and researchers in their own right (James and James, 2008; Malone & Hartung, 2010; Parnell, 2015). However, when childhood is understood as

¹¹ A useful output of this project, also used in this study (chapter 3), is the ‘Spatial Agency’ database (Till, Awan, & Schneider, 2009)

being socially and culturally constructed children's voices become imbued with socio-cultural influences (Elden, 2012). Researchers must therefore be aware of and acknowledge the developing and multiple perspectives from which children speak (*ibid.*). Spyrou (2011) goes further, arguing for an approach that is reflexive as well as critical. In other words, researchers must situate the local context, within which children-adult interactions take place, within the global, from which children and adults draw the representations they use "to make sense of, and create meaning, during their encounter" (2011, p. 160). Driven by a children's rights agenda, contemporary research with children has often sought to either stress the exclusion and marginalisation of children by adults or demonstrate their position as independent social actors (Mannion, 2007). However, these are zero-sum positions that ignore the potential of a more "interdependent and intergenerational" approach that, through recognising the differences between children and adults, reframes the purposes of participation from protection to collaboration (Wyness, 2012, p. 440; also, Clark, A., 2010).

There also exists a spatial dimension to children's participation. Traditionally this has been framed in terms of marginalising structures and the subverted or newly created spatial responses to them. Reframing child-adult participation as collaborative dialogue therefore raises a number of questions: What are the spatial qualities of the sites where collaborative dialogue occurs? How does the process of collaborative dialogue alter these spaces? What do the changes to these spaces tell us about child-adult relations (Mannion, 2007)? I continue to develop the concepts of 'agency' and 'voice', as well as the notion of a 'spatial dimension' to children's participation throughout this chapter.

The concepts of 'status', 'rights', 'agency', 'voice', and 'relations' – touched on above – are central to such questions. They are also concepts frequently found at the heart of a broad body of research identifying under the term 'student-voice' or 'pupil-voice' (e.g. Cook-Sather, 2006; Fielding, 2004, 2007; Flutter & Rudduck, 2004; Rudduck, 2007; Rudduck & McIntyre, 2007; Mannion, 2007; Mitra, 2001; Thompson, 2009). Thus, although foremost about 'participation' and 'participatory (spatial) design', this study can also be considered to contribute

to the broader body of literature on student/pupil voice: specifically, by extending the collective understanding of its spatial dimension in a particular way.

Children's participation: different models

Conceptualisations of children's participation often use levels or ladder rungs to represent and structure differing kinds of participation. For example, building on Arnstein's 1969 ladder metaphor, Hart (2002) locates non-participatory methods on the lowest three rungs, with "Manipulation" (p. 8) at the bottom, and participatory methods on the upper five, with "Child initiated, shared decisions with adults" (*ibid.*) at the top. Such models have generated much debate as to the suitability of their structure, with critics arguing they incorrectly imply participation occurs in a hierarchical sequence, each rung up presumed to be more democratic than the one preceding it (Malone & Hartung, 2010). Although, against Arnstein's original intentions (Hart, 2008, p. 21), subsequent models of participation frequently failed to move beyond the concept of levels (e.g. Mannion, 2007; Reddy & Rattna, 2002; Treseder, 1997), Francis and Lorenzo do offer an alternative, in which they identify "seven realms of participation" (2002, p. 157).

The shift from levels to realms is important: the removal of references to levels, sequences, or hierarchies implies the possibility of coexistence: an acknowledgment that multiple perspectives on children's participation exist and that the creation of a new 'realm' does not signify the end of those preceding it. Further, it recognises that researchers and practitioners can operate simultaneously in multiple realms and from multiple perspectives (Francis & Lorenzo, 2002; also, Malone & Hartung, 2010). In the seventh 'proactive realm' children begin to be considered as "competent" (Malone & Hartung, 2010, p. 30); 'experts' in their own lives and capable of being "active citizens in transforming their world" (*ibid.*). It is in this realm that James and James's definition of participation (2008), which considers children to be active citizens and agents of change while acknowledging their actions remain limited by an adult dominated world, sits.

The need for a new realm/ model

In reframing children's participation as collaborative dialogue between children and adults, more recent discourse challenges the limitations accepted by James and James (2008) and in doing so suggests an eighth realm. Malone and Hartung also make the case for an additional realm in their 2010 discourse on the future of children's participation, which criticises the continued failure of participatory acts to translate into cultural shifts. This, they contend, has in-turn resulted in the products of children's participation remaining tolerated acts of interference rather than celebrated results of collaboration (p. 34). To achieve cultural shifts, they insist the future of children's participation must refocus its energies on bringing about transformational, not just educational, outcomes (2010, p. 33).¹²

The need for, and nature of, 'transformative participation' is addressed specifically by the architect and educator Jeremy Till whose writings I shall draw on, among others, to examine what 'transformative participation' might mean in the contexts of education and school design.

In his introduction to *The Negotiation of Hope* Till argues participation should not be considered a threat to architectural practice but an opportunity to "reformulate, and thus resuscitate, [it]" (2005, p. 25). Drawing on the work of Carole Pateman (1970), he identifies three existing types of participation: 'full', 'partial', and 'pseudo'. In full-participation each individual member of a group has equal power to determine the outcome of decisions. In partial-participation power is unequal, with overall power resting with particular individual(s). In pseudo-participation people are duped into accepting decisions already taken, over which they have no power. Applied to architectural practice, Till suggests full-participation is an unattainable ideal, and while partial-participation is perhaps most realistic, in locating power with the expert it is incompatible with a perspective that sees participation's goal as "the empowerment of the citizen user and not of the expert" (Till, 2005, p. 27). Instead, Till argues a new type is

¹² In 2.4 I draw on the concepts of strong and weak kinds of education (Biesta, 2013/2016) to re-frame this as a call for participation that brings about 'weak' rather than 'strong' educational outcomes.

needed, one which is “realistic enough to acknowledge the imbalances of power and knowledge, but at the same time works with these imbalances in a way that transforms the expectations and futures of the participants” – one which is “transformative” (*ibid.*).¹³

The Building Schools for the Future BSF programme (e.g. Education & Skills Committee, 2007) supported the use of partial-participation. Through it, consultation with children, teachers, and staff was mandatory – although final decisions remained in the hands of adult professionals. In scrapping BSF the then coalition government cited reasons of uncertainty in both cost and time, arguing there was little evidence to support the expense of either beyond the bare minimums required (e.g. in acceptance of the James Review, 2011, and launching of PSBP, 2011). The subsequent commissioning of the James review, undertaken by business rather than educational leaders, its criticism of the inefficiencies brought about by participation and negotiation, and its recommended approach to school design now adopted by government, exemplifies the government’s new ‘philosophy’ (James, 2011, p. 6), from which the process of designing and building schools is seen as fully controllable and should, where possible, be pre-determined by adult professionals (p. 21). Although this philosophy is, arguably, also capable of effecting transformation, this would always be a kind of transformation forced on the everyday lives of inhabitants from without, rather than generated by them from within. Transformation is by no means a silver bullet, rather what or who is transformed or transforming (and ‘why’) is very much critical to what and who transformation benefits. I come back to this in 2.3.

¹³ It is worth noting that Till’s discourse is focussed on adult participation. There is therefore a ‘double powerlessness’ with concern to children and young people’s participation.

2.2 Transformative participation: processes of Negotiation *by means of Spatial Design*

This section draws on the work of the architect and educator Jeremy Till to re-frame participation as processes of negotiation.

I begin by discussing ‘contingency’, before contending that, to carry the potential to effect transformative change, participation needs to support uncertainty by generating shared knowledge and experience from within a given context through processes of negotiation.¹⁴ Next I explore the processes and principles of transformative negotiation before, finally, the different possible methods of negotiation are discussed, with *spatial design practices* posited as ways of negotiating able to support uncertainty by weaving experience and imagination in ways that are speculative rather than prescriptive.

2.2.1 Contingency

The fear of uncertainty and the resultant desire to control is not a new phenomenon but is instead “part of a wider condition of [modern society]” that, through its pursuit of order and denial of contingency, has created rifts between what is needed and what is done (Till, 2009a, p. 125).

¹⁴ Although the term ‘negotiation’ is at the heart of Till’s discourse, he does not, I suggest, adequately define what he means by it. One of this study’s contributions, therefore, is to unpack and develop a working definition of ‘negotiation’. I begin this work in 2.3.

In his paper *Architecture and Contingency* (2009a), Till draws on arguments from key thinkers from within and beyond the field of architecture to contend: (1) that “architecture is through and through a contingent discipline” (p. 120); and (2) that the discipline’s ingrained “denial of contingency is not simply an issue of aesthetics and visual order, but a much wider one of social control and cultural cleansing” (*ibid.*). Till begins by returning to Vitruvius’s Ten Books on Architecture (the profession’s first treatise), arguing that they are responsible for the “mistaken (and dangerous) conflation of visual order with social order [that] continues to this day, with profound ethical consequences” (p. 122): firstly, through their connecting architecture – defined as “an act of imposing order” (p. 121) – to social reform and absolute power; and secondly, through their subsequent use of the term ‘ordering’ to conflate “the visual with the political” (*ibid.*). Moreover, due to subsequent failures to challenge such associations, exemplified by Freud’s identification of “beauty, cleanliness and order” (p. 123) as central to the “requirements of civilization” (*ibid.*), Till contends it is no surprise that in architectural modernism, beauty is associated with visual order and that cleanliness (the removal of uncertainty) is considered a moral order made possible by the architect (*ibid.*). It is here that Till introduces Bauman, who argues the denial of contingency is “part of a wider condition of modernity” (p. 125). Thus, the actions of the modernist architect are symptoms of modernity and not the cause of modernism. For Bauman, modernity is built on the fear of contingency. In his words:

the kind of society that, retrospectively, came to be called modern [...] emerged out of the discovery that human order is vulnerable, contingent and devoid of reliable foundations [...] The response to [this] shock was a dream and an effort to make order solid, obligatory and reliably founded (Bauman, 1992, as cited in Till, p. 127).

Through Bauman's lens, the desire of recent governments¹⁵ to minimize uncertainty within education can be seen as an attempt to order society within school through ordering the spaces of school itself – both its buildings and curriculum. The “philosophical shift in approach” (James, 2011, p. 6) operationalised through the creation of the Education Funding Agency (EFA, now ESFA) as a central body for the delivery of new school, thereby repositioning the state as its own “strong, expert, intelligent client” (p. 58), exemplifies this.

2.2.2 Embracing contingency: the need for a transformative model of participation

If participation has been banished from the architectural and educational process for fear of it bringing uncertainty, including in terms of cost, time, scale, and outcome (e.g. James, 2011, p. 21), to be re-embraced it must be reformulated as “a process that is transformative [and therefore beneficial] for all parties” (Till, 2005, p. 30).

First and foremost, transformative participation challenges the certainties provided by the status quo of knowledge and power relations. In bringing together ‘specialist’ and ‘normal’ knowledge, participation in architecture reveals the “limits of architectural knowledge” (p. 31). The solution, Till posits, is for architects to reconsider the notion of ‘expert’ and how ‘knowledge’ is deployed and for participation (in architecture) to relocate its focus from building to context: “architectural knowledge should not be applied as an abstraction from the outside, but developed from within the context of a given situation” (p. 32). In this way, through occupying the role of “expert citizen as well as citizen expert” (p. 33), architects can address inevitable power imbalances. Yet, for participation to be ‘transformative’ knowledge must pass and influence both ways: “the architect [must] acknowledge the potentially

¹⁵ I refer here to the last two Conservative led governments, 2015 – 2017 and 2017 – present day, respectively; as well as the preceding Conservative and Liberal Democrat Coalition, 2010 – 2015.

transformative status of the users' knowledge and [...] provide channels through which it might be articulated" (*ibid.*).

Applied to education Till's argument is equally relevant. However, ideals do not exist in either context and in the real world participation must address the fact that power imbalances will never fully be dissolved. People will always bring their own perspectives to the participatory process, making "confrontation with difference inevitable" (p. 34). Yet, rather than despair, Till argues it is through "the negotiation of the personal with the social and the individual with the collective" (*ibid.*) that political space emerges, and it is through engaging in the negotiation of political space that new and better opportunities surface (p. 35). Citing Lars Lerup, "if the negotiation dies, the *hope* for splendid inhabitation dies" (Lerup, 1977, as cited in Till, p. 35), Till reframes 'transformative participation' as the "Negotiation of Hope – a potentially contested but ultimately positive process, both alert to realities and positing a better future" (p. 35). And this alternative, I suggest, might also be applied to education: 'if the negotiation dies, the *hope* for transformative education dies too'.

2.2.3 Transformative participation: processes of Negotiation by means of Spatial Design

However framed, processes of negotiation rely on communication and, like power, communication is not equal. For example: professionals frequently use guarded language in order to protect their knowledge and positions as 'specialists'. Therefore, to be transformative, dialogical spaces of and for participation must break down such barriers through finding models of communication that bind rather than separate (Till, 2005). Drawing on Michael Billig's assertion that new knowledge "grows out of [...] the voices of ordinary people in conversation" (1988, as cited in Till, 2005b, p. 37) Jeremy Till posits 'conversation' as an alternative model of communication that "contains the germs of new spatial possibilities" (2005, p. 37). Referring to architectural practices, conversation, he notes, is particularly appropriate to the

participatory process for four main reasons. First, it repositions the ‘expert’ from outside looking-in to inside acting-with. Second, it renders future possibilities “in terms of time and occupation” as opposed to “fixed and empty forms”. Third, it engages with and supports social relationships, seeing them as integral to the process not a hindrance. Fourth, its open-ended nature embraces “unexpected consequences” that might otherwise never have been found through encouraging the following of tangents (p. 38). Considered thus, the role of the participatory processes is to “provide a context” and structure for conversations to be “initiated” and developed within; that acts as a “catalyst for new ways of looking at architectural [/educational] practice, exposing the limits of normative [...] methods” (*ibid.*).

Yet Till also notes that ‘conversation’ alone is too vague a term that fails to “necessarily” address differences in power and instead posits storytelling as an “equitable and focused” mode of conversation¹⁶ that ensures the hope of our imaginations remains attainable through grounding it firmly within our everyday experiences (*ibid.*):

All of us have stories within us, be they descriptive of the past, fictional for the future, anecdotal or practical. Stories have within them elements that are both personal and social, they become a means of describing one’s place in the world, of locating the individual within shared spaces. Stories are the place where the imagination finds lines of flight (pp. 38-39).

The architect and educator Rosie Parnell also supports the potential benefits of using storytelling as a mode of conversation. Drawing on the work of Michael Fielding and Richard Sennett, Parnell contends “dialogical, relational processes of participation [...] provide appropriate conditions for the creative process” (2015, p. 127). And, drawing on Sawyer’s comparison of the “the social process of creativity” to “collaborative improvisation” (p. 131), she therefore

¹⁶ Citing Kristin Ross, Till explains: “The very act of storytelling, an act that presumes in its interlocutor and equality of intelligence rather than an inequality of knowledge, posits equality, just as the act of explanation posits inequality.’ The authoritative positivist explanation of the expert (*You should have your front door here because it is closest to the road*) is replaced by the imaginative storyline of the potential dweller (*...we ran through the back door, steaming bodies into air dense with chip fat*)” (Till, 2005, p. 38).

posits ‘play’ as an act of “creative improvisational exchange” (*ibid.*). As for Till with storytelling, for Parnell the strength of ‘play’ lies in its ability to facilitate the weaving of imagination and experience (*ibid.*).¹⁷ Therefore, for Till and Parnell, participation (and thus negotiation) is “a social learning and creative process in which all participate – in which we all grapple with the challenge of achieving authenticity in the context of competing imposing agendas” (Parnell, 2015, p. 133).

It is in this capacity to weave imagination and experience that the anthropologist Joachim Halse argues the strength of spatial design practice lies. For Halse, spatial design practices offer ways to bring “imaginative issues [...] from beyond the horizon to a point where their contours can begin to be articulated and contested” (2013, p. 181). Not as a means to “zero in on the best solution” (Brown, 2009, as cited in Halse & Boffi, 2016, p. 91) but to “raise new questions” through “playful, experimental and open-ended” methods. Methods that “insist on the importance of specific manifestations, yet explore issues that are unsettled, speculative and imaginative” (Halse & Boffi, 2016, p. 91). It is in reference to the loci of such methods that Halse uses the term ‘design events’ (Halse, 2013). Conceived thus, ‘(spatial) design events’ are places of inquiry into the possible that use concrete, not abstract, practices. Practices that – whether through storytelling, play, drawing, modelling, mapping, daydreaming, dancing, alchemy, or other – weave experience, knowledge, and imagination in ways that are critical, reflective, creative, and relational. Practices that – whether performed individually or collectively – aim to anticipate and effect change for the better, in both the present and future through the “concrete articulations of things and processes”: through the creation of new physical artifacts, processes, relationships, and perspectives, for example (p. 183).

However, undertaking participation through practices of spatial design that seek to weave experience and imagination brings uncertainty (contingency) back into the process, and, as I have suggested, contingency threatens the controlling norms of modern society. How then,

¹⁷ I acknowledge there exists a rich body of work concerned with ‘play’, ‘improvisation’ and ‘imagination’ that for practical reasons cannot be explored in the constraints of this chapter. However, going forward it shall certainly be considered and examined as appropriate.

as Till asks, can contingency be framed as an “opportunity rather than threat” (Till, 2005, p. 39)? To welcome contingency is to welcome the multiple and conflicting desires of all involved, whether directly or indirectly. A method for finding agreement is therefore a priority. While ‘making common sense’ appears equitable, Till suggests that it is problematic for two reasons. Firstly, it implies that answers can be found in an “unthinking, uncontested manner”. Secondly, it assumes that “universal” ways of thinking can be constructed and through them “universal solutions” found (2005, p. 40). Instead, Till suggests “making best sense” (*ibid.*) is a more appropriate endeavour which acknowledges solutions don’t arise from the ‘expert’ alone, are never perfect, and identifies both processes and results as open to forces beyond the control of the expert (they are contingent) (*ibid.*). To repurpose Till’s words:

the hope, therefore, is that a participatory process that is based on the principle of making the best sense will lead to [an education and educational environment] capable of accepting difference and [an education and educational environment] that is responsive to change over time, since it avoids the stasis of any universalizing tendency (*ibid.*).¹⁸

* * *

Through 2.1 and 2.2 I have suggested that ‘negotiating by means of spatial design’ might offer a model of participation that, in its capacity to effect transformation from within, has the potential to transform education in schools for the benefit of those who ‘live in and wear them out’ (children and adults).¹⁹ In sections 2.3, 2.4, and 2.5 I develop this contention in three ways.

¹⁸ In repurposing Till’s words, I have replaced the term ‘architecture’ with the phrase ‘education and educational environments’. Although I have chosen not to, in keeping with the rest of his discourse, Till’s use here of the phrase ‘a participatory process’ could also be replaced with the term ‘negotiations’.

¹⁹ ‘Education’ is used here to encompass all three functions described by Biesta (see **Key definitions**). The phrase ‘live in and wear them out’ is adapted from that used by the architect Peter Hübner’s 2005 lecture entitled *House and town = habitats for people* (2005, p. 43).

2.3 Space + Place: taking a relational approach

In 2.3 I develop Till's framing of 'participation as negotiation': first, using Massey's relational conceptualisation of space to set out the inescapable and political nature of negotiations (2005); and second, through applying Deleuze and Guattari's philosophy of the minor and major (2004). Through doing, I develop the conceptual framework of 'place negotiations in minor and major keys' and align Till's understanding of 'transformation' with the 'work' of the minor key.

2.3.1 Same words, different meanings

In everyday life the terms 'space' and 'place' are often used instinctively and interchangeably, carrying different and shifting meanings dependent on whom is using them, in which context, and for what purpose: both can be described as liminal, as personal, public, or social, as spaces or places "to play in" or "to fear", "of dreams" or "of anger" (Harvey, 2004, p. 1); we talk about places which are full, that have no space left; we describe rooms as spacious, places as vast; and we refer to the kitchen, the lounge, the bedroom as both spaces and places within the house. As the geographer Yi-Fu Tuan notes, "these are unexceptional ways of speaking. Space and place are basic components of the lived world; we take them for granted" (Tuan, 1977/2001, p.3). Yet, as Tuan continues, if we are to pause and consider their meaning deeply, to ask if and how they differ, then "they may assume unexpected meanings and raise questions we have not thought to ask" (*ibid.*).

Different conceptualisations of space and place abound. To avoid becoming lost, I therefore limit myself here to sketching out some key perspectives and approaches commonly found

within geography, design, and education literatures.²⁰ Taken together, these offer an introductory context for the relational approach that underpins this study, set out in the following section.

Positivist, Humanistic, Radical

Positivist ‘spatial science’ approaches to geography, which emerged following the ‘quantitative revolution’ of the early 1960s, conceive of the world and its inhabitants as objects rather than subjects (Cresswell, 2009; Hubbard, Kitchin, & Valentine, 2008). Proponents conceptualise ‘space’ as “a blank canvas filled in by [(measurable)] human activity” (Hubbard, Kitchin and Valentine, 2008, p. 4) and aim for the construction of spatial ‘theory’, ‘laws’ and ‘models’ based upon “statistical analysis”, leading to the creation of “cumulative” knowledge (p. 25).

Conversely, humanistic approaches²¹ – emergent in critique of positivist approaches – sought “to understand how humans perceive the world and how this perception shapes their actions” (Nayak & Jeffrey, 2011/2013, p. 56). The distinction between the “abstract realm” of space and the “experienced and felt world” of place, with human experience considered (thought and felt) to be the process through which “a relatively abstract notion of space” is transformed “into a relatively lived and meaningful notion of place” (Hubbard, Kitchin & Valentine, 2008,

²⁰ Discourse on ‘space’ and ‘place’ can be followed right back to the writings of Plato and Aristotle – in the concepts of ‘chora’, ‘topos’ and ‘kenon’ (Harvey, 2004; Cresswell, 2009) – as well as to the work of Newton, Descartes and Leibniz (Harvey, 2004). More recently, academic debate can be traced through the nineteenth, twentieth, and early twenty first centuries (Agnew, 2011), with particular conceptualisations both products of and responses to particular contexts: geographic, social, economic, political and temporal. See David Harvey’s *Space as a Key Word* (2004) and John Agnew’s *Space and Place* (2011) for further reading.

²¹ While *extensionist* approaches within humanistic geography sought only to augment the positivist spatial scientific model and thus retained the belief that “a separation is possible between human observer and an external reality” (Nayak & Jeffrey, 2013, p. 56). *Revisionist* approaches reject fully such beliefs and seek foremost “to understand how humans perceive the world and how this perception shapes their actions” (Nayak & Jeffrey, 2013, p. 56), with understanding “the way in which space becomes endowed with human meaning and is transformed into place” central to their concern (Hubbard, Kitchin & Valentine, 2008, p. 55).

p. 55; also, Tuan, 1977/2001) was central to humanistic approaches and is often cited as the movement's greatest contribution to geography as a wider discipline (Cresswell, 2009).

Whereas humanistic approaches developed as a critique of the dehumanising tendencies of positivist perspectives and focused on 'place' as "experienced, felt and sensed" (Cresswell, 2009, p. 73). Radical approaches to geography – influenced by Marxist, feminist and post-structuralist perspectives (*ibid.*) – emerged in the late 1970s and early 1980s as a critique of humanism's failure to address issues of power, with questions of how it "is implicated in the construction, reproduction and contestation of places and their meanings" at their centre (*ibid.*).

Seeking common ground, Tim Cresswell identifies three overlapping "depths" of approach: *Descriptive* approaches are idiographic and concern the specificity and uniqueness of place; *Social constructionist* approaches, while also concerned with the specificity of place, focus on explaining its particular characteristics through situating it within the wider social forces behind its construction; *Phenomenological* approaches are concerned not with the attributes of specific places but in defining "what place means to humanity" (Cresswell, 2015, p. 56).²²

2.3.2 Applying a relational conceptualisation (of space and place)

This study roots itself in the particular relational conceptualisation of 'space' and 'place' set out by the radical geographer Doreen Massey (particularly 2005).

Influenced by radical, feminist, and Marxist ideas, and critical of approaches that conceive of 'space' as "flat" or "inert", Massey contends that 'space' is instead dynamic: that although

²² Among others (e.g. Bachelard, 1958/2014; Bollnow, 1963; Casey, 1997, 2001; Harvey, 1997, 2004; Merleau-Ponty, 2002; Perce, 1974/1998; Soja, 1989), the philosophy of Foucault (e.g. 1977, 1986), Heidegger (e.g. 1962/2000, 1971/2013; also Malpas, 2012), Lefebvre (e.g. 1991; also Elden, 2004; Merrifield, 1993; Purcell, 2003), and De Certeau (e.g. 1988/ 2011) are commonly found within literatures concerning or underpinned by conceptualisations of space and place.

‘space’ has a material dimension – “it is the land out there” (Massey & Warburton, 2013, para. 12) – it also has one that is abstract, which both concerns and is a product of continually shifting interrelations between living and non-living things at every scale (Massey, 2005). These interrelations, Massey argues, are imbued with power and therefore their distribution at any given moment reflects directly the power relations within society, locally and globally (Warburton and Massey, 2013).

Within this conceptualisation, ‘places’ are defined “not as points or areas on maps” but as particular articulations of these interrelations, as particular conjunctions of the trajectories – “stories-so-far” (p. 130) – of human and nonhuman things, each moving at its own speed (sometimes wildly different) (p. 131). In other words, “as *spatio-temporal events*” (p. 130, original emphasis). For example, turning to her own repeated visits to see her sister in the Lake District town of Keswick, Massey reflects on how – as a ‘place’ – it is a conjunction of “different social stories with different spatial reaches and differing temporalities”:

Longstanding farmers, the grey-stone country houses of the aristocratic incomers of the eighteenth and nineteenth centuries, poets and Romanticism, ancient mining, middle-class cottage owners, Roman remains, an international tourist trade, a focus on discourse of the sublime... (p. 131)

And...

Skiddaw, a massive block of a mountain, over 3000 feet high, grey and stormy; not pretty, but impressive, immovable, timeless. [...] Through all that history it seemed, it had presided (*ibid.*)

Yet, Massey continues, Skiddaw has (like everything else) not always been ‘here’ and someday (like everything else) it will cease to be ‘here’ too. In other words, its “[i]mmigrant rocks” – like Massey and her sister – are “just passing through”, each at a particular point on their continuing trajectories, each trajectory moving at greatly different speeds (p. 137). ‘Place’, therefore, when conceived as a conjunction of ‘stories-so-far’, can never be stable; there can

be “no fixed points” and ‘here’ can be “no more (and no less) than our encounter, and what is made of it” (p. 139).

Such a conceptualisation of ‘place’, Massey stresses, aims not to devalue it or to bring about its “dissolution into a wider space” but instead offers “an alternative positive understanding” that reveals the possibility of those who constitute it (human and nonhuman) working together to influence lived reality for the better through the never-finished act of negotiation (p. 140). In this way, the specialness of ‘place’ comes not from “a pre-given identity” (ibid.) or “coherence” (p. 141) but specifically from its “throwntogetherness”: from the “unavoidable challenge of negotiating a here-and-now (itself drawing on a history of then and theres)” (p. 140).

This relational conceptualisation of space and place aligns with the understanding of the world as a meshwork of lines (space) and knots (places) argued for by the anthropologist Tim Ingold (particularly 2010), which in-turn draws upon the philosophy of Deleuze and Guattari (e.g. 2004) among others. I return to these ideas later within this chapter.

2.3.3 Space, place, power, and politics

However, the interrelations between individual trajectories, whether human or nonhuman, are not neutral but “filled with power”, their distribution at any given moment a direct reflection of the power relations within society (Warburton & Massey, 2013, para. 12). And, like space, power is also relational: not a commodity but continually producing and produced-by ‘action’, operative at multiple scales and in multiple modalities, with these scales and modalities relating with and inflecting one another; its distribution is not equal but at any given moment a reflection of power relations within society (Massey, 2009). It is in this way that particular groups and places are able to exert power-over others, to dominate at the expense of others (para. 15). For example: large corporations have the power (economic and political) to purchase public-spaces in order to exert power-over what can and

cannot take place within them. Granary Square (London), Brindleyplace (Birmingham), and Liverpool One (Liverpool) exemplify this (Townsend, 2016). The private finance initiatives (PFI and PF2) through which public buildings (including parts of the existing school estate) are commonly funded can be considered further examples, in that those who lease the buildings are restricted in how they can and can't use them. To negotiate a here-and-now is, therefore, to challenge existing "power-geometries" (Massey, 1991, 2005, 2009).²³

Space, place, power, and politics are inescapably interwoven: politics is at once the process by which dominant trajectories exert power-over and through which the oppressed discover and develop potential alternatives, empowering themselves and others through doing. Each 'politics' builds upon a different conception of space, with place the "site and stake of struggle" (Elden, 2004, p. 227).

One way of framing different spatial politics and the ensuing *struggle of place* is through recourse to Henri Lefebvre's dialectic of *abstract* and *differential* space:

Lefebvre's concept of *abstract* space, according to Wilson (2013), can be understood as the product of *abstraction(s)*: political processes through which the particular ideologies (social, economic, political...) of dominant trajectories (i.e. Capitalist) are "progressively concretized in [everyday] lived material reality". Through exerting power over everyday life, such processes work to manage and control difference (political and cultural) by preventing humans from producing our own "material and representational spaces", in-turn protecting and increasing the power of those trajectories that initiate them (Wilson, 2013, p. 374; also, Lefebvre, 1991). However, as Wilson notes, the process of abstraction is never 'total'. Instead, *abstract*

²³ 'Power-geometries' is a conceptual tool developed by Massey to explore critically the intertwinement of space and power. It is used herein as a spatial alternative to the Foucauldian model of power (which it echoes in certain respects) commonly employed within educational research and participation literatures (e.g. Dyer, 2018; Gallagher & Gallacher, 2008; Gallagher, 2008; Pike, 2008; Kenkmann, 2011). For an informative introduction, including in relation to political practice, see Massey's 2009 text *Concepts of space and power in theory and in political practice* (also, 1991, 2005).

space exists in dialectical tension with *differential* space: the former – “alienated space of homogenization and [control]” – contains and exposes within its *contradictions* the possibility of the later – “disalienated space of heterogeneity and *autogestion*” (p. 374, original emphasis; also, Lefebvre, 1991; Merrifield, 2013). Here, *autogestion* refers to praxes through which different “social groups are able to influence their own reality” (Elden, 2004, p. 227); praxes that manifest in acts of both “appropriation” and “participation” (Purcell, 2014, p. 149; also Lefebvre, 1996; Purcell 2003).²⁴

However, Lefebvre’s dialectic only goes so far. For example: in their positioning as responses to and growths from-out-of the contradictions of abstract space, processes of *autogestion* and the *differential space* they produce are cast as reactive rather than proactive. And because – following Deleuze and Guattari – abstract space (i.e. capitalism) feeds on the contradictions it creates, in its reactivity *differential space* can but offer further opportunities for abstract space to strengthen (1983/2004, p. 166).

An alternative framing is offered by the philosophy of Deleuze and Guattari: specifically, their concept of the *minor*, which they develop throughout *A Thousand Plateaus*, including through the lenses of literature and science (2004; also Deleuze, Guattari, & Brinkley, 1983).

For Deleuze and Guattari, “a minor literature does not come from a minor language; it is rather that which a minority constructs within a major language.” It has three “characteristics” (1983, p. 16). Firstly, a minor literature should “deterritorialize” the major language. Minor literatures achieve this through appropriating the major’s components for alternate purposes and uses that give new meaning: Franz Kafka’s ‘use’ of German as a Jew living in Prague or the ‘use’ of English by African Americans, for example (1983, pp. 16 – 17). Secondly, everything within a minor literature is political (1983, p. 17). In major literatures “individual concerns” relate in isolation of the wider “social milieu” that acts instead as “a mere environment

²⁴ ‘Appropriation’ affords all citadins the *right* to “be physically present” in the city, as well as to adapt its urban space and to produce new space in order to meet their shifting needs (Lefebvre, 2002, p. 103). ‘Participation’ affords all citadins the right to be centrally and directly involved in all decisions affecting the ‘production of space’ in a city, no matter the parties or scales involved and unfiltered by “institutions of the state” (*ibid.*).

or a background”. By contrast, in minor literatures, individual concerns are always entwined with the many threads of the milieu: each becomes “all the more necessary, indispensable, magnified, because a whole other story is vibrating within it” (*ibid.*). Thirdly, everything in minor literatures takes on a “collective value” (*ibid.*). Minor literatures entail a shift in emphasis away from a “literature of masters” and towards collective production, wherein the individual acts of each author “already constitutes a common action” (*ibid.*). Through these characteristics the *minor* does not “designat[e] specific literatures but the revolutionary conditions for every literature within the heart of what is called great (or established) literature” (p. 18).

As in the case of literature, a minor science does not come from a minor scientific language but is that which a minority constructs within a major scientific language. Where major literatures comprise a “literature of masters” (*ibid.*), major science is aligned with “royal” or “state science” (2004, p. 401): science that “plots the determined notions of particulate bodies in space that can be divided, reckoned and apportioned”, in which “identity and consistency come before difference and variation” (Ingold, 2018a, p. 40; also Deleuze and Guattari, 2004, pp. 398 – 401). Minor – or “nomad” (e.g. 2004) science, on the other hand, like minor literature, “begins with fluidity” and “posits variation, heterogeneity, and becoming before constancy, homogeneity and being” (Ingold, 2018a, p. 40; also Deleuze and Guattari, 2004, pp. 398 – 401). In this way, major science is concerned with theorems – seeking to reduce the range of the problem-element and progress *straight* from facts to theories or visa-versa. Minor science, on the other hand, concerns itself with problems that have no closing solutions but lead only to further openings, paths to be followed in ways that are itinerant, prospective, improvisatory, and speculative (Ingold, 2018a, p. 41; also Deleuze and Guattari, 2004, pp. 398 – 401).

No matter the context or language (literature, science, art, design, education...), the *minor* does not exist or work outside of the major; reacting to it, growing from out of the cracks left by its contradictions, as in the relation between abstract and differential space. Instead, the *minor* works to proactively produce movement from within, working to unsettle the major

through processes of continuous variation (2004; also Ingold, 2010, 2016, 2018a; Manning, 2016). The major and minor relate as they do in the production of music. Although drawing on the same language of notes, they act in two quite different modes (or ‘keys’): the former “confident, assertive, affirmative” and the later “anxious, unsettling, inquisitive” (Ingold, 2018a, p. 41; also Manning, 2016).

By applying Deleuze and Guattari’s philosophy to the relational conceptualisation of space and place put forward by Massey, we can say: *the never-finished, always-contested negotiation of place is a struggle in both major and minor keys, contested in multiple languages, wherein those operating in the minor work to unsettle the dominant processes and products of the major, with place the site and stake of struggle.*

And further, by applying it to Till’s discourse on ‘transformative participation’, discussed in 2.2, we can also say: *the transformative potential of spatial design can be understood as its potential to unsettle the dominant processes and products of the major, with place the site and stake of struggle. That, therefore, the transformative (minor) potential of spatial design as a means to negotiate place requires it be practised in minor keys.*

* * *

In his 2004 paper *Space As A Key Word*, the geographer David Harvey cautions that answers to questions that “arise over the nature of space” must lie in human practice rather than philosophy (2004, p. 5) and calls for particular conceptualisations of ‘space’ and ‘place’ to be used as tools to better our collective lived reality (2004). Accordingly, 2.4 returns to architecture and education’s relationship, applying the arguments and understandings developed thus far to discuss the kind of education required in order to operationalise practices of spatial design in minor keys – that is, practices that work to expose, generate, and support *minor* negotiations of place.

2.4 The transformative (minor) potential of spatial design within school requires a weak education

Section 2.4 asks what kind of education is needed to realise the transformative (minor) potential of practising spatial design within the school context.

Framing the Farrell Review's (2013) call for a particular kind of built environment education as a call for 'strong education' (Biesta, 2013/2016) aligned to the major key, I posit a weak education (Biesta, 2013/2016) and poor pedagogy (Masschelein, 2010) aligned to the minor key as an alternative model. In enabling participants to expose, engage in, and generate ongoing (place) negotiations concerning the *how*, *why*, and *where* of education, it is in this weak educational model of practising spatial design practice in school that I contend spatial design's transformative (minor) potential lies.

2.4.1 Architecture in Education²⁵

Streetwork

In *Architecture in Environmental Education* (1975), Colin Ward and Frank Chippendale describe the marginal nature of architecture's position (and presence) within the then school curriculum, noting how, where it does "creep" (p. 7) into "the margins of established

²⁵ This title is adapted from that of Colin Ward and Frank Chippendale's 1975 article: "Architecture in Environmental Education", published in *Journal of Architectural Education, EESP Yearbook 1973-1974 (1975)*, 28(3/4) 7 – 12.

subjects”, it does so “as a means to something else” (p. 8): as “*evidence*” in history and geography, for example (*ibid.*, original emphasis). Having sketched out this marginal context, they call for a “design education approach” that is not only about solving problems but also includes “active [multi] sensory exploration of the built environment” (p. 9). While the former, they note, can feasibly be undertaken in a classroom setting, the latter requires “direct experience of *the thing itself*” (p. 10, original emphasis). This latter context, they continue, is that of “streetwork”: practices of urban exploration undertaken through “town trails or urban guided walks” (p. 10) in which equal attention is paid to all aspects of the environment, with urban studies centres set up to act as bases to provide physical (e.g. equipment and materials) and human support (p. 11).

Engaging Places

Thirty-five years on from the publication of *Streetwork: The Exploding School* (Ward & Fyson, 1973), the National Foundation for Educational Research’s (NFER) 2007 report: *An investigation into the provision of built environment education to schools in London, the South East and Yorkshire and the Humber* (Kendall, Wilkin, and Murfield) describes a similarly marginal situation. For example: although it identifies a strong enthusiasm for, and a wide range of activities related to, built environment education (p. xii; p. 45)²⁶, it also finds that the term ‘built environment education’ remains poorly defined and understood (p. xiii); that there is a preference for kinds of activities that can be easily (and strongly) linked to existing curriculum subjects (*ibid.*)²⁷; and that provision is heavily fragmented with no “strategic” body to tie the “myriad” of providers together (p. 44).

²⁶ The report asked participants to provide details of built environment provision according to eight key categories: “site visits/experiences; networks; printed resources; professional development for teachers; projects with schools or colleges; virtual/web-based resources; campaigns; and maps showing location of different resources”; and “other”. The report notes that the first five categories were “broadly comparable [in prevalence] across regions and sectors” (Kendall et al., p. 14).

²⁷ Also see Gert Biesta’s recent paper *What if? Art Education Beyond Creativity and Expression* (2019), in which he discusses similar problems of marginalisation, “instrumental justification”, and tokenism in relation to the current and future direction of art education (p. 3).

The Engaging Places initiative,²⁸ which developed in response to the conclusions and recommendations set out in the NFER report, aimed to support learning beyond classrooms by inspiring “schools to engage more widely with local buildings, places and spaces” (Kendall et al, 2007, p. ii). Engaging Places was originally supported and delivered through an online resource, known as the Engaging Places Portal, together with a national network of schools and providers. However, following the decommissioning of the Commission for Architecture and the Built Environment (CABE) in 2011, the portal was subsumed by the London based architecture charity Open-City, with its geographic reach curtailed accordingly.

The Farrell Review

In late 2013 – three years on from the decommissioning of CABE – the *Farrell Review of Architecture and the Built Environment* was published. Commissioned by the then Minister for Culture, it describes itself as “a broad and independent review of our collective efforts to plan and design our future built environment which in turn shapes the way we live our lives” (Farrells, 2013, p. 2). *Education, Outreach & Skills* forms the first of five thematic sections and has three concluding categories:

The first – “Children’s Education” – calls for “the way in which we shape our physical environment” to be taught within schools at all ages in order “to get across how critical the role of the built environment is to our health and wellbeing, socially, economically, environmentally and culturally” (p. 160). It suggests that this be done through incorporating the teaching of “Architecture, the built environment and an understanding of ‘place’” within existing subjects through the introduction of “new [curriculum] content”, additional “teacher training”, “online resources”, and volunteering. The aim being to help “young people to develop the widest creativity and problem-solving skills, which are essential for the creative industries, and to develop an understanding of what the built environment professionals do” (*ibid.*). The

²⁸ The Engaging Places initiative was set up by the then Department for Culture Media and Sport (DCMS) in partnership with Commission for Architecture and the Built Environment (CABE) and English Heritage. The 2007 NFER report constituted its initial phase (Kendall et al., 2007, p. ii).

second – “Outreach and Sills” – advocates for the creation of an “urban room” in “every town and city”, wherein a “virtual or physical model, produced in collaboration with local technical colleges or universities”, would allow a place’s “past, present and future” to be “inspected” (p. 162). It calls for the development of public-private partnerships that “champion” the “civic value” of good design through “volunteering, collaboration and enabling” activities that go beyond a focus on ‘redesign’ (*ibid.*); as well as for the “empower[ment]” of “decision makers” through “design literacy” training (*ibid.*).²⁹ The third category – “Professional Education” – sits outside the scope of this thesis but has been included for completeness. It argues for a rethinking of architectural training, including a diversification of ‘routes’ and the creation of stronger links between different built environment disciplines (2013). These conclusions, together with their corresponding recommendations (recommendations #01 – #12, see p. 161 and p. 164), are to be welcomed, albeit cautiously. However, it is important to note that their particular wording locates them firmly within the major key (e.g. Deleuze & Guattari, 2004).

For example: The report’s main text presents the purpose of a future built environment education within schools as to help children develop creative knowledge and skills that will enable them to engage actively with ongoing debates concerning where and how they live. However, the respective conclusions made clarify this aim as (1) a response to ‘industry demand’ and (2) a means to understand “what [others] do” rather than to engage with them in collaborative and meaningful practice (p. 160). Following Craft, such aims situate the role of a future built environment education within the wider trends of the “marketization of creativity” and the “harnessing of education to the market” (2008, p. 8). The problem with this, Craft continues, is that “a globalised economic model as a primary driver to creativity in education, leads to a culture-blind and therefore culturally insensitive model of ‘development’ and ‘progress’” (pp. 9-10). In other words, through positioning the warrant and aims of a future built environment

²⁹ These conclusions expand upon and make more explicit recommendations made fifteen years earlier within the final report by The Urban Task Force – *Toward an urban Renaissance* (Rodgers, 1999) – commissioned by the then government. This report subsequently helped to inform the white paper *Our Towns and Cities: The Future – Delivering an Urban Renaissance* (Department of the Environment, Transport and the Regions, 2000).

education as subservient to market forces, the purpose of developing creative skill and knowledge is framed as a means to perpetuate, not challenge or transform, dominant agendas – social, economic, political, and cultural.

A future built environment education conceived in these terms (and language) is a world away from that advocated by Colin Ward and Anthony Fyson in *Streetwork: The exploding school* (1973), as well as in the pages of the *Bulletin for Environmental Education* (BEE).³⁰ Counter to the language of ‘bridging’ used within the Farrell review (e.g. 2013, p. 49), Ward and Fyson call for the “explosion of the school into the urban environment” (1973, back page); for the urban environment to be engaged with actively as an “educational resource”; for its potential as an educator to be realised (p. 18)³¹. This ideology, they write, is captured vividly by the American novelist Paul Goodman in his 1942 novel *The Grand Piano*, which they quote at length:

On the one hand, this city is the only one you’ll ever have and you’ve got to make the best of it. On the other hand, if you want to make the best of it, you’ve got to be able to criticize it and change it and circumvent it [...] Instead of bringing imitation bits of the city into a school building, let’s go at our own pace and get out among the real things. What I envisage is gangs of half a dozen starting at nine or ten years old, roving the Empire City (NY) with a shepherd empowered to protect them, and accumulating experiences tempered to their powers. [...] In order to acquire and preserve a habit of freedom, a kid must learn to circumvent it and sabotage it at any needful point as occasion arises. [...] If you

³⁰ Published between 1971 and 1980, the *Bulletin for Environmental Education* (BEE) was a “roughly produced and highly illustrated” bulletin edited by Colin Ward and intended for teachers working in schools, providing them with inspiration and resources to help enable them to take their pupils out of school and “off into the streets” beyond (Burke, 2014, pp. 436 - 437). A further valuable source of information concerning BEE, including interviews with key actors, can be found in Perez-Martinez’s ongoing doctoral research *Urban Studies Centres and Built Environment Education in Britain 1968-1988: A Framework for Critical Urban Pedagogy today?* (forthcoming).

³¹ For further and very useful discourse on Ward and Fyson’s work see Catherine Burke (2014) ‘*Fleeting pockets of anarchy*’: *Streetwork. The exploding school* (2014).

persist in honest service, you will soon be engaging in sabotage (Goodman, 1942, as cited in Ward & Fyson, 1973, p. 18).

The ideology and methods put forward by the Farrell Review, on the one hand, and by Ward and Fyson, on the other, are representative of the two keys identified by Deleuze and Guattari (e.g. 2004). The former – situated in the major key – seeks to operate with and within, as well as to maintain, “sanctioned” spaces that reflect and represent institution and state “authority” (Burke, 2014, p. 441). The latter – situated in the minor – “underst[ands] the importance of marginal in-between spaces” wherein “fleeting pockets of anarchy” might be found (*ibid.*)³².

Exemplifying the practical difference between these keys is the difference between Urban Rooms³³ and Urban Studies Centres.³⁴ Whereas the former are put forward in the Farrell Review as ‘branded’ “Place Spaces” (2013, p. 53) wherein “the past, present and future of that place can be inspected” through recourse to a “physical or virtual model” (p. 56): as destinations to visit. The latter were envisaged “as a base for streetwork” (Ward & Chippendale, 1975, p. 11; also Ward & Fyson, 1973); that is, as bases for the ‘roving’, ‘service’, and ‘sabotage’ described in Goodman’s novel: bases from which to depart (in exploration). Tellingly, the Farrell Review makes no mention of the latter.

³² Burke notes that the phrase “fleeting pockets of anarchy” is borrowed from Carl Levy (2011) “Colin Ward (1924–2010),” *Anarchist Studies*, 19(2) p. 13. (Burke, 2014, p. 434).

³³ There exists a growing number of organisations self-identifying as Urban Rooms. Although each is unique in terms of history, provision, and identity, they are bound within the recently formed (2016) Place Alliance and subsidiary Urban Room Network. Complimenting these is a further range of organisations that work to promote and support young people’s engagement with their built environment in various ways, including: self-build projects (e.g. Matt + Fiona | Build; Build Up Hackney); architecture workshops (e.g. Architecture Workshops Association); and summer schools (e.g. RIBA Summer School). The online resource *Designing with Children* provides an additional source of past and current projects related to the provision of built environment education in various formats (Birch, Parnell, Patsarika, & Šorn, 2014).

³⁴ Urban Studies Centres were first proposed by Ward in *Streetwork: The exploding school* (1973) as “Streetwork centres” (p. 72). There were 23 in total, with the Notting Dale Urban Studies Centre remaining closest to the Ward and Fyson’s original vision (Hart, 1997).

The focus of this thesis is within, not outside of, the *everyday* school context. It is, therefore, to the need for ‘other’ ways within schools that I now turn.

2.4.2 The need for “other [minor] ways”³⁵ (within school)

In his 2001 preface to Henry Giroux’s *Theory and Resistance in Education*, Stanley Aronowitz contends that at a time when “researchers have tacitly conceded or openly embraced the proposition that the interests of business should drive nearly all aspects of schooling” Giroux’s arguments are more relevant than ever (1983/2001, p. xvi). Nearly two decades on, I suggest their relevance has not weakened.

For Giroux, ‘Schooling’ is distinct from ‘education’. *Schooling* “takes place in institutions that serve the interests of the state” (p. 241), that, restricted by the need to achieve efficiently – economically, spatially, and temporally – constrain the teacher’s ability to “develop critical modes of pedagogy” (*ibid.*). On the other hand, ‘education’ is political and capable of enabling social transformation (p. xxvii). *Education* “represents both an ideal and a strategy in the service of struggling for social and economic democracy” (p. 239). As an ‘ideal’ it seeks to eliminate, through learning and action, oppression in its many forms. As a ‘strategy’ it seeks to address issues raised by drawing on theoretical concepts to enable those involved to situate the issues at stake “within the wider historical, social and economic context” (*ibid.*). Framed thus, the Farrell Review’s call for Built Environment Education is in-fact a call for Built Environment *Schooling*.

³⁵ The term ‘Other Ways’ is taken from the title of Till, Schneider and Awan’s (2009) research project, *Spatial Agency: Other Ways of Doing Architecture*. ‘Other’ is used deliberately in the place of ‘alternative’ because, as Schneider argues, ‘alternatives’ “immediately position [themselves] in opposition to something” and assume there exists a “definite centre” (Curti, Caines & Schneider, 2011). In this way, the ‘other ways of doing education’ that this thesis seeks to investigate are not considered tools of reaction but “positional starting points” (*ibid.*) for ‘other ways’. It is for this reason that I have inserted the term ‘minor’ in reference to Deleuze and Guattari’s concept of the minor key, as discussed in 2.3.

In *The Child In The City*, Colin Ward reflects,

the most important thing is [the child's] realisation that they can actively play a part in shaping their surroundings, that what *they* say about where and how they live will be listened to and that the key to their future lies in their own awareness (1978/1990, p. 185, original emphasis).

Counter to both the motives and proposed methods set out within the Farrell Review, Ward's submission – together with his earlier work with Fyson (e.g. 1973) – supports the argument that any inclusion of Built Environment Education into primary and secondary curriculums must be radical; socially empowering rather than economically subservient. *Education*, not schooling. *Minor*, not major. In particular, through the use of the phrase “where and *how* they live”, as opposed to simply ‘where they live’, Ward highlights the importance of addressing the inseparable relationship between the places in which life unfolds and the nature of life itself (1978/1990, p. 185, emphasis added). For the importance and potential of this relationship in the context of education, see: Clark, H. (2002), Dudek (2000), Nicholson (2005), Read (1943/1974), Rudduck and McIntyre (2007), and Woolner (2010, 2015), for example. In this way, Ward's reflection at once reveals the potential in and reinforces the need for a future Built Environment Education within school that acts as both mode and site of ‘realisation’ and agency³⁶ concerning not only the materiality of education (*where*) but its methods (*how*) and purposes (*why*) too. So, where next?

In arguing that answers to questions such as, “what is a school?” and “who is the child?” cannot be found but must be built together, Carla Rinaldi recognises that participation in the processes through which questions are posed and explored is as valuable as their ‘direct’ outcomes (Rinaldi, as cited in Burke, Gallagher, Prosser & Torrington, 2007, p. 77).³⁷ For example, at one of five ‘exchanges’ organised by ‘The View of the Child’ research cluster (2005), a group

³⁶ The particular form of *agency* required is discussed in 2.5.

³⁷ The term ‘direct outcome’ is used in reference to those which, whether physical or operational, are immediate, as opposed to “effects [...] felt in contexts and times beyond the immediate realm” (Mannion, 2010, p. 339).

of primary school children were asked to design and build a physical model of their city. Reflecting on the project, the researchers note the process of design was “democratic and inclusive” and “served as [a] vehicle for [the] children to knit a fabric among themselves” (Burke et al., 2007). Thus, while the project did not result in the construction of a new city, through providing structure (physical modelling) and time (multiple days, rather than a single afternoon) the process enabled children to engage seriously in discussing and questioning the places they live and was therefore still empowering. And, as such, it will arguably result in “effects [...] felt in contexts and times beyond the immediate realm”³⁸ (Mannion, 2010, p. 339).

Understood this way, a future Built Environment Education within school might not be centred about the transmission of knowledge necessary to feed industry demand (schooling), nor on “accessing the silenced voice of children” (Mannion, 2010, p. 399). Instead, it could foremost be about “the creation of new dialogical intergenerational spaces of and for participation through which new kinds of relationships, identifications and spaces for adults and children emerge and find expression” (*ibid.*).

Moreover, the creation of such spaces cannot simply be undertaken on a one-off or now-and-then basis. For example, it is clear from the literature (e.g. Blackmore et al., 2011; Woolner, 2015) that, when undertaken at all, participation most often occurs within the design and building phases, focused on achieving short-term outcomes quickly with little money or resource put aside for future review, adaptation, or development. Yet, as Singer and Woolner contend, “beyond the creation of ‘new buildings’, a shared understanding of learning spaces supports ongoing development, enabling the setting to respond to and even promote educational needs – and facilitate unforeseen learning and teaching opportunities” (2015, p. 206). Therefore, it is essential such participatory spaces be “embedded” within the everyday “life of the school” (p. 200), with a mandate to facilitate ongoing dialogue that concerns both the modes and sites of learning, between designers, educators, staff, parents, and children;

conversations through which learning might become “shared and cumulative” as well as transformational (*ibid.*).³⁹ This suggests two questions. First, through which methods might dialogical spaces of and for the negotiation of place be generated and supported? Second, how might the practising of these methods be supported and shaped by pedagogy?

Having posited spatial design practice as a means to generate and support such participatory spaces in 2.2, it is to the second of these questions I now turn.

2.4.3 The potential of weak education and poor pedagogy

Strong and weak education

Gert Biesta argues that there are two kinds of education: strong and weak (e.g. 2006, 2009, 2013/2016).⁴⁰ *Strong education* is about strength, security, and predictability; about the removal of all risk (2013/2016). It is the kind of education that seeks to match educational “input” and “output”; that considers failures to do so as “defect[s]” to be “addressed and overcome” (2013/2016, p. 4). This denies “that education always deals with ‘living material’ [...] not with inanimate objects” (p. 2). *Weak education*, on the other hand, is full of uncertainty. It is a slow and challenging process that embraces all forms of risk in order to open life up. It is an education that “takes communication seriously”: not as a simple act of transmission but, following Dewey (e.g. 1916/1966), as a process of opening-up through which participants partake in the lives of each other (p. 154). In this way, it is concerned not only with “emancipation and freedom” but also with the “responsibility” that such freedom brings (Biesta, 2013/2016,

³⁹ In this way, although the newly developed RIBA National Schools Programme (2018) is to be welcomed, due to its positioning and delivery-from without, and limited capacity as to how many schools it can support, it remains significantly different to the ‘embedded’ kind of built environment education advocated for herein.

⁴⁰ It is worth noting here that, as will become clear, Biesta does not use the term ‘weak’ in a pejorative way but as an attribute that is in fact positive.

p. 5).⁴¹ *Strong education* is a “process of *becoming human*” (Ingold, 2018a, p. 32, original emphasis) rooted in the metaphysical register, with what it means to be human known and agreed in advance (Biesta, 2006/2016, 2009, 2013/2016). *Weak education* is a process of “*human becoming*” (Ingold, 2018a, p. 32, original emphasis) that “operate[s] in weak existential ways” to ensure the question of what it means to be human is always emergent, always at stake (Biesta, 2013/2016, p. 154; also, 2006/2016, 2009).

Conceived along these lines, the kind of future Built Environment Education set out in the Farrell Review (2013) is one of strong education, of *becoming human*. In this sense, it can be aligned with traditional ‘teacher-centred’ approaches that emphasize the teacher’s authority and centrality, the student’s position as passive receiver of knowledge, and the use of systematic and rigid methods for transmission and assessment. The problems of such approaches are clearly examined by Freire (1970/2017), Giroux (1983/2001), and Ranciere (1991),⁴² as well as by a wealth of literature and policy advocating instead for ‘child-centred’, progressive approaches to teaching and learning.⁴³ Importantly, contemporary child-centred approaches that remain wed to theories of universal development and therefore fail to account for or engage with contemporaneous difference – whether social, cultural, economic, physical, or other

⁴¹ Importantly, Biesta cautions that the aim of emancipation does not in-itself make education weak. Educational approaches – including those in the critical tradition – that see emancipation as something to be brought about from without, that assume its goal to be the ‘rational autonomous being’ with ‘rationality’ understood both narrowly and singularly (i.e. that there is a “norm” (2006/2016, p. 5)) and the task of the educator/ emancipator framed as one of ‘making visible’, remain kinds of strong education (2005, 2006/2016, 2013).

⁴² I refer here to Freire’s identification and critique of the ‘Banking Concept of Education’ (1970/2017), Giroux’s distinction between ‘schooling’ and ‘education’ (1983/2001), and Ranciere’s discourse on ‘Explication’ (1991).

⁴³ Although limited to the last one hundred years and within the context of Primary Education in England and Wales, key examples include: The Hadow Report (Consultative Committee, 1931), for an early example; The Primary Memorandum (Advisory Council of Education in Scotland, 1965), specific to Scotland; The Plowden Report (Central Advisory Council for Education, 1967), a highly influential example, although some argue not so in terms of practice (Alexander, Hofkins & Northen, 2009); Every Child Matters (Department for Education and Skills, 2003), a policy example; and The Primary Review (2009), for a more recent, independent example. Also see the Black Papers (1969-1977) (Cox & Dyson, 1971) and James Callaghan’s Ruskin College speech (1976) (Gillard, 2010) for notable examples of challenges made to progressive, child-centred approaches to education, especially as set out in The Plowden Report.

– are arguably also aligned with strong kinds of education (Darling, 1986; Langford, 2010; Power, Rhys, Taylor, & Waldron, 2018; Singer, 2005; Tisdall, 2017; Wood, 2007).⁴⁴

However, if the aim of a future Built Environment Education is to ‘light fires’ through creating dialogical spaces of and for participation that open life up, it is a weak kind of education that is needed.⁴⁵ Suitable approaches would resonate with many of the key principles underpinning contemporary child-centred approaches: a focus on the needs and interests of individual children; flexibility; the importance of active play, discovery, and use of the environment; and critical understandings of progress and its measurement, for example. Suitable approaches would not, however, centralise nor individualise any one constituent of education at the expense of excluding another.⁴⁶ Instead, they would take a relational perspective that moves beyond common binaries, which have long plagued educational discourse and practice (Alexander, Hofkins & Northen, 2009; also Biesta, 2015a, 2015b). To borrow Langford’s words, used in setting out her own ‘democratic-centred’ approach, a relational perspective would understand constituents as “react[ing] and respond[ing] in relations with each other in complex and entangled ways, with growing knowledge, skill, power, judgement and agency” negotiated and emergent (2010, p. 121).⁴⁷ It is for its capacity to operationalise such an approach from within the flows of unfolding practice that I next turn to discuss Jan Masschelein’s call for a ‘poor pedagogy’.⁴⁸

⁴⁴ The phrase ‘contemporaneous difference’ is used in line with Doreen Massey’s conceptualisation of space as a “simultaneity of stories so far” (e.g. 2005; also 2.3, this study).

⁴⁵ The phrase ‘it is not about filling a pail but about lighting a fire’ is widely attributed to Yeats (e.g. Biesta, 2013/2016, p. 1). However, Ingold notes that evidence for this is scant and offers the Graeco-Roman writer Plutarch as a more likely source (2018a, p. 36). It is also a phrase that was often used – in varying forms – by Sir Alec Clegg, the innovative and influential Chief Education Officer for West Riding of Yorkshire County Council between 1945 and 1974 (e.g. Nutbrown, Clough, & Selbie, 2008, p. 107).

⁴⁶ *Education* is understood here in line with Massey’s conceptualisation of ‘place’ (2005; also 2.3, this study).

⁴⁷ Whereas Langford’s (2010) text suggests the constituents of education as being limited to children and teachers, I use her words more broadly: employing the term ‘constituent’ (as well as ‘education’) in line with Massey’s concept of place (e.g. 2005), thereby including both the human and nonhuman, both within and beyond the immediate realm. Likewise, whereas Langford does not deliberately define the terms ‘knowledge, skill, power, judgement and agency’, I use them in accordance with their meanings as discussed throughout this chapter.

⁴⁸ Although Biesta does not cite Masschelein explicitly in his discourse on weak education, he is certainly aware

A poor pedagogy

In opening his paper *E-ducating the Gaze: the idea of a poor pedagogy* (2010), Jan Masschelein sets out two perspectives within critical education. According to the first, which follows the “sense of *educare* (teaching)”, the task is to “becom[e] conscious or aware” through “arriving at a liberated or critical view”. Critical education in this sense is aligned with the tradition of critical pedagogy (e.g. Freire (e.g. 1970/2017), Giroux (e.g. 1983/2001) and Rancière (1991)). Alternatively, the second perspective begins from the sense of “*e-ducere* (as leading out, reaching out)”. Its purpose concerns “liberating or displacing our view” through “becoming attentive [and] paying *attention*” (Masschelein, 2010, p. 44, original emphasis). Although critical education in this second sense remains rooted in the tradition of critical pedagogy, it represents a distinct shift in perspective that, Masschelein contends, “asks for a poor pedagogy” (*ibid.*).

Masschelein uses the term ‘poor pedagogy’ to describe a range of practices that aim not to “arriv[e] at a particular perspective or vision” but to “[displace] one’s gaze so that one can see differently” and thus the possibility of transformation is opened (*ibid.*). Exemplifying such practices, Masschelein writes, is the activity of ‘walking’:

The activity of walking – along a street, for example – offers the walker a particular perspective. This particular perspective is not special in the sense that it offers a particular view: looking up the street or down the street, peering in from a side road, or looking down from above. Nor is it special in it being objective (e.g. the perspective of an urban planner) or subjective (e.g. the perspective of lived experience). Instead, its specialness lies in its activity through which the walker’s perspective is continually pulled “*out of position*” (p. 45, emphasis added). In this way, walking along the street is a particular mode of “exploring and relating to the present, which [is] in the first-place e-ducative” (p. 46). Through being “attentive” the walker “exposes” themselves to the world, suspending judgment and following wherever their attention

of him, having cited his work in *Against Learning: reclaiming a language for education in an age of learning* (2005).

may lead; a process of continual movement through which spaces of possible transformation are opened up (p. 47).

Understood through the lens of ‘attention’, rather than ‘intention’, Masschelein also notes how the activities of ‘copying’ and ‘mapping’ transform from processes of “reading and ordering or re-presenting” to ones of “simultaneously recapturing and inventing” (*ibid.*): they become practices of ‘poor pedagogy’. Although he denotes copying (explicitly) and mapping (implicitly) to be processes undertaken by hand, I argue against this; that it is the stance taken – attentional or intentional – rather than the means – by hand, mechanical, or digital – that is important. Indeed, it is for its ‘attentional’ stance and commitment to remaking a work in a different medium and on the critic’s own terms that I suggest the practice of Site-Writing (3.3.8) is also an example of ‘poor pedagogy’.⁴⁹

Through applying Massey’s relational concept of space (e.g. 2005), discussed in 2.3, practices of poor pedagogy can be understood as always *with* others, whether human or nonhuman (trajectories), directly or indirectly. Further, because in their attentiveness practitioners of poor pedagogy are always on the move, the nature of relations between trajectories is never oppositional but always along (e.g. Ingold, 2018a).

Referring to Dewey’s description of experience as being “a rhythm of intakings and outgivings” (1934/2005, p. 58), Ingold also reminds us that a weak education is always a composition in two movements: in breathing-in (submission) “attention educates by exposing us to a world in formation”. In breathing-out (mastery) “attention is what is educated by dint of this experience” (2018a, p. 32). The two are entwined, with the former leading the latter. In submitting to the world, we ‘grow’ in knowledge and *skill* (mastery), knowledge and *skill* which we in-turn offer back to the world and those we live with through future submissions. The use of the word *skill* is important. It is not used to describe the bodily actions through which the cognitive mind applies its knowledge in the world, but the creative practices of a mind that

⁴⁹ Site-writing is a practice of art criticism developed by the architectural theorist Jane Rendell and used herein as a method of data analysis (see chapter 3).

mingles with “body and environment” (2018b, p. 159; also: 2010). In other words, *skill* is a “practice of *correspondence*” (p. 162, original emphasis) – a term I will return to in more detail in the following section (2.5).

2.4.4 The transformative (minor) potential of spatial design within school lies in the minor key, requiring a weak education

This section has described two kinds of spatial design education in school. The first is a ‘strong’ kind of spatial design education that, through the use of ‘rich methodologies’,⁵⁰ enables people to learn about *the* built environment, about ‘what’ those (industry and practitioners) who are involved in its creation and development ‘do’, as well as the creative skill and knowledge they demand. This is a spatial design education in the major key. Undertaken through engagement with false problems it is secure and predictable, carries little risk, and has definite inputs that measurable outputs can be matched to and scored against. While it does offer participation in the relationship between architecture and education this is a participation-in-waiting, a ‘promise’ of the ability to participate in the future, after the required knowledge and skill has been acquired.

The second is a ‘weak’ kind of spatial design education that, through the use of a poor pedagogy, supports people in actively questioning and exploring *their* built environment, to engage in meaningful collaboration and practice with those (industry and practitioners) who are already involved in its creation and development, through which all grow and offer creative skill and knowledge. This is a spatial design education in the minor key. Undertaken through *struggling* with real problems, it is a slow, challenging, and risky process that foremost seeks to unsettle and thereby open life up. Like the strong kind of spatial education just described,

⁵⁰ Beyond its presentation as representing the counter to the ‘poor pedagogy’ he calls for, Masschelein does not explicitly define the phrase “rich methodology” (2010, p. 44). In absence of an explicit definition, it can, I suggest, be understood to reference the methods and principles of ‘schooling’ described by Giroux (1983/2001), or ‘explication’ by Rancière (1991).

it too offers participation in the relationship between architecture and education. However, in the minor key, this is a participation-in-the-present; a lively process of “intakings and out-givings” (Dewey, 1934/2005, p. 58) through which participants rhythmically ‘grow’ and ‘offer’ knowledge and skill.

Conceived this way, spatial design education in the major key at best offers no possibility of participation and at worst dupe’s participants into thinking they have power to effect change through offering forms of participation that are in reality “pseudo” (Pateman, 1970, as cited in Till, 2005, p. 27). On the other hand, spatial design education conceived in the minor key at worst offers forms of “partial” participation, in which the power to effect change is real if unequal and at best offers “full” participation, wherein power is distributed equally (*ibid.*). Moreover, through generating and supporting attentive movement that works to continually open up spaces of possible variation (Masschelein, 2010), spatial design education in the minor key offers forms of participation that always carry the potential to challenge the certainties provided by the status quo of knowledge and power relations. To recall Till: the potential to be “transformative” (Till, 2005).

* * *

In sum: I contend the transformative (minor) potential of practising spatial design in school lies in its use as a means to expose, engage in, and generate ongoing place negotiations – concerning the how, why, and where of education – in the minor key. That is, in attentive ways that open up spaces of possible variation, new paths to follow. Explorations that trouble the major and require a *weak*, not strong, kind of education. In other words, I suggest ‘the (weak) educational potential of spatial design in school is its potential to effect transformation from within when practised in the minor key as a means to expose, engage in, and generate ongoing place negotiations concerning the how, why, and where of education.’

It is to the question *what makes practices of spatial design minor* that I turn next.

2.5 Practising spatial design in the minor key

Section 2.5 asks, '*what are the characteristics of minor spatial design practices?*'

I begin by identifying that it is the particular 'way' in which methods are used that determines the key of spatial design, not the methods themselves. Next, the work of the anthropologist Tim Ingold is used to introduce two particular understandings of the world and set out two respective theories of relating, thereby developing the theoretical lens of '*human and nonhuman relating*'. I conclude by offering three characteristics of minor spatial design practice before cautioning that the 'key' of spatial design is ever-emergent through action. This leads to a statement of the primary research questions within a final summary.

2.5.1 Methods alone are not enough

As I have already noted, Deleuze and Guattari make clear that minor and major literatures do not use different languages – they do not exist outside of one another – but the same language in different keys (1983; 2004). This is what allows the minor to work the major from within and it has important implications for the role of methods in *doing* spatial design in the minor key.

The use of 'drawing' within practices of urban design offers one example of such implications. On the one hand, design professionals (architects, planners, engineers, etcetera) might use a range of drawing types to work in the major key, thereby guarding their knowledge and positions as 'specialists' and reducing the possibility for variation (e.g. Till, 2005). On the other, those seeking to open up the 'guarded world' of urban design might also use a range of drawing types but, this time, to work in the minor key, thereby offering up their personal knowledge

and positions to one another in pursuit of raising questions and developing possibilities for variation. While both groups might use the same methods of drawing (e.g. sketches, conceptual, technical, three-dimensional), they do so in different ways and for different purposes. Likewise, while Till and Parnell recommend methods of storytelling and play (2.2) because of their ability to generate and support negotiations in the minor key, such methods can in-fact also be used in the major key.⁵¹ Importantly, although particular methods might tend towards generating and supporting negotiations in major (i.e. ones requiring specialist skill or knowledge) or minor (i.e. ones requiring no specialist skill or knowledge) keys, they cannot ensure one key or the other alone. Instead, it is the particular ‘way’ in which methods are used that determines the ‘key’ of negotiations; whether they work to open life up by *increasing* the possibility for variation (minor) or close it down by *reducing* the possibility for variation (major).

No matter their mode, form, shape, purpose, duration, or whatever, ‘methods’ are operationalised through human and nonhuman interrelations. Therefore, to generate and support negotiations in the minor key, no matter the method, a particular *theory of relating* is needed that is itself *minor*. In the following part of this section, I draw on the work of Tim Ingold to detail two different theories of relating: correspondence and interaction.

2.5.2 Theories of relating: correspondence and interaction

While Ingold specifically advances his theory of correspondence in *On human correspondence* (2016), it has threads that weave throughout his work (e.g. 2000, 2007, 2010, 2011, 2014, 2015, 2016, 2017a, 2018a, 2018b, 2018c). It is also worth noting that although I use the term ‘theory’ freely, Ingold is less easy with doing so:

⁵¹ Indeed, Till (almost) says as much in his noting that the vagueness of the term “Conversations” fails to “necessarily” address differences of power (Till, 2005, p. 38).

if ‘theory’ sounds too presumptuous – as if claiming title to an intellectual territory – let us call it an overture which perhaps affords an opening to the dynamic potential of social life, and its transformative possibilities, that might otherwise be closed off (2016, p. 21).

Drawing on a diverse literature – including, among others: Deleuze and Guattari, 2004; Dewey, 1916, 1938; Heidegger, 1971/2013; Klee, 1961; and Mauss, 1954 – correspondence is a theory rooted in, and central to, a particular understanding of the world. Therefore, before continuing, I take time to sketch out some foundational concepts – richly set out by Ingold in *Bringing Things to Life: Creative Entanglements in a World of Materials* (2010).

For a lively meshwork of things

In *Bringing Things to Life: Creative Entanglements in a World of Materials*, Ingold argues *against* the “double reduction, of things to objects and of life to agency” (p. 7), *for* a focus on material flows over materiality, and *for* an understanding of the “inhabited world” as “not a network of connections but a meshwork of interwoven lines of growth and movement” (p. 3). Herein, I use the terms *thread* and *line* interchangeably.

Contrasting the psychologist James Gibson’s understanding of the world as comprising “earth and sky with objects on the earth and in the sky” (Gibson, 1979, p. 66., as cited in Ingold, 2016, p. 4) with the philosophy advanced by Heidegger in his classic essay *The Thing* (1971/2013), Ingold begins by setting out a clear distinction between objects and things:

The object stands before us as a *fait accompli*, presenting its congealed, outer surfaces to our inspection. It is defined by its very ‘overagainstness’ in relation to the setting in which it is placed (Heidegger 1971: 167). The thing, by contrast, is a ‘going on’, or better, a place where several goings on become entwined. To observe a thing is not to be locked out but to be invited in to the gathering. We participate [...] in the thing’ thinging in a worlding world (p. 4).

And...

...the thing has the character [...] of a knot whose constituent threads, far from being contained within it, trail beyond, only to become caught with other threads in other knots. Or in a word, things leak, forever discharging through the surfaces that form temporarily around them (*ibid.*).

To illustrate, Ingold narrates the journey he takes from sat writing in his study to walking outside: describing, for example, how the many threads of the tree weave downwards with those of earth and worms, how the threads of its branches and leaves weave and dance with the currents of the air, how up and down the ‘surface’ of its trunk, the life threads of insects weave with those of bark and flesh (2010). Turning to buildings, he describes the same processes of human and nonhuman flow and entwinement, leading him to state: “not unlike the tree, the real house is a gathering of lives, and to inhabit it is to join in the gathering” (p. 5). The same might be said of schools.

This particular understanding of inhabitation – as “join[ing] in the processes of formation” (p. 6) – leads to Ingold’s second distinction: between life and agency. Ingold is against perspectives that accord materials agency. This, he argues, is only required in a world wherein materials have been artificially “deadened” through their reduction to objects “by arresting the flows of substance that give them life” (p. 7.). Instead, in a world of things movement is generated not by pre-distributed agency but by their leaking, processes through which threads join in with and depart from one another in lively acts of weaving: the kite with the air, the fish with the water, the tree with the wind and earth; the human with buildings; etcetera.

Contrasting Gibson with Heidegger once more, Ingold identifies the treatment of surface as central to the difference between a lively world of things and a dead world of objects. In the latter world, surfaces form interfaces between the substance of objects and the medium that surrounds them; objects may well merge or dissolve but in doing so their original surfaces must do so too. In contrast, Ingold notes how Heidegger’s philosophy speaks of the continual “discharge of substance through the porous [temporary] surfaces of emergent forms” (pp. 6 –

7): in the world of things, the environment comprises an “immense tangle of lines” in which “continuous trajectories” of human and nonhuman “becoming” all weave together (p. 11). Importantly, the many threads that comprise the ‘worlding world’ have a particular nature. In Deleuze and Guattari’s words, which Ingold quotes at length (p. 10):

[each thread (or line) is] not defined by the points it connects, or by the points that compose it; on the contrary it passes *between* points, it comes up through the middle [...it] is neither one nor two, nor the relation of the two; it is the in-between, the [...] line of flight [...] running perpendicular to both (Deleuze and Guattari, 2004, p. 323, original emphasis).

Threads always forge forward. Unlike lines that connect between points, lines of flight have no final destination (*ibid.*): life can only lead to more life. It is to this entanglement of lines that Ingold gives the term “meshwork”⁵² – which, he notes, is borrowed from Lefebvre’s likening of processes of hand-writing to those of human and nonhuman activity (Ingold, 2010, p. 11; also, Lefebvre, 1991, p. 117). And, it is the difference between the *meshwork* and the *network* that Ingold turns to last.

Within common understandings of actor-network-theory, Ingold writes, lines connect between points (people and objects) with agency understood as distributed throughout the network: the lines of the network are lines between objects – lines of “interaction” (2010, p. 11). In contrast, the lines of the meshwork are put down by *things* in their living (*ibid.*). Although Ingold hints that such lines might also be considered as relations – albeit relations “*along*”, rather than “*between*” (p. 12., original emphasis) – it is perhaps clearer to maintain their definition as lines of life, with relations in the meshwork instead generated through the unfolding of multiple lines “in counterpoint”, “the one [serving] as a refrain” to the other (*ibid.*): that is, through their *co-responding* or *correspondence* (e.g. 2016).

⁵² Ingold also notes the link between his use of meshwork and Deleuze and Guattari’s use of “*haecceity*” which they liken to the rhizome (2004, p. 290).

Correspondence and interaction

Ingold defines *correspondence* as “the way of relating of a being that dwells in habit, whose agency is ever-emergent, and whose stance is attentional” (2016, p. 20). Understood thus, *correspondence* comprises three principles: ‘habit’, ‘agencement’, and ‘attentionality’. I discuss each in turn, setting them against those of volition, agency, and intentionality, which Ingold (drawing on Manning (2016)) presents as the counter triad: *interaction* (e.g. 2016 & 2018a; also, Manning, 2016).

The first principle of correspondence is habit, which, Ingold notes, is rooted in Dewey’s writing on experience as opposed to that of *habitus*⁵³ developed by Mauss (e.g. 1934/1979) and Bourdieu (e.g. 1977) (Ingold, 2016). For Dewey, who Ingold quotes at length, habit is the principle by which

every experience *enacted and undergone* modifies the one who acts and undergoes, while this modification affects, whether we wish it or not, the quality of subsequent experiences. For it is a somewhat different person who enters into them (Dewey, 1938/2015, p. 35, emphasis added; also Ingold, 2016, p. 15 & 2018a, p. 22).

To explain the significance of the principle, Ingold highlights the terms “act” (doing) and “undergo” (undergoing), as well as Dewey’s use of the conjunction *and* to join them (2016, p. 15). Specifically, Ingold writes, the principle of habit places doing “*inside* the undergoing” (2018a, p.22). This, he notes, is quite counter to the principle of volition, by which acts “deliver on intentions that the [wilful] mind places before them” (2016, p. 15). Thus: undergoing

⁵³ Although the differences between the concepts of ‘habit’ and ‘habitus’ are far from simple (Crossley, 2013), the importance of the difference understood and highlighted by Ingold (2016) is perhaps best articulated through their respective relations to ‘freedom’. Whereas *habitus* – understood as a “settlement” (p. 15) of capital (e.g. social, economic, cultural) – acts to constrain an individual’s freedom in respect of action; *habit* – understood as ongoing ‘movement’ through which we “perpetually shape the conditions under which both we and those who follow us, and to whom we relate, will live together in the future” Ingold, 2016, p. 15) – preconditions freedom (Crossley, 2013, p. 153). A useful broader account of the “genealogy and anatomy” of the term ‘habitus’ is provided by Wacquant (2016, p. 64).

is what someone actively does; it is not the passive by-product of doing. While seemingly semantic, the difference is important: whereas the principle of volition imposes change from without, the principle of habit transforms “from within” (p. 16).

To further explain the shift in register between the principles of volition and habit, Ingold turns to the experience of walking.

Decisions, he writes, that are taken by a person prior to walking – such as, why to walk (to think), where to go (the nearby hills), what to take (food, drink, camera, map, etcetera) – as well as those taken during a walk – in stopping to check the map, for example – agree with the principle of volition. And, the volitional walker assumes that in-between such decisions they “can get on with thinking in [their] head and leave the rest of [their] body to look after itself” (p. 23). However, once walking, Ingold continues, walking is no longer a task that the walker sets themselves to do but a process that they are inside of, “animated by its movement” (*ibid.*): the walker does not “think *while* walking [but] think *in* walking”. In other words, “walking is a habit of thinking” through which the walker’s mind “freely mingles with the body and the world” (*ibid.*, original emphasis). Moreover, the walker – in walking – must respond to the unfolding landscape, with each step forwards an act of uncertain submission. Outcomes cannot be known in advance. There is always the possibility for variation.

It is in this understanding of “responsivity” that *the second principle of correspondence – agencement* – lies (*ibid.*): whereas in the volition of going for a walk, agency is “given in advance of action, as cause to effect”, in the habit of walking it is something that is “ever forming and transforming from within the action itself” (p. 24). It is to distinguish the second from the first of these understandings that Ingold suggests we “turn the noun into the gerund of a verb” and reintroduce the French term, “*agencement*” (*ibid.*). Thus: whereas agency is (purportedly) pre-given to us as “beings endowed with volition”, *agencement* emerges within action, in the doing of undergoing (*ibid.*).

The third and final principle of correspondence – attentionality – is also explained by Ingold in relation to walking. Ingold describes two types of ‘attention’. The first is illustrated by the

walker who stops mid-walk to look up and check the landscape for signs that they are on the correct trail: the common sight of an individual hurrying through the streets of a busy city, pausing here and there to check the map on their phone, for example. Such kinds of attention are categorised by Ingold as *intentional* and are, he notes, framed by the principle of volition. The second is illustrated by the walker's ongoing responsiveness to the landscape as it unfolds around them, through which they attentionally *attend* to things "as [they] go along, joining or participating with them in [their] own movements" (p. 25, original emphasis). Thus...

...if the principle of volition renders a form of attention founded in intentionality, the principle of habit gives us a form of intention founded in attentionality. [...] The awareness of such a mind is [...] not of but with. Where 'of -ness' makes the other to which one attends into its object, [...] 'with -ness' saves the other from objectification by bringing it alongside as an accomplice. It turns othering into togetherness, interaction into correspondence (2016, pp. 19 – 20).

It is this difference between *with-ness* and *of-ness* that lies at the heart of Ingold's understanding of Anthropology as a "discipline of correspondence" (p. 24). In his words: "its purpose, dynamic, and potential [...]s to join with others in an ongoing, speculative, and experimental exploration of what the possibilities and potentials of life might be", in ways that seek "to restore the world to presence, to attend and to respond" (*ibid.*). And it is, I contend, through aligning with an Anthropology conceived thus – through unfolding in accordance with the principles of correspondence – that practices of spatial design can generate and support human and nonhuman relations in the minor key.

2.5.3 Three characteristics of *minor* spatial design practice

What then might be the characteristics of spatial design practices wherein methods and approach unfold according to the principles of correspondence – that are minor, not major?

Affording real freedom through crafting real problems

There are two types of problem, real and false.⁵⁴ Following Deleuze and Guattari (1988), as well as Bergson (2007), the philosopher Erin Manning describes false problems as those that carry their own solutions within them or arise from “badly stated questions” thereby leading to solutions that are mere illusions (Deleuze, 1988, p. 17., as cited in Manning, 2016, p. 10). Either way, she notes, they “maintain the status quo” (Manning, 2016, p. 10). In keeping with the earlier theme of walking, Ingold offers the example of the maze as a false problem: although within the maze “inmates” are “faced with multiple options at every turn” the path they may take is always limited by the “external determination” of its walls and its solution always contained within (2018a, p. 43).

Importantly, whereas false problems can only offer false freedom – the freedom to “choose between a finite set of options” – real problems offer real freedom – the freedom to “improvise, to find a way as you go along in response to environmental variations” (*ibid.*). Real freedom is not, then, something that can be possessed outside of an event but something that emerges from within its unfolding. Real freedom is not “linked to human volition, [...] intentionality or agency” but “to the *agencement* that opens up the event to the fullness of its potential” (Manning, 2016, p. 23). However, Manning cautions, while all events carry the “germs of [real] freedom”, something is required to “tend” and “sow” these germs in ways that generate real problems through which real freedom can emerge (p. 23). This, she contends, is the role of the “minor gesture” (*ibid.*).

In sum: whereas *minor spatial design practices* afford real freedom through crafting real problems that *open life up* to the possibility of variation, *major spatial design practices* comprise only false problems that, in containing their own solutions, can only *close life down*.

⁵⁴ “Wicked problems” – as defined by Rittel and Webber (1973) – are understood herein as akin to real problems (also: Buchanan, 1992).

Supporting patient experimentation

Following Manning, minor gestures are forces that open events up to the fullness of their potential (2016). The question, therefore, is *how to generate minor gestures?* For Manning, the answer lies in the difference between *method* and *technique*.

The danger in method, Manning argues, lies in its alignment to reason – to “a making-reasonable of experience” – through which the nature of knowledge is assumed in advance and consequentially the “danger of not hearing [...] the voice of knowledges not yet parsed for the academic establishment” is raised (p. 31). Drawing on Whitehead’s 1929 *A Function of Reason*, Manning instead calls for a “speculative pragmatism” that “remains open to the more-than” (speculative) while at once being “completely invested in its ‘something doing’” (pragmatic) (p. 33). Conceived thus, processes of speculative pragmatism recognise that “knowledge is invented in the escape, in the excess” (p. 38). Consequently, they replace the rigor of method, provided in its application from outside, with “a rigor of experimentation” that “emerges from within” through the use of ‘technique’ (*ibid.*).

Against a definition of method as the static repetition of action, Manning posits technique as a “dynamic” process that “involves the honing of repetitive movements” while at once encouraging experimentation as to “what else those movements can do” (p. 40). In this way, technique supports “experimental prudence”, a form of experimentation patient enough to “engage with that which experimentation unsettles”, that “jumps at the chance to discover what else the act can do” (p. 7). It is in their ability to generate and support experimental prudence that Manning puts forward (having first developed) the techniques of “study” and “research-creation” (*ibid.*; also pp. 26 – 45). And it is to these techniques that, I suggest, *minor practices of spatial design* can be added.

In sum: whereas *minor spatial design practices* achieve rigor by means of *patient experimentation* (through the use of technique), *major spatial design practices* achieve rigor through the application of and holding to external methods, regardless of how life unfolds.

2.5.4 The ‘key’ of spatial design (minor/ major) is ever-emergent through action

This section began by contending the ‘key’ in which negotiations-by-means-of-spatial design unfold (major or minor) is determined not by the particular methods of spatial design used (which can be used in either key) but by the nature of human and nonhuman relations through which they unfold. *Correspondence* and *interaction* were subsequently introduced as particular theories of relating – each rooted in a particular understanding of the nature of the world, as a meshwork and network respectively – that’s principles describe the nature of minor and major relations respectively. The contention being: to generate and support human and non-human relations – and thereby negotiations – in the minor key, practices of spatial design need to unfold according to principles of correspondence, not interaction.

However, according to the principles of correspondence the nature of the ‘I’ who acts does not exist outside of the event but is ever-emergent from within its midst, always at stake, always “in question” (Ingold, 2018a. p. 24). It is therefore not “possible to say with confidence ‘I [will] do this’ or ‘I did that’”. Instead, one must continually ask “is this what I am doing?” and ‘what did I do?’ (*ibid.*; also: Manning, 2016, p. 37). This is important, for it means aligning with the theory of *correspondence* opens up the possibility of relating according to the principles of interaction instead: whereas aligning with the principles of *interaction* shuts down all other ways of relating, aligning with the principles of *correspondence* opens them up.

Correspondence is therefore a way of relating that cannot simply be set in advance – in an act of volition – but can only emerge in the midst of ongoing events. It is not possible to say, ‘I will correspond’. Instead, one must continually ask ‘am I corresponding?’ and ‘was that correspondence?’ By extension, it is not possible to ‘set’ the key of an event (minor/ major) either: although certain methods (practised as techniques) and approaches are more suited to generating and supporting minor relations, there are a multitude of other factors at work too (internal and external). One must continually ask ‘is this minor?’ and ‘was that minor?’

Therefore, to better understand how to develop and undergo minor practices of spatial design – wherein its transformative (minor) potential lies – a better understanding of *how human and nonhuman relations manifest and unfold during spatial design including how aspects of the methods and approaches used affect how they manifest and unfold* is needed. It is to developing this understanding that this thesis is orientated.

2.6 Summary:

Researching ways of human and nonhuman relating

Chapter 2 addressed the overarching question: *what might be the educational potential of spatial design within the context of the English primary and secondary school?* It began by identifying the need for and potential of children participating in the relationship between education and the environment in which it takes place, in the context of school. Following an overview of existing methods and models, a new mode of participation was then called for that carries the potential to effect transformation from within (2.1). Responding to this, 2.2 drew on the work of Jeremy Till (2005, 2009a, 2009b) and others, first, to re-frame participation as processes of negotiation that, by supporting uncertainty, carry the potential to effect transformation from within; and second, to posit *spatial design practices* as ways of negotiating able to support uncertainty by weaving experience and imagination in ways that are speculative rather than prescriptive.

Together, 2.1 and 2.2 suggested that ‘negotiating by means of spatial design’ might offer a model of participation that, in its capacity to effect transformation from within, has the potential to transform education in schools for the benefit of those who ‘live in and wear them

out' (children and adults). Sections 2.3, 2.4, and 2.5 responded to this, each developing the contention in a particular way.

2.3 began by addressing the inescapable and political nature of negotiation, including its role in the ongoing formation of place, through the work of Doreen Massey (2005). Next, Deleuze and Guattari's philosophy of the minor and major (1983, 2004) was drawn on to develop the conceptual framework of 'place negotiations in minor and major keys' and to align Till's understanding of 'transformation' with the 'work' of the minor key.

In 2.4 discussion turned to the kind of education needed in order to realise the transformative potential of practising spatial design within the school context. The Farrell Review's (2013) call for a particular kind of built environment education was framed as a call for 'strong education' (Biesta, 2013/2016) aligned to the major key, with a weak education (Biesta, 2013/2016) and poor pedagogy (Masschelein, 2010) aligned to the minor key subsequently posited as an alternative model. In enabling participants to expose, engage in, and generate ongoing (place) negotiations concerning the *how*, *why*, and *where* of education, it is in this weak educational model of practising spatial design in school that I contended spatial design's transformative (minor) potential lies.

Finally, in 2.5 the 'key' of spatial design practice (minor / major) was suggested to be determined by the nature of human and nonhuman relations that are generated and supported, whether they unfold according to the principles of correspondence (minor) or interaction (major), rather than the particular methods used, with the theoretical lens of 'human and non-human relating' developed through doing. Additionally, 2.5 illustrated how the key of spatial design practice cannot simply be set in advance and forgotten about but is ever-emergent and therefore always at stake. This, I contended, is especially important for it means that in order to better understand how to develop and practice spatial design in the *minor* key – wherein its (weak) educational potential to effect transformation from within lies – a better understanding of *how human and nonhuman relations manifest and unfold during spatial design including how aspects of the methods and approaches used affect how they manifest and unfold* is needed.

It is to developing this understanding that the empirical research presented herein is oriented; specifically, through addressing the following two research questions, guided by the theoretical lens of *'human and nonhuman relating'*:

rq.02

'How do place negotiations manifest and unfold during spatial design with children?'

rq.03

'How do aspects of the methods and approaches used affect how place negotiations manifest and unfold?'

* * * * *

3 Methodology

This chapter explains the methodological approach taken, including the methods of data generation and analysis used, in response to the research questions posed.

In **3.1** I discuss the use of design anthropology as an approach to educational research: setting out and situating the particular approach taken, as well as detailing the key methodological concepts that underpin the study. Next, I move to a consideration of how this approach might be operationalised in practice: presenting the overall research design in **3.2** before explaining the qualitative methods employed to generate and analyse data in **3.3**, including some methodological limitations.

Ethical considerations weave through. They are also addressed specifically in **3.1**, as well as within the preface of each site-writing (**III**).

3.1 Research Approach

3.1.1 Using an anthropological research approach to undertake educational research

In this thesis, I contend the (weak) educational potential of spatial design practice lies in its *minor* use as a means to expose, engage in, and generate ongoing (place) negotiations concerning the *how*, *why*, and *where* of education, within the context of school (chapter 2). Central to the practise of spatial design conceived this way is the active raising of and engagement with questions concerning how and why we live together, a practice which – following the anthropologist Tim Ingold – lies at the heart of Anthropology. In his words, to practise anthropology is to undertake “a generous, open-ended, comparative, and yet critical inquiry into the conditions and potentials of human life in the one world we all inhabit” (2017b, p. 22). Accordingly, this study uses anthropology in two ways: first, it proposes it as a methodology through which spatial design practice might become *minor*, enabling it to realise its *weak* educational potential; and second, it employs it as a methodology that guides the empirical research.

The particular approach to empirical research taken draws on Gatt and Ingold’s approach “anthropology *by means of* design” set out in *From Description to Correspondence* (2013, p. 141, original emphasis). Before continuing to unpack its key methodological concepts and detail how they guide this research, I first offer a brief introduction to the field of Design Anthropology within which it is situated.

3.1.2 Design Anthropology

Design Anthropology (DA) is a developing field in which practitioners, broadly speaking, combine elements of both ‘design’ and ‘anthropology’ in numerous ways, with it being the

differences between the two respective disciplines, rather than the overlaps, that make it special (Otto & Smith, 2013). Design, Otto and Smith suggest, brings a “*future orientated*”, ‘interventionist’, and ‘collaborative’ attitude, along with specific tools and practices through which people might engage actively in the “formation of their futures” (p. 3). Anthropology, on the other hand, “emphasiz[es] the generative role of theory in developing design concepts and critically examining existing, often implicit conceptual frameworks”; understands the importance of “systematically” investigating the past “*to understand the present*, including its modes of anticipating the future”; and has a “unique *sensitivity to the value orientations*” of those affected by design, directly or indirectly (pp. 3 – 4, original emphasis).

Continuing, Otto and Smith describe three modes of Design Anthropology: In the first, practitioners use design as a source of “inspiration for anthropology to develop its research practices”. In the second, the “critical potential” of anthropology as a research tradition is directed “toward the study and contextualization of design and technological innovation as a specific mode and site of change in modern society”. And in the third, which Otto and Smith propose, the first two modes are combined in the contention that DA “is coming of age as a distinct style of doing anthropology, with specific training and research practices” (Otto & Smith, 2013, p. 10, original emphasis).

It is in the first of these modes that the methodological approach taken herein – guided by anthropology *by-means-of* design – is situated. In this mode, anthropology is not “*of*” or “*for*” design but “*with*” (Gunn & Donovan, 2012, p. 9, original emphasis). In practices of anthropology ‘*of*’ and ‘*for*’ design, the one is always before the other: in the former design serves anthropology, furthering its theoretical knowledge; while in the latter anthropology serves design, with the “anthropologist’s interpretation” not necessarily the “most relevant” (*ibid.*). However, in practices of anthropology ‘*with*’ design, the two disciplines are brought alongside in endeavours that work to “ope[n] up lines of inquiry” (*ibid.*) through engaging “within environments [...], with other[s...] and materials” (p. 11).

Through these different modes, anthropologists have largely worked within industrial, corporate, and commercial settings (Otto & Smith, 2013, pp. 6 – 9; also, Smith et al., 2016 ; Gunn & Donovan, 2012). This study contributes to the already diverse sphere of DA practice: (1) by extending the use of anthropology as an approach to undertaking research into an educational context;⁵⁵ and (2) by doing so from my perspective as a researcher trained in (architectural) design, rather than anthropology, sociology, or psychology.⁵⁶ Nonetheless, the study continues the “commitment to concrete practice and reflective action” that Otto and Smith identify as underpinning DA no matter its focus or mode (p. 10).

3.1.3 Anthropology *by means of design*

In setting out their approach ‘anthropology *by-means-of design*’, Gatt and Ingold explicitly position it in contrast to those that are “*of, as, or for design*” (2013, p. 140, original emphasis). Instead, through the relation – *by means of, or with* – they describe how “anthropology might open up to [design] as a potent source of inspiration for [anthropology’s] own projects, acknowledging that we have much to learn from the faith, commitment, and wisdom that give hope and commitment to others’ lives” (*ibid.*).⁵⁷ In this way, they suggest, practices of ‘anthropology *by means of design*’ “would be inherently experimental and improvisatory”, aiming to “[move] forward with people in tandem with their desires and aspirations rather than looking back over times past” (p. 141, original emphasis).

⁵⁵ This study is not the first to apply a DA approach within the context of education or school (e.g. Kjaersgaard & Otto, 2012; Smith, 2015); it is significant nonetheless in contributing to a still young field, especially within the UK context (Thompson, 2018).

⁵⁶ Otto and Smith note that DA practice is usually undertaken by anthropologists who have entered fields of industrial and product design, rather than by trained designers (2013).

⁵⁷ Gatt and Ingold make explicit that this description draws on that used by Joel Robbins (2006) to articulate the third way in which he suggests the discipline of anthropology might engage theology.

Conceived thus, parallels can be drawn between using anthropology *by means of* design to guide the undertaking of educational research and ‘more-than-representational’ or ‘non-representational’ approaches to research.⁵⁸

Correspondence and interaction

Underpinning ‘anthropology *by-means-of* design’ is a particular understanding of the world – as ‘a meshwork of things’, rather than ‘a network of objects’ – wherein human and nonhuman trajectories (the life lines of stories-so-far) relate with one another according to the principles of ‘correspondence’ rather than ‘interaction’ (pp. 141 – 144; also, section 2.5). Comparing these two theories of relating through the analogy of walking, Gatt and Ingold write:

Like walkers who have turned in discord to square up to one another, there is no way forward. The implication of the pre-fix *inter-* in interaction is that the interacting parties are closed to one another, as if they could only be connected through some kind of bridging operation. Any such operation is inherently de-temporalizing, cutting across the paths of movement and becoming rather than joining along with them. In the kind of relation we call correspondence, by contrast, points are set out in motion to describe lines that wrap around one another like melodies in counter-point (p. 143, original emphasis).

It is in the difference between ‘correspondence’ and ‘interaction’ that Gatt and Ingold ground the distinction they draw against ‘anthropology *by means of* ethnography’. Whereas the latter, they contend, is limited by its fixity: a practice of description, it cuts across the paths of movement. The former, a practice of correspondence, joins along with them moving forward (2013).⁵⁹

⁵⁸ Non-representational theory emerged within the field of human geography in the 1990s. Originally advanced by Nigel Thrift through a series of papers (e.g. 1996, 2000; more recently 2008), it has since been developed and expanded by, among others, Lorimer (2005), Anderson and Harrison (2010), and Vannini (2015).

⁵⁹ This distinction between anthropology and ethnography – the former as active, the later as descriptive – is found repeatedly throughout Ingold’s work (e.g. 2011, 2014, 2017b, 2018c) and is addressed directly in his

Correspondence: habit-agencing-attention

Key to the theory of ‘correspondence’ are the principles of ‘habit’, ‘agencing’, and ‘attention’. This triad sits in opposition to that which underpins the theory of ‘interaction’, namely: volition-agency-intentionality (Ingold, 2018a). I have already discussed these key principles and the differences between them in chapter 2 (2.5) and therefore limit myself here to re-sketching those of *habit*, *agencing*, and *attentionality*.

Rooted in the writings of Dewey, the principle of ‘habit’ places doing “*inside* the undergoing” (2018a, p.22), which, Ingold notes, is quite counter to the principle of volition, by which acts “deliver on intentions that the [wilful] mind places before them” (2016, p. 15). In this way, undergoing is what someone actively does rather than the passive by-product of doing. For example: once underway walking is no longer a task that the walker sets themselves to do but a process that they are inside of “animated by its movement” (*ibid.*); the walker does not “think *while* walking [but] think *in* walking”. The principle of habit repositions agency from ‘in front’ – given in advance and pre-distributed – to emergent ‘within’ and ‘through’ action. Whereas in the volition of going for a walk, agency is “given in advance of action, as cause to effect”, in the habit of walking agencing is something that is always emergent and developing within the act (p. 24). The principles of habit and agencing, require an ‘attentional’ rather than intentional attitude: for the walker to attentionally *attend* and *respond* to things as they “go along, joining or participating with them in [their] own movements” (*ibid.*).

In short: correspondence is “the way of relating of a being that dwells in habit, whose agency is ever-emergent, and whose stance is *attentional*” (2016, p. 20, my emphasis).

papers: That’s enough about ethnography! (2014) and Anthropology contra Ethnography (2017b). Such charges have not gone unanswered. Indeed, volume seven, issue one, of *the Journal of Ethnographic Theory*, within which *Anthropology contra Ethnography* is published, includes a number of passionate responses that fight ethnographies corner.

Ontological implications

Continuing to follow Ingold, the theory of correspondence gives ‘attentionality’ “ontological priority” (2016, p. 19). This has a number of implications, starting with its “reunit[ing] knowing with being” (2018a, p. 61):

First: underpinned by those of habit and agencing, the principle of attentionality demands that in attending to the world, “we respond in kind” too; that we “giv[e] back to the world and its inhabitants what we owe them for our own [development and] formation” (2016, p. 21). Thus, it works to “restore observation to participation” – that is, ways of knowing (epistemology) to ways of being (ontology) – “in a life lived in the company of others” (2018a, p. 61).⁶⁰

Second: that it is not possible to “construct a narrative” or “build a model” without being “already situated in the world and thus already caught up in a nexus of relations with both human and non-human constituents of the environment” (2000, p. 52) challenges constructivist ontologies that place ‘building’ (cultural construction) before ‘dwelling’ (relating) (Knudsen, 1998). This however, Ingold cautions, calls not for the construction of yet another alternative “*view of the world*” but for *engaging in* the world. That is, for the primacy of ‘dwelling’ over ‘building’ (2000, p. 42, original emphasis; also, 2018b).

Third: according primacy to ‘engaging in’ the world over ‘constructing views of’ it requires “commitment to the habitation not of multiple worlds of being but of one becoming world of nevertheless infinite multiplicity” (2018a, p. 67; also, 2000). This necessitates a ‘relational ontology’ that understands “relationality” as constituting “reality itself” and, consequently, ‘being’ as “not what ‘is’ [but] what ‘becomes’ in and through relationality” (Del Lucchese, 2009, p. 181; also, Ingold, 2018b, 2018c).⁶¹

⁶⁰ It is in this sense that Ingold presents correspondence as an “ontological commitment” (2018a, p. 61; also, 2016, 2018b, 2018c).

⁶¹ Del Lucchese’s words are written in argument for a shift from ontology to ontogeny, which is also called for by Ingold in his 2018 paper *One World Anthropology* (2018b). The need for such a shift is also discussed much

Contributing to educational research

With some notable exceptions,⁶² discourse concerning the potential in educational research and practice opening up to anthropology remains limited within the UK context,⁶³ with connections between the two disciplines more often found in the background, manifest through common perspectives, orientations, theories, and references.⁶⁴ Through adopting the approach anthropology *by-means-of* design to undertake educational research, this study explicitly explores and contributes to this potential.

Using this particular approach enables the study to respond to the identified paucity of existing literature⁶⁵ in ways that generate and explore paths – opening up – rather than ways that identify and plug gaps – closing down. It is within the former orientation of opening up that the three detailed, spatial accounts of a designer and educational researcher (me) ‘undergoing’ spatial design with children in school are crafted and offered (III), constituting a contribution in their own right.

earlier by Ingold under the concept ‘ontology of dwelling’ and in connection to the idea of an ‘ecological anthropology’ (e.g. 2000).

⁶² Pat Thomson’s recent paper *Troubling ‘writing as representation’* (2018) is a recent exception, albeit in relation to representation only and through the lens of ethnography. Recent work by Tim Ingold, which this study draws on heavily, is a further notable exception (e.g. 2018a).

⁶³ As Thomson notes, the situation is slightly different in other contexts – most notably in North America (2018). See Wolcott (1967), Comitas and Dolgin (1978) for overviews of early linkages; or, more broadly and recently, the journal *Anthropology and Education Quarterly*. Further examples can also be found in the qualitative studies journals – *Forum Qualitative Social Research (FQS)*, for example.

⁶⁴ This can be the case in ‘new materialist’ approaches to educational research, for example. For a useful introduction to ‘new materialism’ and ‘posthumanism’ in relation to educational research, including some potential dangers, see Smythe, Hill, MacDonald, Dagenais, Sinclair, and Toohey (2017).

⁶⁵ This paucity is identified through the review of existing literature in chapter 2. It pertains to literature concerning spatial design with children that goes beyond focuses on methods and outcomes, to interrogate and make visible the “complex, incomplete, and messy process” in-between (Gallacher & Gallagher, 2008, p. 508).

3.1.4 Practising ‘anthropology *by means of design*’

Adopting the methodological approach ‘anthropology *by means of design*’ guides the empirical research undertaken in the following key ways:

The use of ‘spatial design projects’ as a speculative practice

Anthropology *by-means-of design* demands the use of spatial design practices that are speculative rather than prescriptive (Gatt & Ingold, 2013). Such practices aim not to “zero in on the best solution” (Brown, 2009, as cited in Halse & Boffi, 2016, p. 91) but to “raise new questions” through “playful, experimental and open-ended” methods that “insist on the importance of specific manifestations, yet explore issues that are unsettled, speculative and imaginative” (Halse & Boffi, 2016, p. 91). The use and potential of spatial design as a means to support speculative practice is discussed in further detail in chapter 2. The specific spatial design methods used are detailed in 3.3.

My ‘active’ participation in the spatial design projects undertaken

In its shift to the middle voice – in reuniting ways of knowing with ways of being – anthropology *by-means-of design* necessitates my “*active participation* [...] in building relationships and making things: that is, in contributing to the unfolding happenings in fieldwork” (Gatt & Ingold, 2013, p. 148, my emphasis). Guided thus, I take an active role in setting up, facilitating, and analysing the three spatial design projects undertaken. This is in contrast to approaches that limit the researcher’s role to the observation of spatial design practices set up, developed, and facilitated by others (e.g. Šorn, 2017).⁶⁶

The conceptualisation of participant observation as Observant Participating

The twin theories of ‘interaction’ and ‘correspondence’ underpin two different conceptualisations of participant observation, with each affecting how researchers can and can’t act in the world, as well as what they can and can’t say about the experiences they actively ‘undergo’

⁶⁶ In her 2017 thesis, *Designing with children: Spatial Literacy explored through Communication between Children and Spatial Designers*, Šorn presents three spatial design projects. While two of these are developed and facilitated by others, she takes an active role in all aspects of the third.

(Ingold, 2018a). Participant observation is underpinned by the theory of ‘interaction’, is rooted in the post-positivistic belief that “being in the world and knowing about it” can be split (Ingold, 2014), and conceives itself as an ‘intentional’ technical method of data collection in the service of feeding analysis. Observant participation is underpinned by the theory of ‘correspondence’, rebuts claims that it is possible to observe without participating, and conceives itself as an ‘attentional’ practice of studying *with* people (2018a, p. 23; 2018c, pp. 13-14); a “commitment to learning by doing” that is a process of education, not collection (2018c, p. 14). Whereas participant observation allows the researcher to investigate the ecosystem of a stream by observing it from a position seated upon its banks (or indeed from the safety of a boat or bridge), observant participating demands that the researcher dive into the mid-stream and join in *with* its multiple life lines, moving forward and co-responding with them attentively, following wherever they might lead: a productivity that, to recall Giroux, is inescapably educational (1983/2001; also, chapter 2, 2.4).

The use of ‘Site-Writing’, a practice of speculative analysis

Anthropology *by-means-of* design also requires analysis to be undertaken in ways that are speculative rather than descriptive, to investigate events observed and experienced in ways that seek to ‘bring them into presence’ so that they can be addressed and answered to directly in the here-and-now. Such ways shift the focus of analysis from ‘what it is’ to ‘what it does’ (Deleuze, 1995)⁶⁷, thereby enabling the generation of new knowledge that contains within it openings by which life might continue (Ingold, 2016, 2018a). For these reasons, this study employs the practice of ‘Site-Writing’ (Rendell, 2010) – supported by techniques rooted in auto-ethnography – to analyse data generated through the three spatial design projects undertaken (see 3.3).

⁶⁷ This recalls Lyotard’s discourse on ‘dreamwork’ (1971), which Deleuze explicitly references (1995, p. 21), and is usefully summarised by Graham Jones in *Lyotard Reframed: Interpreting Key Thinkers for the Arts*: “...what is important about a dream is not the content of the dream itself but its ‘work’. It is the dream-work as a ‘working-over’, a transformation of material, that is significant, and this material arises from a combination of the day’s residues and memories or past ideas that the former evoke and resonate with [...] the dream-work does not think; instead it is what is done to thought” (2014, p. 46).

3.1.5 Ethics

In this study, I consider children and young people to be “competent social actors who are experts in their own lives” and have the right to participate equally and seriously in all matters that affect them, whether past, present, or future (Clark, 2005, p. 46; also Clark & Moss, 2001/2011; James & James, 2008; James, Jenks, & Prout, 1998; James & Prout, 1997; Malone & Hartung, 2010)⁶⁸. I understand children and young people to be – like all people – ever-evolving individuals (Kesby, 2007; Lansdown, 2005), diverse in their “competencies” and preferences (Clark, Flewitt, Hammersley, & Robb, 2014, p. 47). In this sense, I consider all humans to be ‘becomings’ rather than ‘beings’ (Ingold, 2013, p. 8; also, Massey, 2005).⁶⁹ I therefore adopt the notion of “ethical symmetry” to ensure research is appropriate for all participants, with ethical considerations responsive to the specificity and dynamism of situations rather than “assumed in advance” (Christensen and Prout, 2002, p. 482).

In any research undertaken *with*, negotiating informed consent is an essential ethical process. The process undertaken within this doctoral study accords with the ethical guidelines of the British Educational Research Association (BERA) and comprised two phases. First, ethical consent was ‘applied for’ and ‘granted by’ the University of Cambridge’s Humanities and Social Sciences Research Ethics Committee. Second, informed consent was negotiated in the context of each spatial design process between all involved, including: children; parents, guardians, and carers; staff; as well as the school’s governing body (Appendix A). While the particular processes followed are fully detailed within the prefaces of each site-writing (III), I discuss some important underpinning issues below.

To gain consent once is not enough. Instead, informed consent must be continually renegotiated throughout the project between all involved (e.g. BERA, 2018; Clark, 2013; Morrow,

⁶⁸ This position is one of four identified by Christensen and Prout (2002), the other three being: “the child as object, the child as subject” and the child as co-researcher (p. 480).

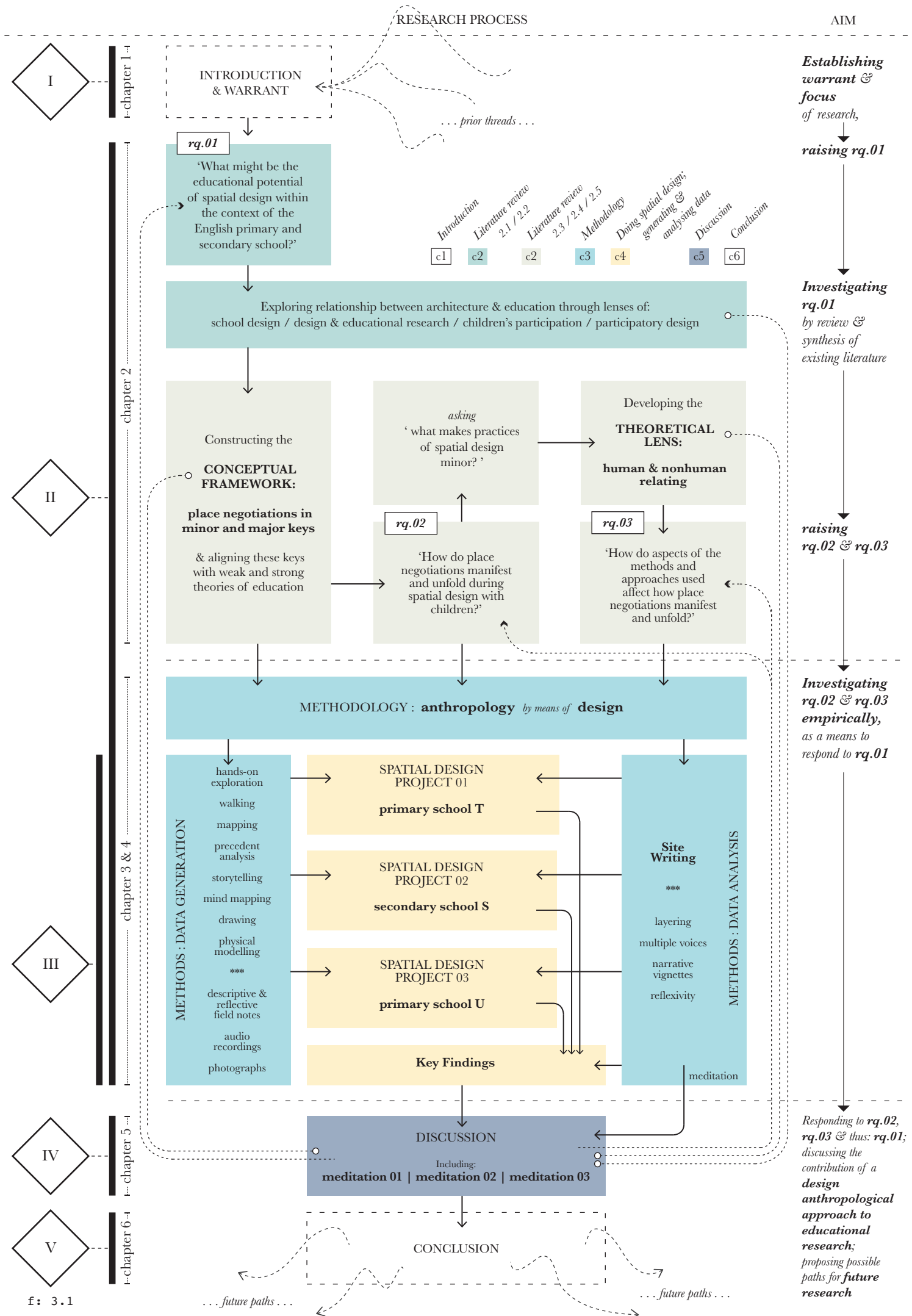
⁶⁹ This represents a subtle shift from the ‘new paradigm of the sociology of childhood’ that responds to developmental perspectives – which see children as ‘becomings’ and adults as ‘beings’ – by according children the status of ‘beings’ too (e.g. James & Prout 1997).

2009). For example: although consent was gained at each project's outset for the use of audio recording during workshops, it was nonetheless re-negotiated in each subsequent workshop, at its start and through its duration. Likewise, while both children and adult participants consented to their involvement at the beginning, efforts were subsequently made to ensure they felt free to leave and re-join the process at any point and without punishment, implicit or explicit. In negotiations, attention was given to a participant's body language in addition to any verbal and written response given, with choosing 'not to do' also considered a valid form of participation, whether within or before workshops (Mannion, 2010, also Gallacher & Gallagher, 2008). Relationships created and nurtured in workshops between myself, children and staff, as well as between those involved and the remaining cohort required on-going evaluation and negotiation. This was particularly important in situations that had the potential to challenge traditional structures and/or hierarchies and especially so where such challenges could carry beyond the project's scope, physically, socially, and temporally.

Each school and all participants are anonymised throughout, using pseudonyms where relevant. Images of each school are included but do not feature children or adults and are cropped to maintain anonymity. School U's unique design makes even the most simple of discussion and imagery problematic. Following negotiation, it was agreed the school could be identifiable, as long as the participants and year group remained anonymous. It is nevertheless treated in the same way as schools S and T.

3.2 Research Design

In this section I present f: 3.1, outlining broadly the key stages of the research process undertaken. Then, in the following section, I set out in detail the methods employed to generate and analyse data before continuing to discuss some of the issues, challenges, and limitations.



3.3 Research methods

I begin this section with a discussion of how data was generated: detailing the aims and methods of each spatial design project, explaining the additional qualitative methods used, and describing the selection of schools and participants. Moving to a consideration of how data was analysed: I introduce the practice of 'Site-Writing', explain how it was used, and discuss issues of reliability and the possibility of generalisation, together with some methodological limitations.

3.3.1 Three live⁷⁰ spatial design projects

Three spatial design projects were undertaken, one in each school. The first two (school T and school S) began with a design aim in mind: to redevelop a specific area in each school. The third (school U) started by exploring the existing school as a means to identify and explore problems and possibilities, developing a range of potential design opportunities to be explored further through future work. Despite their differences, each project shared in the aim of generating and supporting conversations concerning: how particular places within the school are used, including what for and by whom; how such places might be used in different ways, for different purposes, and by different people; as well as how, through its re-imagining, a place's design might support and encourage its use in different ways, for different purposes, by different people.

Each project was specifically designed and developed for the purposes of this study and undertaken through a series of design workshops – framed according to the principles of 'design

⁷⁰ Following Šorn (2017), I use the term 'live' to emphasise that each project engaged with and sought to effect change in real, ongoing live environments with all the contingency and uncertainty this brings.

events' (Halse, 2011) – that employed a number of different methods rooted in design and children's participation literatures. In all three processes, methods were chosen for their playful and performative characteristics when undertaken collectively as acts of exploration and discovery. In this way, contrary to the often-held view of design as the work of the 'lone-genius',⁷¹ the processes were developed and undertaken within a framing akin to Keith Sawyer's conceptualisation of 'improvisational theatre'. That is, as creative processes whose essences lay in the collaboration between people and cannot be "reduced to the inspiration or mental process of any single actor" (2000, p. 1523). The design process and methods used in spatial design projects 01 and 02 (school T and S respectively) were based on a wealth of previous design-led participatory projects (e.g. Bellfield, 2015a; Bellfield et al., 2013; Bellfield et al., 2014; Birch et al., 2014; Hoffman, 2014; Till, Awan, & Schneider, 2009; SSoA, 2005; also, chapter 2, this study). The design methods used in spatial design project 03 (school U) are also rooted in these literatures. However, the process used in school U (especially steps 01 and 02) was based on 'layer-one' of the methodology *Urban Gallery*, developed by the research practice CHORA and set out in *Urban Flotsam* (Bunschoten, 2011). The particular methods used in each workshop are detailed in the below table (f: 3.2).

⁷¹ The phrase 'lone-genius' is commonly used to evoke the image of creative persons as "special individuals, whose work distinguished them as persons set apart, or, better, above, the masses" (Montuori & Purser, 1995, p. 73).

			<div style="border: 1px dashed black; padding: 5px; display: inline-block;"> Primary intended method ● Secondary intended method ◐ </div>								
Intentional methods			Mapping (inc. existing + proposed)	Hands on exploring	Walking	Precedent analysis	Prioritising	Storytelling	Mind-mapping (inc. brief creation)	Drawing (inc. collage)	Physical modelling
Spatial Design Project 01 School T	Workshop	01	●					◐			
		02	●	●							
		03				●			●	●	
		04	●							●	
		05	●				●				
Spatial Design Project 02 School S	Workshop	01	●	●							
		02				●		●			
		03								◐	●
		04								◐	●
		05								◐	●
		06								◐	●
Spatial Design Project 03 School U	Workshop	01	●	●	●			●			
		02							◐	●	
		03						●			

f: 3.2 Overview of the different spatial design (intended) methods used.

Spatial design project 01 (primary school T)

Spatial Design Project 01 was undertaken within the mechanics of an ongoing project comprising the conversion of an existing Edwardian domestic building – the School House – into additional accommodation for use by the school, including: a multipurpose activity space, kitchen, and toilet on the ground floor, with two discrete teaching rooms and staff preparation room above. Within this framework, its overarching intention – developed in discussion with the school – was to enrich the appointed architect’s proposals by engaging with pupils in exploring ‘how the garden and proposed ground floor might be inhabited’. Five workshops were held during the 2017 summer term, one per week, with emergent ideas to be funded with monies from the overall construction budget. Further detail is included in the preface of the first site-writing: Primary School T, III.

w01: mapping the school

In workshop 01, participants were invited to work together to create a hand-made ‘map’ of the existing school as a means to: (1) develop a shared understanding of how the school is perceived and inhabited from different perspectives; and (2) provide space and structure through which all could begin to negotiate new relationships and the overall purpose of the project could be discussed in a conversational format.

w02: exploring the garden

The School House and garden are located to one edge of the main school site. They are protected on all sides by a combination of tall, opaque fences and thick bushes. Workshop 02 therefore intended to introduce participants to the School House and garden through facilitating hands-on exploration. To structure and focus exploration an activity sheet was developed which sought to prompt creative questioning of both garden and house by using each of the five senses (Appendix B).

w03: exploring precedents, creating a spatial brief, developing ideas

Workshop 03 was conceived in three parts: Through the discussion of precedent images, part 01 aimed to introduce participants to a variety of ways in which different types of spaces might be designed and adapted using a range of methods and materials. Through the collective development of a spatial brief, part 02 intended to build on discussions had in part 01, as well as to explore different ways in which the garden might be used and how its design might facilitate such uses, asking: which different elements should or shouldn't be included? What materials might they be constructed from? How might elements feel to inhabit? When and by whom could they be used? Finally, part 03 invited participants to draw on knowledge developed through parts 01 and 02 to develop specific design proposals for future change through writing, drawing, and collaging.

w04: developing a proposal

Drawing on the experiences, knowledge, and ideas generated during the previous week, workshop 04 invited participants to develop a collective proposal for the school-house garden in plan/ map form, including discussions concerning where things might be located (including their relation to each other), how much space might be needed (including between individual proposals), as well as how they might be managed and by who.

w05: reviewing the final proposal

Workshop 05 sought to conclude the project by reviewing the final proposal, including the agreed hierarchy of priorities through collective discussion.

Reporting back to the school and governors

The final proposals were collated into a physical report presented to the school and presented to their governing body. This included the specific proposals made, alongside an overview of the project and the wider doctoral research within which it is situated (Appendix C).

Spatial design project 02 (secondary school S)

Departing from proposals developed during an older project, Spatial Design Project 02's aim was three-fold: to review previous decisions, putting forward amendments where applicable; to explore how the remaining garden area might be inhabited in different ways and by different user groups; and to develop a concrete proposal in support of the methods of inhabitation proposed. Six workshops were held during the 2017 summer term, one per week. Further detail is included in the preface of the second site-writing: Secondary School S, III.

w01: surveying the garden, reviewing previous proposals

Workshop 01 had three aims: Firstly, to introduce participants to the garden space through undertaking a hands-on survey – using tape measures, clipboards, paper and pencils – with participants then asked to translate the information into a drawn scale plan of the space. Secondly, to introduce participants to the existing physical model, originally developed during a previous project (the Garden Project – part I). Current participants were invited to discuss and critique these proposals, with the idea that they would be working directly with this model explained. Thirdly, to provide space and structure through which all could begin to negotiate new relationships and the overall purpose of the project could be discussed in a conversational format.

w02: discussing precedents, developing a spatial brief

Workshop 02 sought to prompt initial debate through introducing a range of precedent projects focused on different kinds of form, materiality, construction, and use. Participants were invited to discuss these projects between each other and to annotate the images with their thoughts and comments. Through doing, it was hoped a series of paths would emerge that could be picked up and explored further, using spatial-mapping to ask: what are the different ways in which the garden space might be used, by who, and when? How might its design facilitate these uses? How should the space(s) designed feel to inhabit? What materials might be used and how might these

choices affect and be affected by construction? Finally, emergent ideas were to be prioritized and consolidated into a working brief.

w03: physical modelling (developing the brief)

Workshop 03 aimed to progress ideas developed in workshops 01 and 02 through the use of physical modelling. Through doing, participants were encouraged to grapple with questions of materiality and use in three dimensions: what materials might be used? How might materials chosen affect how the structure feels to inhabit? How might they ease construction and lower cost? How might the structure be used? When and by whom? To structure and focus efforts, workshop 03 was divided into two parts: first, participants worked in teams to create three dimensional proposals (single or multiple) that developed elements of the brief-so-far; and second, participants were asked to review and evaluate the proposals made, identifying the most salient features in order to crystallise the project's brief into a final form.

w04, 05, and 06: physical modelling (creating the proposal)

Following on from workshop 03, workshops 04, 05, and 06 sought to develop and articulate a final proposal through the creation of a scale physical model, using the existing site model. Through asking participants to work together on a shared model rather than alone, workshops 04, 05, and 06 sought to foster collective discussion and decision-making thereby stimulating open, rather than private, questioning and development of ideas.

Spatial design project 03 (primary school U)

Spatial Design Project 03's intention was two-fold: First, to generate opportunities for participants to explore their own school, questioning how different places are currently used, how they might be used differently, as well as how they might be re-

imagined so to effect positive change. Second, to use problems and possibilities identified as departure points for developing concrete proposals for change and further development through the use of physical models and collage. Three workshops were held during the 2017 summer term. Further detail is included in the preface of the third site-writing: Primary School U, III.

w01: exploring the existing school

In workshop 01, participants explored a variety of specific sites within the existing school, chosen at random, asking: What do we like? What don't we like? How else might we use this place? What changes might we make? This process, structured through the use of explorative walks, aimed to reveal hidden narratives, rendering the diversity of individual experience, and identifying varied possible opportunities for change to act as departure points in workshop 02.

Step 01: establishing the bean sites

Gathered around a pre-drawn map of the existing school, showing both internal and external areas, participants took turns to close their eyes and place 'bean counters' on the map at 'random'. If two counters landed on the same site, one was re-thrown. The number of counters placed by each participant is dependent on the overall time available for the workshop. In the workshops undertaken, each participant placed a single counter (five in groups 01 and 02, six in group 03). In each group, I added an additional counter to include a site I wanted to discover more about as an educational researcher. Once all counters were placed, participants worked together to create a route through the bean-sites, drawn onto the map using a coloured pen. While the spaces between sites were not the specific focus of discussions, conversations raised during journeys between were never ignored.

Step 02: exploring the bean sites

At each 'bean site' a two-stage process was followed. Two further stages were intended, bookending those described below. These were not undertaken due to their

requiring the use of cameras, which was not permitted. Instead photographs of the sites visited were taken by myself during a separate visit after school hours. At each bean site a new 'questioner' and 'scribe' were appointed. Using the prompt question cards provided, the questioner's role was to initiate discussions and then to prompt where necessary as they unfolded. The six question prompts were: 01: Where are we? 02: How is this space used? Who by? 03: When were you last here? Why? Who were you with? 04: Do you think the design of the space works well? 05: What are the positives and negatives? 06: How else could the space be used? Using a selection of coloured pens and large format paper, the scribe recorded the discussions that took place, noting down the salient points, including disagreements and questions raised. While the scribe's role was envisaged as being undertaken by a single participant, in reality all helped out.

w02: developing proposals for change

In workshop 02, participants used the narratives developed and discussed in workshop 01 as points of departure, with physical modelling employed as a means to discuss specific issues in more detail through developing proposals for how particular spaces within the existing school might be adapted, in terms of materiality as well as use.

Step 01: reviewing the bean sites

To ensure participants had opportunities to discuss issues raised during each walk, the start of each session was dedicated to recapping all of the sites visited, with participants also free to choose a different place or narrative altogether.

Step 02: developing proposals

Next, participants were invited to select one or more sites and, using a variety of collage and modelling materials provided, to develop proposals for how that site might be improved, used differently, or re-imagined entirely. Participants were allowed to work individually or together.

Relocating Mr B?

Prior to the project's start, school U's head teacher had expressed his discomfort with his office's existing location on the first floor, isolated from the main school below. Consequentially, he asked that participants consider why it is where it is? What they think of this? Where else it might be located and why? This was addressed at the end of workshop 02. With all gathered around the school map, participants were invited: firstly, to indicate and discuss the existing location of Mr B's office; secondly, to create plasticine figures representative of Mr B, different colours for each group; and thirdly, to locate these figures on the map to mark where each thinks Brian's office might be relocated, explaining their reasoning.

w03: exploring significant themes further

In workshop 03, participants were invited to discuss different aspects of school life further, with the work produced in workshops 01 and 03, as well as the narrative of a 'typical' school day, used to provide structure. This was done in a 'round table' discussion format.

Developing and discussing the final report

The experiences, knowledge, and proposals generated were collated into a physical report, along with: a 'how to' guide detailing the methods used; seven possible paths for future change and exportation; and answers to questions raised by participants and put to the school's original design team by myself, via a face-to-face interview with the architecture practice responsible for the school's design and construction. A draft of this report was presented back to the participants, along with their peers (from the same year group), for discussion with suggestions and additions subsequently made (Appendix D).

3.3.2 Additional qualitative methods used

In addition to the above detailed methods and practice of observant participating discussed in 3.1.4, data was also generated through the use of Field Notes and Audio Recordings.

Field Notes were written (and drawn) during spatial design workshops and in the hours that immediately followed, drawing on Emerson's twin approaches: "participating-in-order-to-write" and "experiential" (1995/2011, cp. 1). By allowing for an element of 'methodological immaturity' through supporting practices of 'experimentation', 'innovation', and 'making do' (e.g. Gallacher & Gallagher, 2008, also Till, 2005), this two-part approach enabled a balance to be struck between: on the one hand, capturing in detail the potentially fleeting moments that may occur during each workshop, which might easily be lost in latter reflection; and, on the other, meeting my commitment to actively correspond with participants in workshops as opposed to observing them passively, a commitment guided by design anthropology literature (e.g. Gatt & Ingold, 2013; Ingold, 2014; Otto & Smith, 2013).

Taking photographs was considered a practice equivalent to writing and diagramming. Taken on my mobile phone, photos were used as a means to quickly record fleeting moments – toasting bagels, presentations of Lego creations, dens, and bugs under care, for example – as well as to document particular elements of place which seemed important or to merit further investigation. In this second mode, photographs were taken both alone and with children, as a means of recording discussion, as well as to prompt it.

Reflective notes were kept throughout the research to record my experiences, thoughts and feelings concerning different elements of the research. Made within my primary notebooks, these notes were identified in ways that retained a level of separation without going so far as to dislocate them from the other messy threads of life (e.g. Ortlipp, 2008).

Audio recordings were made during each workshop using a personal hand-held Dictaphone. The device and reasons for recording audio – including who might listen to recordings, why, and for how long – was discussed with participants before each workshop. During workshops, participants were free to pick up the device, to record separate messages, and to listen back to

sections at will. Recordings were downloaded onto a secure storage device after each workshop, with the originals subsequently deleted.

Video recording was deliberately not used because, in past experiences, participants had appeared to withdraw following the introduction of video equipment, with spontaneous conversation – especially that unrelated to the project at hand – much less likely to occur (e.g. Garden Project Part I, 2013). More recently, in the pilot project undertaken my use of a video camera was observed to create a distance between participants and myself. This distance had appeared to be reinforced by the expense and delicacy of a camera over a Dictaphone, which meant I was not able to allow it to be picked up and moved about in the same way; as well as the camera's fixity, recording workshops from the outside, rather than a hand-held device situated within the midst of workshops.

3.3.3 Kinds of data generated

Using the spatial design (3.3.1) and qualitative (3.3.2) methods described, the following kinds of physical data were generated:

			Spatial design method ●		Supporting qualitative method ○										
			physical artifacts				photographs			audio recordings	field notes				
			Drawings (inc. collage + map making)	Writing (activity/ precedent sheets)	Physical models	Mind-maps	Photographs (places, after workshop)	Photographs (processes)	Photographs (physical artifacts)	Audio recordings	Descriptive field notes	Reflective field notes			
Spatial Design Project 01 School T	Workshop	01	●				○			○	○	○			
		02		●			○			○	○	○			
		03	●	●		●	○		○	○	○	○			
		04	●				○		○	○	○	○			
		05	●				○	○	○	○	○	○			
Spatial Design Project 02 School S	Workshop	01					○			○	○	○			
		02		●		●			○	○	○	○			
		03			●				○	○	○	○			
		04			●					○	○	○			
		05			●			○		○	○	○			
		06			●		○	○	○	○	○	○			
Spatial Design Project 03 School U	Workshop	01				●	○			○	○	○			
		02	●		●			○	○	○	○	○			
		03					○			○	○	○			

f. 3.3 Kinds of physical data generated through the undertaking of the three spatial design projects.

3.3.4 Selection of schools and participants

Spatial design projects 01 and 03 were undertaken in English primary schools: schools T and U respectively. Spatial design project 02 was undertaken in an English secondary: school S. Specifics, including how and why schools and participants were selected, as well as the processes through which consent was negotiated, are detailed within the dedicated introduction to each respective site-writing, under the heading ‘Negotiating Informed Consent’ (III).

3.3.5 Data management

Digital data generated included photographs, drawings, diagrams, and field notes. All were securely stored on two portable, password-protected hard-drives. Once transferred to the back-up device, original digital data was deleted. To guard against equipment failure my phone was taken to each workshop, offering a secondary method of visual (photographs) and audio recording. Physical data generated comprised small and large format drawings, diagrams, physical models, and written field notes. Physical data was stored securely within each school during each project, before being transferred to my personal residence on their completion. Once the overall doctoral research is complete physical data will either be returned to the relevant school or destroyed. Pseudonyms were used throughout data generation, storage, analysis, and reporting.

3.3.6 Introduction to ‘Site-Writing’: a practice of speculative analysis

I used the speculative practice of Site-Writing (Rendell, 2010) to analyse data generated through the three spatial design projects undertaken. Due to its use being novel within educational research, I take time to introduce it fully before highlighting the specific elements used.

“Where I am makes a difference to *who* I can be and *what* I can know”

(Rendell, 2010, p. 150).

Site Writing is a practice of art criticism developed by the architectural theorist Jane Rendell through a number of projects: textual and physical; of different shapes, sizes, and durations; linked and individual. It has developed through Rendell’s engagement with the intersections of “feminist theory and architectural history, conceptual art practice and architectural design, and most recently art criticism, psychoanalysis and autobiography” (2010, pp. 2-3). It is this latest phase of evolution that is drawn on herein, with particular inspiration taken from Rendell’s 2007 essay *Site Writing: enigma and Embellishment* and 2010 book *Site-Writing: The Architecture of Art criticism*, as well as the site-writings *To Miss the Desert, An Embellishment: Purdah* (2010), and ‘*She is walking around a town which she does not know*’ (2007, 2010).

As an architectural mode of art criticism, Site-Writing aims to foreground the site of engagement between critic and art by “trac[ing] and construct[ing] a series of interlocking places, which relate critic, work and site” (2007a, p. 186; also, 2010, p 1.). This, Rendell states, is antithetical to the purpose of ‘art-writing’, which, as defined by the cultural critic Mieke Bal, “aims to ‘put the art first’” (2010, p 1.). More specifically, Site-Writing is a practice that seeks to operate in the “interactive space between the critic and their other [...] their site of inquiry” (ExhibitionDJCAD, 2015, 37:30) in order to investigate and make explicit “the spatial and often changing positions” that are occupied by critics in relation to a work, “materially, conceptually, emotionally and ideologically” (Rendell, 2007, p. 180); as well as to consider future relations between the textual works produced and potential audiences (ExhibitionDJCAD, 2015, 37:48).

In pursuit of these aims, Site-Writing seeks to reposition “the engagement between the critic and art work as a site”; “adopting and adapting” Howard Caygill’s understandings of “immanent” and “strategic” critique, in which judgement criteria emerge *through* the practice of

criticism (Rendell, 2007, p. 180).⁷² Indeed, “rethinking” key terms of criticism – such as “judgement, discrimination and distance” is central to the practice of Site-Writing (*ibid.*).

To account for the different and changing relations between critic and work, as well as to challenge “criticism as a form of knowledge with a singular and static point of view located in the here and now”, Rendell’s practice has developed to use multiple voices (2007, p. 181). These, she notes, are “discovered in relation to the other object” (ExhibitionDJCAD, 2015, 38:38) and might be “objective *and* subjective, distant *and* intimate. From the close-up glance, from the caress to the accidental brush.” They might draw on “spaces as they are remembered, dreamed and imagined, as well as observed” (Rendell, 2007, p. 181).

Drawing on literary criticism of different subject positions, early site-writings evolved through Rendell’s experimenting with how using different prepositions worked to produce different critic-work relations: “from one of *mastery*, the object *under* critique; or *distance*, writing *about* an object; to one of *relation* and *dialogue*, writing *to* the object; and also *equivalence*, writing *as* the object” (ExhibitionDJCAD, 2015, 38.53, my emphasis). It is the latter of these relations that, she notes, she has become most interested in: using “analogy” – defined as “the desire to invent a writing that is somehow like the artwork” – to infuse critical acts of understanding and interpretation with creativity intrinsic to the practice of remaking a work in a different medium and on the critic’s own terms (39:13). Such practices of remaking combine modes of “critical analysis and interpretation, as well as associative states of storytelling, remembering and imagining” to create “the critical imagination”, which uses “an analytic mode to outline the structure and form of [the] response and memories – sometimes real, sometimes fictional – to create the content filled detail” (Rendell, 2007, p. 185). Importantly, practices of remaking are not free from limit but guided by constraints rooted in the work itself. Such constraints are essential in steering “where and how the writing might go” as well as in

⁷² In this sense, a connection can be drawn with Biesta’s arguments concerning the need for making ‘wise judgements’ from within the practice of weak education (2013/2016; also, chapter 2).

questions about content: what is included? What is excluded? What is missed? (Generative Constraints, 2014, 09:00).

Specific elements of Site-Writing used

Understood thus, the practice of Site-Writing offered practical ways that enabled me to operationalise the active and speculative, rather than descriptive, approach to analysis called for by Gatt and Ingold (2013; also, Ingold, 2016, 2018a). Specifically:

- (1) The positioning of the spatial design workshops undertaken, including the ‘data’ generated (field notes, photographs, audio recordings, artefacts) as *the work* and myself as *the critic*.
- (2) The use of different and multiple voices: (a) to investigate and make explicit the different and changing relations between *the work* and myself; and (b) to trace and construct a series of interlocking places relating *critic*, *work* and *site* – remaking, rather than describing, *the work* in a different medium and on my terms.
- (3) The use of constraints rooted in *the work* to guide the direction that the practice of re-making takes, as well as in questions about its content – what is and isn’t included, as well as what is missed.
- (4) The use of the produced text’s design as a means to encourage the making of new connections and relations in each new reading – within the text, as well as between text and reader.

For an early example of my personal development of the practice see Appendix H.

3.3.7 Supporting the use of Site-Writing through recourse to layered auto-ethnographic approaches

To support my use of ‘Site Writing’ as a practice of speculative analysis, I drew on techniques used in layered auto-ethnographic approaches. Namely: layering, multiple voices, narrative vignettes, and reflexivity.

Constructing site-writings through the use of layering and multiple voices

Layered accounts are one of eight approaches to auto-ethnography identified by Ellis, Adams, and Bochner (2010). In this study I used ‘layering’ to craft site-writings of undertaking spatial design with children that “offe[r] an impressionistic sketch, handing readers layers of experience so they may fill in the spaces and construct an interpretation of the writer’s narrative” (Ronai, 1995, p. 396). Through doing, each site-writing acknowledges and seeks to make visible the ever-shifting nature of the threshold conditions between differing identities and relations, which are as present in writing as they are in living (including reading) (Ronai, 1995). They ask readers to “reconstruct the subject, thus projecting more of themselves into it, and taking more away from it” (p. 396).

Drawing on Pitard (2016), who also follows Ronai, each of the three site-writings was constructed by following a multi-staged process, expressed as multiple voices. **Voice 01** equated to Pitard’s first step, “Context”; **voice 02** with steps two and three, “Anecdote” and “Emotional response” respectively; and **voice 03** with steps 04, “reflexivity”, and 05, “strategies developed” (Pitard, 2016, p. 6). **Voices 04, 05, and 06** went beyond Pitard’s process to incorporate the material and economic threads of the places traced and constructed.

Constructing voice 02 through the use of narrative vignettes

As devices, vignettes have literary origins in the practice of *prosographia*, by which Greek orators would use “richly descriptive vignettes” in order to give validity and credibility to their claims (Erickson, 1986, p. 150). Widespread within ethnography and auto-ethnography, they are frequently applied using differing definitions and for differing purposes (Angelides &

Gibbs, 2006). **Voice 02** used textual vignettes written in a ‘close’ and personal style to offer a tangible, vulnerable insight into the manifestation and unfolding of human and nonhuman relations during workshops by crafting a “vivid portrayal of the conduct of an event of everyday life, in which the sights and sounds of what was being said and done are described in the natural sequence of their occurrence in real time”: what events were like to live (Erickson, 1986, pp. 149 – 150; also, Miles & Huberman, 1994). While developed from my field notes, the vignettes constructed remain conceived as an “abstraction” that does not and cannot “represent the original *event*”: an “analytic caricature [...] in which some details are sketched in and others are left out; some features are sharpened and heightened in their portrayal [...] and other features are softened, or left to merge with the background” (Erickson, 1986, p. 150).

Practising reflexivity

Practices of reflexivity have long played a role in qualitative research (e.g. Berger, 2015; Duranti, 2010; Finlay, 2002; Watt, 2007). Framing reflexivity as a tradition full of variety and “ambiguity”, Finlay categorises the various threads through the use of five “maps”: “introspection”, “intersubjective reflection”, “mutual collaboration” “social critique”, and “discursive deconstruction” (2002, p. 209). Of these, “intersubjective reflection” is closest to the understanding taken within this study, combining an attention toward both the ‘personal’ and the “negotiated” (p. 215). In attending to the personal my focus was with issues such as gender, race, age, language, experience, sexuality, ideology, and biases (Berger, 2015); in attending to the negotiated it was with how shared understandings emerged through relationships, discourse, and interaction (Finlay, 2002).

In accordance with the relational, anthropological approach taken, intersubjectivity is understood in terms of ontology:⁷³ as concerning the inescapable interrelations of human and non-human trajectories that “carry on or unfold along concurrent path” (Ingold, 2014, p. 389),

⁷³ Although this aligns with phenomenological understandings of ‘intersubjectivity’, the subsequent conceptualisation of relations in the relational, anthropological approach taken is a significant departure.

rather than ‘how we know’ in relation to others (epistemology) (Standal & Rugseth, 2016; also, Duranti, 2010). Accordingly, this understanding is applied through the lens of ‘correspondence’. Thus, reflexivity was not something “given, as an existential condition” or “achieved” – through analysis and writing, for example – but was “always in the making” throughout the ongoing living of research (Ingold, 2014, p. 389).

3.3.8 Using Site-Writing to analyse data

In this section I detail the structured process used to construct each of the site-writings presented in III, through which each of the three spatial design projects undertaken were analysed. Analysis was guided by the theoretical lens of ‘human and nonhuman relating’, developed in chapter 2 of this study. Describing, interpreting, and contextualising data from a specific and known perspective helped me to develop novel contributions to knowledge in response to the research questions posed.

Although presented herein in discrete sections of text, thresholds between data generation and analysis were – in reality – often blurred (e.g. Pink, 2013). The practising of spatial design and qualitative methods described in 3.3.1 and 3.3.2 to ‘generate’ data included an inescapable degree of interpretive analysis: in my active involvement in design during workshops; in writing field notes during and immediately after workshops; in writing and drawing documents that reported back on spatial design projects undertaken, for example. In this way, the analytic practice of site-writing began – to an extent – with the planning and practising of spatial design. Likewise, while the process is below described in discrete steps, it was not – in reality – linear. Although the development of different voices began in the order described, they were then developed concurrently at different speeds and allowed to “leak” and influence one another (Ingold, 2010, p. 4). In the same way, the development of themes began not on the completion of the three site-writings but in their construction and the exploration of data was not a discrete first stage but continued throughout.

Ongoing exploration of data

In practising site-writing, the exploration of data comprised ongoing active reading of data – field notes, photographs, produced artefacts, and audio recordings – “searching for meanings [and] patterns” (Braun & Clarke, 2006, p. 16). Different elements of data were read individually and together (listening to audio recordings while reading field notes, for example), combined with active note taking and diagramming (analogue and digital) (see Appendix E for examples). Although full transcription of audio recordings was not undertaken, writing was used as a tool to unpack complex sections (i.e. those with multiple layered voices) as part of the familiarisation process.

Constructing voices 01 and 02

This involved asking: what happened and what was intended? Construction of **voice 02** began first. In doing, I took an attentional, personal perspective that’s spatial positioning slipped between ‘during’ workshops and ‘just after’ they had finished. Drawing on field notes, audio recordings, and produced artefacts, voice 02 explored and questioned ‘what happened’ within a particular ‘episode’. Through adopting a ‘close’ style of writing, I sought to render tangible insights into how human and nonhuman relations manifested and unfolded in amidst workshops: what events were like to live.

In contrast, in constructing **voice 01** I took an intentional, distant perspective: drawing on documents produced prior to the undertaking of workshops to set out the ‘planned intention’ of the particular design workshop and/ or methods that gave rise to the events considered in voice 02.

Constructing voice 03

In constructing **voice 03**, I took a meditative perspective that stepped back to ask, ‘why did what happened, happen? Developed after the project’s completion, it drew on field notes, audio recordings, and artefacts produced during workshops, as well as both ‘distant’ and ‘close’ voices to tease out, identify, and explore the reasons behind how human and

nonhuman relations were experienced to manifest and unfold, including the influence of aspects of method and methodology.

Constructing voices 04 and 05

In constructing **voices 04** and **05** I sought to ‘bring into presence’ some of the material and financial threads experienced (Ingold, 2016, 2018a).

Voice 04 took a material perspective: drawing on texts from architectural specifications and manufacturer’s catalogues to interweave the prior voices with representations of material threads integral to the places traced and constructed through them. Each narrative focuses on a particular material thread of the episodes described and is presented as traveling horizontally across the page, interrupting the downward flow of voices 01—03. This is not done to indicate material threads cut across the others but to ‘pull the reader out of position’; to encourage pause and acknowledgement of those threads that more often go unnoticed but are themselves produced by trajectories and relations stretching out around the globe.

To construct **voice 05**, I took a financial perspective through which I sought to represent the financial trajectories that entwine inextricably with those described within voices 01—04. It was constructed using extracts from the Education & Skills Funding Agency’s (ESFA) *Academies accounts direction 2017 to 2018*. While publicly available, the actual accounts of each school were not used to maintain anonymity. Although fictional, the extracts presented are chronological with the figures used following through correctly. They present a large secondary academy, operating within a multi-academy trust (MAT). Selection of extracts was guided by an industry specialist. Again, as with voice 04, each narrative is presented as traveling horizontally across the page, not to indicate its cutting across but to ‘pull the reader out of position’.

Weaving in drawings and images

Drawings and images were produced and introduced to ‘co-respond’ (Ingold, 2016) with the textual narratives. These threads were positioned on facing pages, positioned vertically and

horizontally to match those threads they co-respond with. While often depicting material threads, they are independent to Voice 04. Images used do not feature children or adults and are cropped so as to maintain anonymity.

Developing and refining key themes

Development of the themes, presented as ‘key findings’ at the end of III, began during the construction of site-writing through itinerant processes of reading, note-taking, writing, and diagramming. As development progressed initial themes were refined through experimental processes of splitting, joining, addition, and removal, again working itinerantly, both within and across site-writings. In both stages, work was undertaken manually, working with pencil and pens on large format paper, white boards, as well as digitally through the use of Adobe Illustrator (a software package used commonly within design and illustration) (Appendix E). Finally, resultant key themes were discussed and interpreted as ‘key findings’ through recourse to the conceptual framework of ‘place negotiations in minor and major keys’ and the ‘theoretical lens of ‘human and nonhuman relating’ (chapter 2). This was done through the framework of three Meditations, presented in IV (Ahmed, 2018).⁷⁴

3.3.9 Addressing issues of reliability, validity, relational ethics, and the possibility of generalisation

Common critiques of auto-ethnographic practice concern, but are not limited to, issues of reliability, validity, the ability to generalise, and relational ethics (e.g. Atkinson, 1997; Coffey, 1999; Delamont, 2009; Elis, Adams, and Bochner, 2010; Mendez, 2013; Walford, 2004). Although Rendell does not explicitly discuss such issues herself, they are, I suggest, equally applicable to the practice of site-writing. This study therefore also borrowed from auto-

⁷⁴ Although Ahmed’s use of meditation as method involved her meditating on use (2018), it is important to be clear that I discovered her work after ‘use practice’ had emerged as a key theme within the research presented herein. Thus: it was Ahmed’s use of Meditation as method that was of relevance – not her use of ‘use’.

ethnography with respect to the use of techniques to ensure these issues were addressed actively throughout the research process.

As in auto-ethnography, in site-writing, I suggest, ‘truth’ is linked to modes of writing and representation, contingency is embraced, the fallibility of memory acknowledged, and the likelihood of different people interpreting and representing the ‘same’ event differently recognised (Ellis, Adams, & Bochner, 2010). In such a context *reliability* becomes linked to my “credibility” as a researcher: are the experiences I have described possible? What balance did I strike between imagination and reality (*ibid.*; also Erickson, 1986; Miles & Huberman, 1994; Richardson, 2000)? Likewise, the *validity* of the site-writings constructed is weighed on their ability to resonate with the reader: do they enable readers to immerse themselves in the currents of those experiences narrated (*ibid.*; also Ellis, 2009/2016)? Do they have the capacity to “improve [...] lives”, whether of the author, readers, participants, or other (including the non-human)? Do they have “use” or “usefulness” (Ellis, Adams, & Bochner, 2010, p. 282)? Although these questions must still be asked afresh and answered anew with each reading, they performed an important role during research too: guiding active interrogation of my developing understandings of data, during both the undertaking of spatial design workshops and the construction of site-writings. This interrogation was performed by myself, as well as by colleagues and with practitioners,⁷⁵ throughout what became an itinerant, rather than, iterative process. Through doing, I worked to maximise the credibility, validity, and usefulness, of the site-writings constructed, without banishing the embracement of contingency and difference fundamental to the research approach taken.

⁷⁵ Following the development of initial themes, I conducted a number of informal interviews (conversations) with architects and spatial design practitioners to discuss fledgling ideas in the context of others’ practices. Those interviewed were selected due to either their specialising in the design of schools or to their experience in facilitating participatory spatial design projects with children. The conversations were recorded but not transcribed. A list is provided in Appendix F.

The close and personal perspectives taken made the ongoing consideration of relational ethics – concerning relationships developed with space and places (including participants) through the research undertaken – especially important (2010). Considering and attending to the feelings of others, being aware of both the direct and indirect implications of relationships and events, including how processes that sought to protect identities might affect meaning, was central in both the practising of spatial design and the construction of site-writings (*ibid.*). Following the anthropological approach taken (3.1.3), ongoing consideration of relational ethics was not achieved by adhering to a specific recipe but by operationalising an *attentional* rather than *intentional* mode in practice (3.1.3, also chapter 2). Moreover, it was not presumed that an *attentional* mode could be ‘pre-set’ and forgotten about. Instead, the approach taken acknowledged such a mode is ever-emergent through action; always at stake. Therefore, I did not state with any confidence before or after practice “I will do this’ or ‘I did that” but continually asked “is this what I am doing?” and “what did I do?” (Ingold, 2018a. p. 24; also, Manning, 2016, p. 37).

Underpinned by a relational ontology and conceptualisation of space, this study understands events – conceptualised as ‘places’ (Massey, 2005, pp. 138 – 142) – as products of and produced by interrelations between human and nonhuman trajectories unfolding at multiple scales and speeds, weaving a meshwork that continually grows (Massey, 2005; also, Deleuze & Guattari, 2004; Ingold, 2010). Thus, while it is possible to return to place, this will always be to a place “that has moved on” (Massey, 2005, p. 139). Accordingly, although the events researched might appear replicable, any sense of repetition achieved would be an illusion caused by the entangling of ‘then and theres’ in ‘here and nows’ (*ibid.*). This suggests the potential of ‘generalisability’ lies not at the level of events – what happened – but in the conceptual analysis that explored ‘how’ and ‘why’ what happened, happened. Therefore, although the particular episodes of life described through the site-writings constructed are not generalizable, the mechanisms suggested as responsible for *how* events (negotiations) were experienced to manifest and unfold might be. For example, that particular use practices were found to

shape the nature of negotiations experienced in the schools researched suggests that such use practices might do so elsewhere too. It does not mean they will but demands we at least remain open to the possibility nonetheless. This aligns with Ellis et al.'s contention that 'generalizability' depends on the frequency with which readers find resonance and is thus tested with each new reading (2010).

3.3.10 Some methodological limitations

In this section I note some limitations of the research undertaken. Also see chapter 5 (5.3.2).

Research was undertaken in three schools, with the time spent within each shaped and bounded by the framings and requirements of the spatial design projects. Additional time, spatial and temporal, was permitted at the discretion of each school's respective gatekeepers. Practically, this meant much more 'additional' time was spent in school T than in each of the other two (especially school S). The importance of this additional time, both to the practising of spatial design and to the understanding of how places were negotiated, arose repeatedly throughout the analytic process. It is discussed in chapter 5 accordingly (5.1.3). Of course, this is not surprising: trajectories and their interrelations did not stop conveniently at the artificial boundaries of my research but flowed in and on: events that occurred beyond workshops shaped and were shaped-by events experienced within them (e.g. Massey, 2005, pp. 138 – 142). The extent of my ability to spend time beyond workshops thus played a critical role in limiting the understandings I was able to develop in and through them.

My decision to undertake research in both primary and secondary school contexts but not to undertake a comparative study also shaped the research. A comparative study would have likely led to valuable understandings concerning the practising of spatial design in school and how places are negotiated. Despite this, such an approach was not taken for fear it might have limited my ability to explore within each at the level of events, especially given the constraints

of resources available within the context of doctoral research. Thus, although the role of wider relations was clearly identified (chapter 5), the understanding of this role in respect of the particulars of primary and secondary education context was limited. To this end, future comparative work is recommended in the concluding chapter.

The anonymisation of places and people is performed throughout this study and has a number of limiting implications. In helping to “decouple” events and relations from the meshwork wherein they unfolded and, in cases, continue to unfold (Nespor, 2000, p. 546), anonymisation works to alienate the particular places researched from their specific geographies and histories (Massey, 2005). This, Nespor contends, not only facilitates “certain kinds of theoretical claims” to be made (2000, p. 546) but concurrently limits the ability of future readers to “respond to and challenge the account” presented too (p. 552). Such issues are especially pertinent in research that seeks to highlight the importance of understanding ontology in relational terms. Consequentially, balancing the demands of a relational ontology with the rights of participants and schools to not be identified has been an ongoing battle throughout the research. Although I have where appropriate provided as much contextual information as possible, anonymisation has ultimately been accorded priority throughout: in the decision to heavily crop included images, to use draft rather than real financial accounts, and to not use video or photograph faces, for example. The decision to include descriptions and photos of school U, which, due to its unique design, are likely to result in its identification is a notable exception.

Factor	Unit value	Eligibility
Primary age 3 (KS3) basic per pupil funding	£3,862.65	Each pupil on the school roll in year groups from year 7 to year 9 inclusive. The KS3 APT adjusted pupil count is based on data from the 2018-19 APT.
Primary age 4 (KS4) basic per pupil funding	£4,385.81	Each pupil on the school roll in year 10 and 11 inclusive.

claiming FSM, and 285 do not claim FSM. School A that are eligible for funding (285 / 285 = 100%).
 by multiplying the total pupil count by 25%. Therefore School A eligible pupils = 285 x 25% = 71.25 eligible pupils.
 attract funding for all the factors listed above.

Chapter 3: Core schools funding NFF calculation for LA allocations

- 3.1. We set out each component of the SB NFF that is calculated at a school level in this chapter. We use pupil and school characteristics data to calculate the NFF pupil-led and school-led units of funding, the minimum per pupil funding and the funding floor. For calculating LA allocations, we use data from the 2018-19 APT for all schools, and this chapter sets out the calculation of core schools funding for LA allocations.
- 3.2. For calculating the illustrative impact on individual schools, we use 2018-19 APT data for maintained schools and 2018/19 GAG data for academies and free schools. That calculation will be described later on in Chapter 6.
- 3.3. Core schools funding covers funding through the NFF that is calculated at a school level. Through the core schools funding calculation we produce a NFF primary and secondary per pupil unit of funding for each LA.
- 3.4. The NFF uses APT adjusted pupil numbers. This adjustment is made to remove the reception uplift where the LA has applied it, since this is not a component of the NFF.
- 3.5. The NFF core schools funding covers funding through the basic per pupil, deprivation, low prior attainment (LPA), English as an additional language (EAL), lump sum, and sparsity factors. The area cost adjustment (ACA) is also applied to uplift funding in line with local wage costs, and the minimum per pupil funding and the funding floor are applied to ensure that all schools attract at least the minimum level of per pupil funding through the formula and that all schools will attract at least a 1% increase compared to their 2017-18 pupil-led baseline.

- 3.6. The total NFF funding is:
 - a. Primary basic per pupil unit, plus
 - b. KS3 basic per pupil unit, plus
 - c. KS4 basic per pupil unit, plus

Additional notes

- 3.7. The additional number of pupils per unit of funding is calculated by dividing the total NFF funding by the total number of pupils. This ensures that the NFF is applied to ensure that all schools attract at least the minimum level of per pupil funding through the formula and that all schools will attract at least a 1% increase compared to their 2017-18 pupil-led baseline.
- 3.8. The NFF is applied to all eligible pupils. This ensures that all schools attract at least the minimum level of per pupil funding through the formula and that all schools will attract at least a 1% increase compared to their 2017-18 pupil-led baseline.

Basic per-pupil funding

Figure 1: Basic per pupil funding factors

Factor	Unit value	Eligibility
Primary age basic per pupil funding	£2,746.99	Each pupil on the school roll in year groups from reception to year 6 inclusive. The primary APT adjusted pupil count is based on data from the 2018-19 APT and excludes reception uplift.

CHAPTER 4 : RESEARCH NARRATIVES
+ KEY FINDINGS

Three Site-Writings in Five Voices

Cast of Voices

Distant:

Helvetica, regular.

Voice 01 takes a 'distant' perspective. In 'Intro' it sets out the specifics of the school context, including the reasons for its selection; the intention and practicalities of the spatial design project undertaken; and the process through which consent was negotiated with different parties. In each 'Score' it sets out the planned intention of each workshop discussed.

Close:

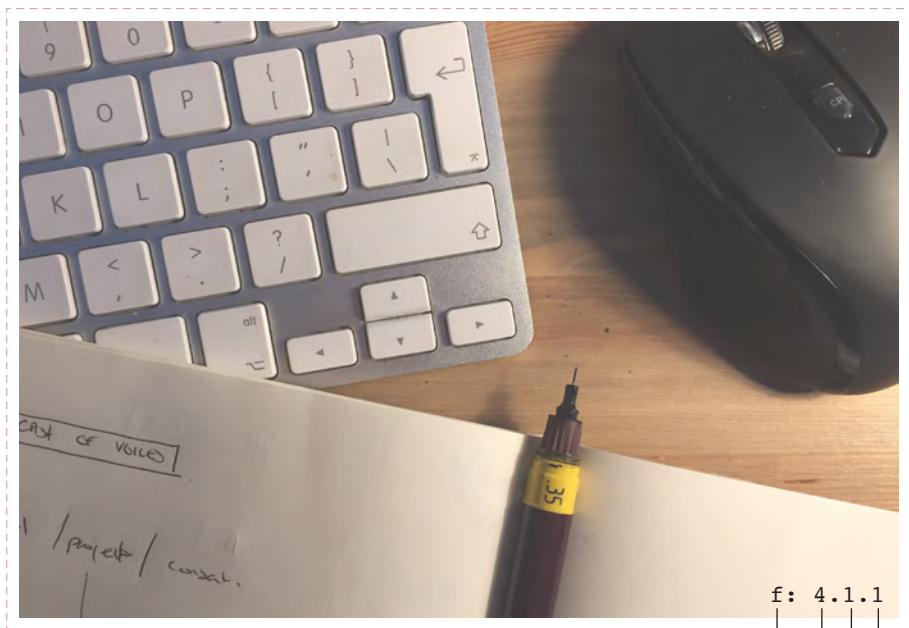
Scotch Roman, italic.

In voice 02 I offer a 'close' narrative account, describing events as they happen before, during, and after workshops. I tell each narrative from a personal perspective that's spatial positioning slips between 'during' workshops and 'just after' they have finished. I develop the narratives using field notes, audio recordings, and artifacts produced during workshops; the former written either immediately following a workshop or at moments of pause during its course. Through voice 02 I work to render tangible insights into how human and nonhuman relations manifested and unfolded in amidst fieldwork; what events were like to live.

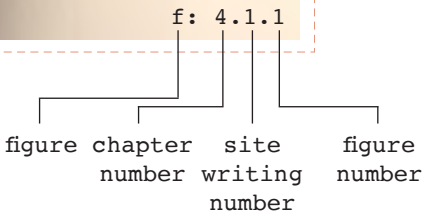
Meditative:

Scotch Roman, regular.

Voice 03 steps back to ask, 'why did what happen, happen?' Developed after the project's completion, it draws on field notes, audio recordings, and artifacts produced during workshops, as well as both 'distant' and 'close' voices. Through voice 03 I work to tease out, identify, and explore the reasons behind how human and nonhuman relations were experienced to manifest and unfold, including the influence of aspects of method and methodology.



(Left: Aluminium and plastic keyboard, paper notebook, plastic ink pen, and plastic mouse on pine and steel desk)



Material:

In voice 04 I take a material position, drawing on texts from architectural specifications and manufacturer's catalogues to interweave the prior voices (01, 02, and 03) with representations of material threads integral to the places traced and constructed through each. Each narrative focusses on a particular material thread of the episodes described and is presented as traveling horizontally across the page, interrupting the downward flow of voices 01–03. This is not done to indicate that nonhuman threads cut across the others but to 'pull the reader out of position'; to encourage pause and acknowledgement of those threads that more often go unnoticed but are themselves produced by trajectories and relations stretching out around the globe.

Financial:

Voice 05 represents the financial trajectories that entwine inextricably with those described within voices 01, 02, 03, and 04. It comprises extracts from the Education & Skills Funding Agency's (ESFA) *Academies accounts direction 2017 to 2018*. While publicly available the actual accounts of each school are not used so as to maintain anonymity. Although fictional, the extracts presented are chronological with the figures used following through correctly. They present a large secondary academy, operating within a multi-academy trust (MAT). Selection of extracts was guided by an industry specialist. As in voice 04, each narrative is presented as traveling horizontally across the page, not to indicate its cutting across but to 'pull the reader out of position'.

Voice 05 consists of public sector information licensed under the Open Government Licence v3.0.

Images + diagrams:

(Images and diagrams are presented on facing pages, positioned vertically and horizontally to match those threads they co-respond with. While often depicting material threads, they are independent to Voice 04. Images do not feature children or adults and are cropped so as to maintain anonymity)

(Except where stated otherwise, all figures in chapter 4 were taken by myself, during or after workshops)

4.1 : PRIMARY SCHOOL T

A Site-Writing in Five Voices

Scene

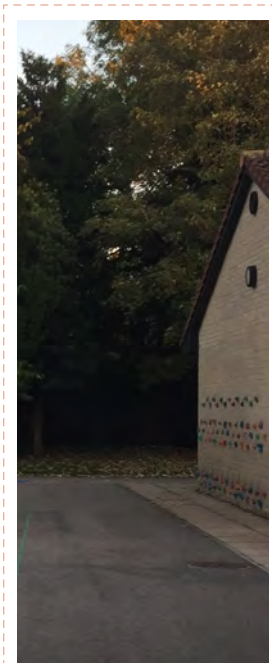
Various locations inside and out, within Primary School T.

Time

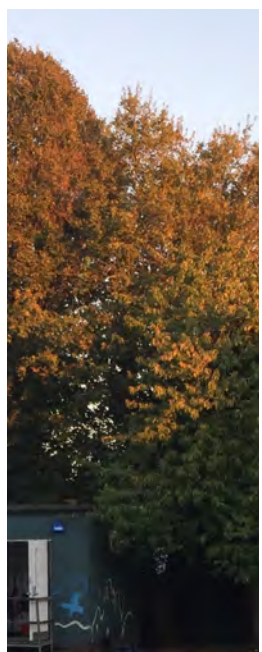
Workshop 01:	02.05.2017	45 minutes.
02:	09.05.2017	"
03:	16.05.2017	"
04:	23.05.2017	"
05:	06.06.2017	"
06:	13.06.2017	"

Participants

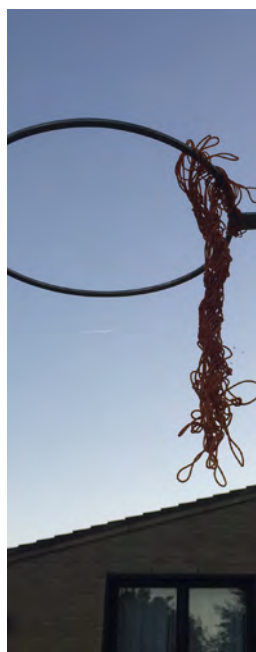
Workshop 01:	8 children.	8-11 years.
02:	14 children.	8-11 years.
03:	10 children.	8-11 years.
04:	6 children.	8-11 years.
05:	6 children.	8-11 years.
06:	7 children.	8-11 years.



f: 4.1.1



f: 4.1.2



f: 4.1.3



f: 4.1.4

(Left, clockwise from
bottom: Purloined pen;
External detail; External
detail; External detail)

INTRO

PRIMARY SCHOOL T

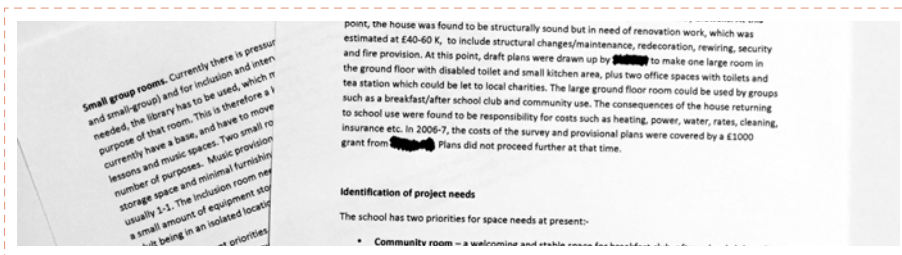
Helvetica, regular.

School T is situated on the corner plot formed by the intersection of a quiet village road with a busy major carriageway, itself constituting the eastern arterial edge of a major university and commuter city. A smaller than average primary school (DfE, 2018), it currently serves 153 pupils aged between five and eleven across six classes, one reception, four mixed year, and one year six. The majority of students are White British. Just over ten percent are supported by the pupil premium and less than ten percent are identified as disabled or having special educational needs. Both of these proportions are below the national average (OfSTED, 2015). A Church of England (CofE) Voluntary Aided Primary School, it shares close links with local churches and actively seeks to contextualise education within Christian belief and practice.

Scotch Roman, italic.

Before able to look for a buzzer or intercom, I was greeted with a friendly face. And, after an initial conversation – who I am and why I am here – a buzzer sounded, beckoning me through the second door and right into the heart of the school. Turning to my right, I entered the main reception, its door also wedged open in invitation. Here, there was no screen between Caroline, the school’s office administrator, and myself; we occupied the same space. There was no electronic register or photo taken. Instead, we shared the same pen, long since purloined from a well-known bank, passing it between each other as needed.

6mm Toughened. Conforms to all EN 12150-1 requirements and is CE marked in accordance with EN 12150-2. Achieves Class 1 to EN 12600 with a mode of breakage type C. (Pilkington, n.d.)



f: 4.1.5

(Centre: Original brief,
photo of print out)

School T was selected for fieldwork due to an existing relationship between myself and one of its governors (my then doctoral advisor) and the resulting understanding that the proposed research would work to support and enhance currently proposed changes to the school's building stock: specifically, the re-purposing of an adjacent Edwardian dwelling – named the School House – to provide new spaces for breakfast and after school clubs, specialist teaching, and staff preparation.

THE SCHOOL HOUSE PROJECT

Helvetica, regular.

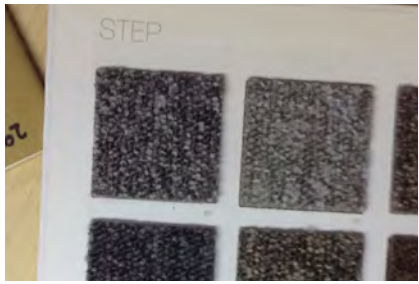
The School House comprises a single Edwardian building that abuts school T's North Western edge. It shares a party wall with the oldest part of the school but there is no direct access between the two. Previously leased as private domestic accommodation, its owners, the Diocese, had recently taken the decision to convert the two-storey building into additional accommodation for use by the school. The conversion was to be funded by a grant from the Educational Funding Agency (EFA, now ESFA).

At the time of my entering the project, a briefing document had been produced – authored by the school's governors and head teacher – and an architectural practice commissioned. The latter, having completed its initial proposals, was finalising the planning application and developing documents in readiness for the tender process.

Fieldwork was undertaken within the mechanics of this ongoing project. Its intention – developed in discussion with the school's head teacher – was to enrich the architect's proposals by exploring

Photo of Architect's drawings highlighting mistakes removed for copyright reasons. Copyright holder of drawing is Architect, who cannot be named for confidentiality reasons.

f: 4.1.6



f: 4.1.7

(Left, from top:
Architect's drawing error
example; Architect's carpet
proposals)

‘how the garden and proposed ground floor multi-purpose activity room might be inhabited’. Emergent ideas were to be funded with monies from the overall construction budget.

Scotch Roman, italic.

A number of points were made. While they varied in nature, they seemed united in their arising from mistakes found in the proposed drawings.

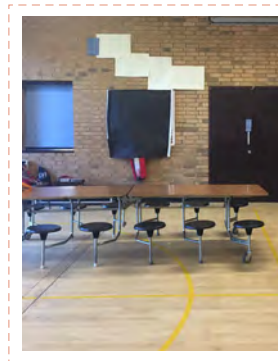
The attitude toward these mistakes make me worry about the level of care and respect the architecture practice is giving to this admittedly small project, exemplified by the discussion about flooring material. The school had suggested soft thick carpet to one half of the room – giving a homely feel that invites and supports sitting or lying down to play games or read – and rubber to the other half – providing a durable space in which eating and more messy play can occur.

This made sense. The after school club is, after all, a bridge between school and home and the school representatives present agreed it should, at all costs, feel domestic and not institutional in nature. The architects did not agree and countered the school’s suggestion with an argument for creating an institutional space: “it is fundamentally an institutional building and should therefore feel institutional”, they stated. To make their case, they offered up several folders of carpet samples, unified by their office| hotel lobby design: dark colours to hide the dirt with various patterns and stripes to lift the spirits. All were tough as a doormat and paper-thin: no soft pile to run your fingers through or insulation from the cold concrete floor below.

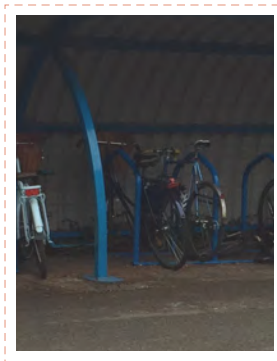
Yes, they would all be hard wearing. Yes, they would all be easy to clean. In the face of such economic pragmatism the school had struggled to make its case: that comfort should perhaps be given greater weight. It had begun to feel hopeless. The architects had done this a hundred times and have never had problems, they reassured. The risk of choosing a different direction would be great, they urged. The school gave up.



f: 4.1.8



f: 4.1.9



f: 4.1.10

(Centre, from left: Nest,
internal detail; School
hall, internal detail;
personal bicycle used
in travel to and from
workshops)

Helvetica, regular.

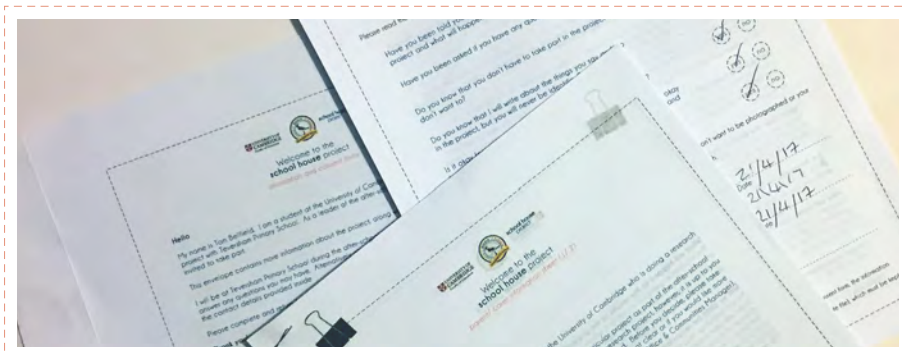
Five workshops were held during the 2017 summer term, one per week. Each was scheduled to take place during the After School Club, starting at 4.30pm – immediately following snack – and lasting 45 minutes. The After School Club itself runs from the end of school – at 3.15pm – until 6pm. Although members do not attend every day, each has a regular cohort from across year groups. Fieldwork was undertaken on Tuesdays to fit in with existing school and personal schedules.

Following the After School Club itself, workshops were held in one of two locations: when possible, in school T's main hall; when necessary, in the 'Nest' – an ageing portacabin sited on school T's main playground, roughly one third of the hall in size. During dry weather, children are allowed free run of the playground and grassed areas. When wet or dark, they are restricted to using the playground's hard surfaces.

NEGOTIATING INFORMED CONSENT

Helvetica, regular.

Informed consent was negotiated in four phases. In phase 01 broad consent for the proposed research was brokered through discussion between school T's head teacher, Anita, my then doctoral advisor and school governor, Kate, and myself, with official approval sought and gained from school T's governing body. A face-to-face meeting between Anita, Kate, and myself allowed for more detailed discussions, including: who the research should be undertaken with, workshop duration and schedule, methods of recording, potential outcomes for both participants and the wider school community, as well as issues of safe guarding.



f: 4.1.11

(Centre: Informed consent forms, example detail)

The decision for fieldwork to be undertaken with members of the existing After School Club was reached during this initial phase of negotiations. As it had not been possible to involve the whole school, this decision ensured the inclusion of those who were most likely to become future users. Running workshops outside of main teaching hours also helped to minimise disruption and ease logistics with respect to safeguarding.

Before extending negotiations to members of the After School Club, phase 02 saw discussions held between Emma, Amaya, who together run the After School Club, and myself. Discussions focussed on prior decisions and project practicalities, including proposed methods and potential outcomes.

In phase 03 negotiations were extended to members of the After School Club, as well as to their parents and/ or guardians. Attending school T's After School Club on the proposed afternoon of workshops allowed me: (1) to introduce the proposed project, wider doctoral research, and myself to members of the club in person; (2) to raise issues of consent and participation, including the option not to and ability to change their mind later should they wish; and (3) to provide participants with information and consent forms to take home (Appendix A). To help ensure information and consent forms were not lost or binned as unknown quantities, I spoke to parents and guardians in person as they collected the children – putting a face to the name given on consent forms and fielding any initial questions raised.

Phase 04 of negotiations continued throughout workshops: reminding participants of the workshops connection to my ongoing doctoral research; that the workshops were being recorded via Dictaphone, including the purpose and audience of such recordings; and that they were free to choose to cease participating at any time without consequence.

Workshops were recorded through the use of a personal Dictaphone. Video was not used.

SCORE I

CODES

Score I explores conflicts arising from the practical application of school T's access procedures.

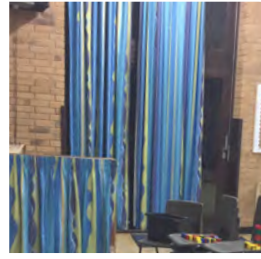
Its *close* voice describes discrete episodes that unfolded immediately before workshop 04.



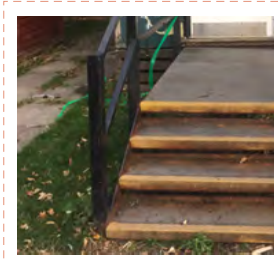
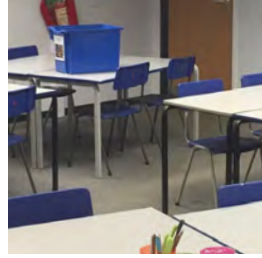
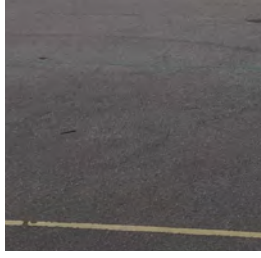
f: 4.1.12



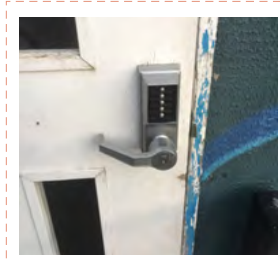
f: 4.1.13



f: 4.1.14



f: 4.1.15



f: 4.1.16



f: 4.1.17



f: 4.1.18

(Left, clockwise from top left: Nest, access stair; Nest, code; Playground, painted lines on tarmac; Corridor's door access control button)

(Centre, from left: Portacabins; Nest; School Hall)

Helvetica, regular.

When possible the After School Club takes place in the school's main hall. When the hall is being used for other purposes – for clubs, meetings, or events – it relocates to the second of the school's two portacabins, sited on the main playground. Known by staff and children as 'the Nest', this portacabin is roughly one third of the hall in size. It has a small sink but no hot water. The nearest toilets are in the adjacent portacabin. Before entering, children must first line up on the tarmac outside in class and age order. The relevant adult is then to ascend the stairs where they are to enter the code in secret before allowing the children to enter, one class at a time.

Scotch Roman, italic.

The Nest is accessed via a short metal stair, painted black; parts untouched and flaked with rust, parts worn smooth with use. The entrance door, guarded by a mechanical code, leads to a small internal porch wherein a further door, heavy and opaque, provides access to the main space beyond.

Defender Security: Green Dome Push to Exit Button - Door Release. DEF-0657-1. IP67 Ingress protection. Momentary contact, 2.5mm travel. Anti-rotational mounting. 20J Impact rating. RoHS compliant. (CPC, n.d.).

Between the electronically operated door, that terminates the internal corridor in which I collect the older children, and the mechanically coded entrance door to the Nest lays an expanse of tarmac. How anyone ever manages to get children to cross this quietly and in a neat line is beyond me. As soon as I moved towards the door, invisible fingers reached to the button... with all, of course, bursting out in every direction. Some headed straight to the Nest, racing each other; others scattered, playing games or following the lines painted on

	Note	Unrestricted Funds £000	General Funds £000	Asset Funds £000	Total £000	Total £000
Income and endowments from:						
Donations and capital grants	3	123	297	544	964	1,725
Transfer from local authority on conversion		-	-	-	-	8,976
Charitable activities:						
Funding for the academy trust's educational operations	4	-	4,585	-	4,585	4,349
Provision of boarding activities						
[if reqd]	33	-	-	-	-	-
Teaching schools [if required]						
Other trading activities	5	10	-	-	10	9
Investments	6	6	-	-	6	5
Total		139	4,882	544	5,565	15,064

Fig. contains public sector information licensed under the Open Government Licence v3.0.



f: 4.1.19



f: 4.1.20

(Left, from left: Nest,
code, Code note)

the tarmac. Overwhelmed and unable to respond to all, I hung back to help and encourage the slower children, most of whom were busy chatting or struggling under mountains of bags.

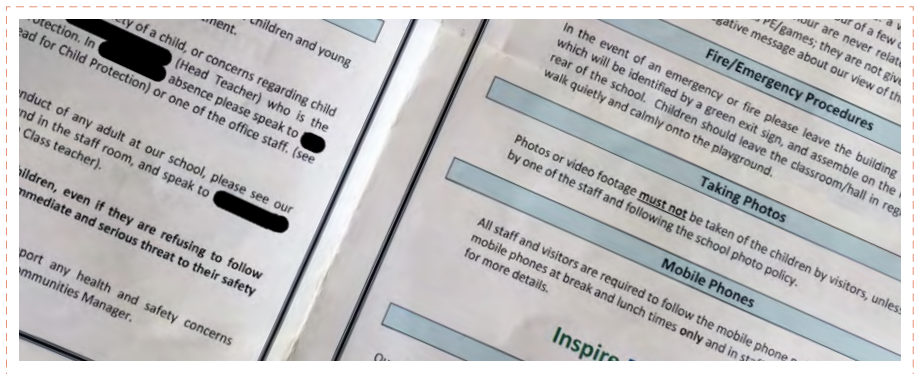
Once across the tarmac we all waited outside the coded door for Emma to arrive with the younger children. It was here that the first difficulties arose. While a minority of the children were happy to wait, those full of energy grew increasingly restless until, eventually, they snapped, running off loudly across both tarmac and grass – forcing me to act, to make efforts call them back. Yet, trickier still, were those determined to get inside; who tasked themselves with guessing the code.

Smith & Locke Medium Duty Push Button Lock (5661J). Easy to fit, medium duty, mechanical push-button lock with tubular latch and optional holdback facility. Silver finish. (Screwfix, n.d.)

They know that they are not allowed to know this code; that when the school discovers they have worked it out, as I am sure they always do, it will be changed once more. It's a two pronged attack: As Tessa and Rachel work on guessing the combination – taking it in turns to 'mash' the decidedly worn key pad – Jo focussed on me: "please can you tell us the code, we guess it eventually anyway... Go on! Please..." She accompanied her constant questioning with attempts to swing on my arm, a barrage that continued even as I sought to enter the code on Emma's arrival. Trying to prevent them from seeing is almost impossible. And, even though I had eventually succeeded, I can't help but feel that it is a hollow victory... Why shouldn't they know the code? It is their school, not mine... Why are they not deemed responsible enough? Surely ownership is something we should together share?

Scotch Roman, regular.

The responsibility accorded to me by the school – manifest in giving me the codes – was based not on 'me' but on my having passed the relevant government checks and thus holding the relevant Disclosure and Baring Service certificate (DBS). It was not a responsibility I had earned through time spent with the school but one I had applied for, away from it. This is a route to responsibility not open to the school's pupils who – even after six years – must wait at such coded thresholds for a responsible adult to arrive.



f: 4.1.21

(Right: School T
safeguarding leaflet)

In response to the discomfort (and guilt) I felt in such situations, I had simply chosen to stop asking for new codes; to shed my responsibility; to rely on Emma to input the codes instead. I had of course known that Emma’s position as ‘club leader’ meant that she was not able to shed this responsibility. Such actions were crude, selfish, and didn’t work. Acutely observant, the children had simply changed tact: future conversations no longer hinged on the demand “tell us the code” but on the question “when will you ask Emma for the code?”

	Note	Unrestricted Funds £000	General Funds £000	Asset Funds £000	Total £000	Total £000
Expenditure on:						
Raising funds	7	13	-	-	13	14
Charitable activities:						
Grants	8	-	-	-	-	-
Academy trust educational operations	9	3	4,546	949	5,498	5,198
Provision of boarding activities [if reqd]	33	-	-	-	-	-
Teaching schools [if required]	36	-	-	-	-	-
Other		-	-	-	-	-
Total		16	4,546	949	5,511	5,212
Net income / (expenditure)		123	336	(405)	54	9,852

f: 4.1.75

Fig. contains public sector information licensed under the Open Government Licence v3.0.

The discomfort that drove my actions is rooted in the beliefs I hold as a result of memories pertaining to my personal experience of primary school (based on the private, not state sector), my more recent experiences in architectural education and practice, as well as my current role as an educational researcher. It is compounded by the conflict between these beliefs and experiences, and my responsibilities as set out by school T and duty as an educational researcher to uphold them.

The primary school that I attended comprised three buildings in close proximity to one another. As with the Nest, external doors were guarded by mechanical codes. However, we were – as children – entrusted with this code: the school had belonged every bit as much to us as it did to the staff and we enjoyed a level of access and responsibility commensurate with this. We had taken our duties seriously: codes were not discussed with friends outside of the school and, where appropriate, we had opened doors for visitors to pass through, rather than handing them the code. Two decades on, I am surprised by the clarity of these memories, as well as by the strength with which they have gone on to influence my beliefs and actions. By way of alternative measure, I continue to use this code every time I unlock my mobile phone...

lphone 6s. White. 32GB. 4.7” Retina HD Display. 812-MP i-Sight camera. Aluminium, glass. (Carphone Warehouse, n.d.)



f: 4.1.22



f: 4.1.23

Photo of Anti Trap Bow Top Fencing technical drawing removed for copyright reasons.
Copyright holder is H.S. Jackson & Son (Fencing) Ltd.

f: 4.1.24

(Centre: Jacksons Anti -
Neck Trap Bow Top Fencing,
extract from specification
(Jacksons, 2018))

(Right, from left:
Personal Design Project,
Hulme Library - Entrance
diagram (Bellfield, 2015c);
Personal Design Project,
Hulme Library - Entrance
perspective (Bellfield,
2015c))

In architectural education, I was – to a large extent – protected from the practicalities of safeguarding and security. Although aware of the issues, policy, and debate, in detailed design and discussion we had always managed – been encouraged – to gloss over the uncomfortable realities that arise from seeking to allow access to certain people while preventing it for others: where to place the locks? Who gets keys? Which fences to install? How high? How strong? In architectural practice, specialising in both primary and secondary education sectors, such questions could no longer be avoided. Indeed, as the youngest (cheapest) in the office, I had often found myself poring over lock, hinge, and fence catalogues. However, in such intimacy, the abstraction rendered by a world of codes, colours, finishes, and prices had also provided protection from what such measures might mean to the people who used – or couldn't use – them in everyday life.

The weld mesh panels with longitudinal profiles are manufactured from 5mm (nom.) horizontal and 4mm (nom.) vertical wires to give 200 x 50mm maximum wire centre spacing. Available in a range of heights from 1.2 to 3 metres. The panels are fixed to 60 x 60 SHS posts with steel clips threaded inserts. (IAE, n.d.)

In contrast, researching in school T removed such protections. Responsible for the children's safety, I was required to strictly adhere to official procedure at all times, including the unlocking and locking of doors, as well as the protection of codes, coded fobs, and keys. If in doubt I was to turn to Mrs C, the school's office manager. Although these procedures often clashed with my experiences and beliefs – the degree to which children were accorded responsibility and freedom, for example – as an educational researcher my duty was clear: Yes I had a responsibility to school, staff, and children. But, contrary to my personal feelings, this duty had a set hierarchy: in its position of ultimate responsibility with concern to the children's safety, my duty was foremost to the school, represented by its head teacher. Next it was to staff and parents/ guardians, and finally to children. My DBS certificate accorded me responsibility to hold and withhold codes, fobs, and keys, not to distribute them: to follow procedure, nothing more.

Note	Unrestricted Funds £000	General Funds £000	Asset Funds £000	Total £000	Total £000	
Other recognised gains / (losses):						
Actuarial (losses) / gains on defined benefit pension schemes	-	(319)	-	(319)	(133)	Fig. contains public sector information licensed under the Open Government Licence v3.0.
Net movement in funds	123	7	(395)	(265)	9,719	
Reconciliation of funds						
Total funds brought forward	155	(956)	10,520	9,719	-	
Total funds carried forward	278	(949)	10,125	9,454	9,719	

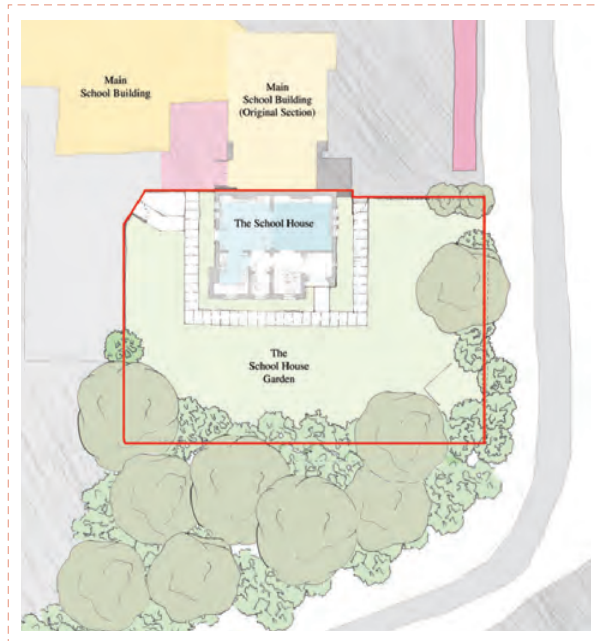
Battles for the code had continued. Re-run each week, they exemplify how debates and decisions – policy, economic, design, etcetera – at school, local, national and international levels manifest in tangible moments of everyday life, right down to finger tip level. Employed as a mode of top-down production, design becomes a practice through which the requirements of dominant agendas are concretized in the construction of physical environments. However, design can also be used bottom up, as a technique: a practice that seeks to expose and – where possible – open up such agendas to questioning; ways through which inhabitants might join *with* ongoing debate at local, national, and global levels regardless of the immediate situation.

SCORE II

EXPLORING THE GARDEN

Score II explores emergent schisms between intentional and actual approaches to, as well as acts of, exploration.

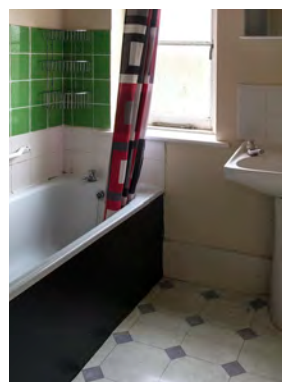
Its *close* voice describes discrete episodes that unfolded during workshop 02.



f: 4.1.25



f: 4.1.26



f: 4.1.27



f: 4.1.28

(Left, from left: Original School House - garden detail; Bathroom detail; Kitchen detail)

(Centre: School House / school relation)

Helvetica, regular.

The School House and garden are located to one edge of the main school site. They are protected on all sides by a combination of tall, opaque fences and thick bushes. Workshop 02 therefore intended to introduce participants to the School House and garden through facilitating hands-on exploration.

To structure and focus exploration an activity sheet was developed (Appendix B), which sought to prompt creative questioning of both garden and house by using each of the five senses: to feel for different textures and temperatures, to stand still with closed eyes and listen intently, to breath deeply and describe the different smells, to imagine what it might like to taste – sweet, sour, like mashed potato?

Scotch Roman, italic.

Back in the school hall, stood toasting bagels for those children who wanted – 1min 45sec for Jo, just before the edges start to catch for Rachel – I begin to reflect: Was it a triumph or was it chaos? I'm really not sure...

LOGIK L04TBK14 4-slice Toaster - Black & Silver. Defrost function. Warming function. Extra-wide slots. (e.g. Currys, n.d.)

I had been especially looking forward to this workshop. I think it incredibly important for participants to explore first hand the places that we – as designers – are asking to develop with them. Therefore, because the School House and its grounds were in poor condition, I was initially apprehensive about proposing such a visit to the school. Thankfully, my worries were unfounded and, after some wrangling over precise details and the promise of a risk assessment, all had been quickly arranged.

	Note	2018 £000	2018 £000	2017 £000	2017 £000
Fixed assets					
Intangible assets	13		6		-
Tangible assets	14		9,963		10,518
Current assets					
Stock	15	4		5	
Debtors	16	78		82	
Cash at bank and in hand		896		255	
		<u>978</u>		<u>342</u>	

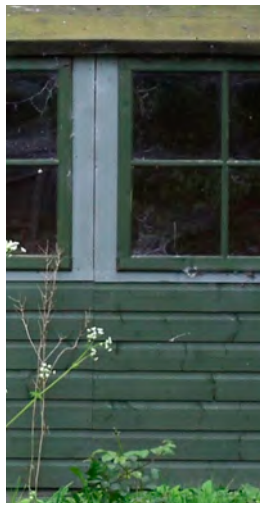
Fig. contains public sector information licensed under the Open Government Licence v3.0.

f: 4.1.77

The process of explaining the workshop's intentions and of physically lining up and walking over had also been without



f: 4.1.29



f: 4.1.30



f: 4.1.31

(Left, clockwise from bottom:
The breezeblock; The shed,
internal detail; The shed,
external detail)

incident. And once in the garden all had listened – albeit while continually stealing glances at the new environment that now surrounded them – as I talked through the activity sheet, handing them out along with pencils. However, from the moment I fired the starting gun it all began to unravel – or did it? Where I had imagined participants combing back and forth, working through the activity sheets in careful investigation and reflection, they instead ran amok – what had I been thinking?

Yet, in among the chaos, genuine exploration had taken place... To one end of the grounds, the existing shed had been tentatively entered:

The 8 x 6 overlap, double door, dip treated shed has been constructed to a very high quality using a tough timber to assure value. The shed is made using a thick 28 mm framing of which an overlap cladding is fitted to create the walls of the shed. This overlap cladding gives the shed a traditional, yet rustic appearance that is guaranteed to spark compliments (Shedstore, n.d.)

First George tried to establish the shed’s purpose by attempting to peer through its grimy windows. Too small to reach alone, he stood on tiptoes, using a nearby brick to gain crucial inches, fingers hooked onto the thin window frame for balance, his neck craned up. When this fails to reveal a satisfactory answer, he recruited a friend and together they pried open the main door. On pushing their heads inside the opening they had quickly recoiled – “urghhh... it smells”. Yet, urged on by questions from the children now gathered behind – “Does it contain bees?” “Can anyone see or hear anything?” “Is it dry?” “What’s it like?” – they had pressed on, pulling open the door and edging inside.

In the middle, Tessa, Jo, and Rachel had circled around a discarded breezeblock, one corner broken off.

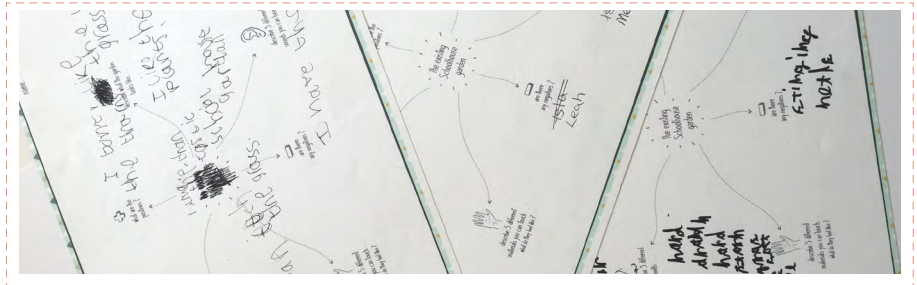
Category: Dense Concrete Blocks. Hollow Dense Concrete 7.3N Blocks 215mm. Full Dimensions: 440mm long x 215mm high x 215mm wide (Travis Perkins, n.d. -a)

Taking it in turns they stood on the block in various positions, trying to find their balance – two legs, one leg, then one-legged hops. Announcing that this is all too easy, Jo had reached down and flipped the breezeblock onto its broken face. Standing on it once more she proceeded to demonstrate the now pronounced wobble, turning the block into a miniature seesaw – again, easy with two legs, but how about one? Can two people use it at the same time? The experiments went on...



f: 4.1.32

f: 4.1.33



f: 4.1.34



f: 4.1.35

(Left, from top: The School House, cat flap, external detail; The School House, cat flap, internal detail)

(Right, from top: W02 Activity Sheet, completed examples; The manhole, external detail)

Around the corner, a further group of children had questioned why there was a cat flap in the rear door – whose cat was it for? What did it look like? Did it have a name? Would the School House have a cat flap? Would it have a cat? First they used sticks to hold open the flap as others took turns to push their hands inside. Then, curiosity growing, they took turns to, bellies on the floor, press their faces up against the aperture and – through a cat’s eyes – tried to see inside.

Staywell Small White Catflap 715. Dimensions: 3.7 x 20 x 24.2cm. Plastic composite.
 Suitable for cats with maximum shoulder width of 5.75in. (Pets at Home, n.d.)

Scotch Roman, regular.

During and immediately after the workshop I had felt disappointed in the lack of attention given to the activity sheets by participants. Worse, the lack of attention wasn’t a result of my pitching the activity wrong – too hard/ too easy – but due to it missing the point of exploring itself. Where it had asked participants to shut down particular senses in order to apply one in isolation they had refused, instead choosing to use all in continuous symphony, remaining alert and attentive to every facet of their new surroundings. Likewise, that which I had earlier interpreted as ‘mess’ and duly recorded in my assessment as potential risk – the shed, broken breezeblock, cat flap, uneven ground, tree stumps, and manhole cover – had been treated by participants as a rich tapestry demanding multi-sensual interaction.

	Note	2018 £000	2018 £000	2017 £000	2017 £000
Liabilities					
Creditors: Amounts falling due within one year	17	<u>(80)</u>		<u>(87)</u>	
Net current assets			<u>898</u>		<u>255</u>
Total assets less current liabilities			10,867		10,773
Creditors: Amounts falling due after more than one year	18		<u>-</u>		<u>-</u>
Net assets excluding pension liability			10,867		10,773

£: 4.1.78
 Fig. contains public sector information licensed under the Open Government Licence v3.0.

Woven through these initial feelings of disappointment was an at-first strange sense of satisfaction: I couldn’t (and can’t) help but feel pleased that I had gone *with* participants in the moment, allowing them to tread their own exploratory paths, joining with them in their journeying, rather than holding them to my pre-planned agenda. In this way the workshop had been a real success.

Yet this success is tinged. As a responsible adult, I had still made

Photo of internal of manhole removed
for copyright reasons.

f: 4.1.36

(*Right:* The manhole,
internal detail)

choices about which paths the participants could and could not follow: judging the shed, breeze-block, and cat flap to bear no real danger, allowing the children to explore them unhindered, but deeming their use of sticks to gain access to the existing manhole to be a step too far, requiring intervention.

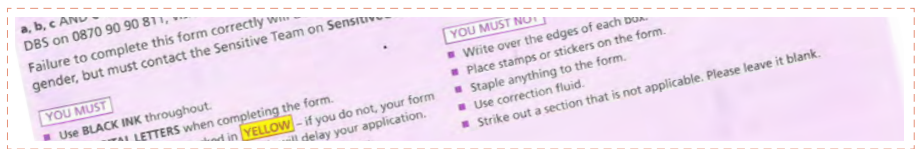
Clark Manhole Cover & Frame. 900mm x 600mm x 100mm 10T Recessed. BLK Paviour CLKS 795R/100. Tapered frame for secure bedding. Fully galvanised. Integrated corner lifting key holes. Recessed for 80mm pavior (Travis Perkins, n.d. -b)

This latter intervention put me in conflict, not only with the participants, but also myself. At a similar age, I vividly remember staying over at a friend's house one weekend. During the afternoon we had found a manhole cover in the path to one side of the house. We had proceeded to chip away the sealing cement and lift the cover before taking it in turns to keep watch/ flush different toilets to work out what happened: how it was connected. At the time it had made perfect sense – it still does: we were discovering the workings of a hidden world and could not understand the trouble we were in when discovered by my friend's parents. Now, in my position as a responsible adult, the situation was reversed. I understood (and understand) the participants' desire to explore the manhole, to discover what lies below. My friend's parents must have understood this too. However, as for my friend's parents, knowing what lies below is what forced me to curtail their explorations to prevent us all from harm (physical and nonphysical).

UG616 - Underground Drainage 750mm Manhole Base. 160mm. 9.68kg. 0.348m³ Polypropylene. (MKM, n.d.)

Not wanting to simply say 'no' I had tried to open up a conversation, inviting the participants to consider and discuss what the manhole was and why I wasn't able to let them uncover it. This discussion was to an extent false: I knew it could not change my position. Instead, it was an attempt to make visible the different negotiations behind my position: the responsibilities I held to various parties (to them, the school, their parents etc...) and how these influenced what I (and we) could and couldn't do.

A further reason for the schisms observed and experienced between intention and reality in workshop 02 is the conflicted nature of the activity's core objective. For example: the intended activity was developed, in my dual role as designer and educational researcher, to create a clear and multi-levelled understanding of the participant's first impressions of the space we were to collectively design. As a designer I wanted participants to explore this space



f: 4.1.37

(Right: Disclosure &
Barring Service (DBS)
application form, detail)

f: 4.1.37 Contains public sector information
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first hand on their terms. Yet, as a researcher, I also wanted them to structure and record their explorations in a particular way – on my terms – helping to ensure the production of clear data beneficial to my wider objectives. This conflict manifested in the activity sheets as an overly restrictive binding of exploration and reflection within discrete calls for action: ‘close your eyes and listen intently, write down the sounds you can hear’, for example.

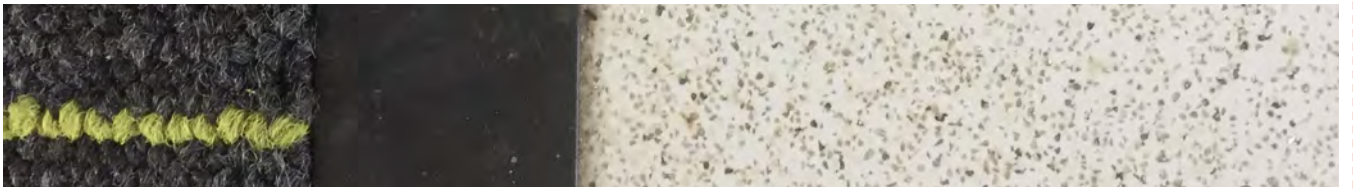
	Note	2018 £000	2018 £000	2017 £000	2017 £000
Defined benefit pension scheme liability	30		(1,413)		(1,054)
Total net assets			9,454		9,719
Funds of the academy trust:					
Restricted funds					
Fixed asset fund	19	10,125		10,520	
Restricted income fund	19	464		98	
Pension reserve	19	(1,413)		(1,054)	
Total restricted funds			9,176		9,564
Unrestricted income funds	19		278		155
Total funds			9,454		9,719

f: 4.1.79

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What, then, might be done differently? One approach might be to loosen the coupling between exploration and reflection. For example: photo-elicitation methods (e.g. Cele, 2006; Clark & Moss, 2011) structure exploration through the act of walking and taking photos. Reflection does not take place during walks – children are not asked to take a photo and immediately record on its reverse why they took it – but happens later, with researchers using photographs taken to structure subsequent interviews. Indeed, this returns to what was intended: to undertake visits to the School House in small groups, to invite participants to explore guided by the activity sheets before holding a short reflective discussion afterwards based on their discoveries. However, on the day of the workshop I was informed that a lack of staff meant all children were required to visit the School House together (I was not allowed to be alone with the children while away from the main site, despite having the relevant checks and clearances). The decision to adapt rather than postpone workshop 02 is therefore also important in understanding why what happened, happened. This does not absolve the activity sheets of responsibility but highlights the complex nature of the issues that lie behind the schisms observed.

My decision to follow participants’ lead during the workshop can be rooted in how I understand my role as a researcher, designer, and workshop facilitator: that my purpose is to guide and support, not impose or restrict. However, it is a decision with roots in fear



f: 4.1.38

(Centre: The School House
floor, junction detail)

and self-doubt too: fears about not being listened to, doubts that participants won't see value or be interested in the activities offered, concerns that to impose order would undermine fledgling relationships with individual participants. In living, these threads cannot be untangled: each drives and supports the other. Fear and self-doubt are not weaknesses but essential to creating the space and time needed if we are to attend to the world around us, to respond carefully and particularly, to follow multiple paths whether expected or not. For to be overly strong risks confidently ploughing through.

Scotch Roman, italic.

Although it has been great to witness the children explore the School House grounds playfully, I am worried by their response to the School House itself: whereas outside they had seen life where I saw mess, on the inside where I saw the possibility of change they expressed disappointment: "It's dark and small, really small." "Is this it?"

Modulyss carpets: First Radiant 609 (Green). 500 x 500mm x 3.5mm thick tiles to be fully adhered in strict accordance with manufacturers details on self levelling latex. (Modulyss, n.d.)

Tarasafe Standard PUR. 2mm thick. Roll/ sheet application. Method: Vinyl tile to be fully adhered in strict accordance with manufacturers details, on self levelling latex. Colour: Marbre (7731) (Gerflor, n.d.)

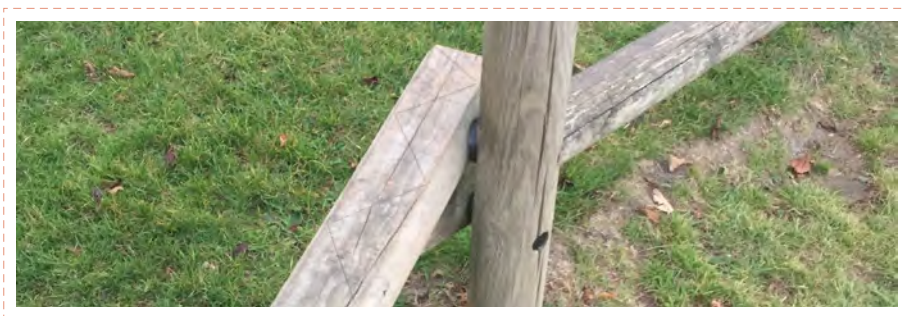
I have seen the architect's plans and know that little is happening beyond the removal of one wall downstairs to create a single room, the renewal of kitchen appliances, and a freshening up of paint. Compounding these worries is Emma's initial response: "Its just so small, how is it going to work? Can you imagine? We have 25 – 30 kids some days and the Nest – that is loud enough! And what will we do when it's wet? You can't have 30 kids all inside... they need and want their own space. I don't know... ..only one toilet! What is going to happen when we need them to all wash their hands for snack?"

SCORE III

ADAPTING METHODS

Score III explores the adaptation and subversion of intended methods by participants, as well as my response.

Its *close* voice describes discrete episodes that unfolded within workshop 03.



f: 4.1.39

(Left: Adventure
playground, starting beam)

Scotch Roman, italic.

Exhausted, I sit on the adventure course's starting beam and try to reflect on the hour just gone. They know an architecture practice is designing the main refurbishment; that they have not been involved from the start; that they have little hope of changing decisions already made. If I knew such things, would I be encouraged to engage? No, of course not.

Helvetica, regular.

Workshop 03 was conceived in three parts: Through the discussion of precedent images, part 01 aimed to introduce participants to a variety of ways in which different types of spaces might be designed and adapted using a range of methods and materials. Through the collective development of a spatial brief, part 02 intended: (1) to build on discussions had in part 01; and (2), to explore different ways in which the garden might be used and how its design might facilitate such uses, asking: Which different elements should or shouldn't be included? What materials might they be constructed from? How might elements feel to inhabit? When and by whom could they be used? Finally, part 03 sought to invite participants to draw on knowledge developed through parts 01 and 02 to develop specific design proposals for future change.

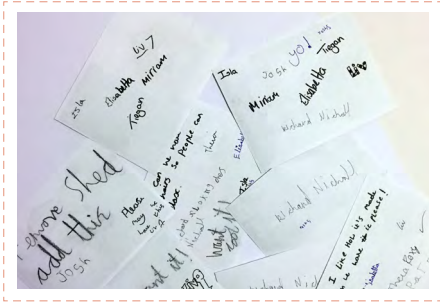
Scotch Roman, italic.

We had sat at one of the dining tables.

Rectangular Mobile Folding Table Seating Unit. 3080mm (l) x 735mm (h) x 1500mm (w) (12 seat) Maple. Blue. (ELF, n.d.)

On its surface I had rolled out a long piece of paper, scattering a collection of writing and drawing materials, as well as a pile of precedent images on top. Leading up to the workshop, I had been anxious about using these images. Although, following Baupiloten's methods (Hofmann, 2014), they did include a focus on conjuring different 'atmospheres', a large proportion depicted finished projects and it is these that I worried might lead to a pick-and-mix approach in which analysis would be bypassed.

The reality was somewhere in between: the images were analysed and discussed verbally, albeit with strong and continuous encouragement



f: 4.1.1.40

f: 4.1.1.41

Photo showing partial views of precedent images removed for copyright reasons.

Im: 4.1.1.42

(Left, from top: Signatures to back of images; Table from which precedents were removed)

(Above: Precedent project and atmosphere image examples)

from myself. Yet, my suggestion that the participants write down what they like and dislike, including why, on the back of images was thoroughly ignored. Instead, I watched in a mix of horror, admiration, and amusement as certain images were whisked away from the table and paraded around both hall and playground in a mission to collect as many signatures – representing ‘likes’ – as possible, while ideas deemed unsuitable were hidden to prevent signatures being gained. Feeling caught, I decided to maintain my position at the table. Quietly releasing ‘hidden images’ back onto the table and focussing on talking with those participants who seemed less engaged. How should I have responded? I will have to follow the signatures later, perhaps identifying those written under duress...

The TPS is an unfunded scheme and contributions are calculated so as to spread the cost of pensions over employees' working lives with the academy trust in such a way that the pension cost is a substantially level percentage of current and future pensionable payroll. The contributions are determined by the Government Actuary on the basis of quadrennial valuations using a prospective unit credit method. TPS is an unfunded

f: 4.1.80

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information
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Licence v3.0.

Scotch Roman, regular.

Echoing workshop 02, participants in workshop 03 had partially engaged with the intended activities, proceeding in unexpected ways, on their terms not mine. However, whereas in workshop 02 the lack of attention given by participants to the intended activity had appeared to be a product of an overly rigid structure that missed the point of ‘exploring’ itself. In workshop 03, the cases of adaptation and subversion experienced seemed to arise from a lack of structure. For example: in introducing the workshop I had explained that participants should discuss the various images of precedent projects and atmospheres laid out, recording on the back of each image the positives and negatives, what they thought did and didn’t work well. But in the excitement and chaos of ‘doing’ this had quickly (and understandably) been forgotten. Yet, participants hadn’t so much ignored the images provided as chosen to conduct and record discussions in their own way. The lack of dedicated space or instruction provided on the images themselves, front or rear, provides a convenient (and comfortable: easy to address) reason. However, it is important to also question the wider context. Images were introduced ‘cold’ and in quantity. They did not tie in with existing narratives and were sometimes difficult and confusing to engage with: those that depicted buildings but were actually intended to raise questions of materiality rather than use, for example. As several participants noted: ‘why is this even relevant?’

	Unrestricted Funds £000	Restricted Funds £000	Total £000	Total £000
Capital grants	-	544	544	1,224
Donated fixed assets	-	-	-	-
Other donations	123	297	420	501
	<u>123</u>	<u>841</u>	<u>964</u>	<u>1,725</u>

f: 4.1.81

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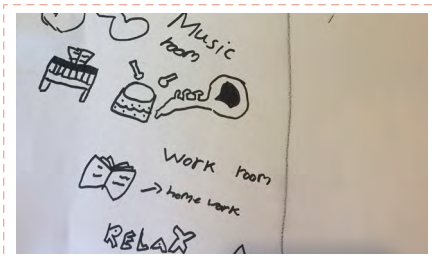
So why had I not stepped-in to remind participants of what was expected and offer further support? As in workshop 02, my decision to ‘allow’ participants to adapt the intended activity was at least partially to do with fear: fear that were I to impose the rules I would be ignored; fear that in forcing restrictions upon participants I might drive them away; fear of what might be missed through holding firm. However, to frame my response either solely or predominantly as the outward face of internal fear is wrong. To do so would render my decision to not step in as a deliberate choice to not engage: to accept my mistakes and allow their consequences to unfold while keeping watch from a safe distance. Instead, my response sought to ‘follow with’: to join with participants in their adaptation of my intended methods, supporting them as best I could.

	Unrestricted Funds £000	Restricted Funds £000	Total £000	Total £000
DfE / ESFA grants				
General Annual Grant (GAG)	-	4,500	4,500	4,257
Start Up Grants	-	-	-	-
Other DfE Group grants	-	85	85	92
National College grants	-	-	-	-
	<u>-</u>	<u>4,585</u>	<u>4,585</u>	<u>4,349</u>

f: 4.1.82

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It would of course be wrong to pretend fear did not exist or play a role in the actions taken. Nonetheless, the decision made was foremost rooted in the desire to balance my commitment to allow participants to choose not to participate with my responsibility to make every effort to ensure participants have every opportunity to contribute too. Not through coercion, but through working with. For example: in not stopping participants from signing the backs of images, from trying to collect multiple signatures, or from attempting to hide particular precedent projects, I had articulated my willingness to explore other ways of doing. Yet, by remaining seated at the main table and continuing discussions with other participants, by continuing to challenge those collecting signatures to justify why particular images were well or poorly received and interrogating their replies – by seeking to retain the activity’s purpose if not its methods – I expressed my commitment to (and sought to remind others of) our shared responsibilities to one another, to the after school club’s future members, as well as to the wider school community.



f: 4.1.43

f: 4.1.44

f: 4.1.45

(Left, from top: Brief development detail; Classroom design detail; Classroom design detail)

Scotch Roman, italic.

The adaptation just continued... Rather than develop spatial mind-maps based on discussions held at the workshop's start, as I had intended, Alex and Conrad moved straight to developing design ideas through drawing. And, instead of focussing on the School House and

Paper Mate Fineliner Pen Flair: Black / Blue / Green / Red. Long Lasting Fibre Nylon Tip. (Viking Direct, n.d.)

its garden, they chose to explore how they could improve the design of their own classrooms. Perhaps sensing my realisation, Alex paused to ask "is this OK? Can we draw anything we want?" I replied instinctively: "of course!" How could I have said otherwise? Why shouldn't they be allowed to follow their own paths? Yet in truth, I am far from sure: given the serious flaws in the architect's proposals, is allowing participants to wander from the intended task somehow unethical? Do I have a responsibility to focus their efforts on the School House and garden?

Scotch Roman, regular.

The decision to 'allow' a shift in the focus of explorations, from the School House and its garden to individual classrooms, is a further example of committing to work *with* and again manifests a deeper issue. The decision to refurbish the School House is underpinned by economics: it was cheaper for the owners to offer it back to the school than refurbish it to the level required for continued domestic rental on the private market. It was a decision taken, first, by the owner and then, later, with SchoolT's senior leadership. The design brief – to develop the downstairs for use as a base for both breakfast and after school clubs and the upstairs for staff preparation and specialist teaching – was developed between the head teacher and governors with no effort made to include wider user groups, including both teaching and non-teaching staff or pupils. The modest budget available governed the scope of works – limiting them to ensuring the building's practical viability, no more. Due to the advanced stage of proposals at the time of my becoming involved, my work with pupils was instructed to complement the architect's already-made proposals, to focus on 'how the garden and proposed ground floor multi purpose activity room might be inhabited'. On the commencement of workshops the estimated cost of construction was below the available budget, with surplus funds earmarked for emergent design ideas. However, as works



f: 4.1.46



f: 4.1.47

(Right: The School House entrance gate, additional lock fixing; Rear elevation, missing lights)

progressed this dwindled. Eventually the project slipped into the red. Although some cost increases had been unforeseeable – the discovery of a large bee infestation, for example – others were the product of mistakes: the architect’s failing to include sufficient fencing, their omission of external lighting and internal safety sign-age, etcetera.

	Unrestricted Funds £000	Restricted Funds £000	Total £000	Total £000
Other Government grants				
Local authority grants	-	-	-	-
Special educational projects	-	-	-	-
	<hr/>	<hr/>	<hr/>	<hr/>
Other income from the academy trust’s educational operations	-	-	-	-
	<hr/>	<hr/>	<hr/>	<hr/>

£: 4.1.83

Fig. contains public sector information licensed under the Open Government Licence v3.0.

The decisions and events that these examples exemplify, result from and play out through a myriad of negotiations between different persons and organisations, with the outcome of each influenced by those before it and influencing those to come. Importantly, the majority of such negotiations were only made known to the project’s future inhabitants after their conclusion, if at all. The After School and Breakfast Club staff and members were not asked before or during negotiations between the building owners and school if they thought the space suitable: Was it big enough? Would a single toilet be workable? How might noise be managed? Having the outside is great, but what about during winter nights? Nor were they included in discussions about how best to spend limited funds: what should the priorities be? Within this context, the spatial design workshops were not able to provide opportunities to question or develop the fundamentals: the suitability of the School House itself, questions of program, budget, and priorities, etcetera. Indeed, the project’s main offer, which invited participants to develop design proposals for the garden space, was a direct product of a prior decision to not allow future inhabitants to continue using the school’s main playground, itself taken through negotiations held behind the backs of those who would live its consequences on a day-to-day basis.

Contextualised thus, participants’ desire to shift focus from the School House to classrooms can perhaps be interpreted as driven by a growing awareness as to the limited and superficial extent of their permitted involvement in the former’s refurbishment. This raises important questions that return to issues of ethics. On the one hand, I remain uncomfortable with my actions: on becoming aware of the participant’s limited ability to influence fundamental

discussions, should I not have confronted the school? Did I not have a duty of care to both children and staff members – a responsibility – to raise such issues and demand they be addressed? On the other, I believe I proceeded as best I could in an increasingly difficult situation: did I not also have a duty of care to stay, to work, and to learn with children and staff members, to advocate for them as best I could? To make a stand, to pull out, might have been noble. But would it not also have been to abandon? Did I not also have a wider duty of care to both educational and architectural research and practice; a responsibility to stay and learn lessons, to talk and write about it in the hope of guiding future work?

There are no simple answers. Different duties of care support and conflict with one another. Although the spatial design methods used might be developed to better guard against adaptation and subversion, this should not come at the expense of following *with* participants in the complexities of context and its many conflicts.

To do so, would indeed be to fail in my duty of care.

SCORE IV

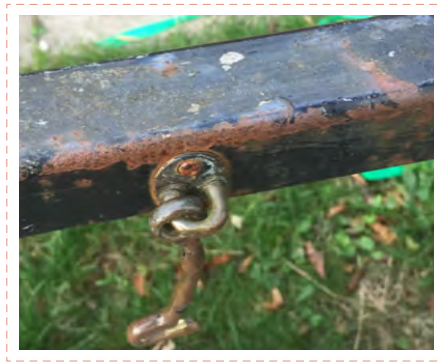
EVERYDAY INHABITATION

Score IV explores events that unfolded in spaces immediately before and after each workshop.

Its *close* voice comprises four narratives, each describing discrete episodes that unfolded either before or after each workshop: the first, second, and third after workshops 05, 06, and 04 respectively; the fourth, before workshop 04.



f: 4.1.48



f: 4.1.49

(Left, from left: Nest,
access steps; Railing door
hook)

Helvetica, regular.

Workshops were scheduled to run for 45minutes, beginning immediately after 'snack time'. Prior to the start of each workshop, it was intended that I help with the general running of the club: collecting children from years four, five, and six, taking the register, preparing food, supervising both indoor and outdoor activities, etcetera. Supporting existing staff in such roles would provide valuable time in which to establish and nurture relationships with both children and staff outside the restrictions of specific workshop activities. On completion of each workshop I was to ensure all was tidy before departing.

Scotch Roman, italic.

It is seriously escalating. On finishing washing up, and with no children inside, I had headed outside into the sun. Yet, no sooner had I stepped out of the external door – the door itself hooked open – Jo had jumped me, launching herself from the horizontal metal railing that guards the few steps that lead between door and tarmac.

3m Square Steel Tubing. 25mm x 25mm. Black. Wall Thickness: 1.2mm. Cut to length. (Rosscastors, n.d.)

Swinging her arms around my neck and hooking her legs around my waist I had needed to respond quickly: jolting forward and rolling my shoulders around I wriggled free. Yet the idea had been planted and I spent the remainder of the afternoon on edge, cautiously traversing all potential launch sites – the adventure course beams, picnic benches, outdoor classroom walls and benches – waiting for her to pounce.

Timber Rectangular Junior Height Picnic Bench. 630mm (h) x 1351mm (d). Suitable for 7 - 11 years. (TTS Group, n.d.)

I am sure my decision to refuse her requests is right. Saying no, even repeatedly, is easy enough but I don't want to live in fear of her next attempt. But what else can I do? Would saying 'yes' be appropriate? Should it be? I don't really see the problem. Yet, I do see the problem.

Scotch Roman, regular.

Jo's attempts to get a piggyback became increasingly physical. Not only did she continue to jump onto me from raised objects, she began to take run-ups from the side and from behind too.



f: 4.1.50



f: 4.1.51

(Right, from left:
Buttering bagels; Toasting
bagels)

It was becoming unmanageable. Perhaps I should have reacted more firmly in the first instance? Although certain the situation required action, I was unsure what to do next. Away from the school context I would have simply discussed the situation with her mum, who almost always collected her. However, in my position as a volunteer and researcher within the school, I felt a responsibility to consult the school too. Eventually, I did both: having first approached Emma to discuss my worries and proposed plan, I had next spoken to Jo’s mum, explaining the situation and asking if she would mind me giving Jo a piggyback? “Of course!” Her response had been thick with bemusement. Relieved, I had headed straight over to Jo. Her joy was immediate and we had managed three laps around the playground, the first slow, the second two at speed, before my back gave up. While this didn’t stop her requests, it built trust, enabling future refusals to be accepted on the promise of future capitulation.

6 Investment income

	Unrestricted Funds	Restricted Funds	2017/18 Total	2016/17 Total
	£000	£000	£000	£000
Short term deposits	6	-	6	5
	<u>6</u>	<u>-</u>	<u>6</u>	<u>5</u>

f: 4.1.84
 Fig. contains public sector information licensed under the Open Government Licence v3.0.

This story demonstrates three things. First, the complex and fluid nature of the developing relationships between participants and myself. Second, the need to and difficulty of managing such complexity from my different positions of responsibility – as a visiting researcher, as an After School Club assistant, and as an individual with my own experiences and values. Third, the key role of everyday negotiations in nurturing relationships: remembering how each liked their bagel to be cooked or fruit to be prepared; managing excitement and energy during quiet times such as taking the register or eating snack; balancing competing interests and expectation during games, especially football; helping with practice for the school play and the odd piece of homework; learning when to be strong and when to show weakness.

Scotch Roman, italic.

I found Sarah, Jo, and Rosie hiding in the trees, crowded around a small object that I couldn’t quite see. As I edged closer they

Photo of Fidget Spinner
removed for copyright
reasons. Copyright holder
is Plumb Tools Direct
Limited.

f: 4.1.52

(*Right: Fidget spinner,
example (Made in Trade,
n.d.)*)

turned away, closing ranks. On reaching them, and after much prevarication, they finally revealed their secret – Sarah’s fidget spinner – which the school had just that day banned and which, therefore, they were hiding from Emma who had already caught them once. Explanation rapidly turned to pleading: “Please don’t tell her! Please let us keep it!” I had become immersed in difficulty: on the one hand I understood my duty – in my position as After School Club volunteer – to support Emma in her decision to enforce the recent ban. Yet, at the same time, I strongly disagree with the ban; or, more specifically, with the decision to extend the ban into the after school club. After all, everyone not here has happily gone home. Having not been informed by the school, I decided to walk away having made explicit the understanding that although I had ‘not seen them’ this time I would know of the ban by next week and would have to act accordingly in future.

8mm Deep Groove Ball Bearing 22mm O.D. RS Stock No. 667-1030. (RS Components, n.d.)

Scotch Roman, regular.

Choosing to engage required me to balance my desire to approach negotiations in ways that were advantageous to my needs with the need to ensure such approaches were not to the detriment of others; maintaining an awareness that the relationships developed through negotiations existed within a wider context, both stretching back and reaching forward.

I am, however, forced to question my actions: in not confiscating the fidget spinner had I ‘sided with’ the children over my colleague? Had such a response undermined Emma? Had I chosen to place my own desire – as a researcher – to nurture close relationships with the children ahead of my duty – as a volunteer – to enforce the rules? The answers to such questions are not black and white. Such negotiations require a dynamic balancing of competing responsibilities and ethics. While particular approaches might be agreed, ends can never be set out in advance. Without validating or condemning the actions I took, would not abdicating my duty to respond, to engage-with negotiations, have been the greater failure?

An alternative approach would be to limit the time spent within school T to that of the scheduled workshops, clarifying my position as an external researcher and transferring the responsibility for acting on issues raised during workshops to the After School Club's dedicated staff. Through doing, everyday issues of inhabitation, such as tree climbing (see below), would be raised descriptively within workshops rather than outside of them through action; I would have a responsibility to pass on the details of such issues to relevant staff members but would not find myself required to engage within the unfolding of events themselves. However, this approach has risks too. In addition to reinforcing my position as an external researcher interested in a specific agenda, constraining my focus and engagement to workshops alone would likely reduce the availability and variety of opportunities in which: (1) issues not directly raised by workshop methods might surface – either directly, raised by participants, or indirectly, through the unfolding of events; and (2) my position and relationships with participants might be challenged and developed. For example: in articulating that I was open to two-way compromise during everyday negotiations outside of workshops (e.g. fidget spinners, tree climbing), did I signal that I would be receptive to participants challenging my intended methods during workshops, thereby encouraging them to do so?

	Non Pay Expenditure			Total	
	Staff	Premises	Other	2017/18	2016/17
	Costs £000	£000	£000	£000	£000
Expenditure on raising funds:					
.Direct costs	8	-	3	11	11
.Allocated support costs	1		1	2	3
Academy's educational operations:					
. Direct costs	3,024	634	502	4,160	3,866
. Allocated support costs	523	503	312	1,338	1,332
Boarding activities: [if relevant]					
. Direct costs	-	-	-	-	-
. Allocated support costs	-	-	-	-	-
Teaching School (if relevant)	-	-	-	-	-
	3,556	1,137	818	5,511	5,212

f: 4.1.85

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Through living the many everyday negotiations that unfolded either side of workshops I developed a tangible understanding of the After School Club from within as a living and breathing entwining of life threads. The ability to situate the knowledge, understandings, and experiences developed through spatial design workshops within such a context was invaluable, enabling me to



f: 4.1.53



f: 4.1.54



f: 4.1.55

(Right, clockwise from top left: Tree one, low branch detail; Tree two, rear fence detail; Tree two, crook detail)

develop a holistic understanding impossible through workshops alone. While it is possible to witness everyday negotiations without engaging, the understanding rendered is different: distant, developed from the outside. While still providing a fuller understanding than workshops alone, it is not the same.

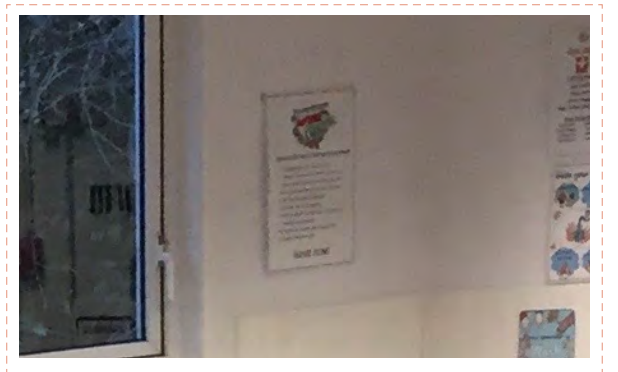
Scotch Roman, italic.

There were always two possibilities: the first tree seemed more harmless. Sure it had the potential to allow access quite high, but its main draw was a low horizontal branch with just the right amount of flex, offering excellent swinging opportunities. This much they did already. The second obvious target was much more serious: abutting the rear fence, its branches stretch upwards not out. While I assumed that this would make it harder for would-be climbers to first get established, using the fence would allow anyone to overcome this quite easily. Unfortunately, the fence is chain link with a twisted wire top and the potential consequences of a fall are all too real.

Galvanised Chainlink Fence 900mm x 50mm x 2.5mm 25m. (Travis Perkins, n.d. -c)

Typically, it was the second of these trees that I caught them climbing. Izzie had just been starting her ascent, one foot bearing her weight onto the fence, trembling under its new load, the other placed, waiting, in the first crook up. Ben was already above her, some 8 foot off the ground. Wincing at the prospect of confrontation, I approached slowly, making sure they had time to see me, hoping that this would allow them chance to climb down. They didn't.

Thankfully they eventually responded to my pleas, despite their by-now-familiar protests that they were allowed to climb trees. In defence, I attempted to hide behind my position as a volunteer researcher, explaining that I was only acting on the information I had been given. How could they expect me to do anything else? Of course, this did little to dampen the energy of their pleas. Why should it? This time I got away with it, but how about the next? How long until they stop responding or – worse – one of them falls? I am torn. Why shouldn't they climb trees? They must do anyway when our backs are turned. Surely it is better to do it when we are around to help, just in case? Emma is convinced they are not allowed, but there is also that old poster by the sink...



f: 4.1.56

(Right: After School Club,
'rules' poster)

Scotch Roman, regular.

The difficulty in finding a definitive answer to climbing trees has long roots. In the past, the after school club had been run by a dedicated external organisation. Operating with their own staff, according to their own rules, and under their own insurance, this company had permitted the climbing of trees. While none of the children would have experienced this direct, the history was known, living on as myth. In conflict with this sat Emma's professional position: based on her own historic understanding with a previous staff member, she did not think the children should be allowed to climb trees, even though this differed with her personal opinion, frequently expressed. Also in support of tree climbing being permitted was a tatty poster pinned up to the side of the Nest's sink entitled 'School T After School Club Rules'. Rule 5 specifically permitted the climbing of trees. As a researcher and individual I was happy for them to climb trees, but only if permitted specifically by the school. No one had been certain.

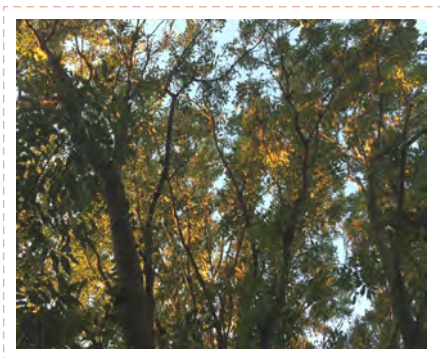
Net income/(expenditure) for the period includes:

	2017/18	2016/17
	£000	£000
Operating lease rentals	4	5
Depreciation	946	870
(Gain)/loss on disposal of fixed assets	-	-
Amortisation of intangible fixed assets (included within Charitable Activities – Academy trust educational operations)	3	-
Fees payable to auditor for:		
- audit	14	15
- other services	4	5

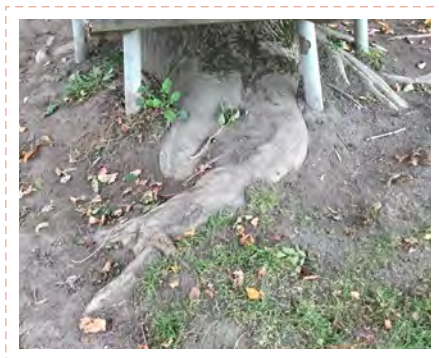
f: 4.1.86
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I had sought to resolve the issue by turning to Anita, school T's head, explaining what had happened, the myth, the existence of the poster by the sink, and Emma's understanding that it was a banned activity. To my surprise, Anita indicated that she did not think there any reason why – when dry, supervised, and within reason – the children shouldn't be allowed to climb trees; that it was an excellent opportunity for them to develop risk assessment skills while within the safety of the school environment but, as the children's supervisors, that it was ultimately our decision.

In this case, the outcome of negotiations with school T's leadership had been positive. Yet it was a process in which the children had held no power or opportunity to put their case. Instead, they had been reliant on my advocating on their behalf, putting their



f: 4.1.57



f: 4.1.58

(Left, from left:
Protective tree canopy; Dry
earth beneath canopy)

interests before my own. In this sense I had failed. As the activity of tree climbing affords opportunities for developing skills such as risk assessment, would not the experience of making and arguing the case for being permitted to have been equally valuable? Moreover, doing so would have illustrated that there are channels available through which they can actively raise and discuss problems and possibilities.

The case of tree climbing exemplifies a wider tension between After School Club members and staff driven by uncertainty about what is and isn't permitted, compounded by a relatively high staff turn over and no agreed 'set of rules'. Resolving such uncertainty in ways that generate dialogue and afford children an equal voice in developing values and rules will be as – if not more – important than any adaptations to the School House's physical fabric.

Scotch Roman, italic.

I found them just before snack. Kneeling on the floor, they were almost entirely hidden by the trunk of the large Beech tree, one of two that dominate this corner of the main playground's grassed area. Using a motley assortment of twigs, sticks, a small plastic trowel from the sand pit, as well as their bare fingers, James, Lucy, Ben, and Kat were engrossed with digging holes in the dirt. The dirt itself is ideal in condition: the top, protected from all but the worst rain by the Beech canopy above, is soft and crumbly; the lower layers still hold moisture, providing much needed structure that enables the holes fashioned to retain shape and not collapse. The sand pit is useless for this: on reaching any decent depth walls always collapse no matter the care taken.

Play Sand. Safe sand for sandpits, sand and water trays, mark making and small world play. 15kg. (TTS Group, n.d. -a)

Fine for aimless digging, rubbish for construction. In any case, it is always covered in plastic and rotting plywood. With a staff member required to gain access, it is much easier to dig in the dirt. On my asking what they were digging, Lucy had stated their purpose quite clearly: "We are digging for worms. There are worms in the ground and we need to take care of them". I had been taken aback: first by the sheer strength of her explanation and, second, by the



f: 4.1.59



f: 4.1.60



f: 4.1.61



f: 4.1.62



f: 4.1.63



f: 4.1.64

(Left, from top: A 'rescued' worm; Sand pit cover)

(Right, clockwise from top left: Nest access stairs, metal railing; Personal jumper, sleeve; Personal trainers, sole; Tarmac playground)

inconsistency of the stated aim. Enquiring gently, I responded: “its great that you want to help the worms, they are really important. But wouldn’t they be happier left in the ground?” The reply was instant: “No! We must help them.” In the face of such determination and with my growing worry for the worms life chances were they to continue, I turned to distraction: “what happens if you leave the worms alone and we instead try to help the trees?” Then, reaching for a beech nut, freshly fallen: “how about we plant these in the holes we dig? We can water them to see if they grow?” After momentary hesitation and a quick glance around, James responded: “but they will need proper holes – we can’t do that with these sticks... give us spades!” Keen to keep the pressure on, I countered: “No, they only need small holes but I understand what you are saying...” Kat had immediately cut in: “There are proper spades – ask Emma. The receptions use them all the time!” Nodding in agreement, I headed off to enquire. The sand pit, its cover drooping under recent rains, remained unused.

Gardening Hand Trowel and Forks. Plastic. 260mm length. Suitable for 5 - 11 years. (TTS Group, n.d. -b)

Scotch Roman, regular.

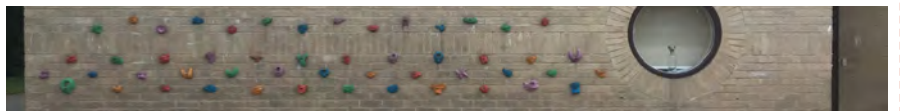
Weaving through these accounts of life – forcing piggy backs, climbing trees, secret fidget spinners, digging for worms – are not only the various human relations described but human-material and material-material relations too. In focussing on the role different humans play within different negotiations, it is all too easy to forget that materials play an important – and often central – role too. For example: in the case of Jo ambushing me, negotiations occurred not only between Jo and myself but between Jo and the smooth metal of the railing from which she jumped, as well as the polyester of the jumper I was wearing, that’s particular smooth properties supported my escape, too. In the same way, further negotiations had occurred between materials: between the hard rubber of Jo’s shoes and the smooth metal of the railing they gripped, between the various different fabrics of our clothes which moved with and against one another, between the soft rubber of my shoes and the gritty tarmac that allowed me to stop quickly and turn, wriggling free. Likewise, in climbing the tree



f: 4.1.65



f: 4.1.66



f: 4.1.67

(Right, clockwise from top
left: Paving slabs; Outdoor
classroom, roof beam; Climbing
wall)

Ben and Jo had not only negotiated with each other and, later, myself but with the materiality of the tree and adjacent fence too: the tree had been chosen due to its material properties – its strength, shape, texture – as well as its proximity to the fence – that’s particular construction and state of decay offered particular attributes conducive to climbing, a level of strength that flexed to allow rubber shoes to gain purchase yet still facilitated upward movement. In both cases there were many more negotiations too.

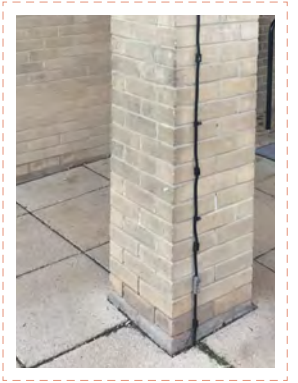
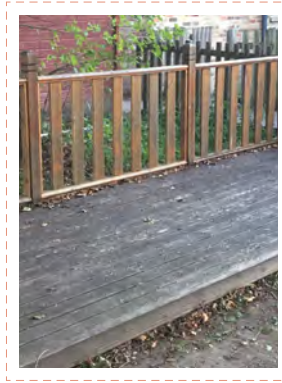
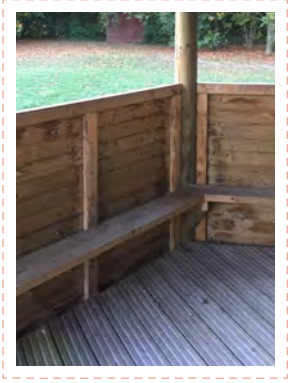
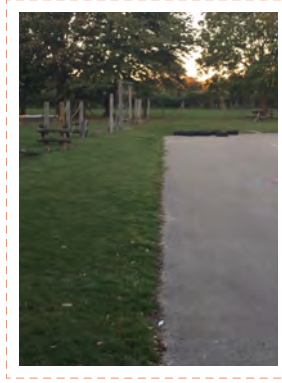
Analysis of support costs			2017/18	2016/17
	Boarding £000	Educational operations £000	Total £000	Total £000
Support staff costs	-	415	415	409
Depreciation	-	312	312	304
Technology costs	-	-	-	-
Premises costs	-	407	407	401
Other support costs	-	109	109	118
Governance costs	-	95	95	100
Total support costs	-	1,338	1,338	1,332

f: 4.1.87

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Present in all negotiations, albeit to differing degrees, relations between humans and materials, as well as between materials and materials, had often unfolded through acts of re-purposing: using sticks to dig, as walking sticks, and as swords; using tree branches to climb; using the outdoor classroom as a ‘base’ for games and as a frame for gymnastics. Such instances of re-purposing might happily be interpreted as a need or desire for dedicated equipment. This, however, is to miss the point. Indeed, during my time within school T a dedicated climbing wall was installed, allowing children to traverse the outside flank of one classroom. Initially well used, it soon fell out of favour – not helped by restrictions on use. Trees come in all shapes and sizes. They change with the passing of each new season. Their branches sway, creak, and crack in their aiding and thwarting of upward progress. In contrast, the climbing wall’s coloured resin holds are bolted mute.

The importance of the generous space offered by the main playground, in addition to its material diversity, also became increasingly clear. Its expanse and variety provides a range of different stimuli supporting exploration and play, as well as separation too. This latter quality had proven particularly important on multiple occasions: either as a way of releasing tension following the arising of frictions between individuals or groups or to allow the choice for natural separation. For example:



f: 4.1.68
f: 4.1.71

f: 4.1.69
f: 4.1.72

f: 4.1.70
f: 4.1.73

(Right, clockwise from bottom right: Brick post, often used to denote a 'base' in games; Bench and earthen area 'hidden' behind end of portacabin; Timber decked area; Tarmac and grass junction detail; Wooded edge; Outdoor classroom, bench detail)

Lucy was frequently to be found playing happily on her own wandering the playground's wooded northern edge, picking up sticks, kicking leaves, or reading leant against a trunk's bottom. Although she had also often been more than happy to join with others in play football or tag, she could find noisy and chaotic situations difficult. Indeed, she was far from alone in this.

The materiality of things – man-made or natural, introduced or existing – appears central to shaping the nature of everyday negotiations. In this sense, while materials do not possess their 'own' agency – as advocated by Actor Network Theory (ANT), for example – they are nonetheless key to shaping the ongoing emergence of human agency (*agencement*) from within the midst of life's swirling currents.

4.2 : SECONDARY SCHOOL S

A Site-Writing in Five Voices

Scene

Various locations inside and out, within Secondary School S.

Time

Workshop 01:	26.04.2017	45 minutes.
02:	03.05.2017	"
03:	10.05.2017	"
04:	17.05.2017	"
05:	14.06.2017	"
06:	05.07.2017	"

Participants

Workshop 01:	4 students.	15-16 years.
02:	5 students.	"
03:	4 students.	"
04:	5 students.	"
05:	4 students.	"
06:	4 students.	"

INTRO

SECONDARY SCHOOL S

Helvetica, regular.

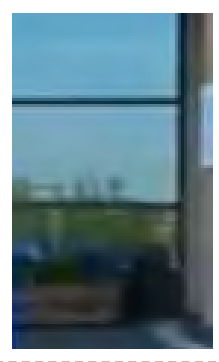
School S is an English secondary Academy. Located within a southern suburb of a major city in the north of England, it is situated just over two miles from the city centre, separated from it by both road (motorway) and railway with no direct public transport. A larger than average secondary academy, it comprises approximately 1000 students aged between 11 and 19 from year 7 to sixth-form. This is circa 350 students below capacity. The majority of students identify as White British. The proportion of students identifying as from minority ethnic backgrounds is close to double the national average, with the number of students who have English as an additional language three times the national average. The proportion of students supported by the pupil premium is double the national average, as is the number identified as disabled or having special educational needs (SEN) (OfSTED, 2016b). School S officially closed at the end of the 2016/17 academic year to be subsumed by the C Multi Academy Trust and reopen at the start of the 2017/18 academic year as the C2 Academy, minus sixth form provision.

Scotch Roman, italic.

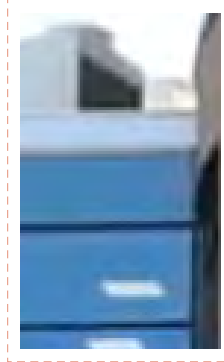
In approaching I feel under constant scrutiny. The cycle from the main gates to the lamppost, where I lock my bike, traverses parallel to the main classroom block. It is a journey annotated by various shouts, screams, and whistles as pupils nearing the day's end find in me a new outlet for their attention. After locking my bike I cross over to the reception. To the left of the sliding door is a glass fronted 'fish bowl' in which those awaiting access to the main school beyond must pause – visitors, volunteers, staff, parents, contractors, and pupils who are excluded during the main day (known as 'twilights') are all thrown together here. To the right, one-way glass reflects my approach while affording those within the opportunity to weigh me



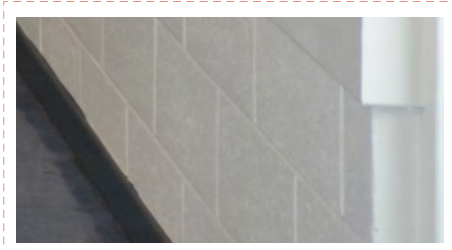
f: 4.2.1



f: 4.2.2



f: 4.2.3



f: 4.2.4



f: 4.2.5

(Clockwise, from top left:
Visitor pass; Reception
windows; White painted breeze
block wall)

up. As the buzzer (signalling the end of the day) has not yet sounded, the twin sliding doors both slide open automatically in welcome.

6M Parallel Sided Galvanised Street Lamp Post Top / 76mm Shaft, Root Mounted (C & R Lighting, 2018)

Within the fish bowl I am greeted to my right by a cheery voice. Recognising me, the receptionist begins to fill in the visitors log and hands me a temporary pass – a simple number on a plastic card featuring their logo alongside the word ‘VISITOR’ in large letters. The reception itself is separated from the waiting area by a sturdy curved wall, faced in orange-tinged timber, its glass strengthened with wire mesh in suggestion of expected trouble.

Once collected by Helen, we pass through electronically controlled double doors, cross the main corridor, and head up a flight of stairs. While the thick plastic coated metal hand rails and flanking concrete block walls feel more akin to a back of house service area than a school, Helen knows every student’s name and her warm greetings – reminding students of meetings and activities to attend or simply saying hello – warm the otherwise cold and functional area with a real sense of mutual care and respect.

Standard Seating Unit (no arms) - Overall W560 x Seat D550 x Overall D720 x Seat H400mm (dfe UK, 2018)

Helvetica, regular.

School S was selected for fieldwork due to an existing relationship between its Librarian/ Extended Services Coordinator – Helen – and myself. This relationship began in September 2013 when Helen attended a spatial design workshop ran by colleagues and myself at School S, part of a Live Project undertaken while studying Architecture (MArch) at the University of Sheffield. Subsequently, I ran a series of spatial design workshops with students at school S from various age groups. These took place in November 2013 and used fictional briefs to explore different places within the city’s central and southern wards. This series of workshops concluded with Helen inviting me, on behalf of school S, to help facilitate a student led redevelopment of the school’s existing garden area. This invitation resulted in a six-week spatial design project – titled *The Garden Project* – that constituted the empirical fieldwork of my Master’s level thesis (Bellfield, 2015a).



f: 4.2.6



f: 4.2.7

(Centre: Existing state of
garden, detail; Existing state
of garden + fence)

Helvetica, regular.

School S's garden is located to the rear (north east) of the main buildings. Bound to the northwest and southwest by classroom blocks, its remaining perimeter is guarded by a curving mesh-fence that edges a maintenance road, beyond which rises a grassy bank planted with tree saplings.

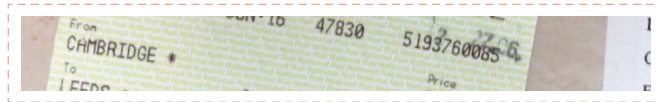
The Garden Project – Part I took place in June and July 2014. Through a series of spatial design workshops it sought to: (1) expand the garden's use, in particular the amount of food grown, having recently forged a relationship with a local food bank; and (2) incorporate an outdoor study area that could be used by pupils either individually or as a part of a class. A small pot of money had been available for the project, part of which was used to purchase a new poly-tunnel. The project culminated in the production of a physical model and oral presentation (given by students to the then principal) detailing the proposed redevelopment.

Helvetica, regular.

Departing from the proposals developed during *The Garden project – Part I*, *The Garden Project – Part II's* aim was three-fold: (1) to review previous decisions, putting forward amendments where applicable; (2) to explore how the remaining garden area might be inhabited in different ways and by different user groups; and (3) to develop a concrete proposal in support of the methods of inhabitation proposed.



f: 4.2.8



f: 4.2.9

(Centre, from left: Personal
bicycle used for workshop
travel and reflection; Train
tickets)

Six workshops were held during the 2017 summer term, one per week. Each was scheduled to take place during 'period 6' – an optional period timetabled at the end of the day in which students could engage in a variety of extra-curricula activities – beginning at 2.30pm and lasting for around 45minutes. Fieldwork was undertaken on Wednesdays to fit with existing school and personal commitments. Workshops were based in one corner of the school library's mezzanine floor (see vignette V). During workshops, the main floor was occupied by students who either required a computer for homework or held a library pass.

NEGOTIATING INFORMED CONSENT

Helvetica, regular.

Informed consent was negotiated in three phases. In phase 01 broad consent for the proposed research was brokered through discussion between Helen, school S's Librarian and Extended Services Coordinator and myself, as well as discussion between Helen and her line manager within school S that I was not party to. Through initial discussions with Helen, issues were considered pertaining to: workshop duration and schedule, who the research should be undertaken with, methods of recording, potential outcomes for both participants and the wider school community, as well as issues of safe guarding. The decision to undertake fieldwork with students from the school's construction and engineering course was taken by Helen on behalf of the school in order to: (1) minimise disruption to the school day; (2) ease logistics with respect to safe guarding; and (3) tie workshops into the existing curriculum.

... should be ...
We will do this by investing ...
school's garden through five areas ...
imagine how it could be used differently, ...
develop ideas for how the new garden can be ...
making our own dens; and create a final project ...
... the first half of the summer term. ...
... will be given this information ...
... you can stop ...
... the project ...

f: 4.2.10

Scotch Roman, italic.

Unlike in School T or School U, in which my first point of contact was their respective head teachers, my contact with School S was undertaken solely through Helen. Rather than intentional, this situation was a product of my previous relationship with Helen combined with the school being in a state of flux and, having no stable principal and a changing senior leadership team.

Helvetica, regular.

In phase 02 negotiations were extended to the proposed participants, as well as to their parents and/ or guardians. Information and consent forms were distributed by Helen on my behalf, ensuring that participants, parents, and guardians had a human point of contact based in the city to raise questions with at any time. The information sheets provided detailed information about both the proposed workshops and my wider doctoral research (Appendix A).

Phase 03 continued throughout workshops and comprised ongoing negotiations of consent between participants and myself. The need to continue such negotiations was raised formally by myself at the start of each workshop: reminding participants of the workshops' connection to my ongoing doctoral research; that the workshops were being recorded via Dictaphone, including the purpose and audience of such recordings; and that while their participation would remain anonymous, they were free to cease participating during or after workshops without consequence. As workshop 01 represented the first meeting between participants and myself, extra time was dedicated to introducing myself, my previous work with school S, and my relationship with Helen, as well as discussion of the proposed workshops and wider doctoral research.

Workshops were recorded through the use of a personal Dictaphone. Video was not used.

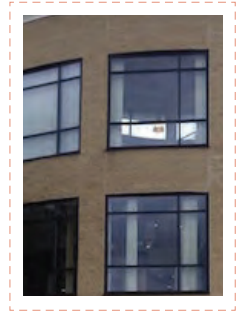
Sony PX440 Digital Voice Recorder PX series. Frequency response MP3 128KBPS 75-17000Hz. Battery life 67 Hrs 05 Min. Product code: ICD-PX440. (Sony, n.d.)

SCORE V

ON THE MEZZANINE

Score V explores the importance of 'where' workshops are undertaken.

Its *close* voice describes discrete episodes that unfolded at the start of workshop 01.



f: 4.2.11



f: 4.2.12

(Right, from top: School S's library, external window; Physical model of library ground floor, produced during workshops led by Helen, separate of my involvement)

Helvetica, regular.

Workshops were based in one corner of the school library's mezzanine floor. During workshops, the main floor was occupied by students who either required a computer for homework or held a library pass.

Scotch Roman, italic.

On arrival we headed up the stairs together; them leading, me following on behind. As the space was not set up in advance, as we traversed the mezzanine I asked Darren, Saal, and Aiz, to help me move a couple of stools, as well as a second table to the end where another was already waiting, alongside a brown leather sofa and a large orange beanbag.

Sovereign Metre Wide Library Bookcase 1200mm High 1000mm Wide: [...] manufactured in an 18mm solid wood MDF with a bump resistant matching edging. All bookcases feature fully adjustable shelving and are available in 4 heights. (Willow Brook, 2018)

Scotch Roman, regular.

Undertaking workshops on the library's mezzanine was significant: an indirect product of the Garden Project Part I, the mezzanine offered tangible proof that the school is willing to listen-to and act-on emergent ideas, as well as that small ideas and changes have the potential to make big differences. Led by Helen, separate of myself, a small group of students had developed a proposal for re-developing the library itself through a number of lunchtime workshops culminating in the production of a physical model. This redevelopment had seen the bookshelves re-orientated so that their length now ran from centre to rim, as do the spokes on a wheel. This change, which had cost only time to implement, had dramatically increased natural light levels and reduced behavioral issues linked to the hidden spaces which had previously existed between the then concentrically arranged shelving units. However, this was not simply about a cynical reduction in private space available to students. Instead, it was coupled with the removal of computers from the mezzanine allowing it to be re-purposed as a dedicated quiet area for reading, relaxing, and resting – not hidden from view, but on a separate level above the library's reception desk. To support this new purpose, the old, tired and 'institutional' furniture had been replaced with stools, beanbags, colourful stools, low rustic timber tables, and

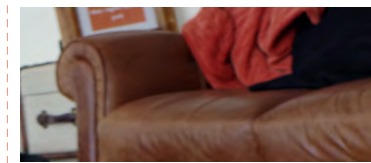
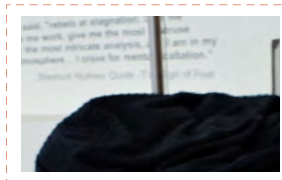


Photo of Red Brick Effect Embossed Wallpaper removed for Copyright reasons.
Copyright holder is B&Q.

f: 4.2.13

f: 4.2.14

f: 4.2.15

f: 4.2.16

(Centre: Colours red brick
effect wallpaper, detail
(B&Q, 2018))

(Right, from left: Beanbag;
Leather effect sofa; Orange
stool)

a soft leather-effect sofa to recreate a ‘coffee shop’ atmosphere. Additionally, the yellow-tinged-white walls between windows had been re-covered with brick effect wallpaper – a change that had reportedly gone down very well with students.

This wallpaper features a photo-realistic image of a red brick wall with an embossed texture. Perfect for giving your room a rustic look: Ideal for use in bedrooms, hallways and living area; peel-able for easy removal; washable to remove marks caused by everyday life. (B&Q, 2018)

Although the re-designed mezzanine stands in contrast to modern, often quirky, and brightly coloured refits found in the pages of glossy architectural magazines, it is clearly well liked and used. In this sense it is a tangible illustration of the importance of generating and undertaking development from within a context, rather than applying it from without (Till, 2005).

Analysis of support costs			2017/18	2016/17
	Boarding £000	Educational operations £000	Total £000	Total £000
Support staff costs	-	415	415	409
Depreciation	-	312	312	304
Technology costs	-	-	-	-
Premises costs	-	407	407	401
Other support costs	-	109	109	118
Governance costs	-	95	95	100
Total support costs	-	1,338	1,338	1,332

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f: 4.2.45

Scotch Roman, italic.

I chose to sit on the floor. This suited me: on the floor, I am at the same level as, or – in the case of those on the sofa – physically below, others. Better still, Helen joined me without hesitation and, as the workshop progressed, we happily crawled around on our hands and knees, getting up to perch on a sofa arm where needed. In amidst, not out in front, not to one side.

SCORE VI

MATERIALITY + USE

Score VI considers how and why issues pertaining to 'materiality' and 'use' emerged and unfolded.

Its *close* voice describes discrete episodes that unfolded during workshop 02.

Photo of multiple partial images of various precedent projects removed for copyright reasons. Individual copyright holders are Aisling McCoy; Lewis Jones; Jim Stephenson; Barbora Kuklíková; Kasia Jackowska.

f: 4.2.17

(Left: Precedent project examples)

Helvetica, regular.

Workshop 02 sought to prompt initial debate through introducing a range of precedent projects focused on different kinds of form, materiality, construction, and use. Through asking participants to discuss these projects between each other and to annotate the images with their thoughts and comments, it was hoped a series of paths would emerge that could be picked up and explored further through spatial-mapping, asking: what are the different ways in which the garden space might be used, by who, and when? How might its design facilitate these uses? How should the space(s) designed feel to inhabit? What materials might be used and how might their choice affect and be affected by construction? Finally, emergent ideas were to be prioritised and consolidated into a working brief.

Scotch Roman, italic.

My intent was to avoid putting individuals on the spot; to allow them time to orientate themselves within the activity. As a planned tactic, it appeared to work well: although Darren initially decided to not join in – instead choosing to sink into the back of the sofa, arms folded in protest – he did not need to. This was the point. From the relative safety provided by the sofa's depth, he was able to observe his fellow participants, to listen to what they were saying, before – when ready – reaching forward to pick up an image and join in with the conversations. Although most were quick to pick up images, reaching in to grab handfuls from the central pile, discussions were slow to start, needing a lot of prompting and encouragement from both Helen and myself. Yet it didn't so much feel like participants weren't interested in the projects depicted, but that they were struggling in articulating why they liked or disliked them – especially when asked to put their thoughts into writing.

Where discussions were kindled they tended to focus more on materiality and practical, rather than social, aspects of use: picking up an image depicting a temporary public library Peter praised the structure's design for its height, use of timber internally, and generous shelving that would allow more books to be added. He also critiqued its suitability, questioning its ability to withstand rain due

Two Photos of RTU Story Tower library removed for copyright reasons. Copyright holders are Theodore Molloy, Niklavs Paegle, Thomas Randall-Page, Artūrs Tols, Christof Nichterlein, Dumitru Eremciuc, Natascha Häutle, Rūta Austrina, Signe Pelne, Tanja Diesterhof, Ulkar Orujova, Zoe Katsamani.

f: 4.2.18

f: 4.2.19

Photo of Hutong Children's Centre & library removed for copyright reasons. Copyright holders is AKTC/Wang Ziling, ZAO, standard-architecture.

f: 4.2.20

Photo of multiple partial images of various precedent projects removed for copyright reasons. Individual copyright holders are Scott Burrows; Aisling McCoy, Lewis Jones, Jim Stephenson, Barbora Kuklíková, Kasia Jackowska; Jim Stephenson.



f: 4.2.21

(Left, from left: Story Tower RTU international summer school, external detail (Austrina et al., 2013a); Story Tower RTU international summer school, internal detail (Austrina et al., 2013b); Zhang Ke, Cha'er Hutong children's library & art Centre, concrete detail (2016))

(Right: precedent project sheet examples)

to its open roof and walls that did not touch the ground. Yet questions about what situating an open library in a public space might ‘mean’ – in terms of community, for example – were not raised. Likewise, in discussing a different image, the ‘how’ of using wooden shuttering to create a timber effect on the concrete’s surface, the durable but poor flexibility and sustainability of concrete as a material, as well as the issue of its cost is discussed at length; the building’s function as community hubs offering a range of services is never mentioned.

Staff costs during the period were:

	2017/18	2016/17
	£000	£000
Wages and salaries	2,696	2,608
Social security costs	270	267
Pension costs	550	519
	3,516	3,394
Agency staff costs	-	-
Staff restructuring costs	40	40
	3,556	3,434

f: 4.2.46
 Fig. Contains
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Scotch Roman, regular.

The focus on materiality over use appears rooted in the design of the ‘precedent image’ sheets, updated following the problems emergent during their use in School T (Score III). These ‘new’ precedent sheets included dedicated space for writing on the front (rather than reverse) along with leading prompts: “we like...”, “we don’t like”. However, in focusing on creating physical space for annotation – an act that’s benefit was very much weighted in my favour, done as a means to hinder attempts to subvert the intended activity – I had omitted to title the images. Nor had I provided any kind of indication as to function. This created a situation in which participants had needed to ‘ask’ me for further, apparently ‘hidden’, information. These small acts framed my role as ‘expert teacher’ and in doing turned the nature of discussions, that had previously flowed, into a staccato back and forth: ‘what is this for?’ ‘It is for this.’ ‘Oh, OK.’ ‘How about this?’

RTU Story Tower: “This timber structure clad in recycled food packaging houses a temporary library and book exchange and was designed and built by architecture students in Cēsis, Latvia.” (Davis, 2013)

The reason for not including the necessary context to precedent images provided might be put down to ‘forgetfulness’. This is, in a way, true. However, this forgetfulness is not rooted in accident but in my forgetting my personal familiarity with the projects the

Photo of the Pinch Library and Community Centre removed for copyright reasons. Copyright holders are Olivier Ottevaere/ John Lin.

f: 4.2.22

Photo of Dalston Eastern Curve Garden removed for copyright reasons. Copyright holder is Lewis Jones.

f: 4.2.23

Photo of New Generation Youth and Community Centre removed for copyright reasons. Copyright holder is Ionana Marinescu.

f: 4.2.24

(Left, from left: Lin & Ottevaere, The Pinch Library and community centre, polycarbonate window detail (2014); Muf Architecture, Eastern curve garden, polycarbonate roof detail (2009); RCKa The New Generation youth centre, polycarbonate cladding detail (2013))

images portray. The majority of images come from a collection I have built over the last 4-5 years. I have used them as inspiration in my own work and have therefore researched their contexts carefully. Yet, here, I had assumed this wealth of knowledge was somehow embedded accessibly within isolated images. Additionally, I have – as a designer – developed a range of skill and knowledge that allow me to ‘read’ such images in different ways – materially, structurally, spatially, culturally – as well as to situate them within wider contexts. Presenting each project to participants in turn is not the answer; this would also return us to a teacher-pupil dynamic. Instead, ways need developing that allow for the inclusion of vital contextual information but in forms that require discovery; that require participants to work in uncovering the many threads of each project. To do this successfully certainly requires additional time: time to read, critique, and compare the articles I myself had carefully studied. Attempting to shortcut this process through the enhancement of images with ‘top trump stats’ would simply miss the point.

Scotch Roman, italic.

Discussions about the use of different materials revolved around tensions between quality, tactility, cost, and durability. For example: although timber is considered by all to be the most suitable material due to its low cost, adaptability, and tactile qualities; it is also repeatedly dismissed due to worries that it isn't durable, that it will rot with exposure to rain, and vandalism, that it will be easy for people to damage or set fire to. Therefore, conversation is given over to the promotion of, and detailed debate about, materials such as concrete, brick, and steel – which are seen as ‘properly’ robust. In a similar vein, plastic alternatives to glass – e.g. polycarbonate sheet – that would allow light to enter internal spaces at a reasonable cost are repeatedly dismissed with participant's (including Helen) united in agreeing they are too ‘cheap’ looking.

Suntuf Corrugated Polycarbonate Clear Sheet in BIC 6 profile is available in transparent/clear [...] with the high light transmission, strength and wide service temperature range of polycarbonate, are ideal for greenhouse coverings and skylight applications. (Polycarbonate Online, 2018)

Scotch Roman, regular.

The kinds of precedent projects introduced to participants – their materiality, construction, form, and use – are a direct product of my particular background and experience as a designer. They

Photo of Brick Wiggle Chair sculpture by Peter Lange removed for copyright reasons.

Photo of Copper Beech Natural Play Area removed for copyright reasons. Copyright holder is Copper Beech Garden Design Herford.

Photo of Five Fields Play Structure removed for copyright reasons. Copyright holder is Matter Design and FR|SCH.

f: 4.2.26

f: 4.2.25

f: 4.2.27

(Right, clockwise from top: Peter Lange, brick wiggle chair (n.d.); Matter Design and FR|SCH Projects Five Fields Play Structure (2016); Copper Beeches, natural play area in Hereford (n.d.))

are projects/ images at home within a particular context: within a certain kind of architectural studio's portfolio (e.g. Exzyst, Assemble, Studio Weave), design website (e.g. Dezeen, Archdaily, Building Design Magazine), or design student's project. In everyday life, however, they are the exception rather than the norm. This conflict is especially pronounced within the particular urban context in which school S is situated, as well as on the construction course attended by participants. In these contexts, traditional uses of brick, render, concrete, steel, and glass are the norm. Whereas participant's use of materials in schools T and U – both primary – had often been detached, with some exceptions, from consideration of their 'traditional' use, here it frequently appeared limited by it.

Staff costs during the period were:

	2017/18	2016/17
	£000	£000
Wages and salaries	2,696	2,608
Social security costs	270	267
Pension costs	550	519
	3,516	3,394
Agency staff costs	-	-
Staff restructuring costs	40	40
	3,556	3,434

f: 4.2.47

Fig. contains public sector information licensed under the Open Government Licence v3.0.

Rather than ignoring such gaps, my response had instead sought to pick up different threads of conversation and to weave them with alternative perspectives as best I could. For example: picking up on Saal's critique of brick's inflexibility, I offered an account of how engineering bricks might be used in tension to create a curving bench through the insertion of steel rods within their central holes. Likewise, to (gently) challenge the assertion that timber was destined to rot, I had asked them to reason why some common structures (e.g. playground equipment, sheds, fencing, decking) are successfully made entirely of timber, leading to conversation about different construction methods, the use of waterproof glues, and the application of pressure to increase strength and resistance to decay. In this way, although my background in design and consequential desire for a timber structure was in tension with the materials initially suggested by participants, which were in turn rooted in their own experiences, the challenges I put to these suggestions had not been about creating bridges by which they might cross over to my position but about opening up paths which we might together explore. Although successful to an extent, such efforts were restricted by the availability of time and materials: with limited Internet access and time, there was no means to expand the diversity of pre-chosen precedent projects, nor extend the session or continue it with fresh materials the following week.

Photo of Ecology
of Colour removed
for copyright
reasons.
Copyright holder
is Jim Stephenson.

f: 4.2.28

Photo of Ecology
of Colour removed
for copyright
reasons.
Copyright holder
is Jim Stephenson.

f: 4.2.29

Photo of Ecology
of Colour removed
for copyright
reasons.
Copyright holder
is Jim Stephenson.

f: 4.2.30

(Left, from left: Studio
Weave Ecology of Colour
(2013): external detail;
Hand crank detail; Folding
bench detail)

Sawn Treated Softwood 22 x 150mm x 1.8m. Slow grown and kiln dried to make it more stable and easier to work with; Pressure treated to protect against fungal and insect attack for longer life; Seal cut edges with a suitable treatment when used externally; Made from responsibly sourced, forest friendly timber. (B&Q, 2018).

Scotch Roman, italic.

We shifted from considering ‘materiality’ to ‘use’ quite naturally: with discussions as to the material nature of foundations (again focused on aspects of technical construction) leading to conversations about how parts of the structure’s wall might move in ways that offered a variety of different functions (such as tables and seats) operated manually by users.

Other potential uses raised included “for music”, “a gardening club”, “a film club”, “for photography”, and “a phone zone”. Although at times such suggestions feel random, like dreams, they can always be traced back to roots in earlier discussions: the idea of designing a structure for photography emerging from Darren’s suggestion to include planted elements that could grow up its walls and across its roof, for example. In a similar way, ideas were not so much introduced and championed by individuals but developed itinerantly between all – each taking it in turns to pick up a thread of an idea in forward movement.

SCORE VII

PHYSICAL MODELLING

Score VII explores the different processes of physical modelling undertaken.

Its *close* voice comprises two sections. The first describes discrete episodes that unfolded during workshop 03; the second, episodes that unfolded during workshops 04, 05, and 06.

Helvetica, regular.

Physical modelling was conceived of within the intended spatial design process as a particular method for progressing the project. It was to be used for two purposes: to progress the brief (w03) and to develop and articulate a final proposal (w04, w05, and w06).

Workshop 03 aimed to progress ideas developed in workshops 01 and 02 through physical modelling, encouraging participants to grapple with questions of materiality and use in three dimensions: what materials might be used? How might materials chosen affect how the structure feels to inhabit? How might they ease construction and lower cost? How might the structure be used? When and by whom?

To structure and focus efforts, workshop 03 was divided into two parts: first, participants would work in teams to create three-dimensional proposals that developed the brief-so-far; second, participants would review and evaluate the proposals made, identifying the most salient features in order to crystallise the project's brief into a final form.

Scotch Roman, italic.

In previous projects I have experienced participants really struggle to get started during both drawing and modelling activities. Today is the first time in this project that I have asked participants to create their own designs; to express their ideas in a format that, unlike the words uttered in workshops 01 and 02, would not soon disappear once spoken or quickly be translated by another. Instead, the physical drawings and models produced will endure.

Sure enough, problems had soon begun to emerge. However, unlike my prior worries, it did not seem to be a lack of ideas or fear about expressing them that caused issue, but the physical process of modelling itself: the materials I chose and provided – the cards, papers, plastics, glue, tape, and string etcetera – appeared poorly suited to the needs and desires of participants. Worse, they appeared to have actively limited and disfigured the development of ideas.

Rainbow Coloured A4 Card. 70 Sheets. Colours and thicknesses (160gsm - 210gsm) may vary (Hobbycraft, 2018)



f: 4.2.31

(Left: Unfolded 'glossy'
card, detail)

For example: Darren and Saal had focussed on creating a multi-level proposal that took inspiration from tree houses. In developing ideas, their conversations explored in detail how people might interact intimately with the structure and how its materiality might support this. However, without being present to hear these conversations, the critic would be hard pressed to see in their proposal anything other than a routine semi-detached house complete with pitched

Scotch® Magic™ Tape, Transparent, 19 mm x 33 m (Staples, 2018)

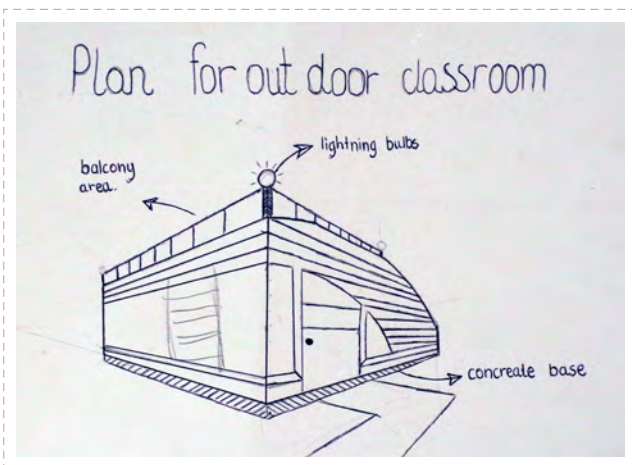
roof. Likewise, in his efforts to create a circular structure, Aiz had quickly fleshed out initial ideas with a pencil before spending the rest of the workshop attempting to create the perfect curve and fix it to a base material: battling against the tape's dogged intention to unpeel from the slightly too glossy card. While he had spent a significant proportion of the time chatting away, I am prompted to wonder if this was a product of problems created through the difficulties found in using the materials provided, rather than cause?

Velo-set 110mm Wood Glue #321110. Ideal for all wood jointing. Conforms to B.S.4071. (E models, 2018)

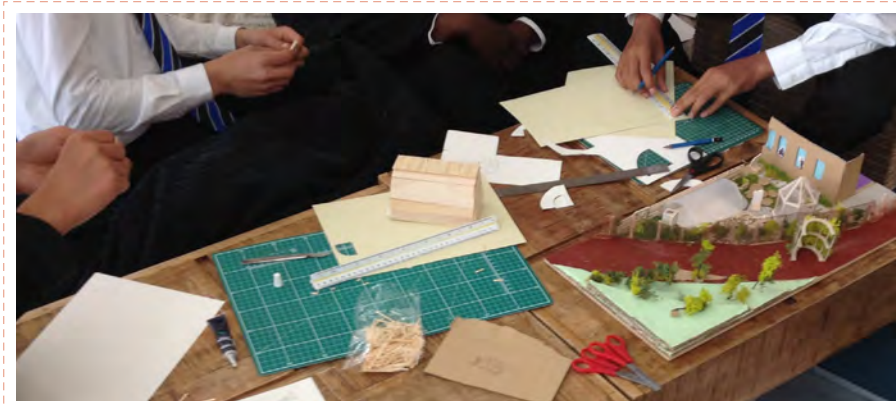
Far from ridiculing participants' proposals, ideas, or abilities, these examples underscore just how influential the materials provided were in the translation of spoken and thought ideas into physical form; difficulties not helped by the speed required by a 45minute workshop. Critically, it seems that in the time consuming struggle to articulate ideas in three dimensions with less than ideal materials, the focus of efforts had become fixed on how to construct something physically and not on how translating an idea into physical form might help to further develop it as a concept.

Helvetica, regular.

Following on from workshop 03, workshops 04, 05, and 06 sought to develop and articulate a final proposal through the creation of a scale physical model, using the existing site model originally developed during Part I of the Garden Project. Through asking participants to work together on a shared model rather than alone, workshops 04, 05, and 06 sought to force collective discussion and decision-making thereby stimulating the open, rather than private, questioning and development of ideas.



f: 4.2.32



f: 4.2.33

(Left, from top: Original garden project model; Darren's proposal; Working together on the shared model)

Tangible fixed assets

	Freehold Land and Buildings £000	Leasehold Land and Buildings £000	Furniture and Fixtures £000	Plant and Equipment £000	Assets Under Construction £000	Total £000
Cost						
At 1 September 2017	6,039	1,510	2,739	1,100	-	11,388
Acquisitions	-	-	231	160	-	391
Additions	-	-	-	-	-	-
Disposals	-	-	-	-	-	-
At 31 August 2018	6,039	1,510	2,970	1,260	-	11,779

Fig. contains public sector information licensed under the Open Government Licence v3.0.

f: 4.2.48

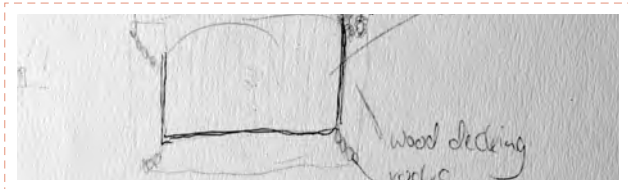
Scotch Roman, italic.

I had thought two workshops would be enough; that building the model would be a relatively quick process...

Medium blue ink and graphite pencil (hb) on white 80gsm A4 Paper

At the start of last week's workshop (W04) Darren had surprised everyone by producing a carefully considered proposal for the garden structure. Drawn in three-dimensional perspective, it suggested a clear direction without going so far as to detail every element; outlining an overall shape and scale it offered stacks of potential for all to get stuck in, developing it further in all sorts of ways. I had immediately offered it to the group: what did they think? Should we take this as our departure point? To my relief – and I wonder if theirs' too – all had instantly agreed.

The subsequent events, which unfolded through the remainder of last week's workshop, as well as today's, couldn't have been further from the struggles of workshop 03: rather than faced with creating a complete physical model from a loose and multi faceted brief, they had instead been able to select a manageable part of the model, suited to their own interests, to develop alone or in pairs. Once sufficient progress was made, or an impasse reached, these individual elements were offered back to the shared model, as well as for review by their now co-designers. For example: having chosen to develop the 'stage' – the area onto which the main room of the structure would open – Saal focussed first on selecting a suitable structure. Conscious that his initial suggestion of a galvanised steel frame would likely be prohibitively expensive, I prompted him to open up his suggestion to the rest of the group. Pausing in their own activities we had come together to tackle the problem. Following a few more calls for metal – leading me to repeat my cost concerns – Aiz suggested he would choose timber as it is easy to work with, cheap, and a nice material



f: 4.2.34



f: 4.2.35

(Right, from left: Saal's Stage plan, showing decking and planting voids; Saal's sectional planting void)

to touch and sit on. However, he was hesitant to fully endorse it, concerned that the structure would be external and open to the elements all year. Picking up on this worry, I asked others what they thought to the use of timber and any potential problems its use might bring. Following general agreement as to the appealing qualities of timber but concerns over durability, I offered my own experience to the discussion: agreeing that they were absolutely right in steel being the best choice in terms of durability but explaining how timber can be well treated against rot and that steel ‘shoes’ could be used to protect it from direct contact with the ground.

Our fully welded Post Shoes are hot dipped galvanised to a minimum of 70 microns after manufacture. This process will safeguard the mild steel against corrosion in a UK environment for between 40-70 years. Weighing 12.5 kg, these are far superior to the common, light-duty pressed-steel, post shoes. (Speedy Fixings, 2018)

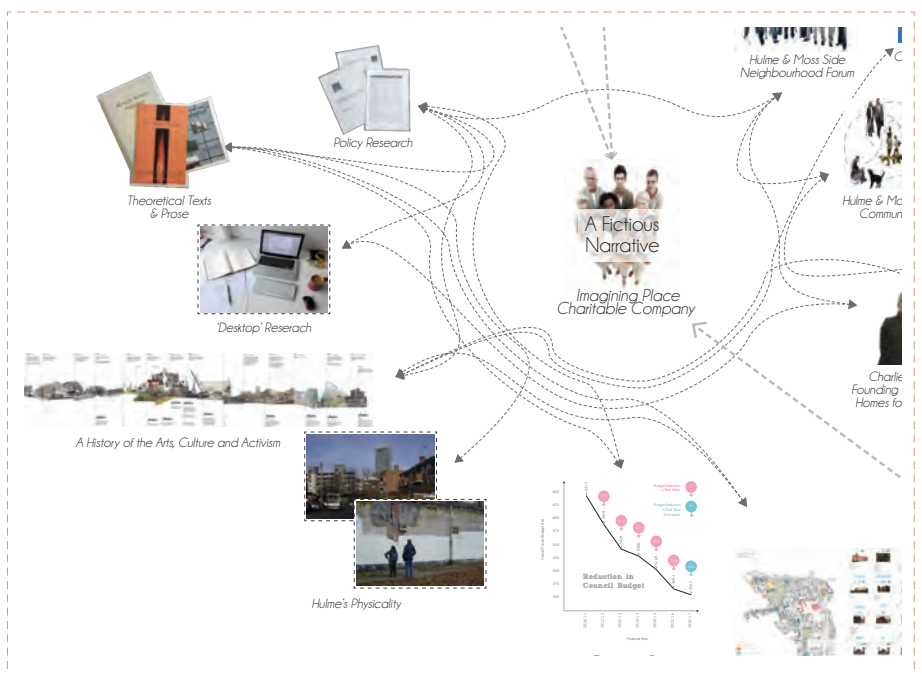
With an approach agreed Saal returned to work individually on his proposal for the stage, setting out its plan, carefully positioning gaps in which a variety of plants might be grown and nurtured – purposefully injecting colour and scent into the overall design.

Sawn Treated Timber Regularised C16/C24 75mm x 175mm x 4.8m. High Pressure treated with Tanalith ‘E’ (or similar); Kiln dried to help improve stability and straightness; Strength graded to C16/C24 for known structural performance; All of our softwoods are responsibly sourced. (Travis Perkins, 2018)

Scotch Roman, regular.

Considering collectively those workshops in which physical modelling was used (workshop 03, 04, 05, and 06), most striking is the change in dynamic that took place following workshop 03. Apparently stimulated by Darren’s presenting his proposal to the group at the beginning of workshop 04, this shift occurred not only in ‘how’ individual participants worked together but also in the nature of their relationships with the physical model, including the process of creating it: whereas in workshop 03 the physical model had seemed very much to be an end point, the eventual outcome of dogged endeavour, in workshops 04, 05, and 06 the model – now shared between participants – had become more a by-product of collective development. Instead of trying to bend materials to their will, participants were working with them, and each other, to develop threads of thought still in flux.

There are a number of reasons that might explain this shift. The first concerns the relationship between the activity’s scope, the time available, and the ability to decide one’s own actions. The



f: 4.2.36

(Right: Previous attempt to explore my design process, extract from Design Report (Bellfield, 2015b, p. 19))

translation of concepts into physical forms is no trivial task. Nor does it necessarily come as a natural process to the participants concerned, even though all have some experience through the construction course they attend. Further, workshop 03 asked participants to undertake physical modelling at speed, within a tight 45-minute window and with no time allowed for orientation at the workshop's start; and with specific materials, provided by me, limited by budget, based on my own experience and skill, as well as their ability to be worked by tools allowed and packable on bike and train. Additionally, due to the lack of time in previous weeks, the established brief had remained relatively loose, with no final scheme decided upon. Such issues do not seem unforeseeable. Given the time and care taken in developing the specific workshops undertaken, how might such issues be accounted for?

Tangible fixed assets						
	Freehold Land and Buildings £000	Leasehold Land and Buildings £000	Furniture and Fixtures £000	Plant and Equipment £000	Assets Under Construction £000	Total £000
Depreciation						
At 1 September 2017	128	32	459	251	-	870
Charged in year	128	32	506	273	7	946
Disposals	-	-	-	-	-	-
At 31 August 2018	256	64	965	524	7	1,816
Net book values						
At 31 August 2017	5,911	1,478	2,280	834	15	10,518
At 31 August 2018	5,783	1,446	2,005	711	18	9,963

f: 4.2.49

f: 4.2.50

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One potential explanation lies in a poor understanding of my own design process and, consequentially, a poor conception of how much time 'design' really takes. Without pausing to undertake proper reflection, it is all too easy to condense past events: to forget the time given to thinking, processing, and retracing, in addition to 'doing'. For example: during my own architectural education and practice entire days would often be given over to working through and resolving what I had asked participants to do in 45 minutes, not to mention the time I would allow myself for returning to an idea after time away with fresh eyes and a clear head. This underestimation of the time needed to 'do design' properly, coupled with overly optimistic timings resultant from not working regularly in schools, acted to add pressure onto an already complex ask. Moreover, breakthroughs within my own design processes would often only be made after switching practice and/ or materials: changing from modelling to drawing or from working with wood to clay, for example, choices that were not offered to participants in workshop 03. In contrast to the limits imposed in workshop 03, in workshops 04, 05, and 06 participants were able to break down the overall task into more manageable

(Centre: silver birch, bark detail (Love the garden, nd))

(Right, clockwise from top: finished model proposal, detail matchsticks and lollipops; model proposal, material detail)



Photo of Silver Birch Bark removed for copyright reasons. Copyright holder is Evergreen Garden Care (UK) Ltd.

f: 4.2.37

f: 4.2.38



f: 4.2.39



f: 4.2.40

chunks should they wish; to undertake each of these ‘chunks’ through their own chosen mix of writing, discussion, drawing, and modelling, as well as within a more relaxed time frame (i.e. across three workshops, rather than needing to finish by the end of a single workshop). The freedom to choose working methods and working speed appear, therefore, to be at least partially responsible for the shift in relations observed between participants and the method of physical modelling: from bending materials to suit their will in workshop 03 to working with them to develop threads of thought still in flux in workshops 04, 05, and 06.

DAS White Air Drying Modelling Clay 1kg. No baking required; Can be decorated with poster paint and acrylic varnish, PVC free; Contains no softeners, only vegetable binders. (Hobbycraft, 2018)

The second reason concerns ‘context’: whereas in workshops 03 physical modelling was undertaken in abstract space – there was no physical context at all – in workshops 04, 05, and 06, a physical site model – originally produced in Part I of the garden workshop – was used, providing a shared physical context within which to work, enabling decisions to be taken in relation to tangible constraints: “How big should its [footprint] be?” “Well, there are these trees here and we don’t want to get too close to this wall... so how about this?” In this way, the physical site model acted as an armature to work within and respond to. Materiality and scale could now be considered in relation to existing forms, with those forms used to aid decisions concerning ‘how to construct’ or represent particular materials or structures.

“Silver birch is monoecious, meaning both male and female flowers (catkins) are found on the same tree, from April to May. Male catkins are long and yellow-brown in colour, and hang in groups of two to four at the tips of shoots, like lambs’ tails. Female catkins are smaller, short, bright green and erect” (Woodland Trust, 2018).

The third reason for the shift in dynamic described concerns the relationship between the ‘scale’ used and the qualities of the materials worked with. For example: when working at the smaller scale of 1:100, as in workshops 04, 05, and 06, both match and lollipop sticks are of a reasonable scale and proportion for representing relevant material elements such as timber cladding and decking respectively. Such items would no longer be appropriate if working at bigger scales such as 1:10 where cladding a wall with matchsticks might take a week. Conversely, other mediums like clay and foam are more suited for larger scale work. In the same vein, while materials such as thick paper and thin card are readily cut with scissors, this same particular set of

Photo of Peter Hübner
architectural modelling
workshop removed for
copyright reasons. Copyright
holders are Peter Hübner and
Cornelia Suhan.

f: 4.2.41

(*Right: Peter Hubner,
using different modelling
materials to achieve
different aims (Blundell-
Jones, 2014)*)

attributes makes them ill suited – without considerable effort – for creating structures above a certain size or requiring a certain strength. The smaller scale used during workshops 04, 05, and 06 was a better match for the materials available. This meant tasks could be undertaken quickly, easily, and safely, allowing more time to be spent on developing and testing ideas and less on physically building, a key problem observed and experienced in workshop 03.

Natural Wooden Matchsticks. Size: 4.2 x 0.2 x 0.2 cm. 35g. Can be painted and glued. (Hobbycraft, 2018)

So what might be done differently? Clearly more time should be allowed for specific tasks as well as overall. This would allow participants greater space for orientation and organisation in relation to individual interest and skill, as well as to the activity at hand. Likewise, greater consideration might be given to the suitability of materials with those offered chosen to afford as wide a gamut of working methods as possible, not just a variety of textures and colours. Importantly, no matter the care taken, it will always be difficult to gauge how easy or difficult participants find a particular activity and therefore at what speed they might work. The key, then, might not lie in ever refining methods toward perfect efficiency but in opening them out: not towards vagueness, but in terms of increasing and diversifying opportunity, as well as the time available to make the most of them.

Stock	2018	2017
	£000	£000
Clothing	2	2
Catering	2	3
	4	5

f: 4.2.51

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SCORE VIII

MANAGEMENT + USE

Score VIII explores how discussions concerning 'management' and 'use' were shaped by different relations and responsibilities.

Its *close* voice describes discrete episodes that unfolded during workshop 02.

Helvetica, regular.

The Garden Project – Part II was to be coordinated by Helen, School S’s Librarian and Extended Services Coordinator. In this role, Helen would hold overall control and responsibility for the project during development phases, prior to the establishment of a dedicated management team. Discussions concerning ‘how’ design proposals might be maintained and managed – especially in the long term – were seen as integral to the overall design process, with dedicated time scheduled in workshop 02 for their consideration.

Scotch Roman, italic.

Suggestions were slow to begin with. Perhaps Helen was too forthright in her reminder as to the responsibility and commitment needed to ensure the garden remained well maintained and used both now and in the future: “what you have to remember is... that whatever is designed, it will be here a long time after you leave”?

Scotch Roman, regular.

Helen’s concern for, and reminder of, our collective responsibility to future generations is understandable when contextualized within her overarching responsibility for the project’s viability and delivery, as well as its long-term sustainability. The weight of such responsibility, including the knowledge that any built structure would likely ‘outlive’ participants, as well as her own tenure, can also be understood as a motive for her increasingly active participation in discussions.

This latter trend manifested as a shift in roles at the point of transition from early discussions about precedent projects (part a) to the subsequent mapping out of ideas and themes (part b): in part a, both Helen and myself had acted to facilitate discussion, attempting to keep debate alive and on track by posing questions to probe and encourage the development of ideas raised by others. However, in part b, while I had sought to continue in this role – positioning myself as scribe, aiming to summarize what others were saying, offering it back to them for approval or development – Helen had taken up the role of ‘client’ much more overtly. Rather than prompting discussion through offering questions, she

Photo of reclaimed timber pallet structure (JAW) removed for copyright reasons. Copyright holder is Julien Kieffer.

f: 4.2.42

Photo of reclaimed timber pallet structure(JAW) removed for copyright reasons. Copyright holder is Julien Kieffer.

f: 4.2.43

Photo of Sandal Magna Community Primary School removed for copyright reasons. Copyright holder is Mark Hadden.

f: 4.2.44

(Left, from left:
Reclaimed timber pallet,
corner junction (Kieffer,
2015); Reclaimed timber
pallet, caster (Kieffer,
2015); Sandal Magna
Community Primary School,
polycarbonate cladding
(SWARCH, 2010))

began to contribute actively: articulating her own ideas, as well as agreeing to or rejecting others.

Debtors

	2018	2017
	£000	£000
Trade debtors	13	12
VAT recoverable	10	10
Other debtors	6	7
Prepayments and accrued income	49	53
	<u>78</u>	<u>82</u>

f: 4.2.52

Fig. contains
public sector
information
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Open Government
Licence v3.0.

Although never dogmatic in the promotion of her own agenda over that of others, Helen's responses to proposals concerning materiality, use, and management were clearly manifest in how the design process unfolded: *against* the use of polycarbonate sheeting as an alternative to glass, or the use of reclaimed palettes instead of new timber; *for* the design supporting core curriculum activities; *limiting* debate to a focus on normative adult-child structures of responsibility and control.

The standard size UK is 1200 x 1000mm and is available in a number of pallet types and weight bearing capacities. UK sized pallets are widely used throughout the UK and for export (Associated Pallets, 2018).

Scotch Roman, italic.

Responding to Helen's caution, Darren went back on his earlier position: shifting from suggesting that the student leadership team be given overall responsibility, to proposing that class teachers take charge, nominating students to look after the garden for set periods of time. Picking up Darren's proposal in apparent agreement, Peter offered that such nomination might be seen as a 'reward', with Aiz positing that it could be incorporated within the existing rewards system. Although Helen also highlighted the importance of students playing a leading role in the garden's management and maintenance, participants seemed to struggle to break free from a perspective that placed adult structure and supervision as prerequisite to preventing misuse and abuse...

Scotch Roman, regular.

The shift from proposing a system of student-led to teacher-led management can be understood as one affect of Helen's reminder as to the serious responsibility students had to the wider school community and future generations.

It can perhaps also be understood in relation to students' everyday relationships with staff and the school (physically, and as an institution). For example: students are not allowed to occupy rooms within school S without prior consent and supervision. Nor are they permitted to walk the corridors outside of dedicated hours, signified by the sounding of a buzzer. Those requiring admittance to the school outside of set times must use the visitor entrance, waiting in its holding area to be collected and escorted inside. Likewise, those allowed to use the library – during 'period six', for example – must wait outside until a relevant adult arrives to unlock the doors and escort them inside. Do such day-to-day experiences render the idea of being allowed to move about the Academy either unsupervised or of their own accord alien?

Creditors: amounts falling due within one year

	2018	2017
Trade creditors	15	18
Other taxation and social security	33	31
ESFA creditor: abatement of GAG [if applicable]	-	-
Loans	-	-
Other creditors	10	12
Accruals and deferred income	22	26
	80	87

f: 4.2.53

Fig. contains public sector information licensed under the Open Government Licence v3.0.

What of my role in how discussions of management and use unfolded?

Although careful to avoid directing or limiting discussions during workshops, the residual effects of decisions and actions taken in setting up the project, in shaping the context within which discussions were held, can not be ignored. For example: my decision to proceed with the project despite knowing that Helen would be my sole point of contact with school S was a compromise. To undertake the project on a timescale necessitated by my doctoral research, I chose to accept the limitations imposed by being unable to communicate with school S's senior leadership team – a restriction raised by Helen and taken in good faith. However, accepting no communication with school S beyond Helen made the project, participants, and myself vulnerable: with no alternative opinion available, Helen had the last say in the feasibility of proposals – in terms of materiality, use, and management. Yet, despite the vulnerability it brought, this was a decision taken *without* participants and 'hidden' from them. Although rooted in my trust in Helen's commitment to both project and participants,

this trust had also been built *without* participants, through a relationship they had never been party to. Should I have instead attempted to establish contact with the senior leadership team direct, bypassing Helen? Knowing the limitations, should I have avoided discussions pertaining to management altogether?

In practice, neither of these alternatives were viable. Attempting to contact the senior leadership team direct would have been to betray hard earned trust. To avoid discussions altogether would also have damaged trust, this time the fledgling trust being built with participants through the project itself. For what would avoiding such issues have said? Not only does your school not deem you responsible enough to inhabit of your own accord, but Helen and I do not deem you capable of engaging in discussions of management and use within such limits either.

Instead, our choosing to raise issues of management and use in ways that sought to render limitations visible and open to discussion, if not influence, through talking about how, why, and by whom our own hands were tied, should be understood as an attempt to highlight and discuss the power differences we were ourselves powerless to annul.

4.3 : PRIMARY SCHOOL U

A Site-Writing in Five Voices

Scene

Various locations inside and out, within Primary School U.

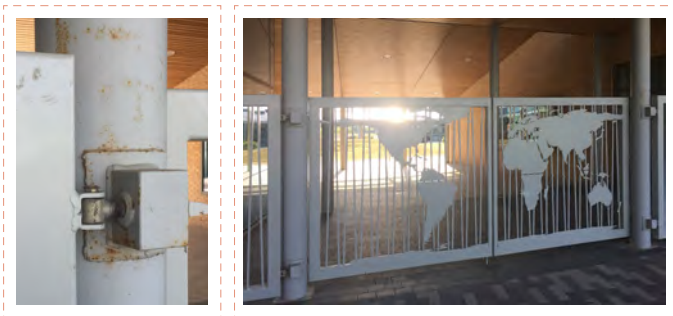
Time

Workshop 01:	20.11.2017	3 x 40 minutes.
02:	23.11.2017	3 x 40 minutes.
03:	27.11.2017	3 x 40 minutes.
Feedback :	07.06.2018	1 x 60 minutes.

Participants

Group 01:	5 children.	8-9 years.
Group 02:	5 children.	8-9 years.
Group 03:	6 children.	8-9 years.

(Left, clockwise from top
left: Entrance gate with world
map; Entrance gate hinge; Lost
property box)



f: 4.3.1

f: 4.3.2



f: 4.3.3

INTRO

PRIMARY SCHOOL U

Helvetica, regular.

School U is an English Primary School. Founded in 2015, it occupies a new, purpose built building located within phase one of a major master plan. This larger development is situated to one edge of a major university and commuter city. It also includes a community centre, foodstore, energy centre, health centre, housing, post-graduate accommodation, and parkland. School U comprises 300 pupils across five years, including reception. This is 330 pupils and two years short of its maximum three-form entry capacity, which it is scheduled to reach in 2021 (Ofsted, 2018). When at capacity, school U will be more than double the average size of an English primary school (DfE, 2018). The number of pupils who speak English as an additional language is higher than the national average. The number of pupils supported by the pupil premium, identified as having SEN and/ or disabilities, and that have an education, health, and care plan is below the national average but increasing each year (Ofsted, 2018).

Scotch Roman, italic.

The main entrance gates are cold steel, painted grey. They stand fast in the wind, their junctions designed to prevent vehicle attack. Across its front, thin metal sheets are welded, shaped to resemble a map of the world. Yet, cut by machine from 3mm inflexible steel and also painted uniformly grey, they couldn't be further from representing the diversity of our shared world.

*Inside, the contrasts are striking: the glass walled entrance pod is clearly about containment: a buffer that allows the school to verify credentials before choosing to admit or refuse. Yet within this defensive structure sits a timber box that I instantly recognise as from **IKEA**. It overflows with jumpers, coats, bags, and lunch boxes forgotten by pupils during the day and placed here to allow collection*

without the need for parents to enter the school.

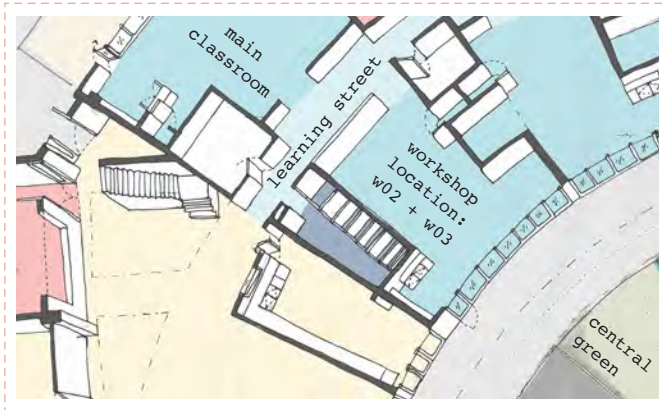
6mm Toughened. Conforms to all EN 12150-1 requirements and is CE marked in accordance with EN 12150-2. Achieves Class 1 to EN 12600 with a mode of breakage type C. (Pilkington, n.d.)

While situated in the heart of the school, the reception is separated from it by a full height wall, punctured by a secure timber and glass hatch. As I waited, I watched a pupil talking with the receptionist through this hatch: head tilted back, her heels lifted slightly as she peered up at the receptionist who herself leant out above.

A comments book proudly displayed to the right hand side of the hatch is also sealed behind glazing. The sofa on which I waited is comfy and vibrant, yet feels more office-like than school or home. Its colour brightens the room and ties in with the school's coat of arms, itself purpose designed and complimentary to the larger master plan's dedicated branding scheme.

Helvetica, regular.

School U was chosen for three reasons. First, it is recently founded (2015) and occupies a purpose built building with a design underpinned by both architectural and pedagogical principles developed through extensive research in collaboration with the local University's Education department. Second, as a University Teaching School it has a stated aim to develop and nurture a symbiotic relationship between teaching practice and educational research. And third, designed and created for a 'missing constituency', there is a real need to understand how current inhabitants experience and use the school on a day-to-day basis: what are the problems and possibilities? Taken together, these reasons represented a valuable opportunity to interrogate the workings of a newly built and carefully designed school with those who inhabit it.



f: 4.3.4



f: 4.3.5

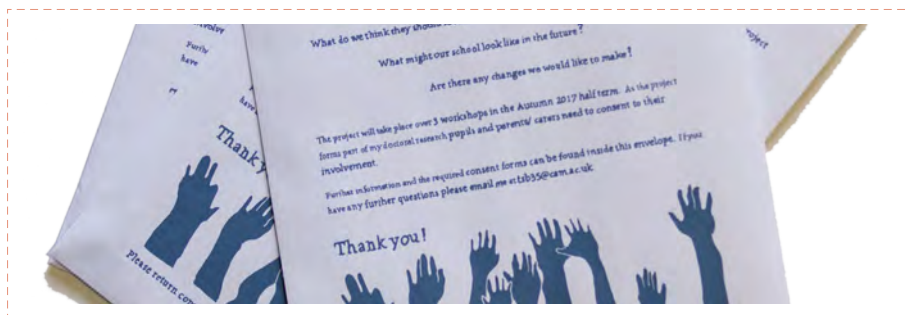
(Centre, from left:
Relationship between main
classroom and workshop
location; Right: personal
bicycle used in travel to
and from workshops)

Helvetica, regular.

Fieldwork was undertaken as a standalone project. Its intention two-fold: First, to generate opportunities for pupils to explore their own school, questioning how different places are currently used, how they might be used differently, as well as how they might be re-imagined to bring about positive change; second, to use problems and possibilities identified as departure points for developing concrete proposals for change and further development through the use of physical models and collage.

Three workshops were held during the 2017 summer term. Each was scheduled to take place during the afternoon, starting at 1pm – immediately following lunch – and finishing at 3pm – the end of the school day. Each workshop was divided into three successive sessions with participants split evenly across them. The decision to create smaller group sizes was taken in discussion with the class teacher – Sarah – to ensure I could attend fully, as both researcher and facilitator, to all participants.

Workshops were based in the dedicated science classroom, chosen for its location immediately opposite the main classroom. This proximity granted participants and myself a level of autonomy without putting us ‘beyond reach’ if needed. Workshop one differed slightly for being held on an afternoon during which the class was using the on-site forest school. In practice, this meant collecting and returning participants to the forest, rather than the classroom.



f: 4.3.6

(Centre: Consent form envelopes)
270

Helvetica, regular.

Informed consent was negotiated in four phases. In phase 01 broad consent for the proposed research was brokered through discussion between school U's head teacher – Brian – and myself, with official approval sought and gained from school U's research committee. Subsequent to approval being gained, a face-to-face meeting between Brian and myself allowed for more detailed discussions, including: who the research should be undertaken with, workshop duration and schedule, methods of recording, potential outcomes for both participants and the wider school community, as well as issues of safeguarding.

Phase 02 comprised negotiations between Sarah – who teaches the class proposed – and myself. Discussions began with a review of prior decisions, before shifting to focus on practicalities, including proposed methods and potential outcomes.

In phase 03 negotiations were extended to the proposed participant cohort, as well as to their parents and/ or guardians. Attending school U towards the end of the school day allowed me: (1) to introduce the proposed project, wider doctoral research, and myself to the class; (2) to raise issues of consent and participation, including the option not to and ability to change their mind later should they wish; and (3) to provide participants with information and consent forms to take home and discuss with their parents and/ or guardians (Appendix **A**).

To help ensure information and consent forms were not lost or binned as unknown quantities, an introductory hello and brief explanation were printed directly onto the envelopes themselves.

Staples White Envelope, Non window, 100G, C5. Item no: WW-297665921. (Staples, n.d.).

Envelopes were given directly to children to highlight their position as active participants in the process, rather than simply subservient to the signatures and will of others. To put a face to the name on the forms and provide an initial opportunity for

questions to be raised and concerns addressed, I remained at the school until all children were collected, with their class teacher introducing me to parents in turn.

Phase 04 continued throughout workshops and comprised the ongoing negotiation of consent. The need to continue such negotiations was raised formally by myself at the start of each workshop: reminding participants of the workshops connection to my ongoing doctoral research; that the workshops were being recorded via Dictaphone, including the purpose and audience of such recordings; and that while their participation would remain anonymous, they were free to choose to cease participating during or after workshops without consequence.

Workshops were recorded through the use of a personal Dictaphone. Video was not used.

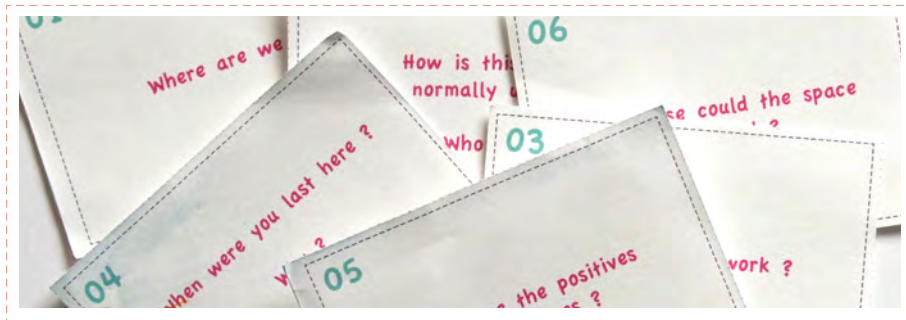
Sony PX440 Digital Voice Recorder PX series. Frequency response MP3 128KBPS 75-17000Hz. Battery life 67 Hrs 05 Min. Product code: ICD-PX440. (Sony, n.d.)

SCORE IX

TOUR TALK

Score IX explores the method of group exploration walks used. Particularly, its role in shaping the nature of emergent relations between participants and myself, as well as how such relations influenced the workshops unfolding.

Its *close* voice describes discrete episodes that unfolded within workshop 01.



f: 4.3.7

(Centre: Prompt question cards)

Helvetica, regular.

Workshop 01 sought to develop a collection of mini-scenarios (narratives) about specific places within School U through asking participants to: (1) select specific places at random through the act of throwing Smarties onto a pre-drawn map of the school; (2) plot a walking route connecting each smartie-site; (3) visit each smartie-site in person (groups), exploring each in turn by means of verbal discussion prompted and structured by six pre-written question cards, asking: where are we?; how is the space normally used? Who by?; does the space work?; when were you last here? Why? Who were you with?; what are the positives and negatives?; how else could this space be used? This process aimed to reveal hidden narratives, render the diversity of individual experience, and identify varied possible opportunities for change to act as departure points in workshop 02.

Scotch Roman, italic.

...Relief. That is my first and overwhelming emotion. It flows over me. Whereas in previous workshops things had either not quite gone to plan or simply fallen apart, today had – I think – gone well, really well. As hoped, a number of mini-narratives about how individual children understand and experience particular places within their school emerged. Together we found similarity and overlap, as well as difference. Ideas for change were posited, challenged, and developed.

Lego, Round Plate 1x1. Plates, special circles and angles. Design ID: 6141. (Lego, n.d.)

Sure, I was unable to use actual ‘Smarties’, reverting to the use of Lego pieces instead. Sure, the size of the map meant that we needed to improvise, taking turns to cover each other’s eyes and placing the counters rather than throwing them. Sure, we were tight on time, often not managing to get to every smartie-site plotted. Sure, children didn’t always listen to each other during discussions, choosing instead to follow their own threads – sometimes individually, sometimes together, sometimes relevant, sometimes not. Yet, despite these small challenges, a variety of stories did emerge...

1. P1: Oooo...

2. P2: I think we should be able to have a room where...

3. P1: ...a free... it could be used as a -- err -- it could be

4. used as where the free readers go, they could use it -- err --

5. to express...

5. P3: Yeh the books could be there...

6. P1: ...and to express their reading...

7. P4: No it could be, no it could be, like a mini little other

8. library - like a tiny little library...

9. P1: ...'cause that's like what I saw downstairs but, but...

10. P4: ...little other library...

11. P1: ...but it was like it was for the year ones.

12. **ME: Alright so do you want -**

13. P4: Little library.

14. P1: It wasn't for free readers anyway.

15. **ME: Write down ambassadors meeting room as well - some one write**

16. **down meeting for ambassadors**

17. P2: Ooo... lunch time ambassador -- err -- lunchtime.

18. P1: And that's also a place for the leaders in lunch...

19. ME: Yeh?

20. P1: ...and stuff to go...

21. **ME: Yeh.**

22. **So more people should be able to meet here.**

23. **All right.**

24. **So someone - who's got the map? - where's next?**

f: 4.3.8

(Right: workshop 01,
group 03, verbal exchange
extract)

The audiotapes recorded during workshop 01 render a particular dynamic of verbal exchange between children and myself.

Sony PX440 Digital Voice Recorder PX series. Frequency response MP3 128KBPS 75-17000Hz. Battery life 67 Hrs 05 Min. Product code: ICD-PX440. (Sony, n.d.)

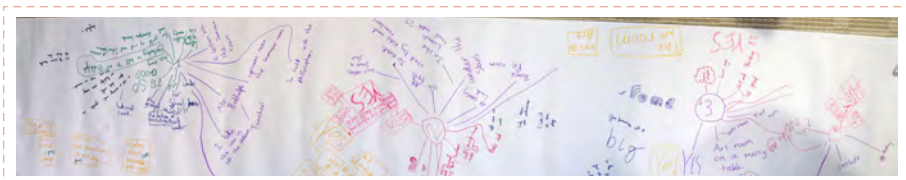
Specifically: they describe multiple episodes of talk in which I acknowledge a child’s comment in a way that acts to cut off any possible forward movement. For the majority of smartie-sites visited, such acts appear to limit the depth of the issues or ‘stories’ raised: while the ‘headline’ narrative is frequently clear – the desire for a larger music room or the dislike of the currently stark covered external spaces – there is most often little to no subsequent discussion. Even in cases where further responses were prompted – when discussing the process of having lunch, for example – these responses are too frequently ‘headline’ in nature, rather than detailed discussion. As both researcher and facilitator, my focus seems set on the generation of content over understanding its context. But why?

	Balance at 1 September 2017 £000	Income £000	Expenditure £000	Gains, losses and transfers £000	Balance at 31 August 2018 £000
Restricted general funds					
General Annual Grant (GAG)	98	4,500	(4,175)	(10)	413
Start Up Grant	-	-	-	-	-
Pupil Premium	-	85	(85)	-	-
Provision for boarding	-	-	-	-	-
Other grants	-	297	(246)	-	51
Pension reserve	(1,054)	-	(40)	(319)	(1,413)
	(956)	4,882	(4,546)	(329)	(949)

f: 4.3.45
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As an educational researcher one of my foremost concerns is to produce a viable piece of novel research that contributes to existing knowledge. The design-led qualitative methods I have chosen to use draw on established cross-disciplinary research and practice. However, they are not strict recipes. Nor is my role as researcher or workshop facilitator inert. Instead, I have modified the methods used to suit the particular context and, by choosing to take an active role in workshops, I have made my own story-so-far (to use Massey’s term (e.g. 2005)) a key variable. It is in this vulnerability that the focus on generating content at the cost of richer discussion seems – at least in part – rooted.

As a designer my primary training is in visual and physical methods



- f: 4.3.9
- f: 4.3.10
- f: 4.3.11

(Left, from top: W01, group
 01, mind map; W01, group
 02, mind map; W01, group
 03, mind map)

of communication: drawings, diagrams, models (physical and digital), etcetera. Talk, however, is not something I am specifically trained in. Indeed, in previous workshops – both within this research (score VII) and prior to it – I have often found physical modeling and drawing (creating ‘things’ with shared hands) to be essential in stimulating and supporting verbal communication. I had hoped (in developing the methods) the physical school environment, together with the collective production of a mind-map, would provide such stimulation and structure. However, the onus had been firmly on ‘talk’, a development that had increased my sense of vulnerability in turn driving my focus on generating (achieving) content at all costs.

Time appears to have been an important factor too. In planning workshops I had been conscious of not making each so long as to lose the concentration of tired minds or to take too much time out of scheduled lessons. It had been about managing these concerns while still allowing adequate time for discussion to emerge. Workshop 01 illustrates how I did not always get this balance right. As the tapes describe, this resulted in my fighting to fit all of the planned activities in: herding the children through questions and sites, cutting some altogether without debate: “we haven’t got time!” In particular, the six question cards, originally intended as prompts, became core questions. In my haste to gain answers to each question in the limited time available, I had resorted to finding ‘efficiency’ through culling any opportunity for pause, reflection, or return.

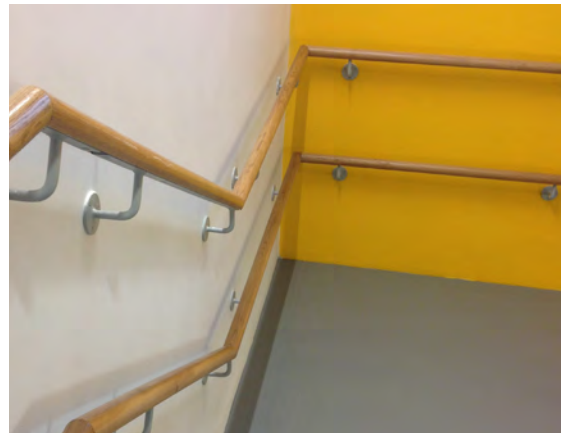
Scotch Roman, italic.

The first Smartie-site fell in an – at first glance – unremarkable corridor space at the head of the building’s only stair, between the head teacher’s office on one side and the beginning of the almost-bridge (leading to the seminar room) on the other. Yet, gathered in a loose circle around a fresh piece of paper laid atop its grey and thinly carpeted floor, such first impressions were fast undermined with varied accounts of use: “to get a gold!”, “or for photos... school photos”, “for a warning”, “don’t forget, sometimes LAMDA”.

These initial accounts rapidly spawned multiple and concurrent



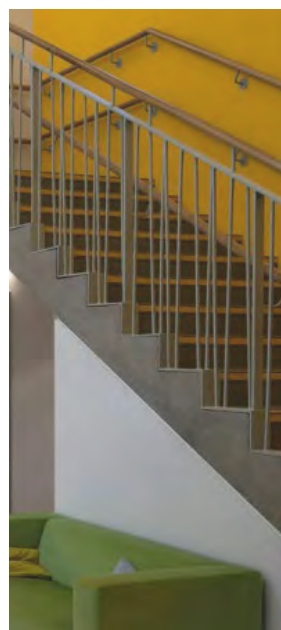
f: 4.3.12



f: 4.3.13



f: 4.3.14



f: 4.3.15

(Left, clockwise from bottom right: Dining hall, stair base; table 23; First floor landing, looking back towards stair; First floor landing, balustrade + handrail)

discussions, each heading in a different direction, often cutting across one another, always increasing in volume.

Heckmondwike Supacord Sheet. 80% Polypropylene, 15% Polyamide, 5%
Recycled Polyester. 2m wide. Steel Grey. (The National Flooring Centre, n.d.).

Caught amid these swirling currents I struggled to latch onto and follow individual threads; to stay afloat. Surfacing for what seemed like agonizingly brief moments, I began to learn from Fran how the stairs give special importance to receiving a ‘gold’ for “...when you go upstairs it feels exciting.” Yet, before I could respond, Claire span me about (mentally and physically) by cutting loudly across all discussion, calling for the stair’s dual-height handrail to be re-designed. This, she continued, was needed to stop its use by children to “slide down the banister”.

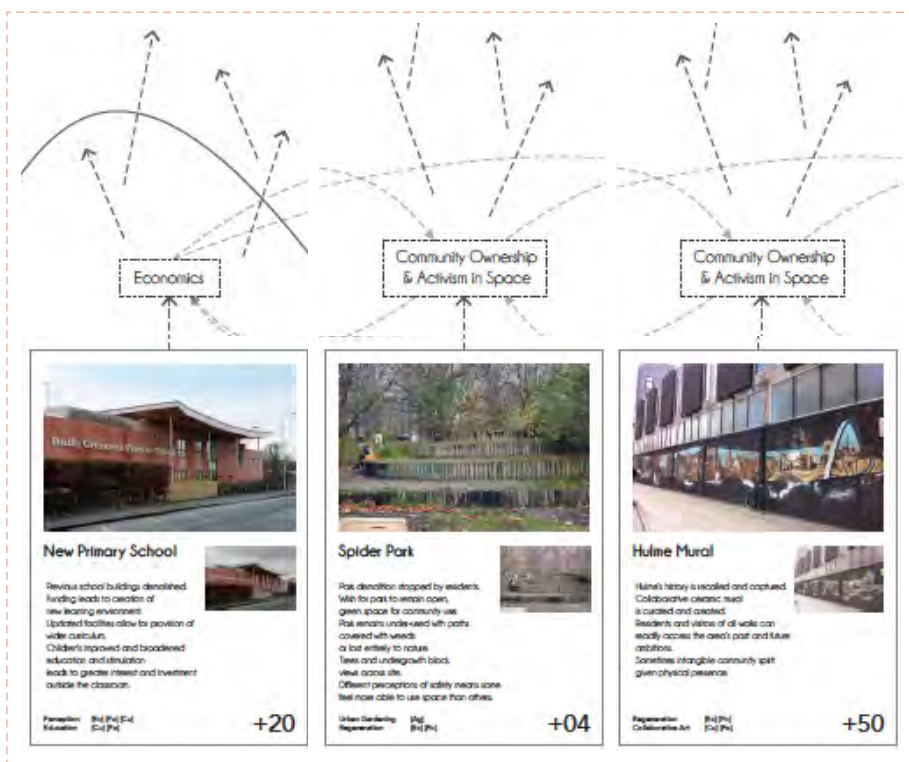
Laidlaw Timber system (Timber handrail/ nylon supports). Wall fixed handrail to be: 40mm dia. Beech, A quality, without foxiness steamed and kiln dried, surface treated with colourless lacquer. Connected to 34mm dia. steel-cored nylon elbow supports. (Laidlaw, 2010)

Surging with her, the whole group – while noting that the school did not permit such acts – joined in, pleading with me to allow them to demonstrate. Any hope of discussion about how such a space might be used for anything other than circulation was soon lost.

At stair’s base, now sat on chairs around one of the many circular dining tables (table 23), our heads craned forwards toward its centre, I asked the – I thought innocent – question: ‘do you change tables everyday?’ It quickly meets a cacophony of thoughts and protests relating to the process of lunch. The initial chorus of “Noooo!!!” receding, I begin trying to pick out the more detailed explanations: Xanthi calmly explained that “[children] have to have the same tables and then we switch around next year”, just managing to finish her sentence before Yaz jumped in, exclaiming, “I don’t like it, I think we should just sit where we want to [...] we have to serve and tidy up [...] its just a bad idea.” But not all voices were against, with Charlie noting that when “sitting where you want to you can sit with silly kids and then get in trouble.” While I feel like I really uncovered a raw issue here, subsequent discussions had avoided the issue of how lunch might be done in other ways altogether...

Scotch Roman, regular

In each of these cases, discussions appear to falter as they progress



f: 4.3.16

(Left: Mini-narratives, extract from Design Report (Bellfield, 2015b, p. 8)

from questions concerning experience and use of existing places to imagining how they might be changed for the better or used different. This faltering, although varied in severity and result, sometimes leading to a collapse of discussion, sometimes resulting in a shift in subject, was a clear trend. Why?

	Balance at 1 September		Expenditure £000	Gains, losses and transfers £000	Balance at 31 August 2018 £000
	2017 £000	Income £000			
Restricted fixed asset funds					
Transfer on conversion	9,218	-	(673)	-	8,545
DfE Group capital grants	1,124	200	(100)	-	1,224
Capital expenditure from GAG	7	-	(3)	10	14
Private sector capital sponsorship	171	344	(173)	-	342
	10,520	544	(949)	10	10,125
Total restricted funds	9,564	5,426	(5,495)	(319)	9,176

f: 4.3.46

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My adaptation and use of the original method (chapter 3) offers a first potential reason. The original method was developed for the urban context, intended to link intimate observations at a micro level with issues, systems, and structures at a macro level through the writing of mini narratives. For example, the specific discovery of a bike lock might inspire narratives that link to wider issues rooted in infrastructure, sustainability, governance, and economics. In adapting this method to the particular research context – a primary school – I had attempted to simplify while retaining what I understood to be its core principles: linking intimate observation with wider issues as a means to find openings for possible change at both micro and macro levels. It is this process of simplification that led to the use of the six-question prompts. So, what drove this attempt to simplify? Why had I not used the exact method, as I had done successfully before?

It comes back, I suggest, to issues of ‘fear’: fear that an overly complicated method would take too long; fear that, if deemed too challenging or of little purpose, the method would foster disinterest – as witnessed during the pilot phase of this doctoral research process (appendix I). But if I had had success before – albeit in different contexts – why had I not taken the risk here?

The reason is again, I suggest, rooted in fear: fear that coming away with nothing would be linked by others to personal failings as a designer and educational researcher, especially due to my active role in adaptation and facilitation. However, blaming all on ‘fear’

is too crude. Although personal worries certainly played a role in the development and facilitation of the methods used, there were other issues at play: courage alone does not offer a magic bullet. Indeed, as found in Score I, to be overly confident risks becoming
blind to all but that which is expected.

The second possible source for the faltering of discussion returns to the problem of talk, this time with regard to its use as a means of casting forward, especially when compared with methods such as drawing, modelling, and performance. Thrown into the spotlight, participants had often seemed to struggle in discussing proposals for adaptation or change. Indeed, even with all my training, experience, and insider knowledge of workshops and ‘expectations’, I would struggle to produce definite proposals on demand. But why? What might it be about open talk that makes imagining possible futures more problematic than reflecting on past and present use? Is it simply easier to talk about how we have and do use a particular place – drawing on specific experiences – then to imagine possible futures of boundless limit? Too an extent, yes, but there is more to it: method and time play a considerable
role too.

In talk, once spoken, the material form (sound waves) of contributions offered, ceases to exist. This prevents any tangible ‘excess’, which, through being carried over, might serve as a departure point for other participants, allowing them either to pick up prior threads in development or challenge, or to start new ones from the newly established context. In contrast, drawing and modelling always generates a physical product. Even when no action is taken the materials remain visible, open for anyone to use, their own sensory properties themselves offering opportunities for departure. Why then, did a lack of ‘material excess’ not appear to hinder discussions concerning experiences of existing place? This, I suggest, is due to the ‘materiality’ of existing place: the material fabric of existing place affords a medium through which an ‘excess’ can be carried over. For example, in the case of the narratives that emerged in the library (score X), although the words of each narrative ceased to exist soon after being spoken, their meaning was carried forward in the material that remained.

Engaging with the different aspects of the library’s materiality led to new narratives, some adding detail to previous stories, others branching out in directions new.

	Balance at 1 September 2016		Expenditure £000	Gains, losses and transfers £000	Balance at 31 August 2017
	£000	Income £000			£000
Restricted general funds					
General Annual Grant (GAG)	100	4,300	(4,302)		98
Start Up Grant	-	-	-	-	-
Pupil Premium	-	85	(85)	-	-

f: 4.3.47

Fig. contains public sector information licensed under the Open Government Licence v3.0.

Time appears, once again, to be a factor, its limited availability working to intensify problems. For example: discussions concerning how a particular space might be changed for the better or used in other ways were not prompted until towards the end of each smartie-site visit. Due to the limited time available, it is this part of the process that appears to have become particularly exposed to being cut short by myself; action often taken when ideas did not appear to be emerging in the hope of protecting future discussions from curtailment.

The overall project length – from first meeting participants to leaving for the final time – is a further influencing factor. Whereas the spatial design projects undertaken with School’s T and S comprised five and six workshops respectively over the course of as many weeks, the three workshops undertaken in School U were completed within six working days. This expedited schedule resulted in considerably less time spent with participants, time necessary if relations are to properly take root, grow and shift.

SCORE X

MATERIAL NARRATIVES

Score X explores the importance and use of existing materials, including the ways in which it shapes the everyday lives of participants.

Its *close voice* describes discrete episodes that unfolded within workshop 01.



Photo of School U's central courtyard showing use (in promotional material) removed for copyright reasons. Copyright holder is professional photographer, who cannot be named for confidentiality reasons.

f: 4.3.17

f: 4.3.18

(Left, from top: Central courtyard, typical use; Central courtyard, use as shown in promotional material (Marksbarfield, 2015))

Helvetica. Regular. Black.

The explorative walking method used in workshop 01 sought to reposition the locus of discussions from an arbitrary location (e.g. a classroom) to the specific physical sites of their focus. This aimed to enrich discussions of use and materiality, stimulating the development of narratives concerning the simple and complex, ephemeral and enduring, micro and macro.

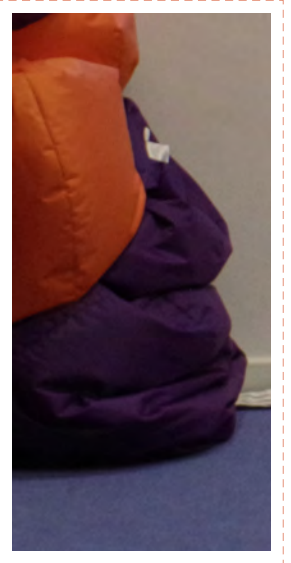
Scotch Roman, italic.

Of the three groups, two visited the green courtyard positioned at the school's centre. Both revealed a shared disappointment in its underuse. Although I have seen no indication as to any form of use so far, I had hoped this was simply down to poor luck: perhaps not being around at the right time, perhaps due to it being winter. The promotional photos and literature portray this central space as full of life, used by all. In reality it seems only the few have access and for specific purposes at that – for after school club, on special occasions... The calmness with which Tim explained the green's original purpose only serves to strengthen my anger. Floating within the waves of others' protests, it seemed so matter-of-fact: 'this is what was intended, this is what we have, oh well'. Yet not all wanted this original vision. In amidst the majority of voices defending the original purpose as a quiet space for reading, relaxation, and play, Jen argued that its soft grass (in comparison with the main field) and hill makes it ideal for more active games. Anna wondered why those in the internal classrooms couldn't use it more often – an idea that quickly drew reaction from Philip who thought that this would only damage the space as it simply wasn't big enough for all the school to use.

Universal Lawn Seed. 40% Dwarf Perennial Ryegrass, 35% Creeping Red Fescue, 25% Chewings Fescue. Tough. Mower type: Rotary/ Flymo. (Lawn UK, n.d.)

These issues resonate with those raised during visits to the covered wedge-shaped spaces in-between the classroom blocks. While these spaces are used freely by pupils, and frequently in wet weather, they are viewed as desolate, windswept, cold, and in much need of care.

Back inside, the final Smartie-site took us to the dedicated library. On entering, the children immediately rushed to the far corner, where



f: 4.3.20



f: 4.3.19

f: 4.3.21

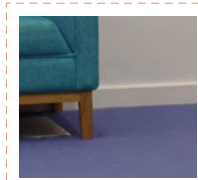
(Right, clockwise from top:
Library beanbags; Library
reading nook, roof detail;
Library reading nook, shelf
detail)

the beanbags are stored. Helping the others to pull them out, Kyra gleefully exclaimed: “Yay, I get my own bean bag this time... ..this is the first time I have ever got my own bean bag!”

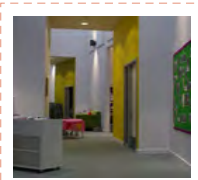
Kids Classic Beanbag - Trend. 100% Polyester. D65cm x H85cm 5.5 cu ft. (RUcomfy, n.d.)

As I held back, watching, the obvious joy found by the children in collapsing onto bean bags – some on their back, others on their front – instantly reminded me of School T, wherein children wrestled almost weekly for use of two (much older) beanbags, using them for all sorts of exploits. Sadly, the reason for conflict in School T appeared repeated here: while much loved, the beanbags were simply too limited in supply – a scarcity that the children highlighted themselves, explaining how their teacher had needed to introduce additional rules to ensure all got a turn.

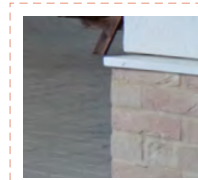
Next, we all squeezed into the library’s purpose built reading nook – a house shaped timber structure with bright yellow comfortable cushioned seating and matching acoustic panels to both walls and ceiling. Nestled within, the children demonstrated how the gaps between cushions and wall panels could be used to hide popular books, thereby ensuring their availability on the next visit, before going on to explain the system of ‘reading licenses’: what each different coloured level meant and how each dictated the kinds of books you were and weren’t allowed to read. Two things strike me here: first, is a genuine love for the library, with children expressing frustration at not being able to visit more often and according to their own will, either to get books or simply as a place to read and be. Second is the lack of ‘agency’ manifest in the questions raised: Why isn’t it bigger? Why can’t they choose any book? Why can they only visit the library at certain times? Why do ‘better’ readers get more access and choice?



f: 4.3.22



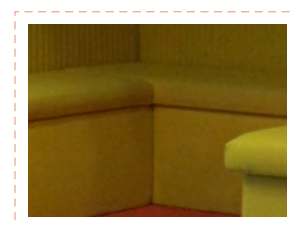
f: 4.3.23



f: 4.3.24

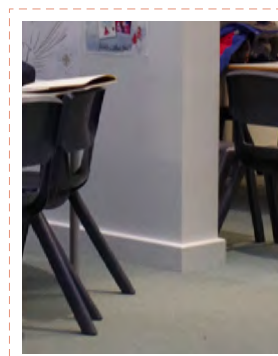


f: 4.3.25

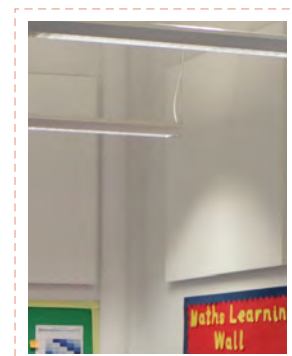


f: 4.3.26

(Right, clockwise from left: Library, floor / wall junction; Internal corridor detail; External wall junction, material detail; Library reading nook, seating detail; Acoustic panel detail; Classroom entrance detail)



f: 4.3.27



f: 4.3.28

Scotch Roman. Regular. Black.

The school’s material fabric – its textures, colours, shapes, and sound – were not at the forefront of discussions had but embedded within them: not the foci of emergent narratives but nonetheless key to the experiences they describe.

	Balance at 1 September 2017 £000	Income £000	Expenditure £000	Gains, losses and transfers £000	Balance at 31 August 2018 £000
Restricted fixed asset funds					
Transfer on conversion	9,218	-	-	-	9,218
DfE Group capital grants	1,024	200	(100)	-	1,124
Capital expenditure from GAG	0	-	(3)	10	7
Private sector capital sponsorship	71	250	(150)	-	171
	10,313	450	(253)	10	10,520
Total restricted funds	9,719	5,135	(4,980)	(310)	9,564
Total unrestricted funds	30	140	(15)	-	155
Total funds	9,749	5,275	(4,995)	(310)	9,719

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f: 4.3.48

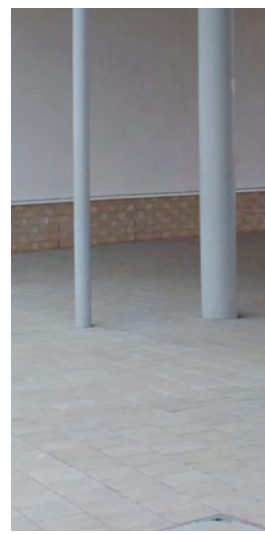
The texture, colour, and shapes of the nook’s cushions, for example, were not raised as isolated points – wrenched from their context –

Buzzifelt. FE-Curry 61. 100% Recycled P.E.T. Felt, latex backing. 1.000g/m2. 170mm x 6mm. >7.000 Martindale. EN 13501.1 + A1/ 2009 Class B-s1, d0. (Buzzi Space, n.d.)

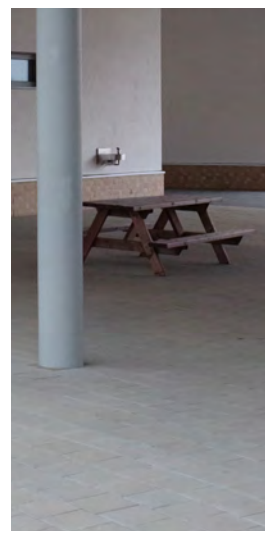
but emerged as key actors in the performance of hiding books: the issues at stake concerned not only the cushion’s material characteristics but the wider circumstances that drove and follow the hiding of books too. In this case, driving issues related to problems pertaining to access and storage, with the resultant act of hiding going on to prevent other children from accessing particular books, thereby escalating initial problems of use. As the nook’s material characteristics appear to be accomplice not cause in the performance of hiding books, potential solutions lie not in changing existing materials, although in cases this might be part of the solution, but in changing access procedures: how the process through which books are borrowed or their overall availability, for example.

Likewise, discussions about the issues of noise and acoustic pollution – raised during all three tours and in multiple sites – rarely focused on specific materials. But, as with the act of hiding books, the process of acoustic pollution is inseparable from the materiality of the spaces in which it emerges. Thus, arguments made for retrofitting doors to classrooms were not simply about the materiality of doors but what such materiality could do for

(Right, clockwise from top:
One of the 'wedge-shaped'
covered areas; Electronic
door magnets; Metal door
push plate)



f: 4.3.29



f: 4.3.30



f: 4.3.31



f: 4.3.32

‘use’ in working to control noise. Whereas in the example of hiding books, the issues raised required solutions that looked beyond the materiality of the nook itself, here solutions *predominantly* lie in the materials that might be introduced: whether in the form of doors or additional sound management structured such as acoustic baffles or paneling. I emphasize the term ‘predominantly’ because changes to practices of use, such as timetables, are also important in addressing acoustical issues.

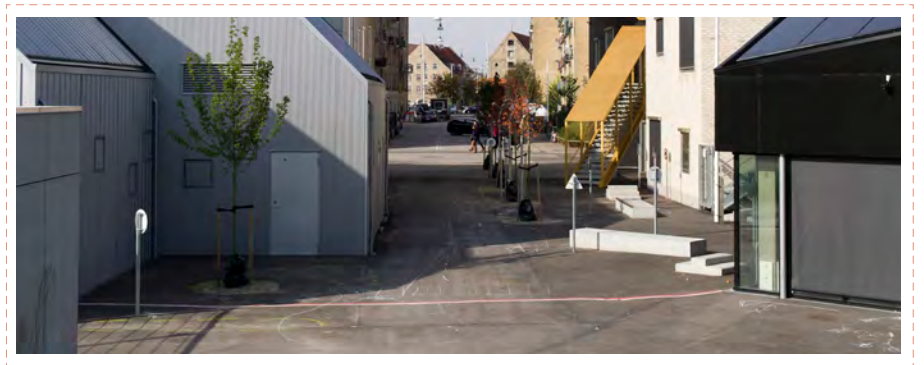
The Solo Baffle Wave is available in sizes 1800x600/300x40 and 1800x300/200x40 mm. The baffles are manufactured from high density glass wool, with Akutex™ FT surface on both sides. The edges are straight cut and painted. (Ecophon, n.d.)

Issues of use raised outside – during visits to the wedge-shaped gaps and central courtyard – require solutions that concern and go beyond materiality (new and existing) in close measure. For example: developing the central courtyard into a place that supports reading and relaxation will, on the one hand, necessitate change to existing rules and procedure concerning access and use: Who can use the space? When can it be used? What can it be used for? How is access and use managed? While on the other, it will need concurrent change to its material form: new structures that offer places to sit or lie, canopies that can provide shelter in rain and shade in sun, for instance.

Materiality and use, however, do not emerge and cannot be changed within a vacuum. Both are deeply entwined with debates that root far beyond the school’s physical boundaries. For example: when discussing my initial analysis (appendix D) with the whole class, one of the children, Adam, who was not involved in the workshops, explained his dislike for the metal push buttons that operate the school’s main reception doors.

RGL DDA Stainless Steel Vandal Resistant ‘PUSH TO OPEN’ Button (EBLPP04): Stainless steel vandal resistant DDA button including PBB03 back box to surface mount; Complies with BS8300; Easy clean; IP55 rated; Dimensions 114 x 114 x 36 (faceplate) mm (Advanced Access, n.d.).

Continuing, he described how he just wanted to open the door using its normal handle and could not understand why he was not able to do so. This narrative resonates with those pertaining to the school’s internal doors raised in workshop 01, in which frustration was expressed at the electronic locks and codes that physically



f: 4.3.33

(Right: Central open street of primary school, Copenhagen)

prevent their use of internal doors to the learning street, thereby restricting their freedom to access and navigate their school at certain times of day. These restrictions are of course rooted in issues concerning their safety and wellbeing. Yet the courses of action taken are decided through negotiations also held behind closed doors, figurative and real.

Such everyday moments of connection with materiality – the moment a warm palm touches the cold metal of a door’s push-plate on a winter’s morning, the moment a door gives slightly as it works to resist pressure applied by outstretched arms trying to push it open – cannot be separated from wider issues and debates on, among others, accessibility and security, which play out at local, national, and international levels: the relations are real and tangible. For example, take the case of four primary schools, the first two located in England, the second two in Denmark. English primary schools T and U (with which this doctoral research is undertaken) are both enclosed physically by metal fences. These barriers are specifically designed to separate: to keep those outside out, and those inside in. Yet they are also designed to camouflage this intent and suppress the issues and debates it is rooted in: painted dark green to blend with surrounding nature, made of mesh or slender rods rather than opaque panels in an effort to appear transparent. Out of sight, out of mind.

SR1 rated perimeter mesh fencing designed and tested to Secured By Design standards to ensure children are safe from potential intruders. All of Zaun’s school fencing can be provided with access control, perimeter detection, locks and CCTV monitoring systems (Zaun, n.d.).

In contrast, the two Danish primary schools do not have fences. This is despite their being located on tight urban sites abutted by both road and water (a canal). They are not without rules: you cannot take photos during hours of use, for example. However, the difference in intent is clear: the school belongs to its community and its materiality should reflect this, seeking to connect rather than divide.

While select, these examples demonstrate that debate is not fixed but subject to ongoing discussion, with different approaches taken globally. Why then do adult ‘gate keepers’ so rarely introduce children to them, let alone allow them to participate

as equal parties? Blaming ‘adults’ is an unfair simplification. In responding to Adam’s account of entering the school, I had asked their teacher (Sarah) to offer her thoughts on children being allowed to freely roam their school. Her response, which had at the time felt uncharacteristically flat, made clear that such freedom was unfeasible due to various safeguarding issues. This, she continued, was as much for their protection as it was as her own – her being in a position of ultimate responsibility. The tone of this response jars with our previous conversations held in private wherein she had expressed a longing for increased agency, a desire for the children to not be restricted in their inhabitation of the school. Despite this desire, she remains tied by the rules and processes of the system she weaves within. Like the children, she too is on the outside of negotiations that impact her on a daily basis. Contextualising her response re-frames it as an effort to at least shed light on that which underpins the issues raised. Even if unable to engage fully, surely it is better to expose negotiations that underpin our daily interactions?

If they remain hidden, how can they ever be challenged?

	Balance at 1 September 2016 £000	Income £000	Expenditure £000	Gains, losses and transfers £000	Balance at 31 August 2018 £000
Restricted general funds					
General Annual Grant (GAG)	100	8,800	(8,477)	(10)	413
Start Up Grant	-	-	-	-	-
Pupil Premium	-	170	(170)	-	-
Provision for boarding	-	-	-	-	-
Other grants	-	597	(546)	-	51
Pension reserve	(694)	-	(80)	(639)	(1,413)
	(594)	9,567	(9,273)	(649)	(949)

f: 4.3.49

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The emergence of human-material relations through narratives of use seems obvious, especially given that the prompt questions used asked how particular spaces were ‘used’ but did not specifically mention materiality. Why then had I thought material narratives would emerge in abstraction? Tracing back, three likely reasons emerge:

The first has its origins in workshops undertaken with School S towards the end of the 2016-17 academic year. For a number of reasons, including the children’s particular interest in Construction and Engineering, discussions had focused heavily on materiality. Although this focus was clearly entwined with narratives of use too – the preference for materials that would not decay over time and be resistant to vandalism, for example – such use narratives had often

germinated in discussions about a specific material – of timber, of metal, of concrete. In score VI, this particular relationship (of use narratives germinating in discussions of materiality) was suggested to be partially caused by my omission of key contextual information from the precedent project cards used to stimulate discussion. However, I think this prior experience of a particular relationship between materiality and use skewed my expectations in School U – contributing to this initial moment of surprise.

The second, perhaps most influential, reason for my expecting material narratives to emerge in abstraction is rooted in my previous training and practice as an architectural designer. As stories-so-far (to again use Massey's term (e.g. 2005)) we experience each new place through perspectives forged in the living of our past: each participant is the product of a unique set of experiences and has a unique perspective accordingly. Yet there is overlap too. For example: Individual participants have – to an extent – a shared experience of school U. Having all attended alternative primary schools previously, they also each hold individual experiences of these respectively. While I also hold some experience of school U, it is very limited and considerably different in nature. Likewise, while I too hold my own experience of attending primary school, this is also very different – it being a different school and in a different time.

Perhaps more important, is my more recent experience of architectural education, practice as an architectural assistant, and current work as an educational researcher. Through the former two I have experienced many schools (alongside other buildings), not through attending as a pupil but through the process of design. From arranging how a series of buildings sit on their site to modelling the precise curvature of a hand rail, such experiences took place across the full gamut of scale and encompassed both the abstract and tangible. I experienced bricks, for example, as the black space between white lines on a screen, as sensory objects in the hand, and as the building blocks of physical forms taking shape: in abstract space and sensory reality, in isolation and en masse. As an educational researcher, I have experienced different schools and pedagogical approaches, each further enlarging the context within

which I reflect on past experiences and experience new places. Combined with my experiences in design, this seems to make me more ‘able’ and likely to isolate elements to compare and contrast – be they to do with materiality or use. These experiences forge a very different perspective to those of the other participants, one which is perhaps more likely to consider issues of detailed design and materiality entwined with and abstracted from narratives of use. This, coupled to my limited experience of school U ‘in use’ (see below), accounts well for the difference between what I had expected and what actually took place.

	Balance at 1 September 2016 £000	Income £000	Expenditure £000	Gains, losses and transfers £000	Balance at 31 August 2018 £000
Restricted fixed asset funds					
Transfer on conversion	9,218	-	(673)	-	8,545
DfE Group capital grants	1,024	400	(200)	-	1,224
Capital expenditure from GAG	0	-	(6)	20	14
Private sector capital sponsorship	71	594	(323)	-	342
	10,313	994	(1,202)	20	10,125
Total restricted funds	9,719	10,561	(10,475)	(629)	9,176
Total unrestricted funds	30	279	(31)	-	278
Total funds	9,749	10,840	(10,506)	(629)	9,454

f: 4.3.50

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The third reason concerns the minimal time spent within School U, especially in comparison with schools T and S. In School U, fewer workshops were undertaken with a greater frequency reducing the number of hours I physically spent in the school. This had two primary effects: first, where my longer relationships with schools T and S had allowed my position as a visiting outsider to soften, the brevity of my visits to school U reinforced it. This lack of softening appeared to particularly manifest in my relationships with the children either side of workshops. Whereas in schools T and S I had often found myself chatting away before and after workshops, in school U I collected the children direct from their classroom and delivered them back – an efficient transition that allowed little opportunity for developing bonds. Importantly, although it is difficult to be sure, comparing the kinds of narratives that emerged in each school suggests a relationship between the nature of the bonds between myself and participants and the nature of emergent use narratives: where I had developed stronger personal bonds, emergent use narratives were correspondingly intimate. The second effect also concerns time: In school U the process of entering and

leaving the site was efficient, with any waiting done at the back of the classroom itself. In contrast, I spent many hours waiting in school S's reception, and a considerable amount of time in the playground, corridors, and reception of school T. This excess time, spent inside each school but outside of workshops, proved valuable as a means to gain a deeper understanding of the school and how it is inhabited, building a richer context within which events unfolding within workshops could be both experienced and understood.

So what does this mean in terms of methods used?

As in Score I, questions of method appear inextricable from those concerning the role of time and myself. Increasing the time available for each Smartie-visit – through either extending the length of the overall workshop or spreading each tour across multiple workshops – would surely ease the pressure to 'get results' fast, allowing room for proper reflection, essential if narratives not explicitly prompted or offered are to have any chance of surfacing.

However, such action does not negate the need to further develop the methods through which exploration is structured. Two approaches might be taken: first, some of the original method's specificity – lost during the process of simplification – should be re-introduced. For example: instead of starting from open questions – Where are we? How is this space used? – the original method begins by asking participants to make a specific observation. This observation is then used as the base from which a narrative can be developed, exploring the processes that lead to and from it. Tempering the extent to which the original method is adapted, following its processes more closely, might provide a better balance between openness and specificity. Second, the benefits and dangers of introducing materiality more explicitly should be considered. That material relations clearly emerged through narratives of use suggests that materiality does not need to be made more explicit. However, doing so might provide alternative departure points from which to strike out in exploration.

This Score suggests the researcher must pay attention to life as it unfolds, following different emergent threads wherever they may lead, regardless of whether they were expected or not. It suggests that such an approach is supported by – but not dependent on – methods that work to open up exploration and debate without jettisoning all structure, as well as a generosity of time that allows bonds to develop and life outside of workshop boundaries to be experienced. Like a symphony’s individual movements, method, time, and approach are entwined: although each can be developed, to focus on one at the expense of another is the true danger.

	Unrestricted Funds	Restricted General Funds	Restricted Fixed Asset Funds	Total Funds
	£000	£000	£000	£000
Intangible fixed assets	-	-	6	6
Tangible fixed assets	8	-	9,955	9,963
Current assets	270	544	164	978
Current liabilities	-	(80)	-	(80)
Non-current liabilities	-	-	-	-
Pension scheme liability	-	(1,413)	-	(1,413)
Total net assets	278	(949)	10,125	9,454

f: 4.3.51

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SCORE XI

PHYSICAL MODELLING

Score XI continues to explore the use of materials, this time through focussing on the processes of physical modelling undertaken.

Its *close* voice describes discrete episodes that unfolded within workshop 02.



f: 4.3.34

(Left: Sam's reading area,
Plasticine book detail)

Helvetica. Regular. Black.

Drawing on the narratives raised in workshop 01, workshop 02 sought to employ physical modelling as a means to discuss specific issues in more detail through developing proposals for how particular spaces within the existing school might be adapted, both in terms of materiality and use. To ensure participants had opportunities to discuss all issues raised, it was intended that the start of each session be dedicated to recapping all smartie-sites visited. Alternatively, participants would also be free to choose a different place or narrative altogether.

Scotch Roman, italic.

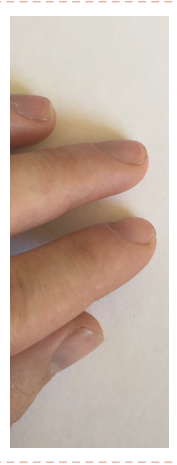
Sam – who was designing a reading area for the central courtyard – was struggling to get the Plasticine to form and hold the exact shapes of the realistic miniature books she was creating. Crouching down beside her, I listened carefully as she demonstrated the problem for me. Gently picking up the half-formed Plasticine, turning it around in my finger tips, I asked her thoughts on a number of possible ways forward: ‘how about if we fold it over to give the impression of a front and back cover?’ ‘What if we pinch along one edge to create a spine?’ ‘Should all be the same size?’ Cautious not to dictate, I proceeded to half-demonstrate my thoughts before passing the semi formed Plasticine back, allowing her to carry on as she deemed best.

Plasticine 24 Colour Max Set. Includes 24 brightly coloured sticks. Never dries out. Suitable for ages three and over. Product code: 588992. (Hobbycraft, n.d. -a)

Catching her sigh in exasperation, I got up off the floor, where I was in conversation with another child, and headed over to Sam’s side of the table once more. Attempting to show kindness rather than amusement with my smile, I noted that she looked like she was ‘struggling’ and asked if I could help. As before, she showed me the issue: this time to do with the process of laying lollipop sticks on to layers of Plasticine to create a circle of interlocking benches of different heights. The problem seemed relatively simple: over compressed, the Plasticine had very little give left, meaning that Sam had to press down hard in order to get both materials to bond. This worked fine when pressing in the centre of each stick. However, when doing so at each end, the stick kept flipping up,



f: 4.3.35



f: 4.3.36

(Left, from left: Sam's
reading area, timber bench;
My fingertips)

levering off the previous stick in the process. The frustration was quite understandable! Offering a second pair of hands, I suggested we try to soften the Plasticine through re-working it with our fingertips, warming it up, thereby allowing the sticks to be laid with less pressure. Starting from the circle's beginning we worked our way around, one holding the previous bench| lollipop stick safely in position while the other gently pressed the next into place. Success! Eventually all the pieces were laid. Happy, I left her to make a start on the next component in her fast developing proposal...

	Unrestricted Funds	Restricted General Funds	Restricted Fixed Asset Funds	Total Funds
	£000	£000	£000	£000
Intangible fixed assets	-	-	-	-
Tangible fixed assets	20	-	10,498	10,518
Current assets	135	185	22	342
Current liabilities	-	(87)	-	(87)
Non-current liabilities	-	-	-	-
Pension scheme liability	=	(1,054)	-	(1,054)
Total net assets	155	(956)	10,520	9,719

f: 4.3.52

Fig. contains public sector information licensed under the Open Government Licence v3.0.

Scotch Roman. Regular. Black.

Throughout the process of analysis the audiotapes recorded during each workshop have proven valuable. By slipping on my headphones, closing my eyes, and listening, I have been able to ‘re-visit’ places past. Not in a simple act of return: looking back from the present as if peering from outside in. But, following Massey (2005) and Ingold (2016), by weaving my many present life-lines with those captured in tape and memory – analytic acts that forge new places firmly rooted in the here and now. Yet these audio recordings have distinct limitations.

Sony PX440 Digital Voice Recorder PX series. Frequency response MP3 128KBPS 75-17000Hz. Battery life 67 Hrs 05 Min. Product code: ICD-PX440. (Sony, n.d.)

At times, limitations have been due to the physical distance between activity and device: as a machine the device had been physically unable to capture all that was said. Elsewhere, limits had manifest not in the recording of sound but in the struggle to separate different threads of conversation when listening back. Here, they concern that which the device cannot record, even when in close proximity: the many instances of physical human-material relations. The example of my helping Sam with modelling during workshop 02 exemplifies this limitation. Whereas the audio recordings describe a disjointed ‘back-and-forth’ between

us, my notes and memories focus on moments in which we shared connection through materiality: the sharing of warmth, held by freshly worked Plasticine passed between hands; the sharing of pressure, as one set of fingers resist the upward movement of a lollipop stick caused by the downward pressing of another's fingers on its opposite end; the sharing of coordination, as one holds the end of another lollipop stick steady, ready for the other to cut it.

Natural Wooden Craft Sticks. Length: 11.5cm (4.5 inches). 50 Pack. Natural Wood Finish. Can be glued and painted. Product code: 563045. (Hobbycraft, n.d. - b)

But why are these kinds of relation important?

However fleeting, mundane, or insignificant, the importance of such connections perhaps lies in what we say and share through them, rather than in that which they directly produce. For example, moments of physical connection, like those just described, might be understood as manifestations of commitment: my commitment to Sam and her aims manifested in my helping her to physically form and shape the materials, Sam's commitment to me manifested in her accepting, trusting, and aiding my actions. Through our shared physical work with the Plasticine and lollipop sticks we each said to the other 'I commit to supporting you'. Further, by joining with each other in action, we also joined with each other in experiencing the world. This is not to say we became one, we still experienced the world individually from our individual perspectives. Rather, within these moments of connection, our individual life-lines, each of which journey forth from individual pasts, became tightly woven in the our sharing of the present: while the Plasticine's warmth and malleability stimulated feelings and memories unique to each of us, we still shared in the biological event of our various senses responding to it. In such shared experiencing we shared too in the process of one another's growth. It is sharing in the process, not produce, of growth that I suggest lies the importance of shared physical endeavour.

Scotch Roman, italic.

As I had worked with Sam, a conversation had began to develop on the other side of the table about horses. Initiated by Claire, who had suggested designing stables, I found myself quite naturally drawn

Satellite photo of field removed for copyright reasons.
Copyright holder is Google and their data providers.

f: 4.3.37

(*Right:* Satellite image
of field in which I was
chased by a horse, age 10
(Google, n.d.))

in to it. Responding to their implicit contention that everyone likes horses, as well as to their explicit stories describing their own experiences, I offered my own memory of being chased, an event which had made me wary of horses ever since. Continuing, I suggested that I was unlikely to be alone in having such feelings and therefore, while proposing horses might be good for some, it might be considered negatively by others too. Concerned not to leave the discussion having only derailed it, I quickly asked: 'what other animals the school might keep' and how this might be managed? Would individual classes take turns to look after them? Would each class have their own?

Scotch Roman. Regular. Black.

Acts of sharing and commitment do not depend on physical material either. Materiality can be understood in a much broader sense: here, the material of stories and memories. Through sharing personal experiences and feelings with the children, I had sought to weave my life with theirs. It is from this woven position, from within the mid-stream (e.g. Ingold, 2018a), that I had then sought to steer discussion by positing possible paths. The opposite of this approach would have been to hold onto my past, to remain outside of discussion and, from high on the banks, to direct it away from horses without giving reason. Worse, I could choose to not engage at all, to ignore the idea during the workshop with the intention of disregarding it as infeasible later, in private and protected from challenge. The outcome of such approaches may not differ vastly: they may both result in discussions moving away from horses and onto the keeping of different animals. However, the process of reaching such an outcome from within, through sharing with and committing to one another, also acts to nurture relations of equality, support, and care between individuals. These kinds of relation are critical, not just to achieving outcomes rooted in shared understandings, but to ensuring all involved feel able to raise paths and narratives without fear of disregard, mockery, or reprisal.

Scotch Roman, italic.

I had been nervous about the suitability, variety, and quantity of the



f: 4.3.38



f: 4.3.39

(Left, from left: Blue felt used to represent water; Reading tunnel, exploiting the structural qualities of Plasticine and card)

materials I brought with me. Yet, although I had needed to ration Plasticine and keep a watchful eye over the consumption of glue, most had seemed well suited – or, at least, nobody asked for anything extra or seemed limited by that available.

Velo-set 110mm Wood Glue #321110. Ideal for all wood jointing. Conforms to B.S.4071. (E models, n.d.)

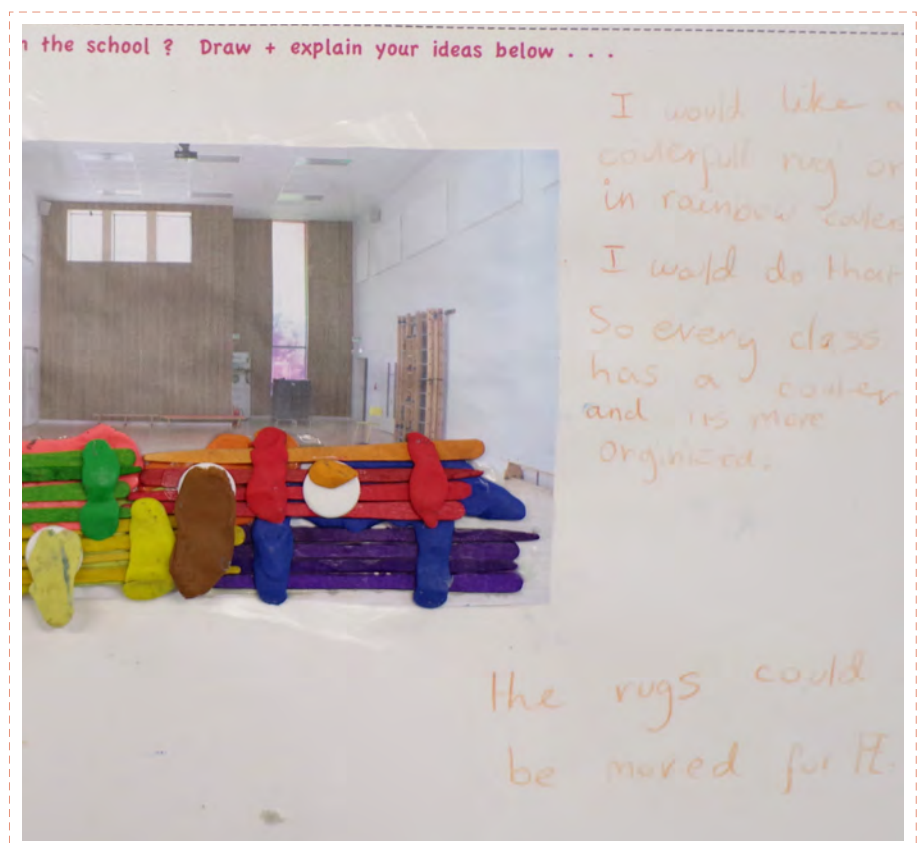
At times, materials seemed to be used as a way of increasing the ‘reality’ of designs: Tim and Fran choosing blue Plasticine and felt to represent water, selecting green card and felt, respectively, for grass too; Sam and Claire using lollipops and matchsticks for timber. At others, however, materials were apparently chosen for their own properties alone: Fran’s immediate grabbing of the cardboard tube, which – following some indecision – he simply glued to his base sheet with little prior consideration about how it ‘fits’ with his proposal. Likewise, the little coloured wooden squares were repeatedly requested with no intention in mind.

Mixed long,	Colour 14mm	Cube wide,	Wood 14mm thick,	Beads, hole:	Lead 5mm	Free, (X-TB115Y)	Dyed,	about (NBEADS,	14mm n.d.)
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Scotch Roman. Regular. Black.

On initial exploration, the diversity of proposals belies the limited palette of material ingredients available. This relation – between limited ingredients and diverse products – reminds me of that between the limited grammar, letters, and rules that comprise a particular language and the myriad of words, sentences, paragraphs, and stories that can be woven from them. In terms of materiality, construction, and the built environment, the same might be said of concrete, steel, glass, plastic, and timber. In the case of each, a particular set of properties brings forth *almost* limitless diversity in outcome. The word ‘almost’ is critical. Surely a limited palette of materials must create limits? Certain materials and therefore certain characteristics were not offered. There was nothing offered with the properties of a liquid: sand or clay, for example. Likewise, timber was offered only in manufactured form, in sticks of varying lengths and shapes as well as in cubes and spheres; twigs, bark, and leaves were not. How, then, did the characteristics of materials provided affect the nature of proposals made?

(Right: Claire's model of proposed assembly rugs, using Plasticine and timber lollipop sticks)



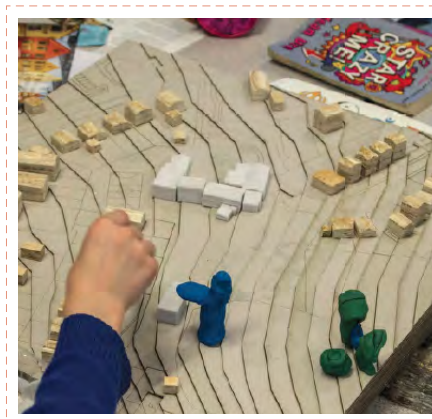
In many ways, the characteristics of materials provided varied hugely: some were soft and malleable, others hard and rigid; some were subdued, others vibrantly coloured; some could not be altered, others could be cut, folded, and scrunched repeatedly. Yet the majority shared overarching similarities too: they were all solid and dry, of similar scale, and – as discrete components – required connection (with glue or tape) rather than mixing (like paint or plaster). Additionally, participants had been provided with identical paper baseboards that offered little support and no context. Such common traits link proposals in a number of ways: they are of a similar scale and complexity, they share a common colour and textural palette, and, in the majority, they appear as collections of smaller items added together, floating in empty – euclidean – space.

	2017/18 £000	2016/17 £000
Net income/(expenditure) for the reporting period (as per the statement of financial activities)	54	9,852
Adjusted for:		
Amortisation [note 13]	3	-
Depreciation [note 14]	946	870
Capital grants from DfE and other capital income	(544)	(11,378)
Interest receivable [note 6]	(6)	(5)
Defined benefit pension scheme obligation inherited	-	834
Defined benefit pension scheme cost less contributions payable [note 30]	18	65
Defined benefit pension scheme finance cost [note 30]	22	22
(Increase)/decrease in stocks	1	(5)
(Increase)/decrease in debtors	4	(82)
Increase/(decrease) in creditors	(7)	87
Net cash provided by / (used in) Operating Activities	491	260

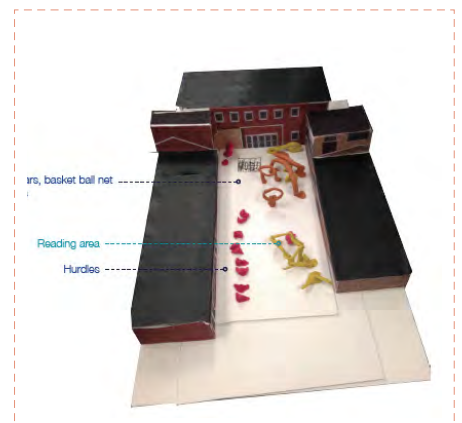
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Fig. contains public sector information licensed under the Open Government Licence v3.0.

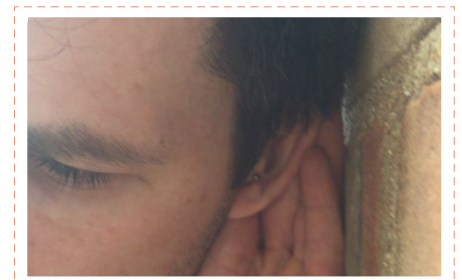
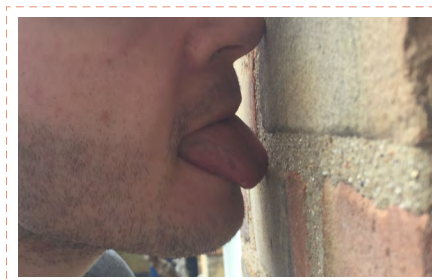
On first review, the focus of proposals appears diverse: rugs for the school hall, places for reading and relaxation, planted areas, streams and ponds, adventure courses, and equipment for games. Yet, common to these is the level or scale at which they are explored and presented. Presented as whole schemes, proposals appear diagrammatic in nature, almost solely concerned with perception by sight. While function is clearly laid out – the provision of benches for seating, objects for climbing, or a tunnel for shelter, for example – little is given away in terms of how these spaces might feel to inhabit. What might they be like to touch? How might they smell and sound? If you were to accidentally make contact with your tongue, how might they taste? The rug’s materiality, for example, in being made of coloured sticks bound with coloured Plasticine, describes the desire for multiple colours and hints at the want for a soft surface. Yet, beyond this, no clue is given as to how the rug might feel: what would it feel like to sit



f: 4.3.41
f: 4.3.43



f: 4.3.42
f: 4.3.44



(Right, clockwise from top left: Using a model with solid timber components and sturdy card base; Using a foam board model exchangeable parts; Listening to materials; tasting materials)

on, to run the tips of my fingers through its pile? Would it be soft or coarse? Would it smell? How about the edges, would there be tassels to play with? Would each class get one large rug, or would each have a collection of smaller ones? Likewise, areas of water and planting are represented with colours of blue, yellow, green, and red. But, beyond the textures of the materials used, the sensory representation does not go beyond sight: What sounds might the water make? Is it still, or does it gurgle with movement? How high are the plants and trees? Do they cast deep and flickering shadows? Do the plants smell sweet? Is their fruit to be eaten?

These observations do not devalue the proposals made but draw attention to the relation between the characteristics of proposals (in terms of their materiality and composition, as well as focus) and that of the materials provided to develop them. How else could things be done?

One approach might involve diversifying the range of materials offered, both in quantity and nature: providing stronger baseboards that allow for larger structures and wetter materials or offering them with different levels of context: pre-making existing elements of the school such as walls, roofs, and landscaping, for example. Workshops might also be structured around different scales of focus – from the strategic to the intimate – as well as the different senses: deliberately prompting the consideration of smell, touch, sound, and taste. An altogether different approach might explore what would happen if materials were treated as points of departure rather than ingredients: what if I were to ask participants to begin their proposals by selecting a material and exploring its specific characteristics through each of the senses? To use the different textures, sounds, smells, tastes, and sights, discovered as departure points for design?

	2017/18	2016/17	
	£000	£000	
Repayments of borrowing	-	-	Fig. contains public sector information licensed under the Open Government Licence v3.0.
Cash inflows from new borrowing	-	-	
Net cash provided by / (used in) financing activities	-	-	
25 Cash flows from investing activities			
	2017/18	2016/17	
	£000	£000	
Dividends, interest and rents from investments	6	5	
Proceeds from sale of tangible fixed assets	-	-	
Purchase of intangible fixed assets	(9)	-	
Purchase of tangible fixed assets	(391)	(1,578)	
Capital grants from DfE Group	200	1,224	
Capital funding received from sponsors and others	344	344	
Net cash provided by / (used in) investing activities	150	(5)	

In the end it is perhaps not about trying to incorporate all into one workshop. Indeed attempting to do too much in too little time was observed to cause problems (e.g. Score **IX**). Instead, these two approaches – the first employing materials as ingredients, the second treating them as points of departure – are two sides of the same coin. Rather than choosing one over the other it is about understanding the potentials and limitations of each so that they might be woven into a broader program accordingly. For example, in the case considered here, a workshop in which the sensory qualities of materials are explored might be included prior to a secondary workshop that focuses on developing physical proposals through the use of different materials. Additionally, either of these workshops might be elongated, perhaps split across multiple workshops, allowing more time to develop different ideas, as well as to get things wrong.

4.4 : KEY FINDINGS

throughout the
three spatial design
projects
undertaken + analysed

interrelations of
the following
key categories of

**THREADS/
TRAJECTORIES**

parents
me (researcher/
facilitator)
staff
participants
existing materials
animal
introduced materials
policy
standards
regulations
insurance
institution

HUMAN

+

NON-HUMAN

were experienced
to manifest + unfold
through the following
key categories of

**USE
PRACTICES**

USING MATERIALS / USING CARE / USING TIME

with
the following
key elements of

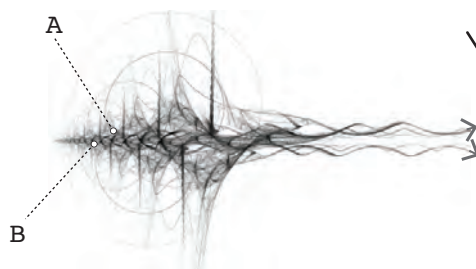
**METHOD
+ / or
METHODOLOGY**

MATERIAL / CARE / TIME

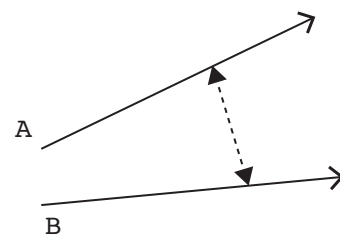
observed to
affect the

**NATURE
OF RELATIONS**

how they manifest,
how they unfold



(CORRESPONDENCE)



(INTERACTION)

KEY FINDINGS

So far, this part (III) has addressed the key research questions – ‘how do place negotiations manifest and unfold during spatial design with children’ and ‘how do aspects of the methods and approaches used affect how place negotiations manifest and unfold?’ – through constructing three detailed site-writings, documenting and analysing the three spatial design projects undertaken, guided by the lens of ‘human and nonhuman relating’.

Throughout these projects, human and nonhuman relations were experienced to manifest and unfold through the following key categories of *use practices*:

Using materials...

Using care...

Using time...

--- with ---

Materials, Care, and Time

experienced to be key elements of method and methodology affecting the nature of relations: how they manifest, how they unfold.

Next, in IV, I discuss and interpret these categories as key findings through recourse to the conceptual framework of ‘place negotiations’. In doing, I open out them out, tracing them through and grounding them within the three site-writings presented, exploring the interrelationship of literature and data.

Table 7-3 Comfort categories for cold draughts

Space/Activity	Minimum recommended comfort category for draught
Stores, corridors and circulation spaces that are not normally occupied spaces,	N/A
Areas where there is a higher than normal level of physical activity (such as sports halls) and sleeping accommodation	Category IV. Low air speeds required for Badminton competitions may necessitate ventilation systems being switched off
Toilets, circulation spaces and store rooms that are normally occupied	Category IV
Kitchen preparation areas	
Spaces with normal level of activity, including teaching, study, exams, admin and staff areas, prep rooms, practical spaces, and computer suites	
Spaces with less than normal level of activity or clothing, including sick, isolation rooms, changing rooms and gymnasias and dance and movement studios	
Special schools and resourced provision, where needs of pupils tend to be complex and varied, including pupils with physical difficulties or profound and multiple learning difficulties.	
Where pupils or adults may be wet and partially clothed for a significant length of time, such as swimming pools;	
Where young people may be in the water	

7.3 Local thermal discomfort from draughts

ESFA has developed the following guidelines to avoid the cold draughts that can occur from prevent windows from being opened in densely occupied classroom spaces and low-level air inlets.

7.3.1 Natural ventilation systems

The decision of whether or not natural ventilation is suitable should be based on the temperature difference on a cold still day during mid-season when the heating system is switched off. This assessment does not need to consider the ventilation system's temperature. However, higher air speeds from natural ventilation can be a nuisance if they blow directly on occupants.

Table 7-2 Recommended operative temperatures during the heating season measured at seated head height in the centre of the room

Space/Activity	Normal maintained operative temperature during the heating season - °C	Maximum recommended heating season occupant temperature
Stores	5°C	N/A
Areas where there is a higher than normal level of physical activity (such as sports halls) and sleeping accommodation	17°C	23°C
Toilets, circulation spaces and store rooms that are normally occupied	17°C	24°C
Kitchen preparation areas	20°C	N/A
Spaces with normal level of activity, including teaching, study, exams, admin and staff areas, prep rooms, practical spaces, and computer suites	20°C	25°C
Spaces with less than normal level of activity or clothing, including sick, isolation rooms, changing rooms and gymnasias and dance and movement studios	21°C	
Special schools and resourced provision, where needs of pupils tend to be complex and varied, including pupils with physical difficulties or profound and multiple learning difficulties.	23°C	
Where pupils or adults may be wet and partially clothed for a significant length of time, such as swimming pools;	23°C	
Where young people may be in the water	25°C	

5 Discussion

Chapter 5 is in three parts:

In response to the two primary research questions, I begin in 5.1 by discussing how place negotiations are experienced to manifest and unfold within and beyond the spatial design workshops undertaken, including how *use practices* of *material*, *care*, and *time* shape and are shaped-by the nature of human and nonhuman relations.

Next, in 5.2 I consider what this might mean in relation to the overarching research question, posed at the outset of chapter 2.

Finally, I examine the value and challenges of using a design anthropological approach to undertake research concerning the relationship between education and the environments it unfolds in, as well as educational research more generally (5.3).

5.1 Negotiating place through practices of use: how uses of *material, care, and time* shape and are shaped-by the nature of relations

This section considers the study's findings in relation to the literature (including the structural concepts of 'minor' and 'major'), through the lens of the two primary research questions: '*How do place negotiations manifest and unfold during spatial design with children?*' and '*How do aspects of the methods and approaches used affect how place negotiations manifest and unfold?*'

Although here organised in three meditations, in life uses of each are not separate but entwined, with each shaping and being shaped by the other two in varying mixes.

5.1.1 Meditation 01: using 'materials'

Relating though material use: introduced and existing

Throughout the three accounts offered, materials were found to perform a central role in place negotiations, with human and nonhuman relations experienced to manifest and unfold through a myriad of material use, both within and beyond the spatial design workshops undertaken.

Each of the spatial design workshops undertaken involved the use of dedicated materials, introduced by me specifically for the purposes of the workshop's undertaking. In some

workshops such kinds of use concerned materials designed and introduced purposefully to support engagement with and use of other materials. For example: in school T activity sheets were purposefully designed and introduced, their use intended as a means to stimulate and support exploration of the School House Garden (Score II); in schools T and S, precedent sheets detailing various material, atmosphere, and project examples were purposefully designed and introduced, their use intended to stimulate and support the development and discussion of ideas (Scores III and VI). In other workshops activities centred on the use of introduced materials themselves. The use of various materials for making models, for example, including: different uses of plain and coloured papers, cards, felts, and plastics; match and lollipop sticks; plasticine; string and wool; glue, Blue-tac and Sellotape; scissors, knives, pens, and pencils, to name but a few (Scores VII and XI). Additionally, existing materials were also used in a multitude of ways, both within and beyond workshops. For example: the use of floors, chairs, bean-bags, sofas, and tables to sit, stand, lie, and work on, as well as to hide under, to form the landscape of invented games, as well as to create dens; the use of paths, painted lines, short-cuts, muddy edges, windows, gymnastic equipment, doors, push buttons, keys, and codes to navigate and move around within a given environment; the use of fallen sticks to throw, to fight, to dig, to build, to demarcate; the use of benches, trees, railings, fences, balustrades, ledges and window sills to climb up, as well as to jump off and swing from (e.g. Scores I, II, IV, IX and X). Although such examples are readily observed in our day-to-day lives, discussion concerning the everyday use of materials is less usual within literature concerning school design. In demonstrating the potential of attending to everyday material use, the empirical research undertaken highlights the dangers presented by this paucity, instead suggesting that “to follow the materials” is essential (Ingold, 2011, p. 213).

Material qualities as central to shaping the nature of relations

Whether purposefully introduced during workshops or already existing (man-made and natural), a material’s particular physical qualities were experienced to perform a central role in shaping the particular nature of relations generated and supported through its use. For example: in acts of support (e.g. in the use of activity sheets for exploring the School House Garden),

performance (e.g. in the use of school U's library's reading nook to 'perform' how favoured books are hidden), navigation (e.g. in the use of doors and access codes), repurposing (e.g. in the use of sticks to dig with, balustrades to slide down and jump off, as well as trees to climb), or other.

Thus: to understand why the climbing of trees was so coveted in school T while the dedicated climbing wall went ignored (Score IV) it was necessary to consider the particular material qualities of each and how these shaped use (here, use through climbing). Alive, a tree's timbers sway, creak, and crack in relation to forces that unfold around and through them; their branches bowing to the force of the wind's currents or flexing under the load of a child's weight. Growing amid such forces, the materials that constitute trees are in constant flux: branches at first weak become strong with age; others offer stability yet, with age, become rotten, eventually failing and falling, the wounds left going on to form hollows or burrs that might once again find use as holds for fingers and feet. Moreover, the use-ability of a particular branch is not knowable through sight alone. One must test carefully, introducing force slowly, feeling for the nature of response and co-responding accordingly (e.g. Ingold, 2010, 2016). In contrast, the moulded resin holds of the climbing wall were designed to resist environmental forces, including those applied by users. Bolted fast, holds might be turned, or their positions exchanged. However, this requires deliberate action that was not undertaken.

On one level, the difference between these two kinds of use can be readily articulated through Ingold's twin theories of relating: whereas the kind of relations forged between humans and material during tree climbing unfolded according to the principles of 'correspondence', those forged in traversing the dedicated climbing wall were of 'interaction' (e.g. 2016). However, zooming in and examining material use at a finger-tip level muddies the distinction. Even given the known strength and fixity of bolted holds, the user had still to contend with forces of, among others, gravity, weather, and friction: the flex of soft soled trainers, wet mud perhaps still adhered to their base. Likewise, overtime and with repeated use, the once coarse surface

of resin-holds became smooth and once tight bolts began to give until, eventually, fingers and shoes slipped, holds span. Examined at this level, the ways in which relations unfolded exemplify Ingold's theory of 'correspondence' in both cases. Although this might suggest support for Knappett's argument that 'correspondence' and 'interaction' can be used interchangeably to explain the nature of relations dependent on the scale (2011), I argue it in fact suggests the opposite: that doing so would work only to veil what is really going on.

This study maintains that human-material relations manifested and unfolded according to the principles of correspondence in both cases, regardless of scale. However, the dedicated climbing wall was designed and constructed through the mode of intention. That is, it was designed in a mode that understood climbing as an activity decided in the mind of the would-be climber and was furnished with the tools needed to climb accordingly: a variety of holds fixed at a variety of angles on a flat surface that allow off-the-ground progression from A-B via numerous (but limited) means based on decisions intentionally made by the climber (Ingold, 2016). In use, the material qualities and relations brought about by this intentional mode of design and construction acted to limit the scope of correspondence: the extent to which the user and material constituents of the wall were able to co-respond within given physical limits. Without a spanner, the children could not apply enough force to move holds by hand, for example. Whereas the materials of trees "flow, mix and mutate" independent of interventions by a third party, the materials that constitute the climbing wall depend on outside intervention to restore their flow (Ingold, 2011, p. 30).⁷⁶

In sum: the difference experienced between using trees and using the dedicated wall to climb lies not only in the particular material qualities of each but in the differences in nature of the materials' wider relations too (physical and nonphysical). Moreover, as the research carried out in this study demonstrates, it is these wider relations that have the strongest affect on the

⁷⁶ Of course, just because trees haven't been 'intentionally' designed doesn't mean they are not subject to other relations that might work to limit the scope of correspondence between themselves and users.

nature of relations that unfold through use. To identify the special climb-ability of trees as inherent to their ‘materiality’ and to exchange the resin holds of the climbing wall for tree branches accordingly would be to see only half the picture. Indeed, school T’s adventure course comprises tree branches (albeit shaped) and metal chains. It was the elements constructed from metal chains, those that sway and respond in ways unpredictable, not the fixed wooden beams and posts, that experienced most use.

Importantly, this is not an isolated example but a relationship – wherein intention works to limit correspondence – that is seen at work throughout the three accounts. For example: the activity sheets introduced as a means to stimulate and support exploration of the School House Garden in School T (Score II; Appendix B) were intentionally designed by me to direct and shape use (in the mode of exploration). The same is true with concern to the system through which participants were to articulate the positives and negatives of precedent sheets detailing various material, atmosphere, and project in schools T and S (Scores III and VI). In these cases, the results of my intentional approach to the planned activities (the activity and precedent sheets produced) were not so determinate that they could not be ignored or adapted. However, in others – in the intentional introduction of particular materials for modelling (Scores VII and XI), for example – adaptation was not possible, with the only alternative response being choosing not to participate, a response experienced in all accounts (e.g. Scores III and VII). Further, where undertaken, acts of transgression against my intentions still relied on an attentional response from me in my role as workshop facilitator. This raises issues of power that are addressed in Meditation 02: using *care*.

The need for a relational lens

This comparison, between the use of trees and the use of a dedicated wall to climb, together with the wider analysis this example is representative of (Scores I - XI), supports arguments for materials and material use to be understood and explored through a relational lens. More specifically, a lens through which material qualities are not conceived as “fixed” properties of objects – as object materiality – but as “processual and relational” “constituents of an

environment” in constant flux. An environment wherein the particular trajectories of materials – of their “substances, media, and the surfaces between them” (Ingold, 2011, p. 30) – cannot be isolated from the wider relational currents within which they “*occur*”⁷⁷ (*ibid.*, original emphasis; also, Knappett, 2011, Jones & Boivin, 2010; Malafouris, 2013; Massey, 1991, 2005; Massey, Human Geography Research Group, Bond, & Featherstone, 2009; Warburton & Massey, 2013).⁷⁸

As this study demonstrates, taking a relational lens enables understandings that go beyond the superficial to explain not simply how and why materials are used, but how use practices are shaped by and shape the wider relational currents (human and nonhuman) within which they manifest and unfold.

Material use as political

The accounts presented illustrate how exposing and seeking to engage with the wider relations within which material and material use occur reveals the power coursing through such relations, as well as its unequal distribution. This supports Massey’s contention that to negotiate a here-and-now (through challenging intentional ways of use) is to challenge existing distributions of power (Warburton & Massey, 2013). In short: material use is inescapably political (Massey, 1991). For example: in the case of door access control measures, the uses of materials that comprise the various control systems used – the mechanical codes (school T), the electronic locks (school T, S, U), the door operation buttons (school U) – are rooted in human and nonhuman (e.g. policy and insurance) relations beyond and hidden from the sphere of everyday life. Their occurrence was brought about by negotiations beyond the permitted knowledge and control of the majority of users (especially children), who are directed to accept

⁷⁷ The term ‘occur’ is used deliberately by Ingold as an alternative to ‘exist’ in order to reinforce the dynamism of *materials* over the stasis of *materiality* (Ingold, 2007).

⁷⁸ The conceptualisation of “[t]hings are alive and active not because they are possessed of spirit [...] but because the [material] substances of which they are comprised continue to be swept up in circulations of wider relations” (Ingold, 2011, p. 29) is counter to that of the world as a network of objects more often found within material culture (pp. 26-27).

them and to not question their occurrence nor resultant use (Scores I and X). On one level, the scale of power inequality was observed to prevent children from questioning or engaging in negotiations as to the use of such measures, let alone ask for their removal. However, zooming in reveals once more that the particular material relations of an access control measure also had an effect on practices of use. For example: the electronic systems required the use of a programmed fob or card, tapped against a solid surface. Gaining access required children to steal a relevant pass, effectively preventing any attempt at transgression. In contrast, the mechanical codes required a memorised sequence to be input physically. This physical engagement could be witnessed (an ‘offence’ less serious and harder to prove). Moreover, the mechanical codes had a limited number of possibilities; it was possible to chance on the solution and doing so allowed immediate access. Conversely, even if the code of an electronic system was discovered (it wasn’t), the means to input it would have required a relevant fob or card and programming equipment. The materials of each were similar: a combination of metal and plastic. It was therefore the interrelations of these materials and the use practices such interrelations supported or prevented that resulted in the nature of use relations – whether they unfolded according to the principles of correspondence (mechanical systems) or interaction (electronic systems).

Materials as trajectories: stories-so-far

Conceptualising material as being always in flux – flowing, mixing, mutating – highlights their temporal dimension. This supports Massey’s argument that nonhuman ‘trajectories’ are also ‘stories-so-far’; that, like humans, they too unfold through space-time, which, through unfolding, they create and expand (i.e. space-time is not an empty container ready for filling) (2005; also, Warburton & Massey, 2013). The accounts presented suggest the need for and potential of such an understanding is two-fold: First, if materials do not exist but “*occur*”⁷⁹ (Ingold, 2011, p. 30, original emphasis) then it must, consequentially, be possible to expose, question, and – where possible – engage with those negotiations that underpin their

⁷⁹ I.e. if materials are understood to constantly produce and be produced by wider human and nonhuman interrelations.

occurrence. For example: while the occurrence of access codes cannot be overturned at the level of everyday use, engaging with the policy and economic debates within which they occur offers a means through which their future trajectories might be challenged and shaped. The ability to exploit this means is of course entirely subject to existing power distributions. It is therefore the capacity of spatial design to highlight such everyday issues, not necessarily directly change them, that is potentially powerful. Second, a conceptualisation of materials as always on the move is essential for designing material things (e.g. climbing walls, schools) and activities (e.g. exploring, modelling) that support kinds of use that unfold according to the principles of correspondence. For example: a relational consideration of the future use and use-ability (including subversion and adaptation) of materials during the planning of model-making workshops might avoid the limitations on correspondence brought about through material choice – the lack of any modelling materials with liquid properties or the failure to introduce strong enough base boards, for instance (Score XI; also, Score VII).

The role of *care*, and *time* in shaping material use

In sum: this study illustrates the capacity of material to support use practices that unfold according to principles of correspondence or interaction. It also demonstrates that it is the wider relations within which materials occur and are used that has the greatest affect on shaping the nature of relations that manifest and unfold through their use. Through doing, the accounts support Massey's call for a relational conceptualisation of space (e.g. 2005) and Ingold's respective theories on materials (e.g. 2011) and relating (e.g. 2010), including the need for and potential of 'correspondence' as a way of relating (e.g. 2016). The accounts also show how material use is inescapably woven with use practices of *care* and *time*. It is to these I turn next.

5.1.2 Meditation 02: using 'care'

Uses of care were experienced to perform a central role in shaping the nature of human and nonhuman relations – and thus, by extension, of place negotiations – throughout the three accounts offered, both within and beyond the spatial design workshops undertaken. More

specifically, uses of care were experienced to be the products of multiple ‘orientations of care’, as well as of the interrelations between them. Furthermore, orientations of care were themselves experienced to be the product of their ‘origin’ – who or what is doing the caring and why – and ‘direction’ – for whom or what ‘care’ is foremost concerned with. Understood thus, individual ‘orientations of care’ are analogous to Massey’s concept of ‘trajectories’ (e.g. 2005; also, chapter 2), which is used hereafter, as well as to the threads that compose the meshwork of life described by Deleuze and Guattari (e.g. 2004) and Ingold (e.g. 2010).

Trajectories of care as central to shaping nature of relations

Trajectories of care – in particular, their interrelations – were experienced to perform a central role in shaping the nature of human and nonhuman relations throughout all scores presented. For example: the ways in which human and nonhuman relations unfolded during explorations of the School House Garden (Score II) can be conceptualised as manifestations of and shaped-by uses of care, with each use of care in-turn a manifestation of and shaped-by interrelations of multiple care trajectories (orientations). The activity sheets purposefully designed and introduced as a means to stimulate and support exploration of the School House garden are a manifestation of care trajectories that originated in and were directed by my dual-position as an educational researcher and designer (Score II). In this dual position I wanted participants to explore space first hand on their terms but in a way that created a clear and multi-levelled recording of their explorations, thereby ensuring the production of clear data beneficial to *my* wider objectives. However, this understanding of exploration – underpinned by *my* trajectories of care – conflicted in its interrelation with the ways in which participants understood the purpose of exploration – underpinned by *their* care trajectories. Amid unfolding life, I had had to make a choice. On the one hand, I could have ‘held fast’ and insisted the activity sheets be used as intended – prioritising *my* care trajectories. Or, I could have ‘flexed’ – prioritising *participants’* care trajectories. Of course, life is not black and white. My decision to flex – and, more particularly, the way in which this flexing manifested and unfolded – was the product of a complex tangle (or knot) of care trajectories. Further, this knot was hierarchical in structure: although I had been willing to de-prioritise trajectories originating in and directed by my

intentional aims as a researcher in order to prioritise participants' trajectories instead, allowing them to explore in their own ways and on their own terms, this re-prioritisation – or flex – had limits. I had not, for example, been willing to de-prioritise care trajectories originating in my position as a responsible adult and directed by my concerns for (1) the participants' safety during explorations and (2) the school and staff in their respective positions of responsibility.

It is the particular structure of this tangle (or knot) that I suggest was central to shaping how human-material relations manifested and unfolded during explorations: in shaping the particular nature of explorations into the shed, breezeblock, cat flap, and manhole, for example (Score II). Further, the accounts show how being attentive to how different care trajectories interrelated and responding in ways that flexed worked to shape the nature of relations between humans too. For example: through my attentive response to conflicting care trajectories during garden explorations, my relations with participants unfolded in ways that can be described as 'correspondent' rather than 'interactive' (Gatt & Ingold, 2013; Ingold, 2016). In other words, it was through exploring *with* participants – through our correspondence in the performance of exploration – rather than my collection and processing of information generated by participants under instruction, that enabled genuinely new knowledge to be generated. This, I suggest, is what Michael Billig refers to when he writes that new knowledge grows not from "special method [...] but from the voices of ordinary people in conversation" (Billig, 1988, p. 162, as cited in Till, 2005).

The ways in which care trajectories and their interrelations shaped the nature of negotiations in the above example – including through material-use – are representative of those experienced throughout the three accounts. For example: through the use of precedent sheets detailing various material, atmosphere, and project examples in Schools S and T (Scores III and VI); through the use of mind-maps and drawing in School T (Score III); and through the use

of question prompts and time in School U, workshops 01 (Score IX); as well as through ‘battles for the code’ (score I) and through ‘refusing and giving piggy backs’ (Score IV).

However, in the same way that understanding material-use based on material qualities alone would be to see only half of the picture, particular care trajectories – including their origins and directions – were also experienced to manifest and unfold within wider relations, themselves manifestations of and shaped-by further care trajectories. For example: in the case of exploring the School House garden, the particular tangle of care trajectories responsible for my decision to stop participants from exploring the manhole was in part formed by trajectories that originated in and were directed by principles that neither myself nor participants could prioritise or de-prioritise alone. Thus, in the same way that an intentional mode of design was found to limit the scope of future correspondence in the case of using the dedicated climbing wall (Mediation 01), the natures of wider relations (shaped by uses of care) were found to have a limiting affect too. And again, it is these wider relations that this study suggests have the greater affect on the nature of relations that unfold through uses of care within particular episodes of life.

This particular conceptualisation of care-use adds weight to the argument for a relational lens, made in Mediation 01 (e.g. Massey, 2005). It also suggests that, regardless of the limitations imposed by wider currents, the mode of care – that is, whether one is alert and responsive to conflicting care trajectories or closed to them – is central to shaping the nature of relations that manifest and unfold through uses of care. The two contrasting modes identified – ‘holding fast’ and ‘flexing’ – support and can be conceptualised through the respective concepts of ‘intentionality’ and ‘attentionality’ put forward by Ingold within his discourse on correspondence (2016). However, whereas Ingold only explicitly refers to ‘practices of care’ as a mode of attention, the accounts presented suggest that care practices can in fact be underpinned by attentionality *or* intentionality – the third element of the respective triads ‘correspondence’ and ‘interaction’ (2016). Thus: to care is not enough, it is *how* we care that matters.

In showing how the nature of relations is shaped within action, albeit within wider limiting currents, the three accounts presented also support Manning's contention that the 'key' of relations (minor/ major – correspondence/ interaction) cannot be set in advance but rather emerges through doing (2016). It is to how a mode of care underpinned by attentionality – thus, a minor mode – was operationalised within action that I now turn.

Operationalising a weak, attentional mode of care

Throughout the three accounts, modes of care appeared to be operationalised in two ways: (1) through the nature of a project, workshop, or activity's purpose; and (2), through decisions made during the course of their undertaking. Importantly, it is the latter of these ways that the accounts suggest is key, with the making of decisions experienced as able to operationalise attentional (minor) modes of care within intentional (major) purposes, as well as to operationalise intentional modes of care (major) within attentional (minor) purposes.

For example: the overarching purposes of the spatial design projects undertaken in schools T and U can be framed as intentional and attentional respectively. In school T, the overall project was conceived and introduced as an opportunity for participants to engage with the ongoing design of the School House and its garden. The major decisions were made prior to inviting participation: to renovate the School House, for the After School Club to relocate to it, the budget, the extent of works, for example. Despite being the main users of the completed project participants were, in reality, being invited to participate in the design of its external space only. In this way, it was a project concerned with designing solutions for problems already defined by others, with no real say over the selection or implementation of any final solutions developed (Account 01, Preface; Score III). Conversely, the spatial design project undertaken in School U was foremost concerned with (1) identifying problems and possibilities and (2) opening them up. Rather than departing from a specific point within an already constrained process, it took as its starting point the everyday life of the school. Participants were not invited into a context already defined and shaped by others but invited to develop their own context through identifying locations within the school at random, exploring them

in person, and developing possible design ideas grounded in problems and potentials identified by them, not others.

The differences between the natures of these overarching purposes – the one intentional, the other attentional – offers an explanation for the differences in the overarching nature of participation experienced in each: why it was that participants had appeared to willingly engage with the various activities undertaken within workshops in School U but had constantly sought to adapt, subvert, and not-participate in activities offered within workshops undertaken in School T.⁸⁰ In other words, the use of ‘false’ problems within school T could only offer participants ‘false freedoms’ which were quickly challenged (e.g. through adaptation and subversion) or ignored (e.g. through forms of non-participation) (Deleuze & Guattari, 1988, 2004; Manning, 2016). In this way, the nature of spatial design project 01’s overarching purpose operationalised intentionality (major) as the default mode of care from the start.

However, this is again only half the story. The scores presented describe examples of attentional and intentional uses of care throughout the spatial design projects undertaken in School T (Scores I-IV) and U (Scores IX-XI). For example, my responses to participants adaptation and subversion of intended activities in exploring the garden (Score II), discussing precedent sheets (Score III), and developing design ideas (Score III), as well as in battles for the code and the offering of piggy backs (Score IV) exemplify modes of care that are attentional (minor). Likewise, my actions in trying to maximise knowledge generated during explorative walks (Score IX) exemplify a mode of care that is intentional (major). Through demonstrating how the default mode of care can be overturned through ‘the making of decisions’ during the doing of activities, these examples suggest it is the latter that is key to operationalising a particular mode of care. In doing so, they support Biesta’s argument that, irrespective of methods,

⁸⁰ There are of course other potential factors at work too: that workshops in School T were undertaken within the After School Club, away from the ‘realm’ of their normal teachers, while workshops in school U were undertaken within the structure of the school day, for example.

making ‘judgements’ is central to the practising of education “in weak and existential ways” (2013/2016, p. 154; also, 2006/2016, 2009; as well as Ingold, 2018a; Masschelein, 2010).

In sum

This study suggests that ‘care’ (understood as a complex and dynamic tangle of care trajectories) has the capacity to support practices that unfold according to principles of correspondence or interaction. The former, through operationalising a mode of care that is attentional. The latter, through operationalising a mode of care that is intentional. It also suggests that – as with material-use – it is the wider relations within which trajectories of care occur and entangle that have the greatest affect on shaping the nature of relations.

A relational conceptualisation of caring is also developed by Nel Noddings in her theory of care, set out in *Caring: A Feminine Approach to Ethics and Moral Education* (1984) and subsequently developed in response to its critics⁸¹ through revised editions (1984/2003, 1984/2013) and future texts (e.g. 1990a, 1990b, 1992, 2002, 2010).

For Noddings, ‘caring’ is “a way of being in relation” rather than a series of “specific behaviours” based on pre-determined rules or principles (1992, p. 17). Understood thus, caring – that is, the development and maintenance of caring relations – depends on ongoing contribution from *both* the “one-caring” and the “cared-for” (1984/2013, p. 19) and comprises three principle elements. *Engrossment* requires the one-caring not to put themselves in the cared-for’s shoes but to receive the cared-for into themselves and to “see and feel *with* [them]” (p. 30, my emphasis). *Motivational displacement* follows, entailing a “motivational shift” whereby the one-caring’s “energy” is shared with and put “at the service of” the cared-for (p. 33). *Reciprocity* refers to the cared-for’s contribution, which completes the caring relation in

⁸¹ Critique has focussed on, among others, issues of autonomy, gender, power, justice, and distance (e.g. Card, 1990; Davion, 1993; Hassan, 2008; Hoagland, 1990, 1991; Houston, 1990; Strike 1990).

accepting and acknowledging the care given through some form of “detectable” response (Noddings, 2005; also 1984/2013 pp. 69 - 74).⁸²

Understood in its evolved form, Noddings’s theory appears supportive of Ingold’s conceptualisation of care as a mode of attention and of caring relations as underpinned by the theory of correspondence (2016; also 2019). It therefore potentially offers an alternative lens through which care-use within spatial design practice might be further examined. However, this study’s finding that ‘caring’ can be underpinned by modes of ‘attentionality’ *or* ‘intentionality’ suggests the need for further critical examination of care-use and the nature of care – within spatial design practice (6.3) and beyond it.⁸³ This work would contribute to both Noddings and Ingold’s understandings of care, as well as to the wider care and ethics literatures.

5.1.3 Meditation 03: using ‘time’

Available time: time to explore, time to experiment

The amount of available time within workshops, especially within the doing of a particular activity (e.g. modelling), was found to play an important role in shaping the nature of relations and thus negotiations.

Exemplifying this are the differences between relations that manifested and unfolded through physical modelling in School S, within workshops 03 and workshops 04, 05, and 06 (Score VII). In workshop 03, participants were under pressure to develop loosely formed and defined concepts – their incompleteness itself a product of a lack of available time in previous workshops – into complex three-dimensional models. Further, they were asked to do so with a

⁸² This is a simplification of Noddings’ work, necessary within the study’s constraints.

⁸³ Although I only reference Noddings and some key critiques of her work herein, the further work called for should draw on and seek to advance the broader body of established literatures on care and ethics.

limited range of material and within a very tight time frame (much tighter than I would allow for myself). The result was experienced to manifest as a dogged focus on constructing, rather than numerous explorations into how fledging ideas might be taken forward in different directions (as had been intended). Conversely, in workshops 04, 05, and 06, a more relaxed time frame was experienced to manifest in an altogether more attentional approach to modelling, wherein individuals used the materials (including those of the shared physical model) as a medium through which to develop threads of thought still in flux in ways that were not so much iterative but “itinerant” (Deleuze & Guattari, p. 410; also, Ingold, 2010, 2011); working at once individually and in collaboration, freely mixing writing with drawing and modelling, allowing different explorations to shape and be shaped by one another. Whereas workshop 03’s lack of time appeared to forge and drive relations – whether between humans, materials, or humans and materials – to unfold according to the principles of interaction; the ample time available during workshops 04, 05, and 06 worked to generate and support relations of correspondence.

This does not simply equate to more time being better. Instead, it is the relationship between available time, the scope of an activity, and the freedom to decide one’s own actions in doing that appeared to be key. Thus, it was not the amount of available time in workshop 03 that was problematic but, when taken in relation to the activity’s purpose, that it allowed only for the application of pre-known methods; for the static repetition of action. This is illustrated through one participant’s repeated attempts to fix a piece of glossy card into a tube using Sellotape, despite the method proving inadequate from early on within his efforts (Score VII). In contrast, the ample time of workshops 04, 05, and 06 afforded participants opportunity to explore (individually and together) different ways of using materials, as well as different ways of approaching a problem. In other words, for the “honing of repetitive movements” while at once encouraging experimentation as to “what else those movements can do” (Manning, 2016, p. 40). This is the difference between ‘method’ and ‘technique’ described by Manning

(2016). Or, to apply Ingold's framing: the former were practices of volitional intention (interaction), the latter of habitual attention (correspondence) (Ingold, 2016).

A second way in which a lack of available time was experienced to shape interactive, rather than correspondent, relations is exemplified by the problems experienced during the undertaking of explorative tours in School U (Score IX). Here, a lack of time – combined with the prioritisation of care concerning *my* research needs (i.e. my prioritisation of generating clear 'findings') – worked to position myself as interrogator and participants as informants. Thus, rather than moving forward together, we were positioned perpendicular, facing off across and closed to forward movement (Gatt & Ingold, 2013; Ingold, 2016).

Immersion in everyday life

A comparison of the three accounts suggests that time spent immersed within everyday school life, outside of workshops, is valuable to developing relationships with participants and the wider school community, as well as a holistic understanding of the school as a living, breathing entwining of threads not possible through participating in workshops alone, however carefully considered or open to wider currents they might be.

For example: in school T, key issues pertaining to everyday inhabitation emerged not through the workshops themselves but through my active participation in numerous negotiations beyond them: in taking the register, in helping to cook and serve food, in supervising and joining in with play, in helping with homework, in resolving arguments, to name but a few (e.g. Score IV). On the one hand, the knowledge developed through these experiences worked to enrich – and challenge – conversations had within workshops: the lack of interest within workshops for the creation of an outside shelter ran counter to the significant use of the existing outdoor classroom (which would no longer be accessible) for play during wet weather, for example. On the other, it developed understandings that would likely not have otherwise emerged: the importance of spaces that supported uses of the physical fabric – in digging, in climbing, in repurposing tables and chairs to create obstacle courses and dens, in using whiteboards to play

noughts and crosses, hangman, and squares, in painting with mud on the pavement, etcetera – as well as opportunities for natural separation, for example.

The omission of outdoor lighting in the pursuit of making cost savings – taken by the appointed Architect and supported (or at the least not questioned) by the school’s senior leadership team – exemplifies the potential paucity of an understanding that has been developed from up high on the banks – through meetings and short site-visits – rather than from within the mid-stream – through actively participating within the struggle to manage outdoor play in inadequate light (Ingold, 2018a). By extension, it also well illustrates (1) the potential inadequacy of participatory approaches rooted in the belief that “being in the world and knowing about it” can be split (2014); and (2) the importance of learning through doing – of participating attentively *with* people (2018a, 2018c; also, Kjaersgaard & Otto, 2012; Smith, 2015). Indeed, however mundane, the case of external lighting exemplifies Till’s contention that it is knowledge generated from within a given context that carries the greatest potential for transformative change (2005).

5.2 The (weak) educational potential of spatial design is its potential to effect transformation from within, when practised in the minor key

This section considers the study's findings in relation to the literature, through the lens of *rq.01*, posed at the outset of chapter 2: *What might be the educational potential of spatial design within the context of the English primary and secondary school?*

First, I discuss how the accounts and meditations presented develop Till's framing of participation as 'processes of negotiation', as well as the study's contention that spatial design practice offers a suitable means to negotiate. Second, I make the case for contending *the (weak) educational potential of spatial design is its potential to effect transformation from within, when practised in the minor key.*

5.2.1 Reframing 'participation' as the 'negotiation of place':

departing from Till, via Massey, Deleuze & Guattari, and Ingold

Through setting up, undertaking, documenting, and analysing three spatial design projects, this study develops Till's framing of participation as 'processes of negotiation', as well as the contention that spatial design practice offers a suitable means to do so, in the below key ways. Through doing, the study makes a novel contribution (theoretical and practical) to existing discourse pertaining to children's participation, within and across the fields of education, design, and design anthropology.

Reframing ‘negotiation’ as ‘the negotiation of place’

The accounts (III) and meditations (5.1) presented illustrate the key principles of the relational approach taken (Massey, 2005). Specifically, they evidence: (1) how all life unfolds through myriad contemporaneous negotiations, each comprising multiple relations between human and nonhuman trajectories, which occur at different scales and speeds, sometimes wildly different; (2) how human and nonhuman relations are imbued with power, including its unequal distribution; and (3) how particular trajectories (and therefore the nature of their interrelations and, by extension, of negotiations) are shaped by and shape the wider relational currents within which they manifest and unfold (Massey, e.g. 2005). In doing, the accounts show – counter to Till’s suggestion – that negotiations never die (2005, p. 35); that the appearance of death is in fact the result of their being hidden by dominant trajectories as a means to exert power over others. The accounts therefore support the need for and potential of the relational approach taken by demonstrating its value as a framework through which always ongoing negotiations can be exposed and engaged-with, as well as generated. This advances Till and Parnell’s respective calls for participatory processes that seek to “mak[e]best sense” (2005, p. 40) and “grappl[e] with competing agendas” (2015, p. 133) through offering an approach by which such endeavours might be operationalised.

Further, although the accounts demonstrate that practices of spatial design *can and do* expose, support, and generate multifarious place negotiations, they also show that the ability of such negotiations to effect change is limited in nature and extent by the wider currents to which they are subject. This suggests that spatial design is not a simple panacea as suggested by Halse (2013), even when practised within a relational approach. Although the accounts show a relational approach to practising spatial design has the potential to effect transformation – through its ability to expose, support, and generate negotiations – they also show how – because such negotiations are relational – transformation is never guaranteed, always in question.

Conceptualising ‘negotiations of place’ as ‘struggles in both major and minor keys’

Examples of conflict within negotiations pervade the accounts and meditations offered. This conflict is between efforts to effect empowerment – through the development and practising of alternative ways – and acts of oppression that, in seeking to maintain the status quo, work against efforts to empower. This supports Massey’s contention that negotiations are inescapably political (e.g. 2005). It also supports the conceptualisation of this politics through the lens of Deleuze and Guattari’s concept of the *minor* and *major* (e.g. 1983, 2004). To re-work Stewart Elden’s words: ‘the struggle of place’ (2004, p. 227) manifests and unfolds in both major and minor keys, wherein those operating in the minor work to unsettle the dominant processes and products of the major. In this way, the accounts and meditations presented suggest Till’s framing of participation as processes of negotiation does not go far enough; that to effect transformation processes of negotiation (and therefore participation) should be undertaken in ways that are *minor*; in ways that seek to trouble the dominant trajectories of the major.

The potential in taking an attentional (minor) approach

Both within and beyond the specific spatial design practices undertaken, the accounts and meditations presented strongly support the need for an attentional (minor) approach to negotiations, understood according to the principles set out by Ingold in his theory of *Correspondence* (e.g. 2016). More specifically, meditation 02 suggests that although such an approach might be operationalised through the nature of a project, workshop, or activity’s purpose (and methods), as well as through decisions made during the course of its undertaking, it is the latter of these ways that is key. It is through making decisions that attentional (minor) approaches might be operationalised within intentional (major) purposes *or* intentional (major) approaches might be operationalised within attentional (minor) purposes. This supports Biesta’s argument that, irrespective of methods, making ‘judgements’ is central to the practising of education “in weak and existential ways” (2013/2016, p. 154; also, 2006/2016, 2009). This also supports Masschelein’s argument for a poor pedagogy (2010), Deleuze and Guattari’s contention that the minor and major share a common language (1983, 2004), and Manning’s argument for technique over method (2016). Although this is supportive of Manning

(2016) and Ingold's (e.g. 2016) contention that the key of relating (minor/ major – attentional/ intentional) emerges through action too, it challenges their linked argument that the key cannot be set in advance.

The potential in focusing on 'use practices' of material, care, and time

The accounts and meditations presented also advance our understanding of using a relational approach through illustrating: (1) how human and nonhuman relations (and thus negotiations) manifest and unfold through multifarious use practices of 'material', 'care', and 'time'; and (2) how these same use practices also play a central role in shaping the nature of relations: the ways in which trajectories relate (according to the principles of correspondence or of interaction). To re-work Stewart Elden's words once more: 'the struggle of place' (2004, p. 227) comprises multiple contemporaneous negotiations that manifest and unfold through myriad use practices. These practices shape and are shaped by the nature of relations and, by extension, the nature of negotiations: whether they manifest and unfold according to the principles of correspondence (minor) or interaction (major).

5.2.2 The (weak) educational potential of spatial design is its potential to effect transformation from within, when practised in the minor key

Each of the above moves opens up the practising of spatial design to risk. First, re-framing 'processes of negotiation' as the never-finished, always-contested, multi-scaled and multi-paced 'negotiation of place' exposes the limits and dangers of spatial design when posited as a practice of negotiation. On the one hand it exposes how, despite its ability to shape wider currents, it is more often buffeted by them in powerful ways that work to limit its ability to effect transformation. And on the other it exposes the dangers faced by these wider currents in their allowing practices that might raise questions they would rather not asked; either because it is in their best interests for such matters to remain hidden, or because they themselves

are limited in their ability to effect change. Second, conceptualising the negotiation of place as a struggle in both minor and major keys brings risk through highlighting the potential for spatial design to be used as a tool to oppress too: school T's use of spatial design practice despite all major decisions having been pre-taken behind closed doors, for example.⁸⁴ Third, positing that the potential of spatial design lies in its practising, not its methods, renders the practising of spatial design inherently risky. This is because whether facilitated by particular individuals or collectively, whether those facilitating were also involved in the activity's design or not, it is a practice that's potential is always in question (Manning, 2016; also, Ingold, 2016). Fourth, suggesting that it is use practices of material, care, and time that shape the nature of relations, and therefore negotiations, creates risk because these are practices that (1) are not wholly in the control of those practising spatial design and (2) demand continued, detailed reflection, in action and at every scale.

In supporting these moves, the accounts and meditations presented also support the contention that the potential of spatial design practice to effect transformation lies in its *minor use* as a means to expose, support, and generate place negotiations concerning the how, why, and where, of education. That is, in its *use* in ways that open life up to uncertainty and, therefore, the possibilities of variations: opening ups through which all might grow in the shared, rhythmic offering and development of skill and knowledge (Biesta, 2013/2016; Dewey, 1934/2005; Ingold, 2016; Masschelein, 2010). These principles are those of the 'weak' kind of education put forward by Biesta (e.g. 2013/2016). They are the principles of an education that requires a poor pedagogy rather than a rich method (Masschelein, 2010), through which negotiation is not 'participation-in-waiting' but is participation-in-the-present, a lively process of "intakings and outgivings (Dewey, 1934/2005, p. 58). This is an education that is always, and must always be, risky. It is an education that embraces contingency. It is weak education in the minor key.

⁸⁴ Such uses exemplify what Carole Pateman refers to as "pseudo" and "partial" participation. Whereas the former is the result of malice, the latter is a product of circumstance (Pateman, 1970, as cited in Till, 2005a, p. 3). Useful, if slightly crude, descriptive examples are offered by Till (2005) and Reinier de Graaf (2016) in contrast to what they argue are transformative examples.

Thus: the empirical work undertaken suggests support for the contention developed through chapter 2 in response to *rq.01*, namely: ‘the (weak) educational potential of spatial design in school is its potential to effect transformation from within when practised in the minor key as a means to expose, engage in, and generate ongoing place negotiations concerning the how, why, and where of education.’

5.3 Contributing a design anthropological approach to educational research

This section discusses the value and challenge of using a design anthropological approach to undertake research concerning the relationship between education and the environments it unfolds in, as well as educational research more generally.

5.3.1 Anthropology *by means of design*: valuable contributions to educational research

This study suggests the developing field of Design Anthropology offers an innovative approach for educational research. This is developed below in relation to the specific methodology and methods used.

A novel approach to exploring the relationship between education and design

Adopting an anthropological approach reframes the focus of research away from efforts to prove or disprove a general relationship between the quality of educational environments and the attainment of students. Instead it takes the existence of such a relationship to be unequivocal and multiple, and therefore supports active participation from within. This is important because although most within the field of school design agree good design positively benefits students up to the meeting of minimum standards (Earthman, 2004, Woolner et al., 2007), the field's complexity, diversity of research agendas, and conflict as to what constitutes good design and how it can be 'measured', has hampered efforts to reach consensus amongst those involved in the design, construction, and maintenance of educational environments. In the English context, this lack of agreement has allowed economics to rise as a dominant force, with

‘standardised’ designs currently promoted by the DfE and EFSA championed for their minimisation of cost, area, and time while remaining “fit-for-purpose” (James, 2011, p. 18).

Anthropology *by-means-of* design offers an alternative by framing explorations of environment-behaviour relationships as explorations from within often contradictory flows of life, thereby: (1) developing knowledge that is relational and processual, rooted in the ongoing lives of a particular cohort of pupils; and (2) opening up and facilitating explorations along multiple paths that result in physical and conceptual proposals: proposals that carry potential to effect tangible transformation within and beyond the current context.

A relational lens

In taking a relational lens, anthropology *by-means-of* design brings into focus the nature of relations between humans and nonhumans (physical and nonphysical): how they manifest and how they unfold. These relations might be direct or indirect; between humans, humans and nonhumans, or nonhumans; affecting and affected by the wider relations wherein they occur. Regardless, a focus on and exploration of relations, rooted in and opening out from moments of manifestation, offers a shift in orientation that can help researchers to stimulate and support tangible change developed from within a particular context.

Compared to normative approaches to the relationship between education and architecture within the field of school design, this shift in orientation is not simply akin to looking back up the microscope but to reaching up and pulling the detached observer down its lens, submersing them within the everyday life of the slide. Through doing, a relational lens works to challenge and address the increasingly common separation⁸⁵ between those who design and assess schools (whether concerning aspects of education or environment) and those who ‘live in and

⁸⁵ For example: in the more general shift from Traditional to Design and Build contracts and linked increase in compartmentalisation of roles, responsibility, and influence. And, specific to education, in the positioning of the EFSA as a “single, strong, expert, intelligent ‘client’”, thereby removing individual schools and individuals from design and construction processes (James, 2011, p. 6). Indeed, going so far as to prevent any communication between designers and end-users.

wear them out'. This schism – also evident beyond educational contexts – is again driven by economic and political forces that find little advantage in attending to lived experience, let alone admitting the need for or supporting post-occupancy adaptation (again, whether concerning aspects of education or environment). Indeed, although post-occupancy studies are increasing in prevalence, in remaining focussed on measuring performance they most often fail to close this gap.⁸⁶ Anthropology *by-means-of* design offers an innovative alternative to researchers, whether coming from design or education backgrounds, whether focussed on aspects of education, environment, or the relations between.

Prioritising an 'attentional' research mode

Underpinned by the theory of Correspondence (Gatt & Ingold, 2013), anthropology *by-means-of* design emphasises the importance of research practices that are 'attentional'. In this mode researchers do not hold to intended methods at all cost but instead seek to maintain an ongoing responsiveness to life as it unfolds around them; their aim being to "join with others in an ongoing, speculative, and experimental exploration of what the possibilities and potentials of life might be", in ways that seek "to restore the world to presence, to attend and to respond" (Ingold, 2016, p. 24).

This approach challenges dominant research paradigms that: (1) seek to minimise the researcher's influence in pursuit of generating 'clean', incontestable data from which generalisations might be made; and (2) seek to achieve validity (rigour) through the unswerving application of pre-determined method. In doing so, it finds support in calls to value 'immaturity' and 'vulnerability' in research (e.g. Gallacher & Gallagher, 2008).⁸⁷ Moreover, in taking seriously the potentially unknowable transformative potential of relationships, activities, and

⁸⁶ Recent work undertaken by Harry Daniels and Hau Ming Tse (2018) concerning the development of ways in which to 'systematically' analyse relations between the spaces of schools and the experience of inhabitants is a notable exception.

⁸⁷ Although Gallacher and Gallagher specifically argue against the "application of technique" (2008, p. 509), this understanding of technique is akin to Manning's definition of 'method' as the static repetition of action (2016, p. 40).

artefacts developed during fieldwork, anthropology *by-means-of* design also challenges prevailing understandings as to how ‘impact’ is measured and the limitations this brings.

Spatial design as a means to open up

Anthropology *by-means-of* design demands the practising of spatial design in ways that do not close down – through the *iterative* use of design methods to solve problems by zeroing in on single solutions – but open up new lines of enquiry through *itinerant* explorations that engage with and seek to unsettle real-world issues.

Such practices limit the ability of researchers to plan in advance for all eventualities, requiring they instead work attentively to support design explorations *as* and *how* they manifest and unfold. This invites researchers to engage with real-world issues concerning materials, budgets, policy, and legislation, as well as to collaborate with others within and beyond their own field of experience. Moreover, it demands they do so in ways that are ‘with’ – not ‘for’ (on-behalf-of) – participants.

Site-Writing: adopting a speculative mode of analysis

Anthropology *by-means-of* design also demands the undertaking of analysis in ways that bring life to presence so that it may carry on (speculative), rather than ways that seek to wrap loose ends up (descriptive). Although suitable methods can be found within anthropology, educational research, and design, their use of non-textual mediums fall foul of the particular parameters set by this study’s situation within a social sciences faculty. To this end, this study’s use of ‘Site-Writing’ (Rendell, 2010) – borrowed from the field of critical art practice and supported through recourse to techniques used in layered approaches to auto-ethnography – as a means to operationalise a speculative mode of analysis offers new potential to the fields of design, design anthropology, and educational research.

More specifically, the particular method used innovates by inviting researchers to trace and construct a series of interlocking places that remake, rather than describe, the *work* in ways

that encourage the making of new connections and relations in each new reading. Although the particular practice undertaken is mainly text based, Site-Writing can be practised through a variety of mediums, including, but not limited to, the textual, visual, aural, tactile, and, performative (2010; also, 2007).

5.3.2 Key challenges

Undertaking educational research guided by the approach ‘anthropology *by-means-of* design’ also presents a number of challenges.

Challenges for the researcher

Anthropology *by-means-of* design requires the researcher to operationalise an attentional approach while recognising that such a mode is always emergent: determined by decisions made during research, rather than simply pre-set and forgotten. This creates considerable difficulty for the researcher who must exercise their judgement dynamically from within the unfolding of action, with no certainty as to which paths to follow. Although Gatt and Ingold offer little in the way of method to mitigate such a challenge, their detailed explanation of ‘correspondence’ as a way of relating with others (human and nonhuman) – unpacked further by Ingold in a latter paper (2016) – serves as a clear navigational guide. Indeed, to set out a particular recipe would be to undermine the approach entirely. Additionally, this study suggests that Biesta’s discourse pertaining to “judgement and wisdom in education” provides further aid (2013/2016).

In taking a relational approach that prioritises attentionality, anthropology *by-means-of* design is an inescapably ‘complex, incomplete, and messy process’.⁸⁸ Embracing this contingency and the uncertainty it brings raises a slew of challenges for the educational researcher,

⁸⁸ Gallacher and Gallagher use this phrase to describe the fundamental nature of research and thus the need for ‘immature’ research attitudes (approaches) (2008, p. 508). Anthropology *by-means-of* design offers such an approach.

relating not only to the ‘doing of fieldwork’ but also to its subsequent presentation. In particular, Gatt and Ingold call for researchers to “answer to”, rather than “describe” or “represent”, the lives they join with in research, and posit ‘design’ as a means to do so, explicitly contrasting it with the thick descriptive texts produced by ethnographers (2013, p. 144). However. Although ‘design’ is an established and widely accepted research approach that offers various ways of presenting the complex, incomplete, and messy; in cross-disciplinary research such ways are not necessarily always accepted. In this study, practices of analysis and its presentation were limited by the parameters set and enforced by the Faculty of Education’s position within the School of Social Sciences. Namely, the need for a textual approach adhering to social science conventions.⁸⁹ This particular challenge manifest as acute paralysis on transitioning between phases of research traditionally referred to as ‘fieldwork’ and ‘analysis’. Engaging with it, within the ethos of Gatt and Ingold’s approach, challenged me to not retreat to discipline norms but look further afield. In this study, beyond the fields of educational research, design, and anthropology, to critical art practice.

Working within and beyond disciplinary borderlands presents particular challenges for any researcher. Anthropology *by-means-of* design is set out as an approach for use within the field of Design Anthropology. As such, it is intended for use by – but not explicitly limited to – those with a background in anthropology or design, ideally used within collaborations comprising anthropologists and designers. It may therefore understandably unsettle those without a foothold in either. However, as Gatt and Ingold make clear, anthropology *by-means-of* design is underpinned by Ingold’s theory of Correspondence. This theory is central to the particular kind of anthropology Ingold develops and calls for throughout his work (especially 2010, 2016, 2018a, 2018c), thus providing the researcher with a much-needed anthropological foothold. Moreover, this anthropological perspective also underpins their understanding of

⁸⁹ Ingold recognises the same challenge in the *Coda to Anthropology And/As Education* (2018a). He does not, however, offer a way forward. For me, it is a challenge strengthened through its contrast to the ethos of my architectural training, wherein the mantra was reversed: then, ‘if it isn’t drawn it isn’t worth saying’; now, ‘if it isn’t written it isn’t worth reading’.

‘design’, thereby offering a foothold there too. In setting out their understanding of anthropology and design, Gatt and Ingold help to reduce potential challenges faced by the researcher without a foothold in either. Conversely, due to my having a particular design background,⁹⁰ this same aid worked to unsettle instead: challenging me to critically examine current beliefs and assumptions concerning the potential, purpose, and practise of spatial design. Engaging with this challenge has been absolutely central to this thesis.

Challenges made by the research

Anthropology *by-means-of* design demands the researcher join in and go along with life’s currents (Gatt & Ingold, 2013). Thus, its use of spatial design does not offer a means to act in response to pre-gathered evidence. Nor does it offer a means to create lasting solutions in response to pre-defined problems. Instead it works to attentively generate lines of inquiry from within in ways that seek to open life up to the possibility of variation; processes that are slow and risky.

The uncertainty created by this approach presents a clear challenge to schools, designers, researchers, and policy makers under pressure to maximise scant resource in ways that provide positive, measurable, and lasting impact with every penny and second spent. Given such pressures, evidence-based (e.g. statistical) and problem-solving approaches that offer speed and certainty, while also minimising the need for the making of ‘judgements’, are quickly rendered the better (easier) choice. However, in their pace, certainty, and rigidity, such approaches afford little room for life. This is important, for – as Ingold and Till argue, and this study shows – it is from within the currents of life rather than from outside of them that knowledge with the potential to transform in ways beneficial to *all* is generated (e.g. 2016, 2018a; also, Till, 2005; Billig, 1988, p. 162). Additionally, although the initial risk and cost (e.g. time and money) of practising spatial design in this way (attentionally not intentionally) might present an initial challenge to commissioners, practitioners, and funders, the possibilities raised may

⁹⁰ See Appendix J (this study).

not only be less expensive or extensive than otherwise but potentially more empowering for users too. For example, the anthropological use of spatial design in school T revealed a series of moves that might have been made instead of the School House's redevelopment: the introduction of better external lighting, soft furnishings, and devolution of power concerning the application of 'school rules' beyond the 'school day', for example. Beyond saving time and money, such moves would have most likely resulted in an environment better able to support the lives that unfold within and through it.⁹¹ Indeed, through failing to practise spatial design anthropologically, the dedicated architects omitted to include external lighting, deeming it unnecessary and thus an easy way of reducing costs. Of course, funding is not neutral either: its availability required the specific re-development of the School House. Despite the potential benefits, these funds could not simply have been re-directed elsewhere within the school – to the purchasing of equipment or undertaking of maintenance, for example.

Whether in terms of cost, time, risk, or other, anthropology *by-means-of* design makes visible and confronts existing power distributions. This presents serious challenges to dominant trajectories. Moreover, it does not necessarily have to enable engagement with existing negotiations to make such challenges. Simply exposing existing negotiations that impact the everyday lives of users but from which they are barred (including the exposure of those responsible) has the potential to empower too: because space is relational and therefore inescapably contingent, spatial design must always be political. Given this, it is of little wonder that the most recent review into government expenditure on education called for participation to be banished (James, 2011). Nor is it surprising that the Farrell Review's call for spatial design to be practised within school at all ages (Farrells, 2013) is more a desire for its restricted practising with and within, as well as to maintain, "sanctioned" spaces that reflect and represent institution and state "authority", rather than as a means to explore the marginality of spaces wherein "fleeting pockets of anarchy" might be found (Burke, 2014, p. 441).

⁹¹ I limit myself to 'most likely' here as this is impossible to know separate of doing.

- Mainstream and special maintained schools
- Mainstream and special academies (including Alternative Provision, 16-19)

4. Funding Ration

- 4.1 The Department pro
FE colleges and oth
breakdown) for the
- 4.2 The Department b
are funded on a w
equal opportunity
country and the s
- 4.3 One of the Depa
This has led to s
Universities

Effect on the institutions

- 2.7 These changes will bring about increased costs for affected
Consultation Document concerns itself with four education
funded schools, Independent schools, FE, and HE. For more
institutions that fall in these categories, please see 4.6 and 4
- 2.8 Overall the Department estimates the overall increased costs
2019-20 across these four sectors, split as follows, rounded to
£10m:

	Cost in 2019-20 from 1 Se 2019 Implementation (£m)
	83
	110
	80
	80

2. Background and Context

- 2.1 The TPS, along with all other unfunded public sector pension schemes, is required to complete a valuation every four years. The valuation has two main purposes: to assess the scheme's assets and liabilities and therefore the cost of providing pensions in the long-term; and to recalculate the employer 'cost cap' to determine whether it remains within the settlement reached in 2015.
- 2.2 In valuing the scheme, the Department must make several assumptions based on past scheme experience and take account of economic and other factors, provided by HM Treasury.
- 2.3 A significant factor affecting employer costs, and therefore the contribution rate needed, is the Superannuation Contributions Adjusted for Past Experience (SCAPE) discount rate, this is the rate used to determine the cost today of providing pensions into the future. This reflects the important principle that the full costs of pensions are recognised at the point they are earned and are provided for accordingly. At Budget 2018, HM Treasury confirmed there would be a further change (reduction) to the rate, to CPI + 2.4%, from April 2019. The change follows the Office for Budget Responsibility's latest forecast on long-term Gross Domestic Product, which estimated a lower than anticipated rate of growth and thus, under the mechanism agreed for determining the SCAPE rate, the need to adjust the rate in order to ensure costs continue to be provided for appropriately.
- 2.4 The estimated employer contribution rate required for the period from 1 April 2019 to 31 March 2023 is 22.8%. This is based on adjusting the scheme design by changing the rate by which pensions accrue. The Department has agreed, with HM Treasury, that the employer contribution rate for the current valuation will be implemented from 1 September 2019 rather than 1 April 2019. Whilst this gives employers more time to plan for the contribution change, there is an offset in that it will create a small deficit in the first year. In order to recover this deficit an amendment to the contribution rate, to take account of the fact that it will not be paid for the full valuation period, will be made resulting in an employer contribution rate of **23.6%** from 1 September 2019 to 31 March 2023.

...n delaying the implementation from
...rate that would see the amount
...e exact speed of payback has no

6 Conclusion

In this concluding chapter I respond to each of the research questions in turn (6.1); identify the contributions to knowledge made (6.2); and make a number of recommendations for research, action, and policy (6.3). It closes with an afterword (6.4).

6.1 Responding to the research questions

The thesis posed the following questions:

rq.01

What might be the educational potential of spatial design within the context of the English primary and secondary school?

rq.02

How do place negotiations manifest and unfold during spatial design with children?

rq.03

How do aspects of the methods and approaches used affect how place negotiations manifest and unfold?

As they constitute the main component of the research I address *rq.02* and *rq.03* first, before returning to *rq.01*, which they inform.

6.1.1 Responding to *rq.02*: negotiating place through practices of use

Place negotiations were found to manifest and unfold through multifarious interrelations between human and nonhuman trajectories (lines of life) within discrete episodes of life.

Specifically, I experienced the following categories of interrelations, during and either side of the spatial design workshops undertaken: human – human; human – material; material – material; human – nonhuman (i.e. other than material, e.g. policy and finance); and material – nonhuman.

Further, these different interrelations were found to manifest and unfold through a myriad of use practices. This was found in all accounts and for all categories; again, both during and either side of the spatial design workshops undertaken. More particularly, I experienced the following key categories of use practice: uses of physical material, including those materials introduced by me as part of the spatial design workshops and those already existing within each school environment; different and often conflicting uses of care; as well as uses of time, including that available during workshops and that spent immersed in the life of the school either side.

The conceptualisation of place as both producing and product of ongoing negotiations between human and nonhuman trajectories is not new but has been extensively developed within the radical geography of Doreen Massey (particularly 2005). These findings provide new evidence in support of this conceptualisation by illustrating how it manifests within a novel context: namely, during the undertaking of spatial design in three English schools. Additionally, they enrich this conceptualisation by demonstrating how relations manifest through practices of use and identifying three key categories of use practice: *material*, *care*, and *time*.

Power and politics

I also found relations – together with the use practices they manifested and unfolded through – to be imbued with power, with the distribution of this power reflective of normative societal hierarchies specific to the educational contexts engaged with. Further, examples of ‘use’ presented within all three accounts that showed how the interrelations produced by the exertion of power (by certain trajectories over others) could themselves work to undermine the power behind their occurrence. Exemplifying this was the various ways in which I experienced door

access control measures to be used by different trajectories: by the school as an institution, to restrict movement; by certain users, to reinforce this restriction (e.g. by school staff); and by those that such measures aim to oppress, in attempts to subvert and overcome it (e.g. pupils and, in cases, parents and guardians) (5.1, meditation 01; Score I). By illustrating specific ways in which negotiations manifested and unfolded according to distributions of power – to oppress, as well as to challenge oppression – this study provides further evidence for Massey’s relational conceptualisation of space, specifically her contention that ‘place negotiations’ are inescapably political (1991, 2005; Massey et al., 2009; Warburton & Massey, 2013), as well as Elden’s framing of place as “the site and stake of struggle” (2004, p. 227). Examples of ‘use’ as a means to subvert ‘intended use’ and thereby challenge existing distributions of power might also be understood as manifestations of ‘minor gestures’. And, correspondingly, attempts to protect against subversion – through the use of electronic rather than mechanical codes, for example – might be understood as their major counterparts (Manning, 2016). This suggests support for this study’s framing of different spatial politics and the ensuing struggle of place through the lens of minor and major keys (Deleuze, Guattari, & Brinkley, 1983; Deleuze & Guattari, 1983, 2004), rather than the more commonly employed Lefebvrian model (e.g. 1991).

6.1.2 Responding to *rq.03*: the role of material, care, and time

Material, *care*, and *time* were found to be key elements of both method and approach that affected the nature of relations: how they manifested, as well as whether they unfolded according to the principles of correspondence or interaction (Ingold, 2016).

In respect of material use, I found the particular physical qualities of materials (man-made and natural) to perform a central role in shaping the particular nature of relations generated and supported through its use: in acts of support, performance, navigation, and repurposing, for

example. This was found true of materials purposefully introduced by me during workshops, as well as of those already existing.

Uses of care were experienced as products of multiple ‘care orientations’ and the interrelations between them, with individual care orientations (trajectories) in-turn experienced as products of their ‘origins’ – who or what was doing the caring and why – and ‘directions’ – for whom or what ‘care’ was foremost concerned with.

Competition between different care trajectories demanded response from all involved, with the nature of response identified as key to determining the overall nature of particular relations, and therefore negotiations. Specifically, two categories of response were experienced: ‘holding fast’ and ‘flexing’. The former, I have argued, might be understood as the product of an *intentional* approach, the latter of an *attentional* approach (Ingold, 2016). That *attending* is a practice of care was already known (Ingold, 2016; Masschelein, 2010) but I show how care can be used in an intentional mode too. Additionally, the research suggests particular responses (e.g. my response, a participant’s response) were also products of further ‘knots’ of competing care trajectories with hierarchical structures, rather than results of volitional decision.

Modes of care – whether *attentional* or *intentional* – were found to be operationalised in two ways: (1) through the ‘planned’ nature of a project, workshop, or activity’s purpose; and (2) through decisions made during the course of its undertaking. Importantly, it was the latter of these ways that I found to be key, with the ‘making of decisions’ experienced as able to overturn the planned mode of care (whether *attentional* or intentional). Examples of operationalising modes of care through the making of decisions from within action presented throughout the three accounts. These examples provide evidence in support of Biesta’s argument that ‘making judgements’ is central to practising education in “weak existential ways” (2013/2016, p. 154); as well as Deleuze and Guattari’s discourse on ‘minor literature’ (1983) and Manning’s call for the use of ‘technique’ over ‘method’ (2016).

Uses of ‘available time’ during workshops and ‘time immersed in everyday life’ either side of them were also found to perform important roles in shaping the nature of relations.

In each spatial design project, I found a lack of time worked to shape relations that unfolded in intentional ways. And, correspondingly, that ample time helped to support relations attentional in nature. Further, I showed how ample time was alone not enough, that it was the relationship between available time, an activity’s scope, and the freedom to decide one’s own course of action *during* doing that instead appeared key. This balance, I have suggested, might be one way in which shifts between ‘method’ and ‘technique’ are produced (Manning, 2016, pp. 26 – 45).

Spending time immersed in everyday school life was found to be valuable to developing (1) relationships with participants and the wider school community and (2) a holistic understanding of the school not possible through participating in workshops alone, however attentively. Neither of these findings are new. However, in providing further evidence for the importance of both within the given context the study has value nonetheless. In particular, examples that presented throughout account 01 (School T) illustrated clearly the transformative potential of approaches that allow the time needed to operationalise an attentive mode of being in the world, through which research becomes *with*, not *of or for*, others. This supports existing arguments within the field of design anthropology (Gatt & Ingold, 2013; Kjaersgaard & Otto, 2012; Ingold, 2018a, 2018c; Smith & Otto, 2016), as well as Till’s contention that it is knowledge generated from within a given context that carries the greatest potential to transform (2005). Because spatial design with children is most often undertaken in the form of short and discrete projects (e.g. Birch et al., 2014; Hofmann, 2014; SSoA, 2005), spending time immersed in the life of the school is, I have argued, a key way in which design (especially when undertaken within participatory frameworks) might open up to the potential of an anthropological approach.

The potential of a relational approach

For all three element categories – material, care, and time – I found the nature of relations generated through use to also be shaped-by and shape the wider relational currents within which they manifested and unfolded. Moreover, I found that it was often these wider currents that had the greatest affect. Again, these findings are in themselves not new: that use is relational is discussed at length in the radical geography of Doreen Massey (especially 1991, 2005). What this study does is (1) provide new evidence of this concept within a novel context; and (2) demonstrate how a relational approach might advance existing understandings of participatory processes. I explore this further in 6.2.

Taken together, I have suggested these findings support the contention that the nature (key) of interrelations generated and supported during the undertaking of spatial design with children (*minor* or *major*) is operationalised through a combination of: a project, workshop, or activity's purpose; its methods; and the decisions made during the course of its undertaking (guided by the approach taken), albeit with the latter having the greatest affect. This supports Ingold (2016) and Manning's (2016) argument that the key of relating emerges through action while also refining their linked contention that it cannot be set (or shaped) in advance. Additionally, in demonstrating how spatial design can be practised in *minor* and *major* ways I found spatial design is not a panacea – as Halse suggests, albeit not explicitly (2013) – but is open to abuse. And, that such abuse could be orchestrated by wider relations over which there is little to no control or knowledge. This, I have suggested, makes clear the need for practitioners to be especially sensitive when participating in the ongoing struggle of place (Elden, 2004); that is to say, they should operate in 'attentional' ways.

6.1.3 Responding to rq.01: the (weak) educational potential of spatial design is its potential to effect transformation from within, when practised in the minor key

Through the empirical research undertaken, I found the potential of spatial design practice as a means to effect transformation to lie in its *minor* use as a means to expose, support, and generate place negotiations concerning the how, why, and where of education. That is, in its *use* in ways that opened life up to uncertainty – to risk – and therefore the possibilities of variations.

However, I also found that spatial design can be practised in both *minor* and *major* keys; as well as that the key was always emergent through action and could easily shift from one to the other. This, I contended, means the *educational* potential of spatial design can also be *minor* or *major* in nature.

The differences between minor and major keys, I have suggested, might be understood through Biesta's theories of *weak* and *strong* education respectively (2013/2016). Because the principles of practising spatial design in the minor key are those of the 'weak' kind of education put forward by Biesta (2013/2016), as well as of the poor kind of pedagogy posited by Masschelein (2010), I have therefore argued that this study supports the following dual-contention: Firstly, that the *weak* educational potential of spatial design practice might be understood as its potential to effect transformation, and therefore lies in the *minor* key. And secondly, that the *strong* educational potential of spatial design practice might be understood as its preference for maintaining the status quo, and therefore lies in the *major* key.

6.2 Contribution to knowledge

This thesis contributes to ongoing conversations within the borderlands of architecture and education concerning the educational potential and purpose of practising spatial design with children, in the context of English primary and secondary education. It does so theoretically, empirically, and methodologically in the following ways:

6.2.1 A relational approach to understanding participation and participatory (spatial) design

This study contributes to the fields of children's participation and participatory (spatial) design by unpacking and taking forward the model of 'transformative participation' developed in *The Negotiation of Hope* by the architect and educator Jeremy Till (2005).⁹² Till proposes that, to be capable of effecting transformative change, participation must embrace, rather than avoid or hide, contingency and uncertainty, as well as the fact that power imbalances can never fully be resolved. To do this, he argues for the reframing of participation as 'processes of negotiation'. Departing from his use of the term 'negotiation', which I argued he does not adequately address or define, this thesis has developed Till's model in the following three ways:

Firstly, I have refined Till's understanding of 'negotiation' through applying a relational conceptualisation of space and place (specifically Massey, 2005). In doing, I have shown that 'negotiation' is not volitional but always ongoing between multi-scaled and multi-paced human and nonhuman trajectories, with place the "site and stake of struggle" (Elden, 2004, p. 227).

⁹² Although not explicitly so, Till's discourse is developed in mind of participation between adults rather than children. It is also set beyond the school context. Although, again, he does not explicitly note any contextual limitations.

In this way, the James Review's advocacy of banishing participation from processes of procuring, designing, and constructing schools (James, 2011) was not an effort to remove negotiation but to exclude particular trajectories from negotiations that very much continued behind their backs (in the pursuit of reducing uncertainty). Thus, while negotiation does involve engaging with the political (Till, 2005), this is a politics not neatly contained within particular processes or practices but always woven with life beyond the immediate realm – socially, physically, temporally (past, present, and future). Through illustrating specific examples, the empirical work undertaken supported the use of a relational approach to re-frame 'negotiation' as the 'negotiation of place'. This suggests effecting transformative change might depend on considered attention being paid by spatial design practitioners to the wider relational currents and negotiations within which participatory processes unfold, before and during its practice.

Secondly, I have developed Till's discourse on the 'spatial politics' of participation by offering an alternative reading. Whereas Till's argument is rooted in Lefebvrian terms, I have instead drawn on the philosophy of Deleuze and Guattari – specifically their concept of the 'minor and major' (particularly 1983, 2004). In doing, I have shown that different spatial politics do not draw on different languages but use the same shared language (e.g. materials and methods of spatial design) in different ways: the minor does not exist outside of the major – reacting to it – but works proactively to produce movement from within, working to unsettle it through processes of continuous variation. In showing how – due to the forces of wider relational currents – it is this 'movement from within' that carries the greatest potential to effect transformation, this study suggests normative spatial design practices might be back-to-front. That is, spatial design's transformative potential might not lie in its use to solve pre-defined problems through zeroing in on single solutions but as a means to open up new paths and possibilities from within a context.

Thirdly, I have advanced Till's distinction between making 'best' and 'common' sense (2005, pp. 39-41) by constructing the theoretical lens of 'human and nonhuman relating'. Specifically, this lens combined the philosophy of Erin Manning (2016) with the anthropology of Tim Ingold – in particular his theory of *correspondence* and its counter theory of *interaction*

(e.g. 2010, 2016) – to: (1) frame Till’s notions of ‘best’ and ‘common’ sense according to the principles of ‘minor’ and ‘major’ keys; (2) posit the key of spatial design as emergent through action, rather than set in advance; and (3) conceptualise the nature of interrelations required to operationalise place negotiations in a particular key (minor/ major). This lens was used to guide empirical investigations into *rq.02* and *rq.03*. Used thus, this theoretical lens could also be considered to offer a standalone contribution to the field of Geography and spatial theory.

Supported by the empirical work, these theoretical moves raise important questions concerning practising spatial design within and beyond the school context. In showing that spatial design can effect change in ways that are positive and negative dependent on *who* or *what*, as well as *where*, you are, these moves trouble prevailing understandings of spatial design as a one-off means to develop lasting, stable solutions that are predominately context-independent. Defining space in relational terms makes explicit the suggestion that the scope of participation and spatial design should go beyond the physical to engage with social, political, economic, and temporal currents too. Indeed, the empirical work undertaken demonstrates the danger in isolating specific currents, especially the physical. Highlighting that the key (or nature) of participation and spatial design cannot be simply ‘pre-set’ but rather emerges from within action presents a further challenge: neither participation nor spatial design are panaceas. Each is open to abuse, intentional and unintentional. Methods alone cannot guarantee minor practices; a reflexive and attentional approach is essential.

6.2.2 A weak approach to the practise and educational potential of spatial design in schools

In developing and providing empirical evidence in support of this relational approach to participation and spatial design, this thesis also contributes to ongoing debates concerning the educational purpose and potential of spatial design within the English primary and secondary school context.

Theoretically, it contributes by proposing spatial design's educational potential and purpose does not depend on its use in a particular way. By aligning the concept of minor and major keys with Biesta's theories of weak and strong education respectively (2013/2016), I instead show how spatial design is *always* educational: practising it in ways that are major realises its strong potential, while doing so in minor ways realises its weak potential. On the one hand, this enables a critical analysis of past uses and current proposals of spatial design within the school context: my analysis of the educational purposes and potentials of 'Streetwork' (Ward & Fyson, 1973) and the Farrell Review (Farrells, 2013) in chapter 2, for example. On the other, it enables greater clarity when advocating for the practising of spatial design within school. Thus, supported by the empirical work undertaken, this study argues for the practising of spatial design within school in minor ways that realise weak educational potentials (Biesta, 2013/2016; Deleuze & Guattari, 1983, 2004; Ingold, 2010, 2016; Manning, 2016). More specifically: *for* the itinerant practising of spatial design within school as a means of developing (read: researching) dynamic and holistic understandings of, and potential variations to, inhabitation – including all three functions of education (Biesta, 2013/2016) – from within. And *against* its use as one-off activities applied from without and focussed on narrow, short-term outcomes as is currently most often the case (Blackmore et al., 2011; Mannion, 2010; Till, 2005; Woolner, 2015). This clarity is important not only in guiding practitioners, whether teachers, designers, researchers, policy makers, or other but also in preventing potential abuse: for its practice but in ways that are in-fact major.⁹³

This study also contributes to these debates empirically (6.2.3-5) and methodologically (6.2.6-7).

⁹³ For example, the weak approach advocated might be used to challenge and guide practice undertaken within the recently established RIBA National Schools Programme (2018), as well as its analysis.

6.2.3 Three ‘site-writings’ of practising spatial design with children, in school

This thesis offers three detailed, relational accounts of practising spatial design from within the currents of unfolding life in three English schools, two primary and one secondary. Further to their methodological contribution (6.2.6), these ‘site-writings’ offer an empirical response to the identified paucity of existing literature concerning spatial design with children that moves beyond a focus on methods and outcomes to interrogate and – perhaps more importantly – make visible the “complex, incomplete, and messy process” in-between them (Gallacher & Gallagher, 2008, p. 508; also 2, this study).⁹⁴

Particularly, the site-writings provide to practitioners and researchers detailed empirical examples of practising spatial design that focus on its ‘practising’. These foreground its inescapably contingent and political nature through interrogating and making visible some of the wider relations within which it unfolds (e.g. policy, material, and financial); underscoring how – irrespective of focus – neither the design, practice, nor analysis of practising spatial design can be isolated from the wider currents within which they occur. In doing, the site-writings offer an alternative to normative accounts (and practices) wherein the empirical value of spatial design is located within its physical outcomes – e.g. in the drawings, photographs, models, recordings, writings produced – and in which, therefore, a focus on the development and employment of method is prioritised (and promoted) over an interrogation of the methodological attitudes taken and resultant judgements made during practice.

In this way, the site-writings contribute empirically to the study’s advancement of Massey (e.g. 2005) and Till’s (particularly 2005; also 2009b) respective theories of ‘space’ and ‘participation’ (see 6.2.1, 6.2.4, and 6.2.5), as well as Ingold’s call for a particular kind of anthropology (e.g. 2016, 2018a, 2018c) (see 6.2.6).

⁹⁴ In addition to Gallacher and Gallagher’s own work, Kjaersgaard and Otto provide a welcome exception in their account of the Body Games Project (2012, pp. 177 – 191); as does Šorn in her doctoral thesis *Designing with children: Spatial Literacy explored through Communication between Children and Spatial Designers* (2017).

6.2.4 Evidence in support of ‘place negotiations’

In providing some concrete examples of how places are negotiated through multifarious interrelations between human and nonhumans (material and nonmaterial) imbued with power, within a novel context (III), this thesis offers new evidence in support of Massey’s relational theory of space and, in particular, her conceptualisation of place as always under negotiation: its “throwtogetherness” (2005, p. 140).

Supporting Massey’s thesis has multiple implications with concern to both the practising and educational potential of spatial design. Pertaining to both theory and practice, these are detailed throughout this section (6.2) and I therefore avoid repeating them here.

6.2.5 Linking the nature of relations with uses of material, care, and time

The empirical work illustrates, I have suggested, how human and nonhuman interrelations might be understood to manifest and unfold through multifarious use practices of material, care, and time; as well as how *material*, *care*, and *time* could be considered key elements of method and approach affecting the nature of relations: how they manifest and how they unfold – that is, whether they unfold according to the principles of correspondence or interaction (Ingold, 2016).

This understanding helped to clarify how different actors and resources (introduced and existing, material and nonmaterial) shaped and were shaped by the nature of relations that manifested and unfolded both during and either side of spatial design workshops. Although further work is needed to understand whether this applies elsewhere, it offers a possibly novel advancement to Massey (e.g. 2005) and Till’s (particularly 2005; also 2009b) respective theories of ‘space’ and ‘participation’ through refining the somewhat nebulous concept of ‘negotiation’ used by both. In particular, this refined understanding of ‘negotiation’ demonstrates, I have suggested, that although elements of ‘method’ and ‘approach’ perform important roles

in shaping the nature of relations, it is the latter – especially during spatial design practice – that has the greatest effect. I discuss the broader methodological implications of this below (6.2.6) having first turned to those which relate directly to material-, time-, and care-use. These are relevant to those involved in the design and/or inhabitation of environments in which learning takes place, especially: spatial design practitioners, designers, teachers, researchers, and policy makers.

Showing, through detailed empirical examples, how the physical qualities of materials are central to shaping the nature of interrelations generated and supported through their use reveals the limits of existing literatures concerning participatory design and school design wherein material consideration rarely extends beyond their description in relation to methods and outcomes. Identifying and making visible the relational and political nature of material-use demonstrates the need to focus on how materials are used and how this use is shaped by their particular qualities, as well as how and what this use enables and restricts. This demands serious relational consideration of the use and use-ability of materials (including subversion and adaptation), in designing and making material things and activities, and in analysing existing use in inhabitation.

That care-use is relational and plays a role in shaping the nature of human and nonhuman interrelations was already known (5.1.2 and 6.1.2). Rather, this study identifies the significance of care-use within a novel context and shows it is not ‘caring’ but ‘how we care’ that matters, with the nature (or mode) of care found to be ever-emergent – dependent on the ‘making of judgements’ from within action. The subsequent advocacy for an attentional care mode – being flexible – puts practitioners and researchers in conflict with prevailing approaches wherein rigour is seen as dependent on rigid applications of methods – on holding fast. This presents serious challenges – in grant application and peer-review processes that employ conservative approaches to determining ‘value’ and ‘impact’, for example – and thus demands clear methodological and theoretical foundations (6.2.1-2 and 6.2.6-7 respectively).

The study shows how the dynamic relationship between available time, an activity's scope, and the freedom to decide one's own course of action during a particular activity plays a critical role in shaping the nature of interrelations during spatial design, and thus the capacity of spatial design to effect transformation from within. This contests neutral representations of and approaches to time-use within participatory design and school design literatures, which rarely go beyond the descriptive, which is itself most often limited to the practicalities of practice. Illustrating the value in being generous with time – in practising spatial design, as well as in immersing broadly within a school's life beyond – challenges normative practices, which most often operate within short and discrete time frames and seek to minimise disruption to existing structures (e.g. Birch et al., 2014; Hofmann, 2014; RIBA, 2018; SSoA, 2005) (also 6.2.7).

6.2.6 A design anthropological approach to educational research

Methodologically, this study aims to contribute to research in the borderlands of education and architecture (i.e. the design and inhabitation of schools) through its proposing a Design Anthropological approach. More specifically, I have argued for the potential of research into the *how*, *why*, and *where* of education that is guided by the approach 'anthropology *by-means-of* design' (Gatt & Ingold, 2013). This demands and guides: the speculative (minor) rather than prescriptive (major) use of spatial design – practices that seek to open-up not close-down; the repositioning of the researcher from outside passively-looking-in to inside actively-acting-with; the ontological prioritisation of "attentionality" (Ingold, 2016, p. 19) – a willingness to flex in response to others rather than holding fast to intentional plans; and a speculative rather than descriptive mode of analysis – to this end I have suggested that the use of 'Site-Writing' (Rendell, 2010), borrowed from the field of critical art practice and supported through recourse to techniques used in layered approaches to auto-ethnography, represents a discrete contribution to both educational research and design anthropology.

In building upon the relational approach to participation and spatial design developed within chapter 2 of this study, ‘anthropology *by-means-of* design’ offers educational researchers a methodological means to “‘go relational’ and ‘go spatial’” (e.g. Mannion, 2007, p. 417), as well as to interrogate and make visible the “complex, incomplete, and messy” (Gallacher & Gallagher, 2008, p. 508). Further, through focussing on and following complex and dynamic relations, this relational anthropology might also offer a radical alternative to those trying to prove – or indeed disprove – a stable relationship between education (most often framed in terms of attainment) and the environments it takes place in (most often framed in terms of technical performance) (e.g. Earthman, 2004; Fisher, 2001; Higgins et al. 2005, Horne Martin, 2006; Temple, 2007; Woolner et al., 2007). Ultimately, in its itinerant, attentional and speculative approach, a design anthropological approach to educational research could challenge settled practices – whether on the part of designers, teachers, students, researchers, or others – through encouraging regular “imaginative leap[s] to envisage how [inhabitation] might be otherwise” (Blundell-Jones, 2015, p. 13).

6.2.7 An anthropological approach to practising spatial design

The combining of elements of ‘anthropology’ and ‘design’ in different ways is not new. However, such combinations are normally developed from within the field of anthropology, with design more usually acting as a source of inspiration for the development of anthropological practice, forming the subject of anthropological practice, or some combination of the two (Otto & Smith, 2013). Therefore, in proposing (spatial) design open up to the potentials of anthropology, I have suggested this study might also make a valuable theoretical and methodological contribution to the field of design and design research.

6.3 Recommendations for research, action, and policy

This study has provoked many further questions and directions for future work, within and beyond academia. Those I believe most pressing are highlighted below in the form of recommendations for research, action, and policy.

For educational research

To build on this research, five directions are proposed:

(1) Theoretically, the conceptual framework of ‘place negotiations’ and underpinning understanding of the world as a meshwork and anthropological approach is not predicated on the specifics of county, country, or continent (Massey, 1991; Ingold, 2018b). As Ingold has it, anthropology is an “inquiry into the conditions and potentials of human life in the one world we all inhabit” (2018a, p. 22). It is therefore recommended that similar studies are undertaken both within the English and UK contexts, as well as beyond. This work should not only help to establish the wider validity of this study’s findings – how generalizable are they? – but should also encourage and support practice and knowledge flows between contexts in the hope of raising further questions. For example: how might an understanding of how places are negotiated within Danish schools help to effect transformation within schools located in the North East of England and visa-versa?

(2) The categories of *material*, *care*, and *time* emerged through this study as central use practices through which negotiations manifested and unfolded, as well as key elements of method and approach that worked to shape the nature of relations. Future study is advocated that takes each of these categories as a main focus and, using a similar approach, works to unpack and explore them further.

(3) The focus of research undertaken herein has leant towards interrelations between human and material trajectories. However, as I have argued, these interrelations shape and are shaped by wider relations that stretch beyond the immediate context – socially, economically, politically, temporally (past, present, and future). Research focussing on exploring the nature and affect of these wider relations is strongly suggested.

(4) Empirical work was undertaken in both primary and secondary contexts. However, it was not within the scope of this research to undertake comparative work concerning how place negotiations differed between them. Nonetheless, primary and secondary schools have particular differences (physical and nonphysical). Comparative work is therefore also proposed.

(5) Lastly, but perhaps most importantly, further work is needed with concern to how spatial design practices might be embedded within the everyday lives of schools. This study has touched on this issue through its discussion of ‘weak education’ (Biesta, 2013/2016) and ‘poor pedagogy’ (Masschelein, 2010). However, much more work is needed. This work is essential to ensuring the spatial design practices recommended by this research are not only sustainable but are also not limited in their offering – whether on a geographic, governance (e.g. whether a free-school or academy), school, or pupil level.

For schools

Spatial design might be practised more frequently within schools, not only in support of existing curriculum subjects but as a means through which schools might develop a growing understanding of how different places are inhabited – why, how, when, and by who. As this study has shown, an active ‘archive of use’ could enable schools to identify and explore spatial issues that might otherwise go unaddressed, as well as to better direct limited resources (material, social, financial, and temporal).

To support this use of spatial design three moves are recommended: first, the development of an online resource to bring together relevant research, resources, and guidance from different disciplines concerning spatial design practice, school design, and the wider built environment. This would replicate some of the resource previously offered by CABE, integrate those offered by the RIBA National Schools Programme (2018), and could plug into the existing Place Alliance. Second, the provision of support for existing schools and teachers. This might be achieved through continued professional development, as well as through forging new relationships with institutions (e.g. architecture and education faculties), the architectural profession (e.g. individual practices and professional bodies (e.g. RIBA)), and dedicated networks (e.g. Place Alliance and Urban Room Network). Third, an increased engagement with the spatial realm in teacher training, discussed further below.

For designers and architects

The current English procurement process affords little opportunity or resource for architects to engage *with* schools. Indeed, the ESFA actively works to prevent it: through positioning itself as the client, for example. However, as this study suggests, attentive participation is essential if designers and architects are to gain a holistic understanding of inhabitation in schools, achieved through taking a relational, anthropological approach. Given existing restrictions, this requires architects to work pro-actively and creatively to find ways of spending time in schools, perhaps using projects in less restrictive sectors to develop skills. Although situated beyond the English context, Peter Hübner and Lucien Kroll's work offers excellent departure points. Post Occupancy Evaluations might offer a further framework for the practise of anthropological practices of spatial design⁹⁵ and are discussed further below.

For architectural and teacher education

This study suggests more time and emphasis be given within architectural education for the attentional exploration of place. This might simply involve giving greater encouragement (e.g.

⁹⁵ See footnote 85.

resource, time, and assessment) to student's working *with* (not *for*) those who would potentially live in and wear out their proposals. Where impractical, this could instead be facilitated through working *with* students and educators from other faculties – *with* trainee teachers and researchers, for example. In addition to the particular knowledges and experiences gained, this would hopefully enable the development of attentional modes of practice, to be taken forward into future practice.⁹⁶

In the same way, more time and resource might be given over within teacher training institutions to the provision of opportunities for exploring the borderlands of architecture and education. This might include dedicated sessions concerning the effects of environmental conditions (e.g. acoustics, lighting, temperature), classroom design, using different elements of both the school and wider environment for teaching, and visits to key precedents. Such sessions should, I suggest, develop practical skill as well as technical knowledge, with a focus on how teachers might effect tangible change through small moves within what are likely to be severely contingent environments. This could offer opportunity and structure for forging new relations: developing relationships between education and architecture faculties or between education faculties and architectural practices, for example. Following the anthropological approach presented herein, such relations would not be 'interdisciplinary' but "*anti-disciplinary*" (Ingold, 2018a, p. 76): they would work to unsettle rather than 'swap' one another's *major* keys.

For policy

The weak educational potential and purpose of spatial design practice in school advocated by this study is counter to that suggested in the most recent review of Built Environment Education (Farrells, 2013). To move forward, a further review is recommended. Unlike the Farrell

⁹⁶ This recommendation is quite different to recent moves within UK architectural education to better integrate degree programs (especially Master level) with practice, which – I suggest – are predominantly driven by industry demand.

Review, this might instead be limited in scope to the practise of spatial design in school and led by a more diverse panel that gives equal representation to different disciplines within the broad fields of design and education. The relational anthropology used herein offers a means to do so.

As the James Review notes, a more rigorous post-occupancy evaluation system is also needed (2011, p. 54). Although this is welcome, such a system's purpose should not be used to drive future efficiency (*ibid.*) but to improve environments, including those already built, supporting variations. This would entail a shift from major to minor keys, most likely requiring legislation to ring-fence money and time within construction budgets. In connection, legislation might also be explored to limit both existing and future restrictions placed on schools by the finance schemes they were built under (e.g. PFI and PF2), making adaptation more feasible.⁹⁷

Issues of 'risk' were experienced to restrict practice throughout the research undertaken.⁹⁸ To support the use of spatial design well beyond the end of initial construction, this study proposes a policy review into relevant insurance practices and legislation. I suggest the following departure points: the accessibility of insurance for schools, architects, and independent practitioners – in terms of personal liability as well as cover for damage to property often not directly owned by schools; the potential of insurance 'share' schemes wherein larger organisations are able to 'lend' their own insurance to smaller groups; and the effect of legislation and insurance on the use of self-build practices within the school context.

As Peter Blundell-Jones put it three decades earlier: "Society has suffered long enough from finished architecture: buildings must be allowed to grow and change" (1987/2016, p. 1).

⁹⁷ Although focussed on the NHS, the recent Centre for Health and Public Interest (CHPI) report *Dealing with the legacy of PFI – options for policymakers* (2018) offers a potential blueprint for how a pathway to such legislation within an educational context might set out.

⁹⁸ Although often not the focus of participation and spatial design literature, the limitations effected by risk were specifically raised by each of the three schools, as well as in personal correspondence with architects and spatial design practitioners undertaken during the course of the research (Appendix F).

6.4 Afterword

The anthropological approach to research and life within the everyday borderlands of architecture and education proposed by this research is different to that of “Angels with Dirty Faces” proposed by Till in *Architecture Depends* (2009b, pp. 194 – 195). Till concludes by calling for a model wherein “architectural angels” regularly “sweep” from “on high to low and back again”, necessitating their getting “grubby” and “drinking cheap coffee” in the process (*ibid.*). Yet such an approach simply maintains the Ivory Towers, the status quo. It is in the major key. Therefore, although Till's metaphor does not, I believe, accurately reflect the arguments he makes throughout the research it concludes, it is problematic nonetheless: for, as the architect Giancarlo de Carlo writes,

architecture has become too important to be left to architects. A real metamorphosis is necessary to develop new characteristics in the practice of architecture and new behaviour patterns in its authors: therefore all barriers between buildings and users must be abolished, so that building and using become two different parts of the same planning process (2005, p. 13).

Applied to education – to its practices and pedagogies, as well as its environments – de Carlo's argument holds true: education is too important to be left to architects, to educationalists, to teachers, to politicians, to anyone *alone*. Education depends. This is why the conceptual framework of ‘place negotiations in minor and major keys’ as well as the approach ‘anthropology *by-means-of* design’ matter, within educational and architectural research and education, as well as the everyday lives of schools. They matter because – as this study has shown – they offer a theory driven, practice-based approach capable of exposing, supporting, and generating ongoing negotiations concerning the *how*, *why*, and *where* of education in ways that support imaginative explorations into how education might otherwise be. That is, in ways that are ‘minor’. In ways that work to unsettle and break-down educational barriers, however positioned within the dynamic interrelations of the human and nonhuman trajectories that constitute it.

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A Consent forms

A.1 Consent forms: school T



school house
project

Welcome to the
school house project
pupil information sheet

Hello

My name is Tom Bellfield. I am a student at the University of Cambridge who is doing a research project with your school. As a member of the after-school club I would like you to take part. Your teacher, parent, or carer will read this information sheet with you.

What is the project about ?

This project aims to explore how different design activities can help us to talk and think about education: How, where, and why do we learn? What and who do we think schools should be for? What do we think they should look and feel like to be in?

We will do this by exploring your existing school and creating a plan for the design of your school's schoolhouse garden. We will do this through five creative workshops in which: we will create maps of your existing school and imagine how it could be used differently; explore the existing school house garden using our five senses; develop ideas for how the new garden can be used, what for, by who, and when; experiment with space by making our own dens; and create a final proposal to present to the school.

The project will take part in the first half of the summer term.

Do I have to take part ?

It is completely up to you. If you do decide to take part, you will be given this information sheet and asked to sign a consent form. If you change your mind, don't worry, you can stop taking part at any point in the project. You can also ask to take part in the 'school house project' but not my research.

What does the project involve?

During the project workshops I will ask you some questions and look at your work. I would like to record the things you say and take photos of you (not showing your face) and your work so that I don't forget it later. I will only do this if you say that it is okay.

Are there any risks ?

There are no known risks or disadvantages involved in taking part in this project. If you have any questions just ask your teacher, parent, carer, or myself at any time.

Who will know about the project ?

Once this project has finished I will write a report about what I find out and give this to the University. I might also tell people what I have found out by doing presentations and writing reports. I will never tell anyone your name and no one will be able to identify you from any of the material I produce.

Do you want to take part?

If you would like to take part please tell your teacher, parent, or carer and fill in the consent form.

Thank you !



school house project

Welcome to the school house project
pupil participant consent sheet

Please read the below questions and tick 'yes' or 'no'

Have you been told you about this research project and what will happen?

yes no

Have you been asked if you have any questions about the project?

yes no

Do you know that you don't have to take part in the project if you don't want to?

yes no

Do you know that I will write about the things you say and do in the project, but you will never be identified?

yes no

Is it okay for your voice to be recorded and photographs to be taken of you (your face will not be shown) and your work?

yes no

When I write about this project and show it to other people, is it okay to show pictures and video of you (your face will not be shown) and your work?

yes no

Do you want to take part in the project?

yes no

If you decide later that you don't want to be part of this project anymore, or don't want to be photographed or your voice recorded, that is OK. Just tell your teacher, parent, carer, or me.
If you wish, you can chose to take part in the design project but not the research.

Your name

Signature

Date

Name of person taking consent
(if different from researcher)

Signature

Date

To be signed and dated in presence of participant where possible

Researcher

Signature

Date

To be signed and dated in presence of participant where possible

Copies: Once signed the participant should receive a copy of the signed and dated participant consent form, the information sheet and any other written information provided to the participants.
A copy of the signed and dated consent form should be placed in the project's main record (e.g. a site file), which must be kept in a secure location.



school house
project

Welcome to the school house project

adult participant information sheet

Hello

My name is Tom Bellfield. I am a student at the University of Cambridge who is doing a research project with your school. As a leader of the after-school club I would like you to take part.

What is the project about ?

This project aims to understand more about how different design activities can help us to talk and think about education: How, where, and why do we learn? What and who do we think schools should be for? What do we think they should look and feel like to be in?

We will do this by exploring your existing school and creating a plan for the design of your school's schoolhouse garden. We will do this through five creative workshops in which: we will create maps of your existing school and imagine how it could be used differently; explore the existing school house garden using our five senses; develop ideas for how the new garden can be used, what for, by who, and when; experiment with space by making our own dens; and create a final proposal to present to the school.

The project will take part in the first half of the summer term.

Do I have to take part ?

It is completely up to you. If you do decide to take part, you will be given this information sheet and asked to sign a consent form. If you change your mind, don't worry, you can stop taking part at any point in the project. You can also ask to take part in the schoolhouse project but not my research.

What does the project involve?

During the project workshops I will ask you some questions and look at your work. I would like to record the things you say and take photos of you (not showing your face) and your work so that I don't forget it later. I will only do this if you say that it is okay.

Are there any risks ?

There are no known risks involved in taking part in this project. If you have any questions just ask your teacher, parent, carer, or myself at any time.

Who will know about the project ?

Once this project has finished I will write a report about what I find out and give this to the University. I might also tell people what I have found out by doing presentations and writing reports. I will never tell anyone your name and no one will be able to identify you from any of the material I produce.

Do you want to take part?

If you would like to take part please let me know and fill in the consent form.

Thank you !



school house
project

Welcome to the
school house project
adult participant consent sheet

Please read the below questions and tick 'yes' or 'no'

I confirm that I have read and understand the information sheet explaining the above project and I have had the opportunity to ask questions about the project.

yes no

I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and without there being any negative consequences. In addition, should I not wish to answer any particular question or questions, I am free to decline. Contacts:

yes no



University: **Name:** Dr Catherine Burke, **E-mail:** cb552@cam.ac.uk, **Telephone:** 01223 767566, **Address:** Dr Catherine Burke, Faculty of Education, University of Cambridge, 184 Hills Road, Cambridge, CB2 8PQ

I understand that my responses will be kept strictly confidential. I give permission for the university student and university project supervisor to have access to my responses. I understand that my name will not be linked with the research materials.

yes no

I understand that I and my work might be photographed (my face not shown) and recorded on voice recorder I understand that these will be deleted/destroyed once the University assessment process is complete.

yes no

I agree to photographs of me (not showing my face) and my work appearing in the student's report and later academic publications and presentations.

yes no

I agree to take part in the above project.

yes no

Your name

Signature

Date

Name of person taking consent
(if different from researcher)

Signature

Date

To be signed and dated in presence of participant where possible

Researcher

Signature

Date

To be signed and dated in presence of participant where possible

Copies: Once signed the participant should receive a copy of the signed and dated participant consent form, the information sheet and any other written information provided to the participants. A copy of the signed and dated consent form should be placed in the project's main record (e.g. a site file), which must be kept in a secure location.



school house
project

Welcome to the school house project

parent/ carer information sheet (1/ 2)

Hello

My name is Tom Bellfield. I am a student at the University of Cambridge who is doing a research project with [REDACTED]

Your child is being invited to take part in an extra-curricular project as part of the after-school club. This project will also form part of my university PhD research project, however, it is up to you and your child to decide whether or not s/he will be involved. Before you decide, please take time to read the information below. If there is anything that is not clear or if you would like more information please contact either [REDACTED] myself, or the university supervisor. Contacts:

Tom Bellfield	tsb35@cam.ac.uk	(research leader)
Dr. Catherine Burke	cb552@cam.ac.uk	(university supervisor)

What is the project about ?

This project aims to understand more about how different design activities can help us to talk and think about education: How, where, and why do we learn? What and who do we think schools should be for? What do we think they should look and feel like to be in?

The project will do this by exploring the existing school and creating a plan for the design of the school's schoolhouse garden through five creative workshops. In these workshops we will: create maps of the existing school and imagine how it could be used differently; explore the existing school house garden using all five senses; develop ideas for how the new garden can be used, what for, by who, and when; experiment with space by making our own dens; and create a final proposal to present to the school.

The project will take part in the first half of the summer term.

Why has my child been chosen?

Because your child is part of the after-school club, and therefore is one of the pupil's who will benefit most from the new school house space.

What will happen and why?

During the project workshops I will ask your child a number of questions and discuss their work. During the workshops I would like to create an audio recording of the things that are said and take photographs. However, I will never photograph your child's face. Contact between myself (the researcher) and your child will be facilitated and overseen by the school - a member of which will always be present. The school has also ensured relevant checks, including a DBS check, have been undertaken.

Are there any risks ?

There are no known disadvantages or risks involved in taking part in this project. If you have any questions please contact the school, the research supervisor, or myself at anytime.



school house
project

Welcome to the
school house project
parent/ carer information sheet (2/ 2)

What will happen to the results of the project?

The information gathered will inform a written report that will be submitted to and become the property of the University of Cambridge. In the future the findings might also be presented at conferences and written about in academic publications. Your child will never be named or identified in any reports or publications.

Will my child be recorded, and how will the recorded media be used?

Sound recordings (e.g. of group interviews and conversations) and photographs will only be taken with your consent and the consent of your child. Photographs will not show faces and the purpose of sound recordings is for later analysis only. The photos might also be used for illustration in the final report and related academic publications. NO images or recordings of your child will appear on the internet. All images and recordings will be stored only on password protected personal electronic devices and they will be deleted once the process of assessing the research report is completed.

Your child can withdraw from the design or research project at any time without giving a reason.

This project has been approved via The University of Cambridge's research ethics review process. The research will be conducted in accordance with the ethical guidelines of the British Educational Research Association.

What if something goes wrong?

Should you wish to raise a complaint about your treatment by the researcher or about something serious occurring during or following your child's participation in the project, please contact the project supervisor (see above).

If you feel your complaint has not been handled to your satisfaction by the supervisor, you can contact the Faculty of Education's Registrar:

E-mail: er206@cam.ac.uk

Address: Emma Rixon, Faculty of Education, University of Cambridge, 184 Hills Road, Cambridge, CB2 8PQ



school house project

Welcome to the school house project parent/ carer consent form

Please read the below questions and tick 'yes' or 'no'

I confirm that I have read and understand the information sheet explaining the above project and I have had the opportunity to ask questions about the project.

yes no

I understand that my child's participation is voluntary and that s/he is free to withdraw at any time without giving any reason and without there being any negative consequences. In addition, should my child not wish to answer any particular question or questions, s/he is free to decline. Contacts:

yes no



University: **Name:** Dr Catherine Burke, **E-mail:** cb552@cam.ac.uk, **Telephone:** 01223 767566, **Address:** Dr Catherine Burke, Faculty of Education, University of Cambridge, 184 Hills Road, Cambridge, CB2 8PQ

I understand that my child's responses will be kept strictly confidential. I give permission for the university student and university research supervisor to have access to his/her responses.
I understand that my child's name will not be linked with the research materials.

yes no

I agree to sound recordings and photographs (not of faces) being taken of my child and his/her work for research analysis. I understand that these will be deleted/destroyed once the University assessment process is complete.

yes no

I agree to photographs (no faces) of my child and his/her work appearing in the student's research report or later academic publications and presentations.
I understand that images of my child will NOT appear on the internet.

yes no

I agree to my child taking part in the above project.

yes no

Name of child participant

Name of parent/ carer

Signature

Date

Name of person taking consent
(if different from researcher)

Signature

Date

To be signed and dated in presence of participant where possible

Researcher

Signature

Date

To be signed and dated in presence of participant where possible

Copies: Once signed the participant should receive a copy of the signed and dated participant consent form, the information sheet and any other written information provided to the participants.

A copy of the signed and dated consent form should be placed in the project's main record (e.g. a site file), which must be kept in a secure location.

A.2 Consent forms: school S



the garden
project

Welcome to the garden project pupil information sheet

Hello

My name is Tom Bellfield. I am a student at the University of Cambridge who is doing a research project with your school. As a member of the architecture club I would like you to take part. Your teacher, parent, or carer will read this information sheet with you.

What is the project about ?

This project aims to understand more about how different design activities can help us to talk and think about education: How, where, and why do we learn? What and who do we think schools should be for? What do we think they should look and feel like to be in?

We will do this by investigating your existing school and creating a plan for the design of your school's garden through five creative workshops in which: we will create maps of your school and imagine how it could be used differently; explore the existing garden using our five senses; develop ideas for how the new garden can be used, what for, by who, and when; experiment with space by making our own dens; and create a final proposal to present to the school.

The project will take part in the first half of the summer term.

Do I have to take part ?

It is completely up to you. If you do decide to take part, you will be given this information sheet and asked to sign a consent form. If you change your mind, don't worry, you can stop taking part at any point in the project. You can also ask to take part in the 'school house project' but not my research.

What does the project involve?

During the project workshops I will ask you some questions and look at your work. I would like to record the things you say and take photos of you (not showing your face) and your work so that I don't forget it later. I will only do this if you say that it is okay.

Are there any risks ?

There are no known risks or disadvantages involved in taking part in this project. If you have any questions just ask your teacher, parent, carer, or myself at any time.

Who will know about the project ?

Once this project has finished I will write a report about what I find out and give this to the University. I might also tell people what I have found out by doing presentations and writing articles. I will never tell anyone your name and no one will be able to identify you from any of the material I produce.

Do you want to take part?

If you would like to take part please tell your teacher, parent, or carer and fill in the consent form.


Thank you !



the garden project

Welcome to the garden project pupil participant consent sheet

Please read the below questions and tick 'yes' or 'no'

Has  or your parent told you about this research project and what will happen?

yes no

Did  or your parent ask you if you had any questions about the project?

yes no

Do you know that you don't have to take part in the project if you don't want to?

yes no

Do you know that I will write about the things you say and do in the project, but you will never be identified?

yes no

Is it okay for your voice to be recorded and photographs to be taken of you (your face will not be shown) and your work?

yes no

When I write about this project and show it to other people, is it okay to show pictures and video of you (your face will not be shown) and your work?

yes no

Do you want to take part in the project?

yes no

If you decide later that you don't want to be part of this project anymore, or don't want to be photographed or your voice recorded, that is OK. Just tell your teacher, parent, carer, or me.
If you wish, you can chose to take part in the design project but not the research.

Your name

Signature

Date

Name of person taking consent
(if different from researcher)

Signature

Date

To be signed and dated in presence of participant where possible

Researcher

Signature

Date

To be signed and dated in presence of participant where possible

Copies: Once signed the participant should receive a copy of the signed and dated participant consent form, the information sheet and any other written information provided to the participants.
A copy of the signed and dated consent form should be placed in the project's main record (e.g. a site file), which must be kept in a secure location.



Welcome to the garden project

adult participant information sheet

Hello

My name is Tom Bellfield. I am a student at the University of Cambridge who is doing a research project with your school. As a leader of the architecture club I would like you to take part.

What is the project about ?

This project aims to understand more about how different design activities can help us to talk and think about education: How, where, and why do we learn? What and who do we think schools should be for? What do we think they should look and feel like to be in?

We will do this by investigating your existing school and creating a plan for the design of your school's garden through five creative workshops in which: we will create maps of your school and imagine how it could be used differently; explore the existing garden using our five senses; develop ideas for how the new garden can be used, what for, by who, and when; experiment with space by making our own dens; and create a final proposal to present to the school.

The project will take part in the first half of the summer term.

Do I have to take part ?

It is completely up to you. If you do decide to take part, you will be given this information sheet and asked to sign a consent form. If you change your mind, don't worry you can stop taking part at any point in the project. You can also ask to take part in the schoolhouse project but not my research.

What does the project involve?

During the project workshops I will ask you some questions and look at your work. I would like to record the things you say and take photos of you (not showing your face) and your work so that I don't forget it later. I will only do this if you say that it is okay.

Are there any risks ?

There are no known risks involved in taking part in this project. If you have any questions just ask your teacher, parent, carer, or myself at any time.

Who will know about the project ?

Once this project has finished I will write a report about what I find out and give this to the University. I might also tell people what I have found out by doing presentations and writing articles. I will never tell anyone your name and no one will be able to identify you from any of the material I produce.

Do you want to take part?

If you would like to take part please let me know and fill in the consent form.

Thank you !



the garden project

Welcome to the garden project

adult participant consent sheet

Please read the below questions and tick 'yes' or 'no'

I confirm that I have read and understand the information sheet explaining the above project and I have had the opportunity to ask questions about the project.

yes no

I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and without there being any negative consequences. In addition, should I not wish to answer any particular question or questions, I am free to decline. Contacts:

yes no

University: **Name:** Dr Catherine Burke, **E-mail:** cb552@cam.ac.uk, **Telephone:** 01223 767566, **Address:** Dr Catherine Burke, Faculty of Education, University of Cambridge, 184 Hills Road, Cambridge, CB2 8PQ

I understand that my responses will be kept strictly confidential. I give permission for the university student and university project supervisor to have access to my responses. I understand that my name will not be linked with the research materials.

yes no

I understand that I and my work might be photographed (my face not shown) and recorded on voice recorder I understand that these will be deleted/destroyed once the University assessment process is complete.

yes no

I agree to photographs of me (not showing my face) and my work appearing in the student's report and later academic publications and presentations.

yes no

I agree to take part in the above project.

yes no

Your name

Signature

Date

Name of person taking consent
(if different from researcher)

Signature

Date

To be signed and dated in presence of participant where possible

Researcher

Signature

Date

To be signed and dated in presence of participant where possible

Copies: Once signed the participant should receive a copy of the signed and dated participant consent form, the information sheet and any other written information provided to the participants. A copy of the signed and dated consent form should be placed in the project's main record (e.g. a site file), which must be kept in a secure location.



the garden
project

Welcome to the garden project

parent/ carer information sheet (1/ 2)

Hello

My name is Tom Bellfield. I am a student at the University of Cambridge who is doing a research project with [REDACTED]

Your child is being invited to take part in an extra-curricular project as part of the after-school club. This project will also form part of my university PhD research project, however, it is up to you and your child to decide whether or not s/he will be involved. Before you decide, please take time to read the information below. If there is anything that is not clear or if you would like more information please contact either Ms. Easton, myself, or the university supervisor. Contacts:

Tom Bellfield	tsb35@cam.ac.uk	(research leader)
Dr. Catherine Burke	cb552@cam.ac.uk	(university supervisor)

What is the project about ?

This project aims to understand more about how different design activities can help us to talk and think about education: How, where, and why do we learn? What and who do we think schools should be for? What do we think they should look and feel like to be in?

We will do this by investigating the existing school and creating a plan for the design of the school's garden through five creative workshops in which: we will create maps of the school and imagine how it could be used differently; explore the existing garden using our five senses; develop ideas for how the new garden can be used, what for, by who, and when; experiment with space by making our own dens; and create a final proposal to present to the school.

The project will take part in the first half of the summer term.

Why has my child been chosen?

Because your child is part of the architecture club, and therefore is one of the pupil's who will benefit most from the new garden space.

What will happen and why?

During the project workshops I will ask your child a number of questions and discuss their work. During the workshops I would like to create an audio recording of the things that are said and take photographs. However, I will never photograph your child's face. Contact between myself (the researcher) and your child will be facilitated and overseen by the school - a member of which will always be present. The school has also ensured relevant checks, including DBS checks, have been undertaken.

Are there any risks ?

There are no known disadvantages or risks involved in taking part in this project. If you have any questions please contact the school, the research supervisor, or myself at anytime.



Welcome to the garden project

parent/ carer consent form

Please read the below questions and tick 'yes' or 'no'

I confirm that I have read and understand the information sheet explaining the above project and I have had the opportunity to ask questions about the project.

yes no

I understand that my child's participation is voluntary and that s/he is free to withdraw at any time without giving any reason and without there being any negative consequences. In addition, should my child not wish to answer any particular question or questions, s/he is free to decline. Contacts:

yes no

University: **Name:** Dr Catherine Burke, **E-mail:** cb552@cam.ac.uk, **Telephone:** 01223 767566, **Address:** Dr Catherine Burke, Faculty of Education, University of Cambridge, 184 Hills Road, Cambridge, CB2 8PQ

I understand that my child's responses will be kept strictly confidential. I give permission for the university student and university research supervisor to have access to his/her responses.
I understand that my child's name will not be linked with the research materials.

yes no

I agree to sound recordings and photographs (not of faces) being taken of my child and his/her work for research analysis. I understand that these will be deleted/destroyed once the University assessment process is complete.

yes no

I agree to photographs (no faces) of my child and his/her work appearing in the student's research report or later academic publications and presentations.
I understand that images of my child will NOT appear on the internet.

yes no

I agree to my child taking part in the above project.

yes no

Name of child participant

Name of parent/ carer

Signature

Date

Name of person taking consent
(if different from researcher)

Signature

Date

To be signed and dated in presence of participant where possible

Researcher

Signature

Date

To be signed and dated in presence of participant where possible

Copies: Once signed the participant should receive a copy of the signed and dated participant consent form, the information sheet and any other written information provided to the participants.
A copy of the signed and dated consent form should be placed in the project's main record (e.g. a site file), which must be kept in a secure location.



the garden
project

Welcome to the garden project

parent/ carer information sheet (2/ 2)

What will happen to the results of the project?

The information gathered will inform a written report that will be submitted to and become the property of the University of Cambridge. In the future the findings might also be presented at conferences and written about in academic publications. Your child will never be named or identified in any reports or publications.

Will my child be recorded, and how will the recorded media be used?

Sound recordings (e.g. of group interviews and conversations) and photographs will only be taken with your consent and the consent of your child. Photographs will not show faces and the purpose of sound recordings is for later analysis only. The photos might also be used for illustration in the final report and related academic publications. NO images or recordings of your child will appear on the internet. All images and recordings will be stored only on password protected personal electronic devices and they will be deleted once the process of assessing the research report is completed.

Your child can withdraw from the design or research project at any time without giving a reason.

This project has been approved via The University of Cambridge's research ethics review process. The research will be conducted in accordance with the ethical guidelines of the British Educational Research Association.

What if something goes wrong?

Should you wish to raise a complaint about your treatment by the researcher or about something serious occurring during or following your child's participation in the project, please contact the project supervisor (see above).

If you feel your complaint has not been handled to your satisfaction by the supervisor, you can contact the Faculty of Education's Registrar:

E-mail: er206@cam.ac.uk

Address: Emma Rixon, Faculty of Education, University of Cambridge, 184 Hills Road, Cambridge, CB2 8PQ

A.3 Consent forms: school U



exploring
our school

Welcome to the
exploring our school project
pupil participant information sheet

Hello

My name is Tom Bellfield. I am a student at the University of Cambridge who is doing a research project with your school. As a [redacted] I would like you to take part. Your teacher, parent, or carer will read this information sheet with you.

What is the project about ?

In this project we will use different design activities to help us to talk and think about our education: How, where, and why do we learn? What and who do we think schools should be for? What do we think they should look and feel like to be in?

We will do this through 3 creative workshops. First, we will design and carry out walking tours of the existing school. On each tour we will stop in particular places to think and talk about what they are for, how we use them, do we like or dislike them, and how they can be improved. In workshop 2, we will each chose a specific place discovered on the tours and - using a mix of drawing, writing, and collage - we will develop a creative response to the place, explaining why we like it or how it could be improved. Finally, in workshop 03, we will discuss our experiences of the project: Have we enjoyed it? Has it made us think differently about our school? Have we discovered anything new?

Do I have to take part ?

It is up to you. If you do decide to take part, you will be given this information sheet and asked to sign a consent form. If you change your mind, don't worry, you can stop at any point. You can also ask to take part in the workshops but not my research.

What does the project involve?

During the workshops I will ask you some questions and look at your work. I would like to record the things you say and take photos of you (not showing your face) and your work so that I don't forget it later. I will only do this if you say that it is okay.

The project will take part over 3 days in the second half of the autumn term.

Are there any risks ?

There are no known risks or disadvantages involved in taking part in this project. If you have any questions just ask your teacher, parent, carer, or myself at any time.

Who will know about the project ?

Once this project has finished I will write a report about what I find out and give this to the University. I might also tell people what I have found out by doing presentations and writing reports. I will never tell anyone your name and no one will be able to identify you from any of the material I produce.

Do you want to take part?

If you would like to take part please tell your teacher, parent, or carer and fill in the consent form.

Thank you !



exploring
our school

Welcome to the
exploring our school project
pupil participant consent sheet

Please read the below questions and tick 'yes' or 'no'

Have you been told you about this research project and what will happen?

yes no

Have you been asked if you have any questions about the project?

yes no

Do you know that you don't have to take part in the project if you don't want to?

yes no

Do you know that I will write about the things you say and do in the project, but you will never be identified?

yes no

Is it okay for your voice to be recorded and photographs to be taken of you (your face will not be shown) and your work?

yes no

When I write about this project and show it to other people, is it okay to show pictures and video of you (your face will not be shown) and your work?

yes no

Do you want to take part in the project?

yes no

If you decide later that you don't want to be part of this project anymore, or don't want to be photographed or your voice recorded, that is OK. Just tell your teacher, parent, carer, or me.
If you wish, you can chose to take part in the design project but not the research.

Your name

Signature

Date

Name of person taking consent
(if different from researcher)

Signature

Date

To be signed and dated in presence of participant where possible

Researcher

Signature

Date

To be signed and dated in presence of participant where possible

Copies: Once signed the participant should receive a copy of the signed and dated participant consent form, the information sheet and any other written information provided to the participants.
A copy of the signed and dated consent form should be placed in the project's main record (e.g. a site file), which must be kept in a secure location.



exploring
our school

Welcome to the
exploring our school project
adult participant information sheet

Hello

My name is Tom Bellfield. I am a student at the University of Cambridge who is doing a research project with your school. As a [redacted] member I would like you to take part.

What is the project about ?

In this project we will use different design activities to help us to talk and think about our education: How, where, and why do we learn? What and who do we think schools should be for? What do we think they should look and feel like to be in?

We will do this through 3 creative workshops. First, we will design and carry out walking tours of the existing school. On each tour we will stop in particular places to think and talk about what they are for, how we use them, do we like or dislike them, and how they can be improved. In workshop 2, we will each choose a specific place discovered on the tours and - using a mix of drawing, writing, and collage - we will develop a creative response to the place, explaining why we like it or how it could be improved. Finally, in workshop 03, we will discuss our experiences of the project: Have we enjoyed it? Has it made us think differently about our school? Have we discovered anything new?

Do I have to take part ?

It is up to you. If you do decide to take part, you will be given this information sheet and asked to sign a consent form. If you change your mind, don't worry, you can stop at any point. You can also ask to take part in the workshops but not my research.

What does the project involve?

During the workshops I will ask you some questions and look at your work. I would like to record the things you say and take photos of you (not showing your face) and your work so that I don't forget it later. I will only do this if you say that it is okay.

The project will take part over 3 days in the second half of the autumn term.

Are there any risks ?

There are no known risks or disadvantages involved in taking part in this project. If you have any questions just ask myself at any time.

Who will know about the project ?

Once this project has finished I will write a report about what I find out and give this to the University. I might also tell people what I have found out by doing presentations and writing reports. I will never tell anyone your name and no one will be able to identify you from any of the material I produce.

Do you want to take part?

If you would like to take part please let me know and fill in the consent form.

Thank you !



exploring
our school

Welcome to the
exploring our school project
adult participant consent sheet

Please read the below questions and tick 'yes' or 'no'

I confirm that I have read and understand the information sheet explaining the above project and I have had the opportunity to ask questions about the project.

yes no

I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and without there being any negative consequences. In addition, should I not wish to answer any particular questions, I am free to decline. Contacts:

yes no



University: **Name:** Dr Catherine Burke, **E-mail:** cb552@cam.ac.uk, **Telephone:** 01223 767566, **Address:** Dr Catherine Burke, Faculty of Education, University of Cambridge, 184 Hills Road, Cambridge, CB2 8PQ

I understand that my responses will be kept strictly confidential. I give permission for the university student and university project supervisor to have access to my responses. I understand that my name will not be linked with the research materials.

yes no

I understand that I and my work might be photographed (my face not shown) and recorded on voice recorder I understand that these will be deleted/destroyed once the University assessment process is complete.

yes no

I agree to photographs of me (not showing my face) and my work appearing in the student's report and later academic publications and presentations.

yes no

I agree to take part in the above project.

yes no

Your name Signature Date

Name of person taking consent Signature Date
(if different from researcher)
To be signed and dated in presence of participant where possible

Researcher Signature Date
To be signed and dated in presence of participant where possible

Copies: Once signed the participant should receive a copy of the signed and dated participant consent form, the information sheet and any other written information provided to the participants. A copy of the signed and dated consent form should be placed in the project's main record (e.g. a site file), which must be kept in a secure location.



Welcome to the exploring our school project

parent/ carer information sheet

1 of 2

Hello

My name is Tom Bellfield. I am a student at the University of Cambridge who is doing a research project with the [redacted] School.

Your child is being invited to take part in an extra-curricular project as part of the after-school club. This project will also form part of my university PhD research project, however, it is up to you and your child to decide whether or not s/he will be involved. Before you decide, please take time to read the information below. If there is anything that is not clear or if you would like more information please contact either the University Primary School reception, myself, or the university supervisor. Contacts:

Tom Bellfield	tsb35@cam.ac.uk	(research leader)
Dr. Catherine Burke	cb552@cam.ac.uk	(university supervisor)

What is the project about ?

In this project we will use different design activities to help us to talk and think about our education: How, where, and why do we learn? What and who do we think schools should be for? What do we think they should look and feel like to be in?

We will do this through 3 creative workshops. First, we will design and carry out walking tours of the existing school. On each tour we will stop in particular places to think and talk about what they are for, how we use them, do we like or dislike them, and how they can be improved. In workshop 2, we will each choose a specific place discovered on the tours and - using a mix of drawing, writing, and collage - we will develop a creative response to the place, explaining why we like it or how it could be improved. Finally, in workshop 03, we will discuss our experiences of the project: Have we enjoyed it? Has it made us think differently about our school? Have we discovered anything new?

Why has my child been chosen?

Your child has been chosen because they are a member of Y4 and, therefore, have excellent knowledge and experience of the school.

What will happen and why?

During the project workshops I will ask your child a number of questions and discuss their work. During the workshops I would like to create an audio recording of the things that are said and take photographs. However, I will never photograph your child's face. Contact between myself (the researcher) and your child will be facilitated and overseen by the school. The school has also ensured relevant checks, including a DBS check, have been undertaken.

Are there any risks ?

There are no known disadvantages or risks involved in taking part in this project. If you have any questions please contact the school, the research supervisor, or myself at anytime.



Welcome to the exploring our school project

parent/ carer information sheet
2 of 2

What will happen to the results of the project?

The information gathered will inform a written report that will be submitted to and become the property of the University of Cambridge. In the future the findings might also be presented at conferences and written about in academic publications. Your child will never be named or identified in any reports or publications.

Will my child be recorded, and how will the recorded media be used?

Sound recordings (e.g. of group interviews and conversations) and photographs will only be taken with your consent and the consent of your child. Photographs will not show faces and the purpose of sound recordings is for later analysis only. The photos might also be used for illustration in the final report and related academic publications. NO images or recordings of your child will appear on the internet. All images and recordings will be stored only on password protected personal electronic devices and they will be deleted once the process of assessing the research report is completed.

Your child can withdraw from the design or research project at any time without giving a reason.

This project has been approved via The University of Cambridge's research ethics review process. The research will be conducted in accordance with the ethical guidelines of the British Educational Research Association.

What if something goes wrong?

Should you wish to raise a complaint about your treatment by the researcher or about something serious occurring during or following your child's participation in the project, please contact the project supervisor (see above).

If you feel your complaint has not been handled to your satisfaction by the supervisor, you can contact the Faculty of Education's Registrar:

E-mail: er206@cam.ac.uk

Address: Emma Rixon, Faculty of Education, University of Cambridge, 184 Hills Road, Cambridge, CB2 8PQ



exploring
our school

Welcome to the
exploring our school project
parent/ carer consent sheet

Please read the below questions and tick 'yes' or 'no'

I confirm that I have read and understand the information sheet explaining the above project and I have had the opportunity to ask questions about the project.

(yes) (no)

I understand that my child's participation is voluntary and that s/he is free to withdraw at any time without giving any reason and without there being any negative consequences. In addition, should my child not wish to answer any particular question, s/he is free to decline. Contacts:

(yes) (no)



University: **Name:** Dr Catherine Burke, **E-mail:** cb552@cam.ac.uk, **Telephone:** 01223 767566, **Address:** Dr Catherine Burke, Faculty of Education, University of Cambridge, 184 Hills Road, Cambridge, CB2 8PQ

I understand that my child's responses will be kept strictly confidential. I give permission for the university student and university research supervisor to have access to his/her responses.
I understand that my child's name will not be linked with the research materials.

(yes) (no)

I agree to sound recordings and photographs (not of faces) being taken of my child and his/her work for research analysis. I understand that these will be deleted/destroyed once the University assessment process is complete.

(yes) (no)

I agree to photographs (no faces) of my child and his/her work appearing in the student's research report or later academic publications and presentations.
I understand that images of my child will NOT appear on the internet.

(yes) (no)

I agree to my child taking part in the above project.

(yes) (no)

Name of child participant

Name of parent/ carer

Signature

Date

Name of person taking consent
(if different from researcher)

Signature

Date

To be signed and dated in presence of participant where possible

Researcher

Signature

Date

To be signed and dated in presence of participant where possible

Copies: Once signed the participant should receive a copy of the signed and dated participant consent form, the information sheet and any other written information provided to the participants.
A copy of the signed and dated consent form should be placed in the project's main record (e.g. a site file), which must be kept in a secure location.

Hi!

My name is Tom Bellfield. I am a student at the University of Cambridge Faculty of Education who is collaborating with the [redacted] called:

Exploring Our School.

In this project I will work with year 4 pupils on a number of different design activities that will help us to talk and think about our education by exploring our school.

How, where, and why do we learn?

What and who do we think schools should be for?

What do we think they should look and feel like to be in?

What might our school look like in the future?

Are there any changes we would like to make?

The project will take place over 3 workshops in the Autumn 2017 half term. As the project forms part of my doctoral research pupils and parents/ carers need to consent to their involvement.

Further information and the required consent forms can be found inside this envelope. If you have any further questions please email me at tb35@cam.ac.uk

Thank you!



Please return completed forms to the school's reception or [redacted]

Please return completed forms to the school

B School T: activity sheet, workshop 02

The below activity sheet was used in workshop 02 as a means to structure and facilitate hands-on exploration of the existing School House garden. It sought to prompt creative questioning of both garden and house by using each of the five senses. Examples of completed worksheets, together with an account of how they were, in reality, used can be found in Movement III, Site-Writing 01, Score II.

Describe the existing garden to another member of the school . . .

name . . .

the existing Schoolhouse garden

- describe 3 different smells . . .
- what are the positives?
- describe what the garden looks like . . .
- are there any negatives?
- describe 3 different materials you can touch . . . what do they feel like?
- describe 3 different sounds you can hear . . .

C School T: design report

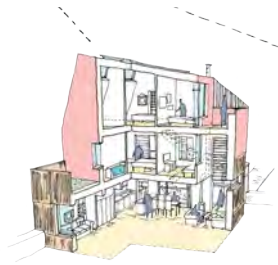
The following slides are taken from the digital presentation given by myself to staff and governors at School T subsequent to the completion of spatial design project 01.

Its purpose was three-fold. Firstly, to re-introduce myself and research, describing the relationship between this and the work undertaken with the After School Club. Secondly, to explain and make tangible the specific work undertaken. Thirdly, to set out the knowledge and design proposals generated through the project, inviting comment and discussion. A key part of this third objective was to present proposals in a way that made clear they were not end points but the beginnings of paths that required further work and energy, as well as wider engagement.

A hard-copy was also given to the school, accompanying a specific hand-over with key actors within the school who were responsible for taking things forward.



WHO AM I ?



ARCHITECTURAL DESIGNER

// PART 2 //

+

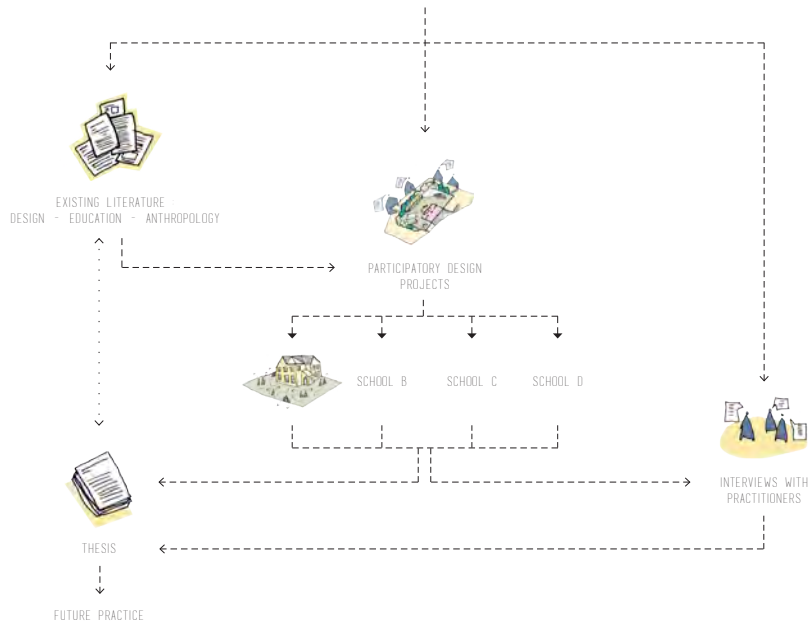


DOCTORAL STUDENT

// FACULTY OF EDUCATION - CAMBRIDGE //

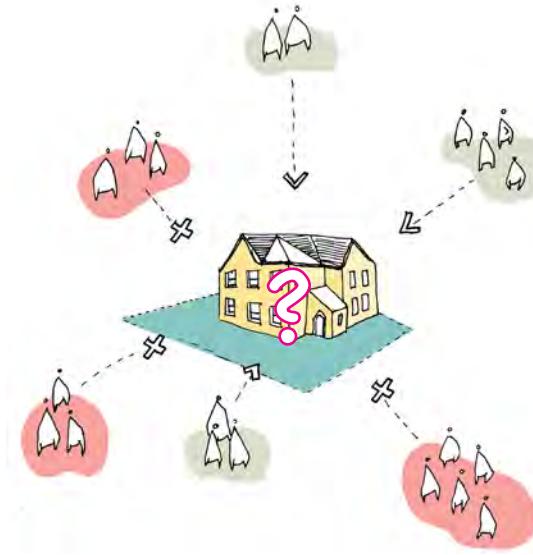
RESEARCH OVERVIEW

Exploring the role + potential of participatory design practice
in the context of primary and secondary school



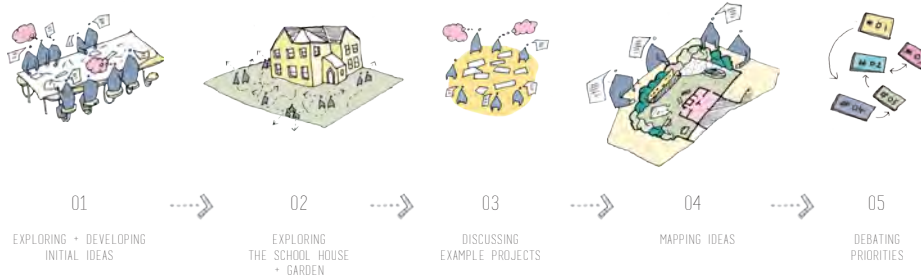
RESEARCH FOCUS

If places are understood to both demand + be produced by negotiations between those who inhabit and control them . . .



. . . can participatory design practices help children to engage in the negotiation of the places they inhabit on a day-to-day basis ?

5 WORKSHOPS



6 PROPOSALS

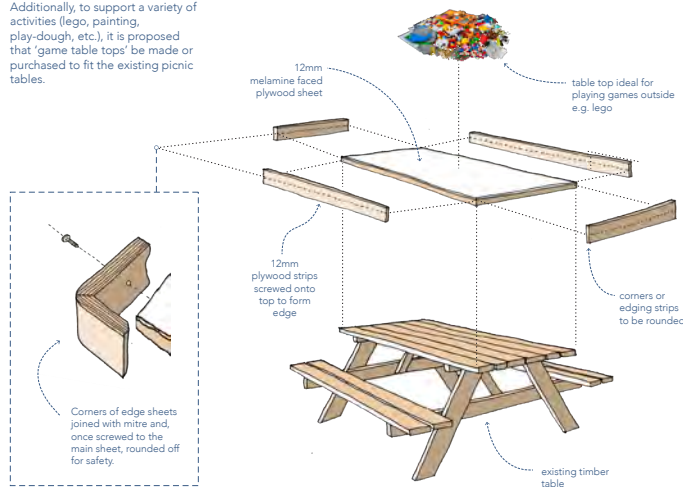


What if ...

WHAT + WHY ?

To support outdoor activities, it is proposed that one or more of the picnic tables - currently situated in the main playground - be relocated to the school house garden.

Additionally, to support a variety of activities (lego, painting, play-dough, etc.), it is proposed that 'game table tops' be made or purchased to fit the existing picnic tables.



... we had outside play tables ?

HOME - MADE ?

Table tops could be constructed with relative ease using materials readily available from local shops.

12mm plywood strips to be fixed (using screws) to edges of melamine faced plywood. Corners to be formed using mitres and rounded off for safety.

Up-stand formed by plywood edging helps to locate table top onto existing picnic table and to provide border to keep play items (e.g. lego) from falling off the table.

Melamine face is easily wipeable and provides ideal surface for a range of activities.

SHOP - MADE ?

Picnic tables with 'game-tops' can be purchased pre-made from various companies. They are commonly made from treated timber with a whiteboard style top that can be ordered with a variety of games printed onto its surface.

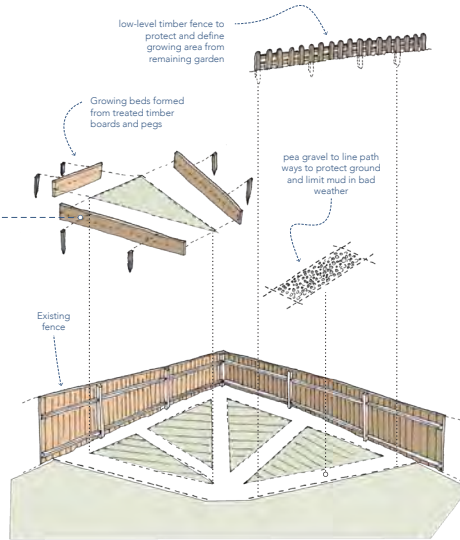
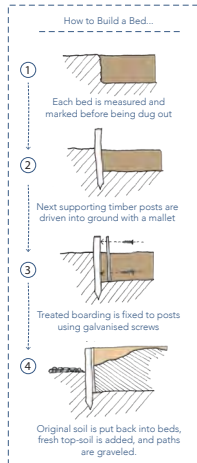
Proprietary are available from (among others) :
www.theplaygroundcompany.co.uk
www.playquestadventureplay.co.uk

Photo of picnic tables with gaming tops removed for copyright reasons. Copyright holder is PGCO Limited.

What if ...

WHAT + WHY ?

An area in which members of the After School + Breakfast clubs can grow their own food. Any food produced could either be taken home or prepared and eaten in the School-house kitchen.



... we had a place to grow ?

RAINWATER COLLECTION

Excess rainwater collected from roof for use on garden.



Photo of raised bed garden removed for copyright reasons. Copyright holder is Konstantina Iakovou.

What if ...

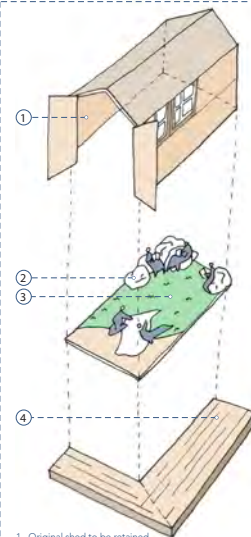
... we had a 'den' to read + play in ?

WHAT + WHY ?

Existing shed to be re-purposed as a 'reading den' and space for 'quiet play'.

Refurbishing the shed will provide additional 'wet weather' play space and afford privacy and separation to children within the clubs - a quiet space to read when noisy activity is taking place inside ...

Installing fake grass will add warmth and comfort when sitting/ playing on the floor, while simple bean bags can support a variety of activities (e.g. reading). Adding a small decked platform will improve ease of access and allow for reading/ playing outside. Natural light is provided through existing windows, and leaving doors open will maintain an audible link to outside.



1. Original shed to be retained
2. New bean bags provide comfy area for reading
3. New astro-turf/ fake grass floor
4. New decking to two sides of shed

What if ...

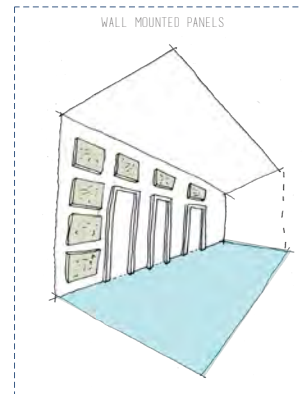
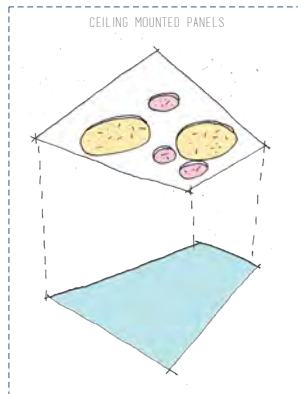
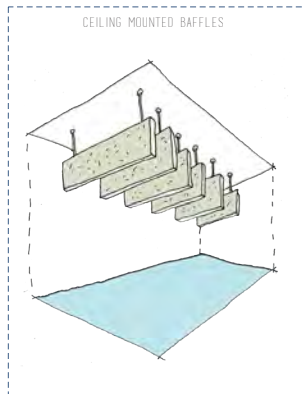
... it needs to be quieter ?

WHAT + WHY ?

The majority of materials and surfaces in the refurbished school house are hard in nature. This will, potentially, cause the space to be noisier due to the ease with which sound is able to bounce off the different hard surfaces.

If noise levels become too much it is possible to install acoustic panels. These panels, which come in various forms, sizes, and colours, are made from soft material that absorbs sound waves to reduce volume levels within a space.

Due to the complex nature of sound, an acoustic engineer would be required to undertake a survey and advise on exact specifications.



What if ... we had a canopy ?

WHAT + WHY ?

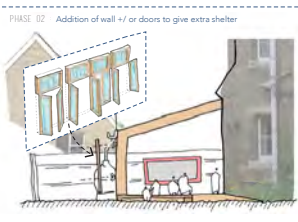
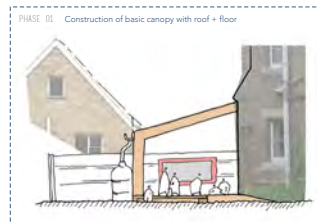
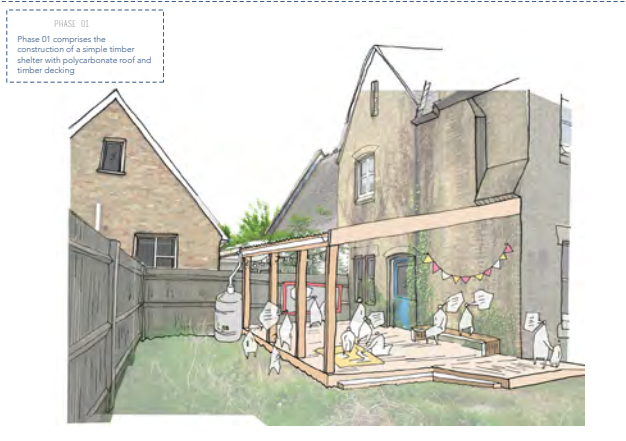
Constructing a simple timber canopy to the end of the school house would provide much needed additional space for both the After School + Breakfast clubs, including an outdoor area that would remain accessible in wet weather.

PHASED CONSTRUCTION ?

To fit with funding constraints the canopy could easily be erected in phases: Phase 01 would see a timber frame erected with a simple polycarbonate roof and timber decking. In phase 02 walls/ doors could be added to improve weather protection. And, finally in phase 03 the canopy itself could be extended to provide yet more space. Designing with further additions in mind is important to ensuring the feasibility of future phases, physically and financially.

MATERIALS ?

A sustainable treated timber frame is proposed for the primary structure. This will minimise cost through simplifying construction while also allowing for future additions and adaptations. Polycarbonate sheet is proposed for its versatility and low-cost. It can be purchased in a range of colours, translucencies, and thicknesses.



What if ...

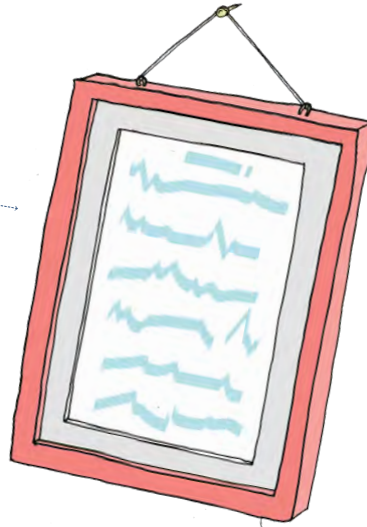
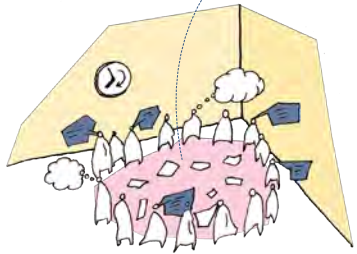
... we created + agreed our own rules?

WHAT + WHY ?

A collectively created and agreed upon set of rules, responsibilities, and expectations for both the After School and Breakfast clubs.

These discussions could be repeated at the start of each year (or term) and would help to:

- (1) Ensure clarity as to what is and isn't allowed during the clubs,
- (2) Help all understand the reasons behind particular rules, especially where they might not be readily apparent,
- (3) Provide a supportive forum for individuals to voice and discuss both individual and shared ideas and concerns.



WHAT NEXT ?



D School U: design report

The following pages are reproductions of the design report produced subsequent to the completion of workshops. The report was originally presented to and discussed with the class in digital form - using the smart board - before changes were made and hard copies were given to the school and class (original size ~ A3). Certain pages have been omitted to maintain anonymity, including the report's penultimate section concerning the discussion between the school's architects and myself based around questions specifically raised by the children.

The report's purpose was three-fold. Firstly, to re-introduce myself and research, describing the relationship between this and the work undertaken with school U. Secondly, to explain and make tangible the specific work undertaken, including a description of the process used thus enabling it to be repeated in the future. Thirdly, to set out the knowledge and design proposals generated through the project, inviting comment and discussion. A key part of this third objective was to present proposals in a way that made clear they were not end points but the beginnings of paths that required further work and energy, as well as wider, continued engagement.

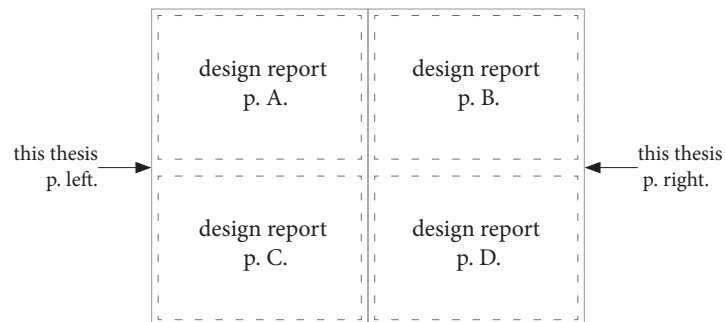
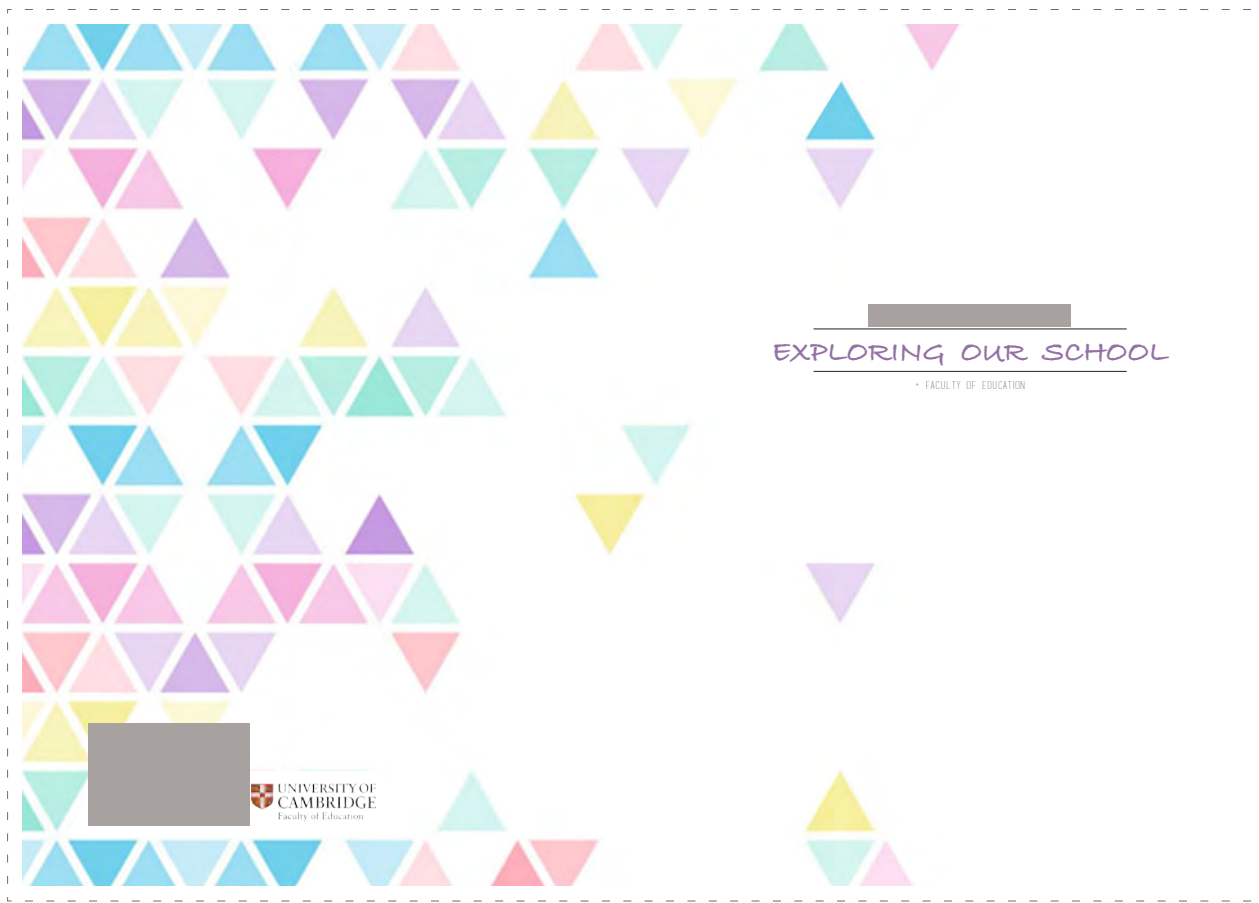


Image showing Design Report during assembly:





EXPLORING OUR SCHOOL

FACULTY OF EDUCATION



UNIVERSITY OF CAMBRIDGE
Faculty of Education



UNIVERSITY OF CAMBRIDGE
Faculty of Education

Introduction

02 Education & Architecture...
03 Research aims/ 3 workshops
04 Informed consent

Workshops

07 Workshop 01 // Establishing the 'bean sites'
Workshop 01 // Exploring the 'bean sites'

08 Workshop 02 // Reviewing the 'bean sites'
Workshop 02 // Developing proposals
Workshop 03 // Exploring significant themes further

Exploring our school...

12 Locating the bean sites
13/ 14 In the classroom // For the classroom...
15/ 16 In the learning street // For the learning street's empty room...
17/ 19 In the centre // For the centre...
21 In the hall + drama studio // For the music studio...
23/ 24 In the gaps // For the gaps...
25 In the library
26 In the dining room
28 Re-locating [redacted]

31 *Asking the Architects...*

42 *Endings & Openings*

This space has been left blank on purpose.

03

Introduction

Research aims

1. To elicit and develop new knowledge concerning children's relationships with spaces and places within the [redacted] including how certain spaces may or may not affect their day-to-day activities both in and outside of the classroom.
2. To develop ideas concerning how particular spaces in and outside the [redacted] might be improved or be used differently in the future.
3. To better understand the specific design methods used so that they may in-turn be developed as exploratory tools for future use in other educational contexts.

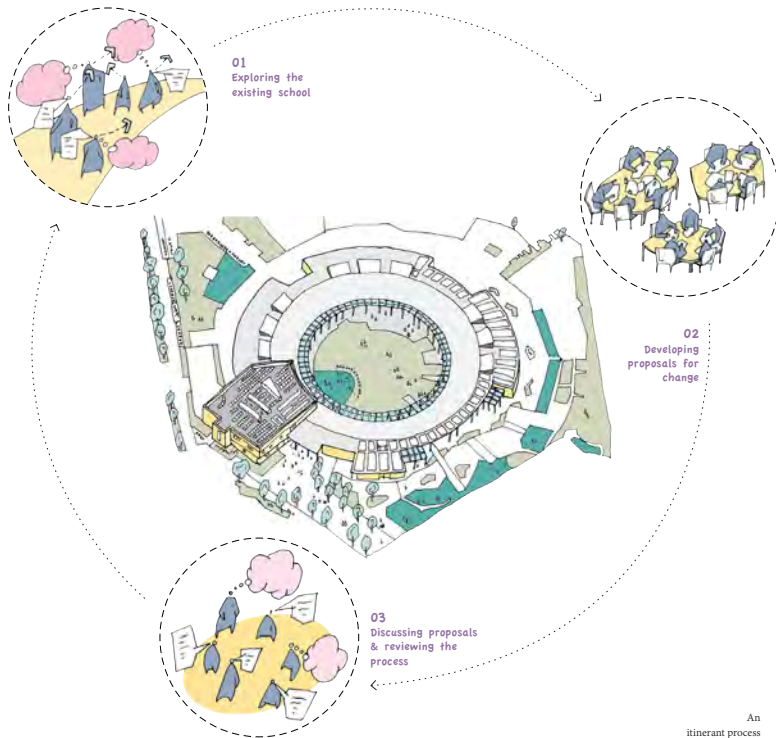
3 workshops

3 workshops were planned and undertaken, each following on from the last. To allow a close ratio

Workshop 01 explored a variety of specific sites within the existing school, chosen at random, asking: What do we like? What don't we like? How else might we use this place? What changes might we make?

Workshop 02 developed proposals for specific sites through the creation of collages and physical models.

Workshop 03 focused on exploring participant's experiences of workshops 01 and 02.



An itinerant process

Introduction

Education & Architecture...

My name is Tom Bellfield, I am a registered PhD candidate under the supervision of Dr Catherine Burke at the Faculty of Education, the University of Cambridge. The PhD is funded by the Arts and Humanities Research Council and is jointly supervised by Dominic Cullinan who is a director at SCABAL, an architecture practice that specialise in innovative educational design.

My personal background is in architecture, where I hold both Bachelor's and Master's degrees and have worked in practice on a variety of primary and secondary educational projects. I have also been involved in a variety of small-scale projects that used design methods to engage with children and adults in primary and secondary education as well as the third-sector.

My ongoing doctoral research employs particular spatial design practices as a means to explore spatially (the material + relational qualities of) children's relationships with the places they inhabit within their school on a day-to-day basis, as well as to spark and support conversations about how particular spaces might be adapted or used differently, in either the near or distant future.



The Map'

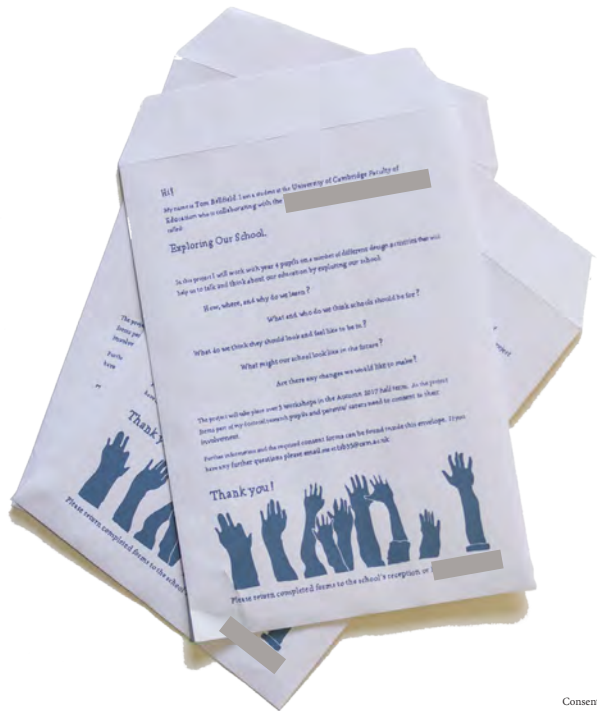
Introduction

Informed consent

This research was approved via The University of Cambridge's research ethics review process and conducted in accordance with the ethical guidelines of the British Educational Research Association.

All participants (including parents or guardians where appropriate) read and signed consent forms explaining fully the nature of the project and what choosing to participate would entail. Participants were able to withdraw consent at any time.

Audio recordings were used throughout project as an aide-memoir. Participants will never be identifiable within any part of the research.



Consent forms/ envelopes

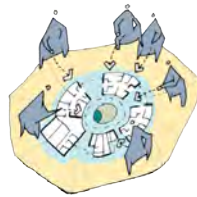
Workshops // 01

Step 01 | establishing the 'bean sites'

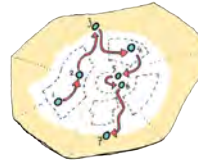
Gathered around a drawn map of the existing school, showing both internal and external areas, participants should take turns to close their eyes and place their counters on the map 'at random'. The number of counters placed by each participant depends on the overall time available for the workshop. If two counters locate on the same site, one may be re-thrown.

Next, a further number of counters are added to the map, based on preplanned reasons.

Once all counters are placed, participants work together to create a route through the bean-sites. While the spaces between sites are not the focus of discussions, conversations raised during transit should not be ignored.



We will each throw a bean onto a map of the existing school



We will create a route that joins the counters together



We will visit + explore each bean site in turn

Step 02 | exploring the 'bean sites'

At each 'bean site' a 4 step process is followed (steps 01 + 04 are optional depending on availability of cameras):

First, a photograph is taken of the site.

Second, a 'questioner' is selected and the bean site is explored using the six questions provided as a guide.

Third, a scribe is appointed to record the discussions that take place on large format paper.

Fourth, a photograph is taken of these notes.



take a photo to describe the space to a friend



discuss the space using the question cards provided as a guide



as you discuss, someone should write down what is said



record the notes taken with another photo

This space has been left blank on purpose.

Workshops // 02

Step 01 | reviewing the 'bean sites'

Individual groups visited different bean-sites, therefore, participants should begin workshop 02 by reviewing all bean-sites visited.

Step 02 | developing proposals

Working individually or together, participants should select one or more sites and, using a variety of collage and modeling materials develop proposals for how that site might be improved, used differently, or re-imagined entirely.



Workshops // 03

Exploring significant themes further

Using the map and narrative of 'the school day' to provide structure, participants are invited to discuss different aspects of school life further. Themes emergent through workshop 01 and 02 should be balanced with new ones to gain a deeper and broader understanding of issues raised.



From top:
Choosing sites
for exploration;
a collection of
finished proposals.

Exploring our school...

Locating 'bean sites' // creating routes

Purple Route

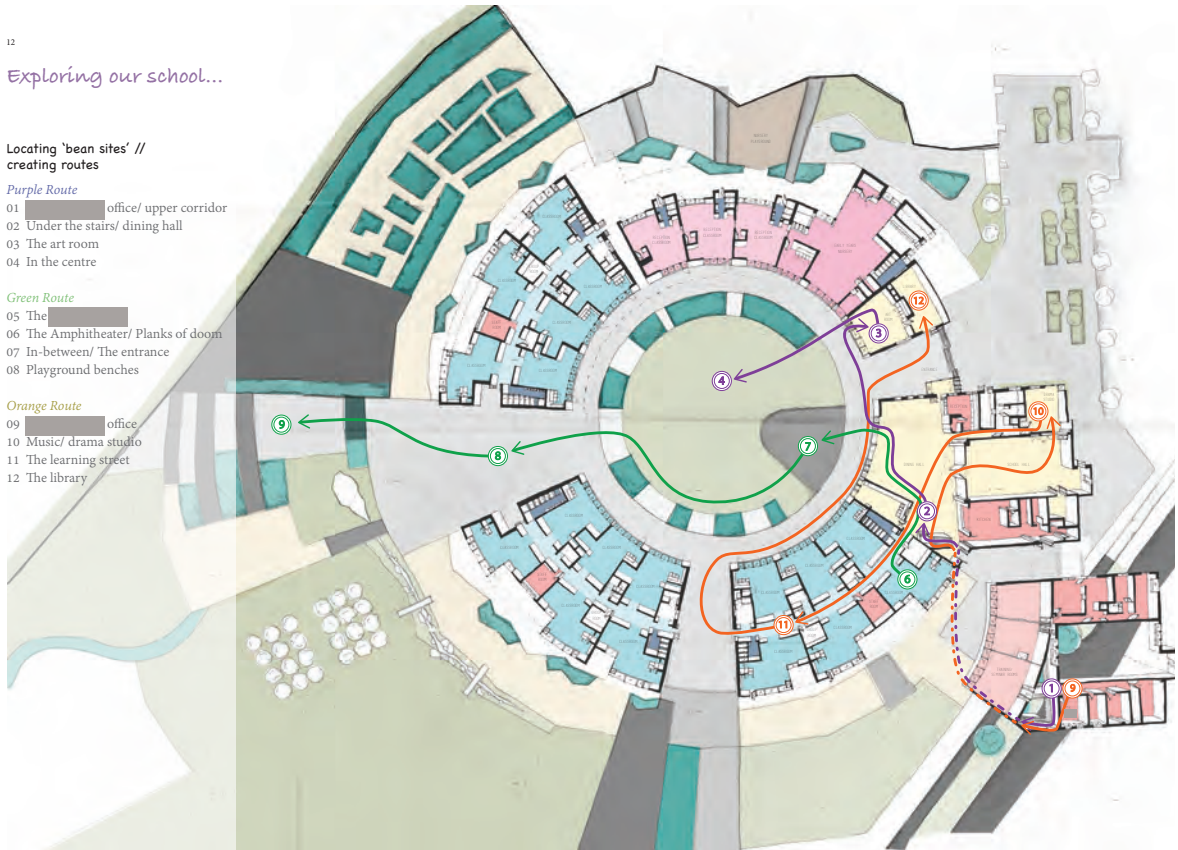
- 01 office/ upper corridor
- 02 Under the stairs/ dining hall
- 03 The art room
- 04 In the centre

Green Route

- 05 The [redacted]
- 06 The Amphitheater/ Planks of doom
- 07 In-between/ The entrance
- 08 Playground benches

Orange Route

- 09 office
- 10 Music/ drama studio
- 11 The learning street
- 12 The library



Exploring our school...

Emergent themes // In the classroom

Discussions in the [redacted] raised issues of privacy and noise, especially concerning the large windows and lack of a door to the learning street. The classroom layout was also noted as impacting teaching, in particular the amount of time spent away from desks/ on the floor.

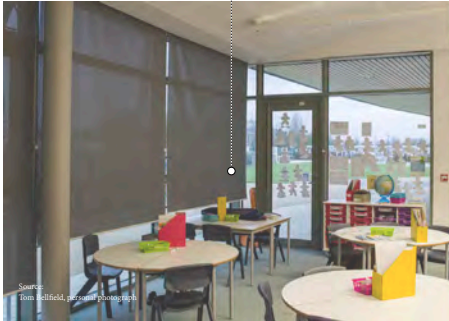
Privacy
Participants loved the big windows but wanted to have more control over their privacy. For example, while they mentioned they could simply ask their teacher to lower and raise of blinds, they also indicated they would like to be able to do this themselves.

Acoustics
Although acoustics were reported to be good within the classroom, it was also noted that unwanted noise from the learning street or other classrooms could not be adequately suppressed when needed.

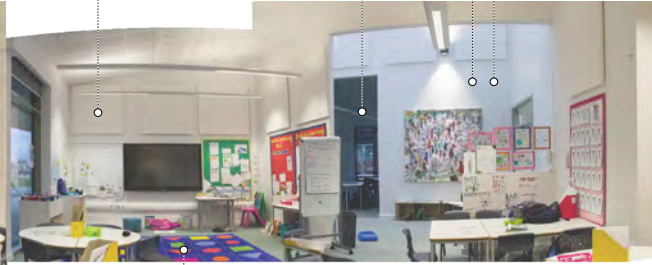
Acoustics
Acoustic pollution is feared to worsen when the school expands and the opposing classroom becomes occupied

Privacy
A second reason for wanting a close-able door was for privacy. For example, participants mentioned that they would like to close the door when getting changed for P.E.

Open Door
The majority of participants liked the lack of a door. However, a significant number raised concerns pertaining to acoustic pollution and privacy. Various options were tabled, including both sliding and folding doors which would be 'open' by default but could be closed when needed.



Source: Tom Bellfield, personal photograph



Classroom shape
Participants reported the classroom's L-shape influenced how they used the space, with any work involving the smart-board requiring them to sit on the carpet rather than tables. While some did not mind this, others noted that - as older children - they would rather spend all their time at desks.

This reflection is supported by their teacher who noted that while the classroom's shape affords many opportunities, it also influences how lessons are planned and taught.

Participants also noted that they liked having the option to use the currently empty opposing classroom to work if needed, for example: when looking for a quieter environment.

Exploring our school...

Emergent themes // In the learning street

Conversations throughout the workshops made clear the extent to which the learning street's potential is restricted by acoustic pollution. Proposals for developing one of its currently empty rooms point to ways this potential might be unlocked, with the library's reading nook also suggested as a way of creating more private (acoustic and visual) spaces within the street.

Scale
While furnished amply with tables, chairs, and sofas, the learning street is uniformly large in scale and offers little opportunity for privacy, away from passers by.

Group working/ reading
Participants reported they enjoyed being able to work in the learning street. However, they also commented that due to noise, they often found it unsuitable for quiet work or reading.

Acoustics
Although lined with acoustic panels, the learning street remains loud. Moreover, due to the open classrooms users find it hard to isolate noise to within or without its boundaries

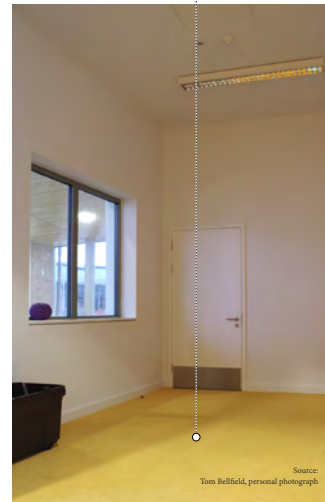
Under use
This room, located on the learning street, was reported as under used by [redacted]



Source: Tom Bellfield, personal photograph



Source: Tom Bellfield, personal photograph



Source: Tom Bellfield, personal photograph

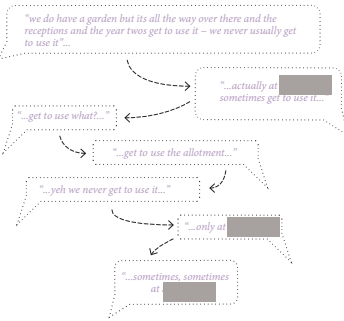
Developing proposals...

For the classroom...

...our very own private garden:

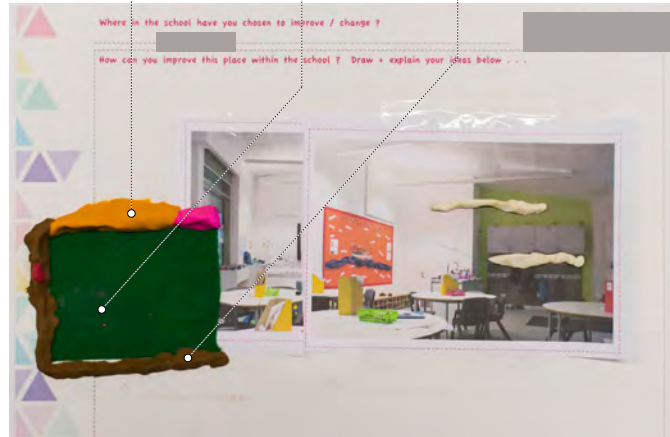
Turning the covered area located immediately outside the classroom into a small garden area would provide space for individual children or small groups to work outside during lessons, where it might be quieter or cooler during the summer.

Such an area could also be used as a multi-faceted teaching aid, for example: offering opportunities to grow a variety of plants or space for potentially 'messy' experiments not suited to an indoor environment.



(Conversation between [redacted])

- Planting**
The garden would be surrounded by areas for planting; for growing vegetables as well as colourful and nice smelling flowers.
- Grass**
The floor - at least part of it - would be covered in soft grass suitable for sitting or laying down on.
- Places to sit**
Comfy benches with cushions would also be included to enable children to take work outside, or to read.



Developing proposals...

For the learning street's empty room...

...a Book Cave to discover books + to curl up in:

This cave would be a private and cosy place to read, away from the classrooms and learning street which can get noisy. Rather than duplicate the existing library's role, it might offer different kinds of books. Or, it might simply offer a place to curl up and read or rest.

...a Mini City:

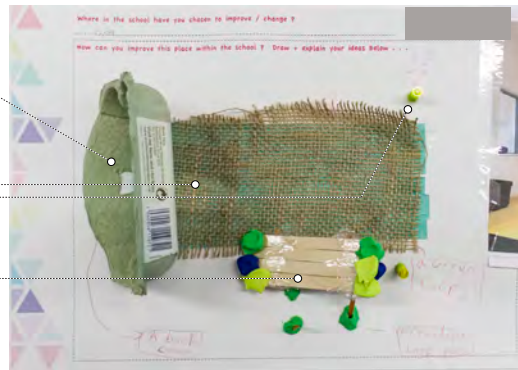
A dynamic miniature city which children could help to both build and develop; a place to learn about their city, its urban and rural areas, in a safe environment. Its use could be coupled with visits to the 'real' city to provide a tool around which a variety of cross-subject projects could be based.

Entrance
The cave would be 'guarded' by a secret entrance that you would have to crawl through to enter...

Flooring
The floor would be covered in a soft green carpet, no shoes needed here!

Lighting
Individual lamps would be provided for reading, giving a cosy atmosphere

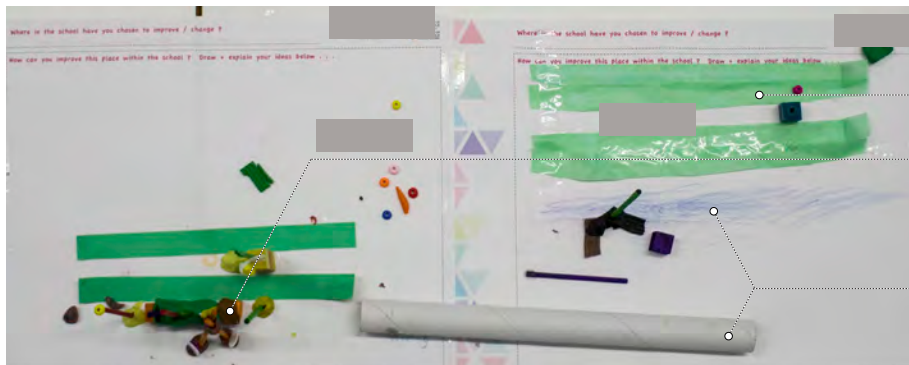
Reading Nooks
Inside the cave, nooks and crannies would provide opportunities to curl up in secret



The Rural Half
One half of the city would represent the city's rural edges. It would have fields, woods, and animals.

The Urban Half
The other half of the city would represent the urban environment. It would have road, and houses, as well as trees and parks.

River & Tunnel
The two halves would be connected by a river and a tunnel.



Exploring our school...

Emergent themes // In the centre

All 3 tours discussed the central courtyard and it was the most popular focus for developing proposals. Participants were glad to have two distinctly different outside areas: a noisy and chaotic outside playground and a quiet and peaceful inner courtyard. However, the later was widely condemned as underused with proposals focusing on enhancing its tranquil qualities - creating places for reading, relaxing, mindfulness, and quiet play.

Under use
The central green was widely reported as being underused.

Uncomfy ground
Several participants mentioned that the grass is very hard to sit on, much harder and more sandy than the grass on the main fields.

Existing planting
While there is a fair amount of existing planting, participants noted that they wished there were larger trees.



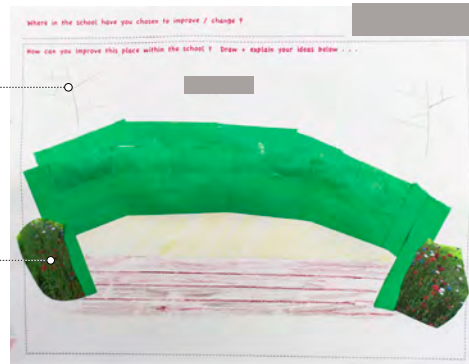
Developing proposals...

For the centre...

...colourful and fragrant planting, with proper trees:
The green should have more extensive planting, with lots of colourful flowers that all have different smells, and proper trees which cast playful shadows.

Proper trees
Proper trees would make the space more interesting, providing places to sit and casting playful shadows throughout the day

Flowering plants
Colourful and fragrant plants could be planted more extensively



...a tranquil centre for mindfulness:

The green should provide a quiet and private place which people can visit to practice mindfulness and to relax in quiet away from any stresses or frustrations that might arise elsewhere in the school.

Trees
Planting trees would provide shade and privacy for those using the central green or river.

Varied + comfy seating
Different kinds of seating - some soft, some hard, some low, some tall - to ensure everyone can find comfort no matter their needs.



"Spaces to calm down when you are frustrated...
...mindfulness cushions"

"Green area to stand and watch the river"

(Annotation from [redacted] design proposal)

Exploring our school...

Emergent themes // In the centre

Emptiness/ Wind
Participants reported a lack of vegetation and hard surfaces, made worse by wind.

Central green
Exacerbating the wind, the open nature of the central space is too open, with little options to sit with protection



Source: Tom Bellfield, personal photograph

Developing proposals...

For the centre...

...a circular bench sculpture for reading + relaxing.
A circular bench sculpture of different widths, heights, and forms - for lying, sitting, leaning, or standing...

...a reading tunnel:
A tunnel could be constructed from timber and shaded with a variety of plants. Benches of different sizes would line the tunnel inside and out providing places for reading and working, as well as privacy and shade as desired.

...water:
Water could be introduced, either as a small pond or stream. Children could take it in turns to keep it clean and to look after any fish.

Nooks
Taller sections would completely enclose the user, providing shade and privacy

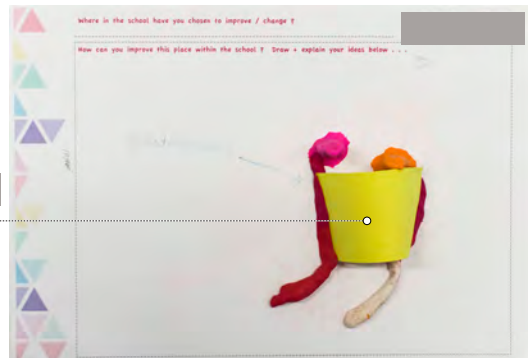
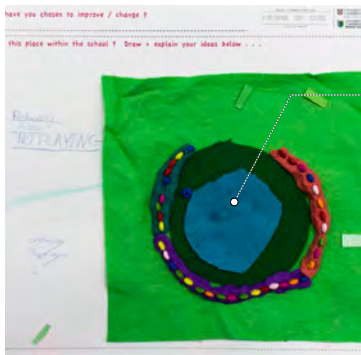
Bench sculpture
timber sculpture encircling the central green offering opportunities for reading and relaxing



Water
Water could be introduced into the centre through a pond or stream, with seating around the edge

"I'd use it just to sit back and relax [...] so if you were just really frustrated you could go to that area and just sit and calm down"

Reading tunnel
a simple tunnel with comfy benches and shaded by plants.



Exploring our school...

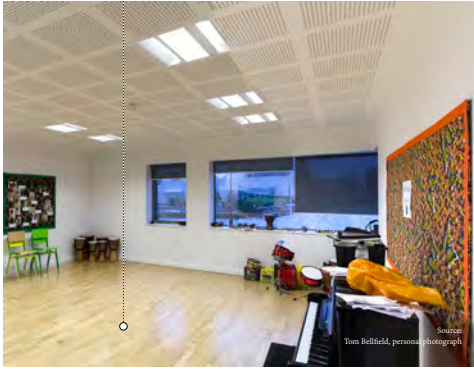
Emergent themes // In the hall + music studio

Questions raised in the school hall mainly took root in its dual use for sport and assembly, with participants finding this to compromise its use in both cases.

The music studio was well liked but criticised for being too small, resulting in the hall often being used instead.

Scale/ Size

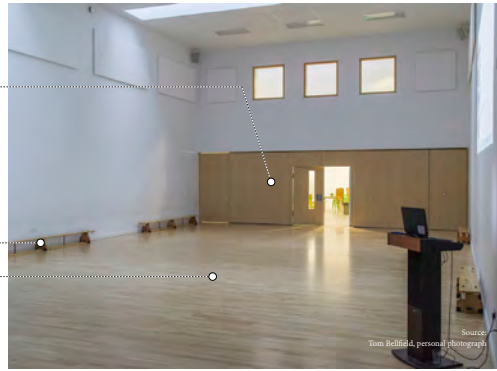
The music studio was well liked. However, participants wished it was bigger - noting that they often have to do classes in the hall when there is not enough space.



Hall size
Participants asked if the hall would be big enough to fit everyone in once all classes in the school are full.

Benches
Participants wondered why they couldn't sit on the benches during assemblies.

Sitting on the floor
Participants said they did not like to sit on the floor due to it being hard and dirty from peoples' "smelly socks" during PE.



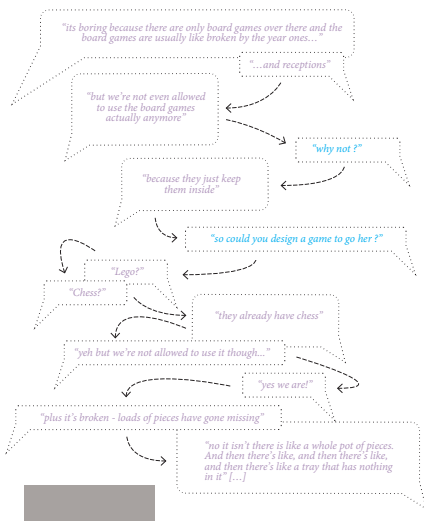
Gym equipment
Participants commented that the gym equipment is underused.



Exploring our school...

Emergent themes // In the gaps

The gaps in the circle work well for wet weather play. However, they are very open and can therefore be exceptionally windy and cold. While the existing picnic benches are well used, the gaps are otherwise featureless and lack colour, exaggerating their 'bleak' atmosphere on grey days.



Lack of colour
Apart from the timber ceiling, the gaps are fairly neutral in colour and can feel bleak given grey skies. Participants noted that they would love for them to be more colourful.

The lip
The lip invites interaction yet is not big enough to sit or walk along

Tables
While tables are provided, they are open to the elements.

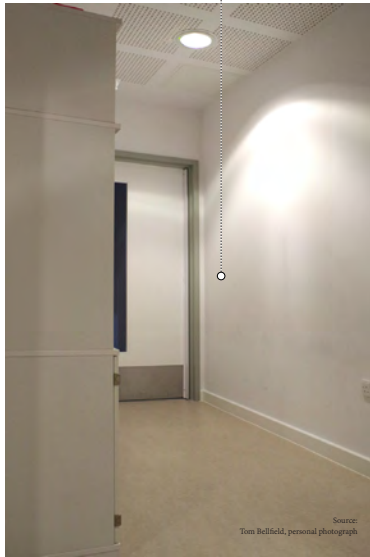
Wind
The gaps provide ample area for dry play during wet weather but, due to their open design, can be windy and cold.



Developing proposals...

For the music studio...

Expanding the music studio
Participants discussed how the existing studio might be extended into the seemingly (from their perspective) wasted space behind the front office.



For the hall...

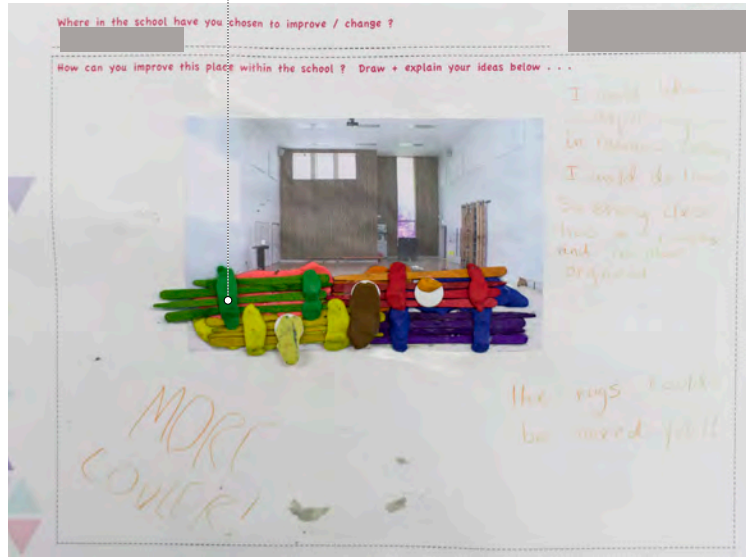
Comfy + colourful seating

Each class should get a colourful rug on which to sit during assemblies. These rugs would protect children from the hard and dirty floor, while being easily movable and store-able, ensuring the hall can still be used for a large range of activities.

"I would like a colourful rug or in rainbow colours. I would do that so every class has a colour and is more organised. The rugs could be moved for PE."

"I want a more colourful hall. I want a rug in the hall"

(Annotation from [redacted]'s design proposal)



Developing proposals...

For the gaps...

...playful structures to protect from the wind:
Small scale playful structures could be installed throughout the gaps. Individually they would offer protection from the wind and opportunities for rest and play. Collectively they might be themed, forming an adventure trail around the school.

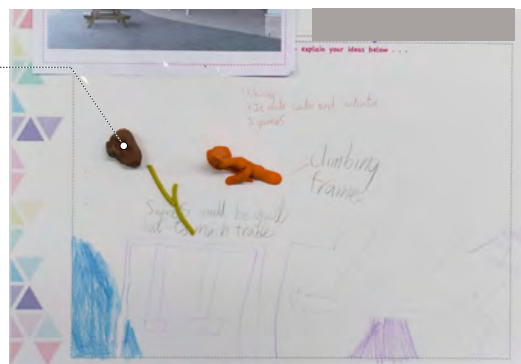
...walls to play games on:
Chalkboards, mounted onto the walls in the gaps, could be pre-painted with different games, such as Pictionary. Using a magnetic base paint would allow for a wider number of games to be played.

...a changing mural:
A hand created mural would inject much needed colour into the currently grey gaps. Different classes might work on different sections, coming together to form a collective whole. Theming the mural and changing it regularly would ensure future students maintained a sense of ownership.

Climb-able wind breaks
Small scale interventions could provide much needed wind breaks within the gaps while also acting as underlying structures that could be climbed and re-purposed for a variety of adventure games.

Swings!
Swings could be hung from the ceiling or between the posts. However, using the current climbing frame as an example, participants noted that swings might cause problems through creating arguments and confusion over who can use them and when.

Adventure Course
The existing climbing frame could be extended with an adventure course that had lots of different elements to interact with: stepping stones, balance beams, towers to climb, tunnels to crawl under, ropes to swing off.



Exploring our school...

Emergent themes // In the library

The main issues raised in the library concerned its use. Participants enjoyed visiting it to collect books or to use during allocated class times, but wished they could visit during the day as they wished - either to change books or as a place to read or play games.

Using the bean bags (Conversation between [redacted])

"there are never enough because there is only like 5 bean bags.."

"I would say there should be about 10 bean bags"

"because everybody fights over them. But [our teacher] says that the people who had them last week shouldn't get them because some people like [names] they always like rush to the back. And the last one, there are always two people fighting over"

Using the library

Participants wondered why they weren't allowed to visit the library during the day on their own accord, either to get books or as a place to read or play games during wet weather.

They also thought it unfair that book selection and use of library was determined by reading ability.

Hiding books

Participants demonstrated how other children sometimes tried to hide books between the cushions so that they could keep them to themselves.

More huts!

The physical and audible comforts offered by the hut were well liked by participants, who thought there should be more of them - perhaps in the learning street too?



Source: Tom Bellfield, personal photograph



Source: Tom Bellfield, personal photograph

This space has been left blank on purpose.

Exploring our school...

Emergent themes // In the dining room

The dining room is generally well liked by all. Noise and space were both raised as issues, with participants well aware that both could well become worse as more children join the school in the future.

The process of having lunch - serving younger children, collecting food, and cleaning tables - was discussed at length. While some participants were unhappy with the current system and others saw its positives, all appreciated it was something that the school was actively trying to make better for all.

Service

Some participants complained about having to serve younger children before being able to get their own dinner. This, they noted, meant they sometimes missed out on the food they wanted and had less time to eat.

Eating elsewhere

The ability to not only choose where to sit, but where in the school to eat was also raised. Suggestions included: outside on the grass in summer or back in the classroom during winter.

Choosing seats

While some participants wished that they could choose where they sat to eat, others enjoyed changing places

Space

Although most liked the design of the dining room, they also thought it too small and worried what would happen as more pupils joined the school.

Noise

Noise was reported to be a considerable issue when running at capacity.



Source: Tom Bellfield, personal photograph



Source: Tom Bellfield, personal photograph

Exploring our school...

Re-locating

Gathered around the school map, participants should discuss where existing office is, asking: Why is it here? Where else might it be? Why?

Using plasticine, participants can create figures, different colours for each group, and locate them on the map to mark where each thinks office might be.

Five main proposals were put forward. However, in all 3 workshops 'staying put' was the favourite, with participants particularly keen to retain the excitement of going upstairs to collect a gold, as well as to safeguard peace and privacy.



Mr [redacted] could...

...go to the centre:

Relocating to the central courtyard would situate [redacted] in the very heart of the circle, equally accessible by and visible to all.

However, a new office would need to be constructed and - even if only small - this would be detrimental to creating the calm and relaxed central green space proposed by participants. Also, while equidistant from all classrooms, being outside the main building would in many ways place [redacted] further away from the daily life of the school than the current situation.

...move to the learning street:

Moving to one of the reportedly underused group rooms located along the learning street would place [redacted] within daily school life, close to both children and staff.

While such a move would decrease provision of group working space in the learning street itself, Mr [redacted] old office could be repurposed to ease this. Although some participants raised concerns about the smaller size of the group rooms, others thought it would be a sacrifice worth paying.

...be in/ near reception:

Being in or near reception would enable [redacted] to easily welcome everyone who visits the school.

Participants contended that this would be enjoyable and easy for him as he knows everybody and all their names.

Practically, there is little space in this area, with the only possible option being the long thin room situated opposite the foot of the existing stair.

...work in the staff room:

If [redacted] were to work in the staff room he would not need to take over any existing places, would be in the centre of the school, and be very accessible for staff.

While no issues were raised during the workshop, I think there are several practical issues with this option that would need further consideration - would staff want Mr [redacted] to move into 'their' space for example?

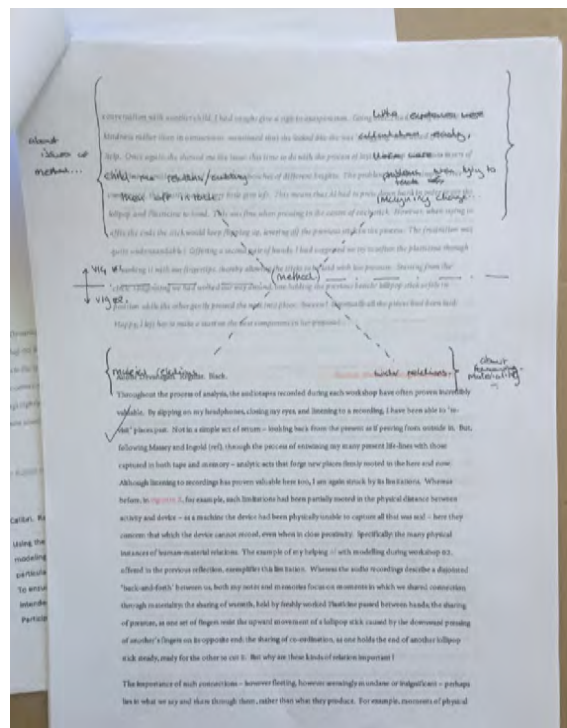
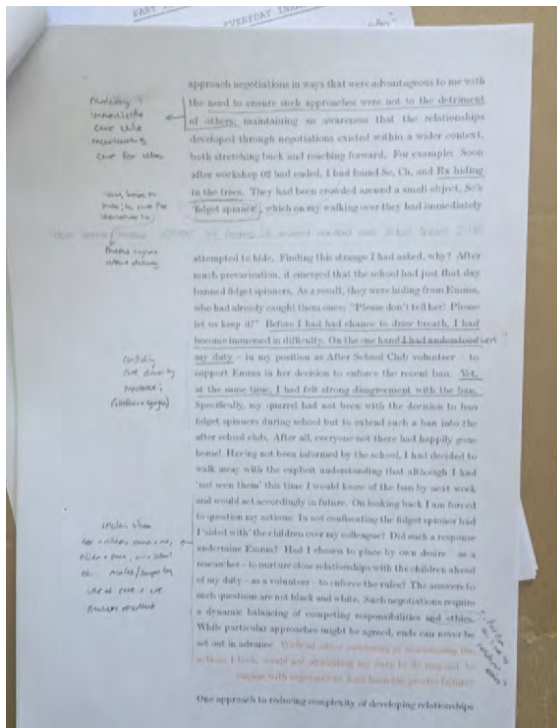
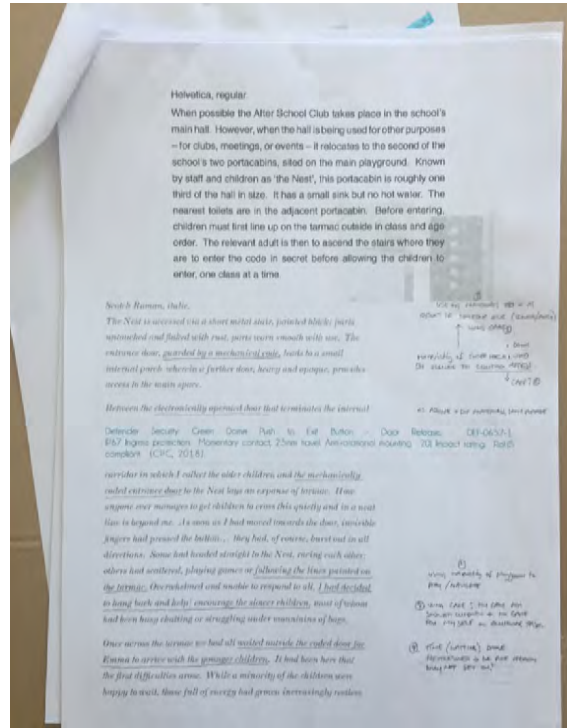
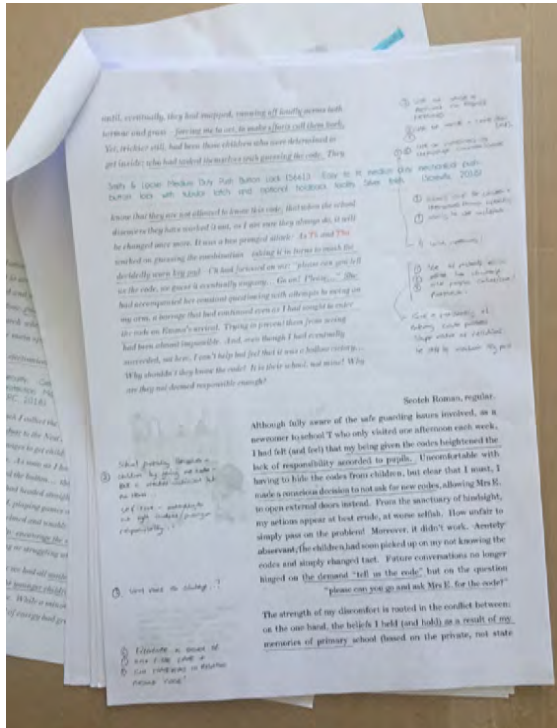
...stay where he is:

The act of climbing the stairs to receive a 'gold' was described with excitement by many participants. For most, this was reason enough for [redacted] to stay where he currently is.

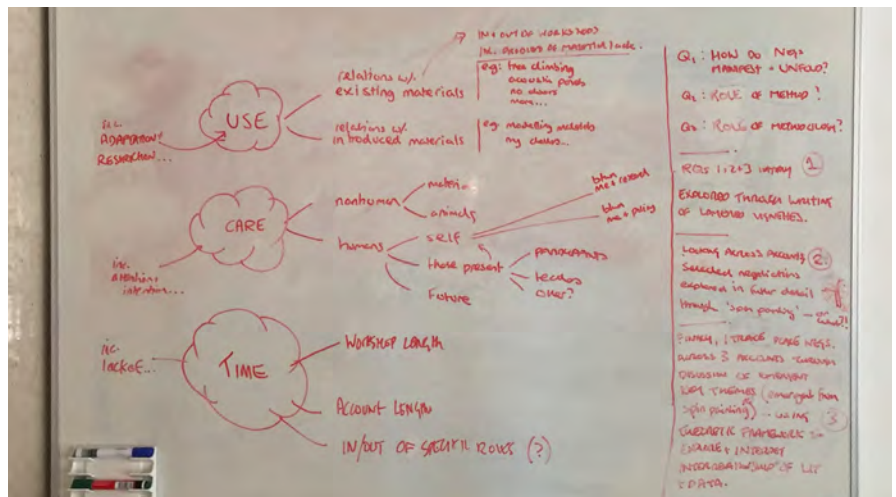
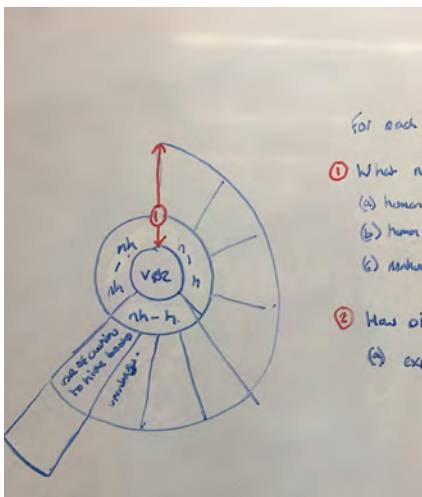
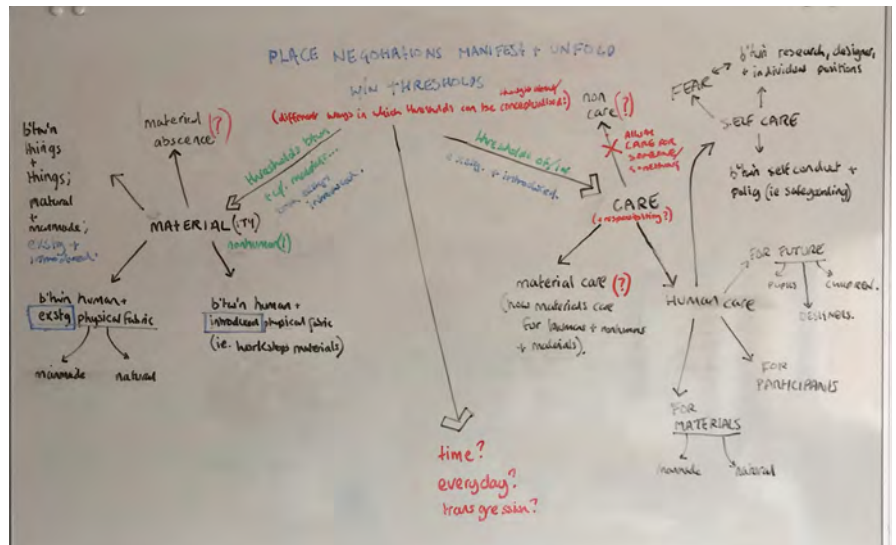
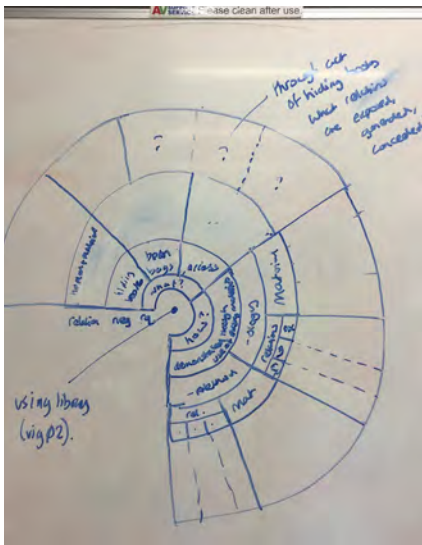
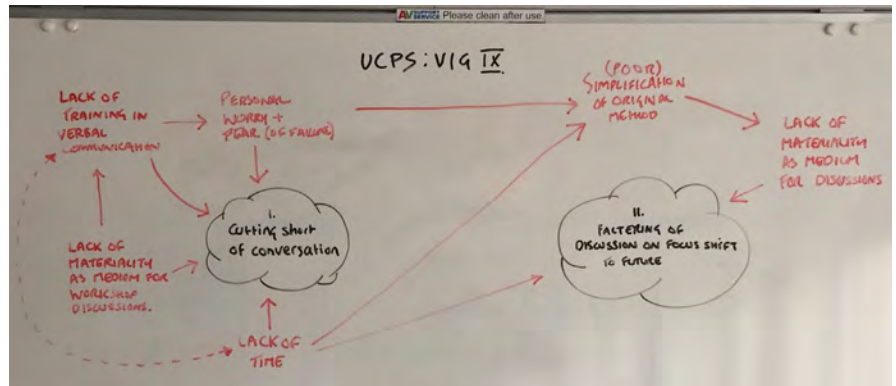
This decision was supported by concerns for his well being, with participants nervous that learning street and central courtyard locations would cause too much noise and distraction.

E Developing themes, process examples

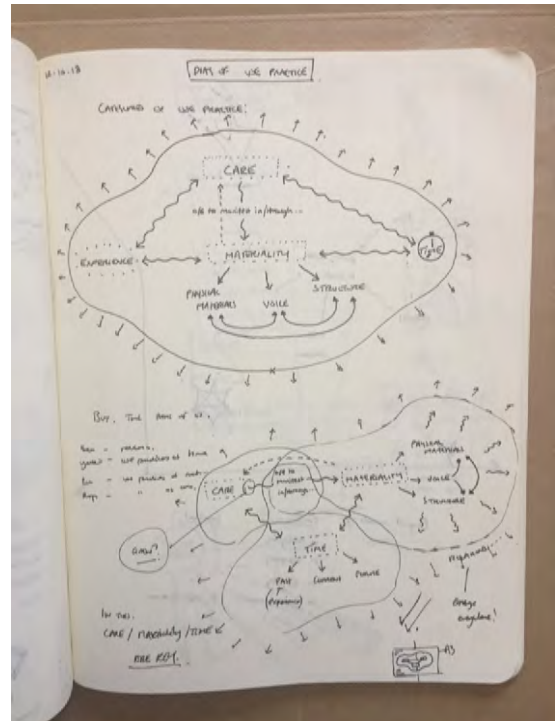
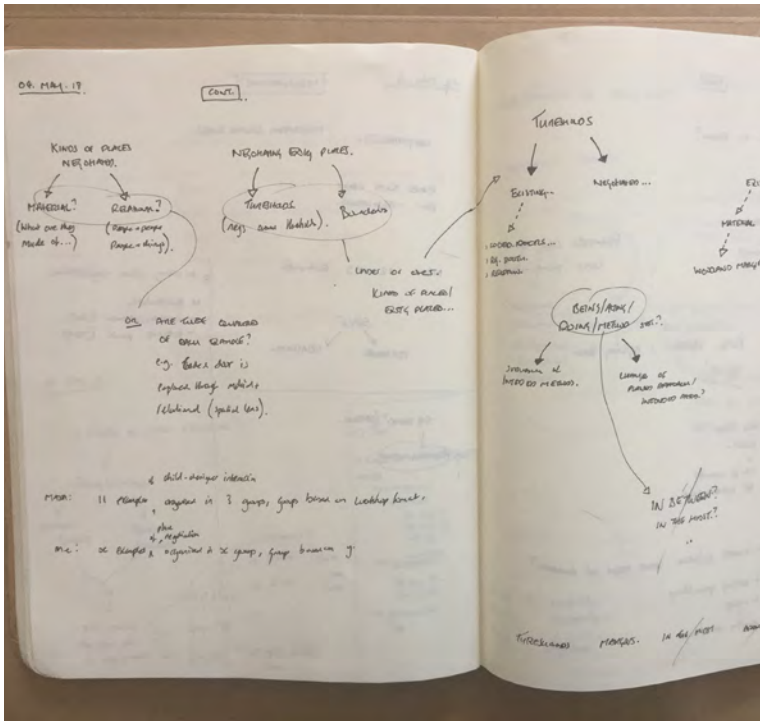
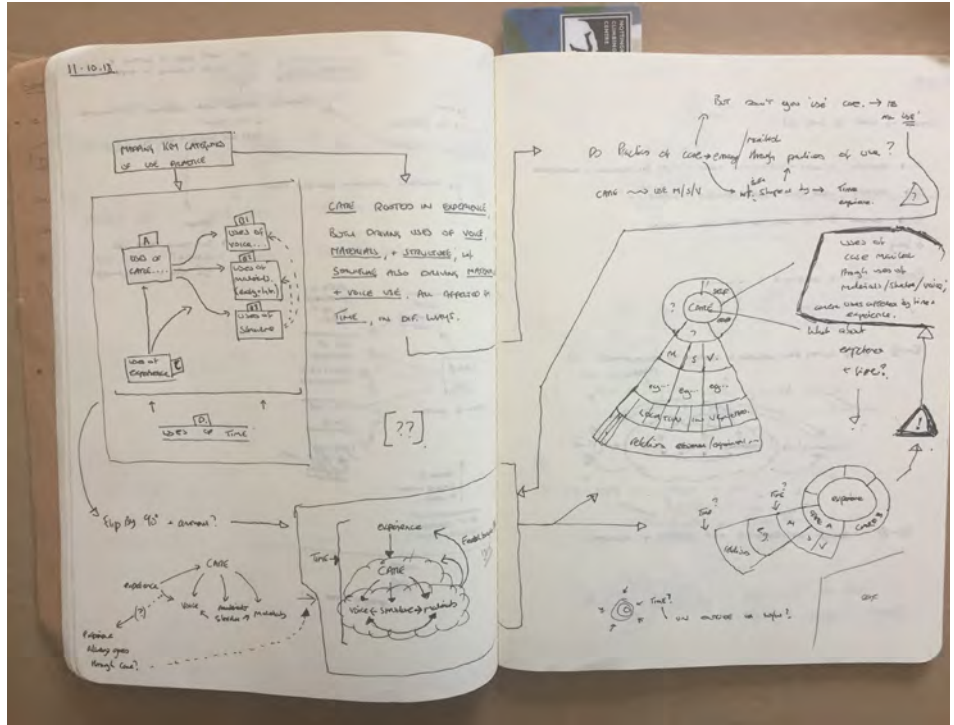
E.1 Writing direct onto developing site-writings



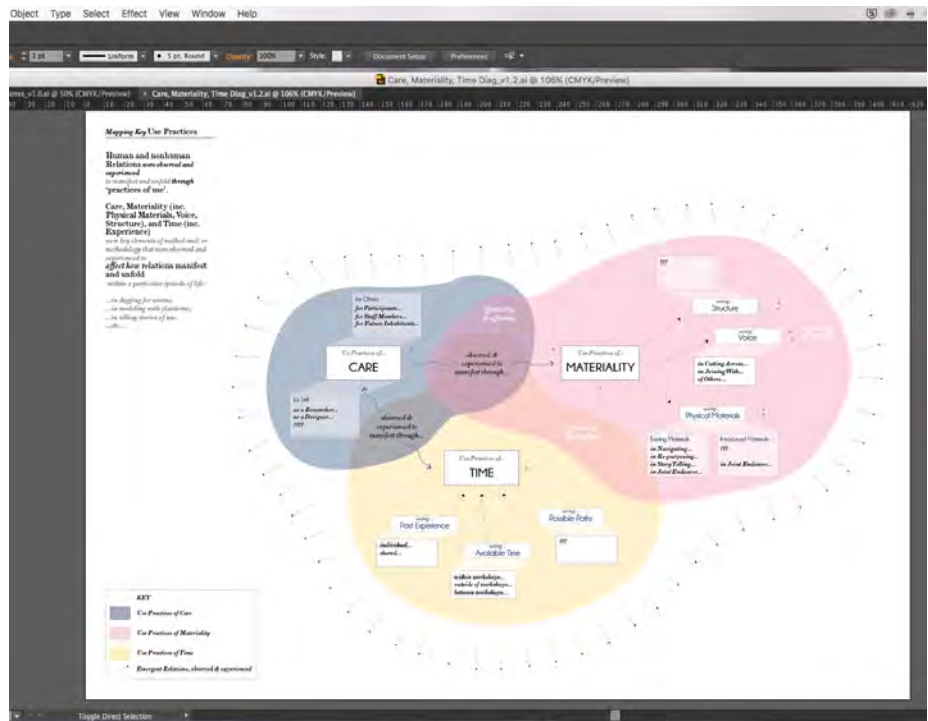
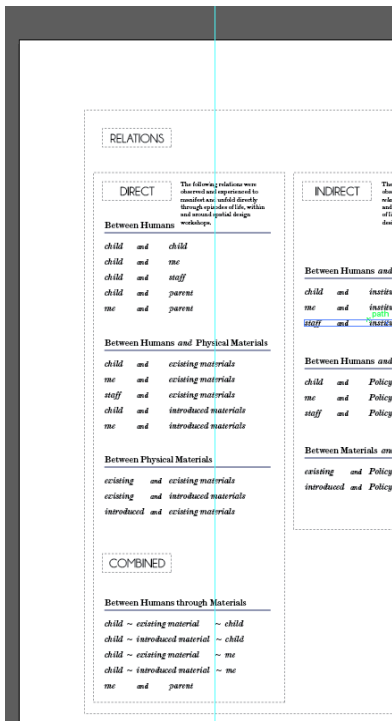
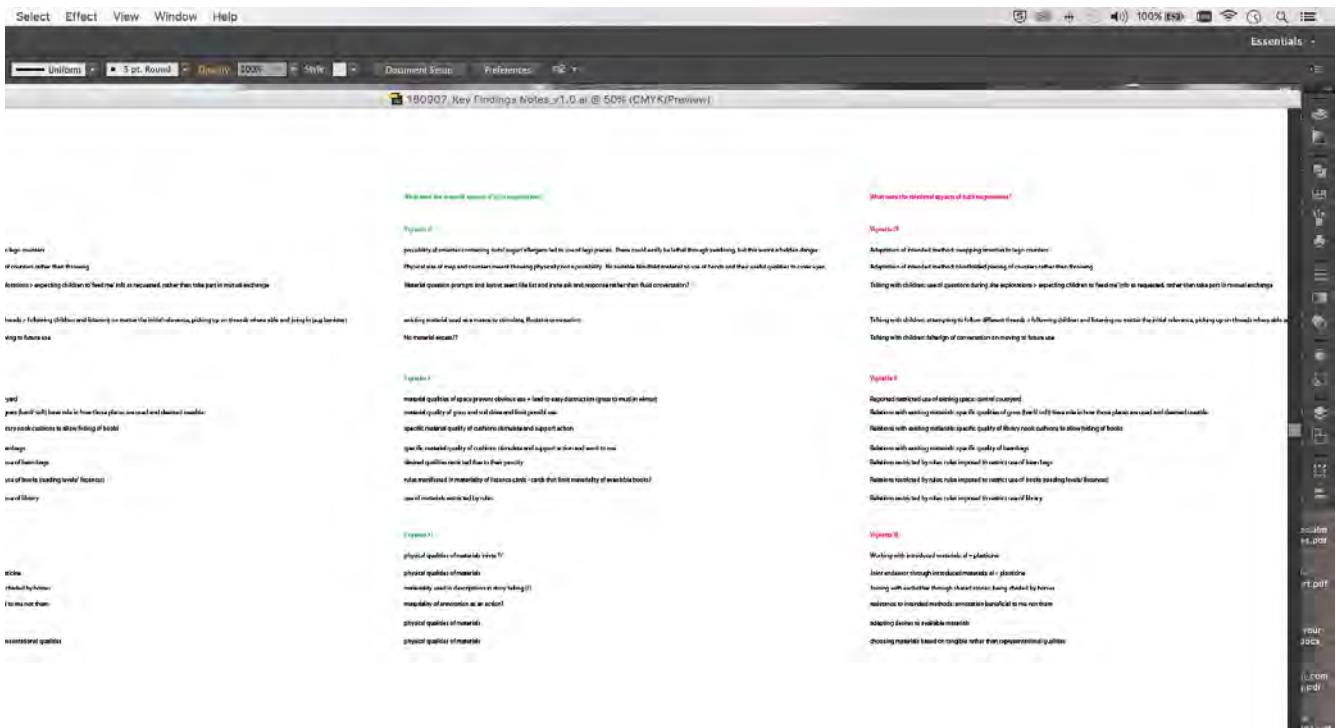
E.2 Diagramming using white-boards



E.3 Diagramming in notebooks



E.4 Collating themes using Adobe Illustrator



F Practitioner conversations

Following the development of initial themes, I conducted a number of informal interviews (conversations) with architects and spatial design practitioners to discuss fledgling ideas in the context of others' practices. Those interviewed were selected due to either their specialising in the design of schools or to their experience in facilitating participatory spatial design projects with children. The interviews were recorded but not transcribed. Pseudonyms are used to maintain anonymity.

<i>Name</i>	<i>Role/ specialism</i>	<i>Date</i>	<i>Length</i>
Maaria Cotton	Practicing Architect, participatory design practitioner, and (design) educator	07, 02, 2018	90 min
Kellie Adam	Practicing Architect (director), with specialism in school design	10, 02, 2018	45 min
Steve O'Neil	Practicing Architect (director), with specialism in school design	11, 02, 2018	45 min
Myla Piper	Practicing Architect (director), with specialism in participatory design	18, 02, 2018	45 min
Zaid Lee	Practicing Architect (director), with specialism in participatory design	21, 02, 2018	60 min
Sara Sears	Teacher, with specialism in participatory design and community engagement	06, 04, 2018	60 min
Isabel Keeling	Practicing Architect (director), with specialism in school design and participatory design	11, 04, 2018	35 min

G Pages as ‘places’

Although the many sentences which constitute this thesis appear complete, beginning with capital letters and ending with full stops, each comprises a myriad threads that stretch well beyond such grammatical bookends. In this sense, the act of reading is analogous to Massey’s description (drawing on Raymond Williams) of travelling across a landscape. Thus:

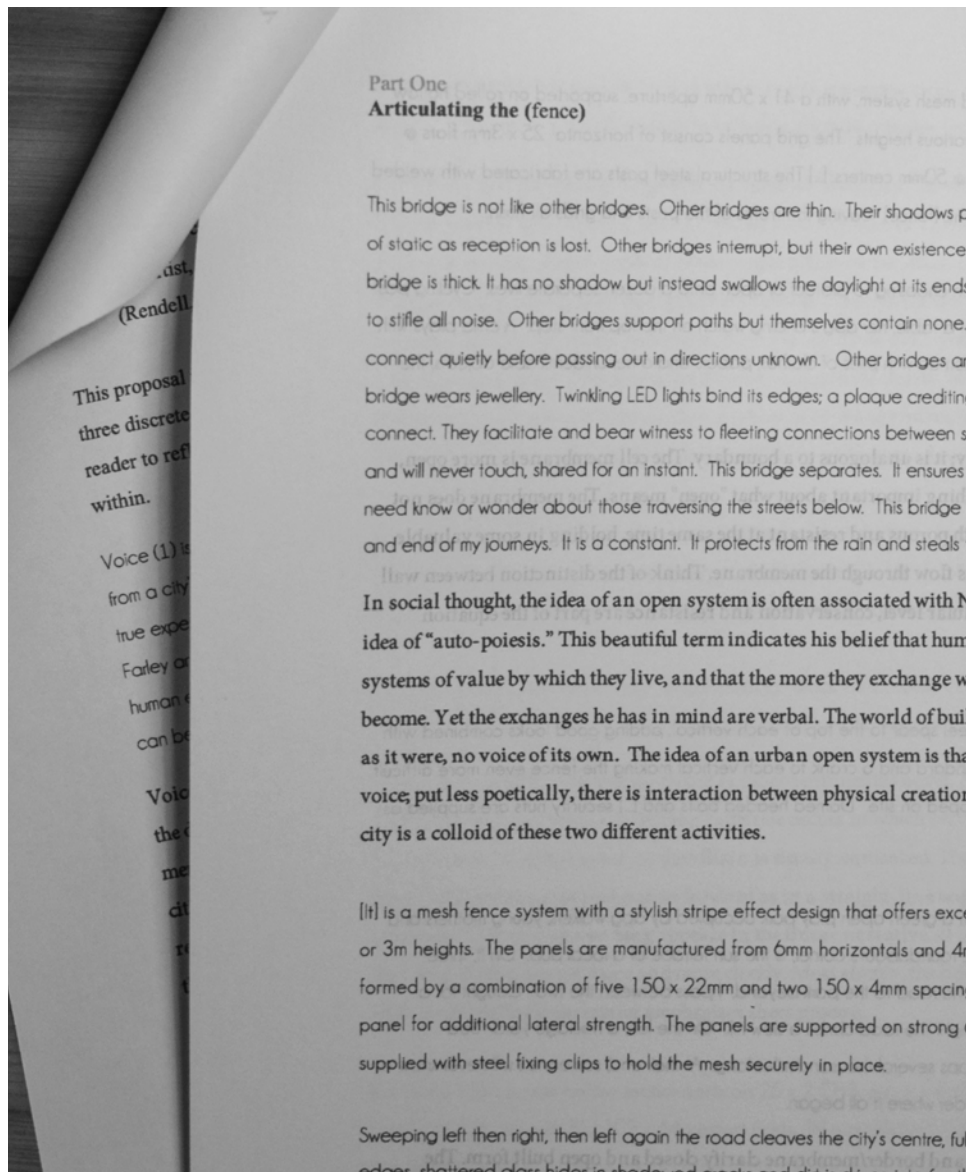
[in reading] you’re not traveling across a dead flat surface that is space: you’re cutting across a myriad of stories going on. So instead of space being this flat surface it’s like a pincushion of a million stories: if you stop at any point in that walk there will be a house with a story (Warburton & Massey, 2013, para. 8).

Importantly, this is as true for the pages of this thesis as it is of the notebooks in which the sentences found herein were first forged and itinerantly overtaken. As particular articulation of words, pages are in-fact ‘places’.



H Practising Site-Writing, *Articulating the fence*

Articulating the fence represents an early attempt (of mine) to develop Rendell's practice of Site-Writing (2010) for use in the empirical work undertaken as a speculative practice of analysis. Constructed as an analysis of school boundaries *Articulating the fence* weaves personal memories of my journey between the train station and School S with extracts from Sennett's *The Open City* (Richard Sennett, n.d.) and extracts from various fencing catalogues. An extract is shown below:



I Original pilot study

I.1 Analysis and recommendations (extract from Registration Report, 2016)



Photo from pilot study. Source: Tom Bellfield Personal Photographs

07.1 | Method 3: negotiating place

Negotiating Place is based on the method *Negotiate Dream Space* developed by Susanne Hofmann through the “study reform project” *Die Baupiloten* and set out in *Architecture Is Participation: die baupiloten methods and projects* (2014). It is a collaborative board game designed to stimulate and support playful thinking, discussion and negotiation concerning the relationships between learning and the design of the material spaces it takes place within. Through the various stages of developing and playing the game, participants are encouraged to imagine and discuss the many different ways in which learning can take place for different people; the particular atmospheric qualities of different spaces and how these might help or hinder ways of learning; how different spaces might relate to one another; and how they can be arranged, spatially and strategically, within the context of a school.

07.2 | *Piloting ‘negotiating place’*

The pilot study was undertaken over the course of two workshops, each on a different day and with a different cohort of participants, at the Academy, north London. At the time of the pilot, the Academy comprises circa. 900 pupils aged 11 to 19 and although its size by pupil number is below average, the percentage of those who are supported by the pupil premium, are of “non-British ethnic heritage”, speak English as an additional language, have special educational needs or disabilities, is above average (OfSTED, 2016c). Initial permissions for the project were sought and gained through direct contact with the Academy’s principal before subsequent access and detailed arrangements were co-ordinated with a senior member of the Academy’s Engineering Department, who also acted as a point of contact on our arrival and was present during each workshop, choosing to take the role of a facilitator rather than participant. Background information specific to the participants was neither sought nor given. Both workshops took place in the last week of the Academy’s summer term.

Workshop 01 took place on a hot Monday afternoon, during the last period of the school day. It was situated in one corner of the main engineering workshop, an open-plan room with four separate exits – two leading through doors to circulation spaces, one connecting via doors to a further teaching space, and the last an open connection to the department’s computer suite. Twelve participants attended, along with two members of staff, my colleague and myself. Participants sat around two tables. The junior staff member and my colleague sat at one table, while I sat at the other. The senior staff member remained standing for the majority of the workshop, joining in with each table alternately, sometimes sitting sometimes not.

Workshop 02 took place in the morning, on the last full day of the summer term and was divided into two parts. In the first, my colleague and myself were given a 45minute tour of the whole Academy (inside and out) by two students at the end of their foundation year (year 7), selected by the Academy. Part two was situated in a small classroom with a single exit, opening via a glazed door onto a larger open-plan teaching space in use by another class. Twelve participants attended, along with one member of staff, a co-researcher and myself. Participants sat around four tables, with my co-researcher and myself moving between tables throughout the workshop.

07.3 | *Findings from the pilot study*

Rather than give detailed accounts of each workshop, for the purposes of this report I

shall briefly discuss three findings that have been central to refining the research methods and ethos proposed herein.

(1)

The importance of tangible objectives that have a clear relevance to the lives of those taking part:

In workshop 01 the majority of participants struggled to engage with the game-based method, complaining that they ‘were bored’, that they ‘didn’t see the point’, and asking, ‘can we go yet?’ These protests were coupled by disruptive behaviour throughout – including, chewing and throwing game equipment, talking amongst and over each other, and, on three occasions, trying actively to leave the room. Despite this, the session was punctuated regularly by sincere moments of clarity in which some of the most disruptive participants engaged in genuine conversation concerning matters they thought important or relevant. For example, in conversation with the senior staff member and myself, a participant who had twice tried to leave the session raised the subject of ‘mindfulness’, articulating clearly why she thought it important that the Academy offer it to students alongside quiet spaces in which they can go to either work or relax. This exchange, while only brief in the context of the whole workshop, made a palpable impact on the member of staff present and demonstrated clearly the power of ordinary conversation over complex methods to generate new and transformative knowledge (e.g. Till, 2005).

The problems and successes of workshop 01 highlight the importance of creating and articulating a clear connection between the purpose of the participatory design methods used and the lives of participants. The game-based method trialled in workshop 01 failed to do this, resulting in its abandonment in favour of alternate methods. While abandoning the game led to the increased emergence of insightful moments, the continuity in disruptive behaviour suggests that the strength of protest witnessed has its roots in a deeper condition – one that cannot necessarily be addressed through the inclusion of tangible objectives alone, no matter their relevance.

(2)

The need for participatory design methods to provide space for and support ongoing negotiation (between all involved) concerning the purpose of, and relationships in, participatory research.

Entwined in the process of developing a specific design method that is to be used in and

for a particular way and purpose, is the development of a particular set of understandings based on our personal experience and knowledge (in this case, as researchers and practitioners). This set of understandings, or ethos, is brought with us, together with the specific design methods developed, to each participatory process and includes: our purpose and goals; what we think might unfurl and how we intend to respond to certain situations; the nature of relationships we wish to negotiate between ourselves and others; and the agency we consider ourselves and participants to have within the process. However, this ‘ethos’ – no matter how carefully constructed or open to negotiation it is – has no connection to the lives of participants prior to the start of the participatory process. Therefore, in every process (especially at its beginning) a gap exists between the different understandings of those involved which must be addressed by the design methods as well as the ethos they are used within, both at the process’s start and then throughout it.

A recurring theme of protests raised by participants during both workshops concerned the Academy’s explicit focus on distinguishing itself – and its students – from ‘normal’ schools. For example, when asked about collaboration as a way of learning, one participant replied, ‘yes – we know all about collaboration, it’s shoved down our throats everyday’. Likewise, in exchanges throughout both workshops, participants repeatedly noted that they are constantly reminded that ‘how they learn’ is different to other schools, that they are somehow ‘different’ to other students.

Due to its complex and abstract method, as well as its direct approach to asking questions, the game failed to provide space for, or support, negotiations concerning either the workshop’s purpose or the nature of the relationships between those involved. In other words, it failed to address the gap between the different understandings of those involved. This failure, as became clear in both workshops (especially workshop 01), led to participants developing a perception of my colleague and myself as self-interested, our workshop yet another way for the school to present itself as different-to and better-than others. Put simply, the participants felt we were there for the benefit of the school and ourselves, not them – reinforcing their disruptive actions in protest.

However, neither the ‘methods’ used nor the ‘ethos’ through which they are undertaken can alone provide space for or support the negotiations required. Instead, the methods used must provide a stable structure through and from which the participatory process (its methods, purpose and ethos) can develop. And, the ethos through which methods are both developed and used must support and adapt to the ongoing development of the process. In this way, the game-based method failed not only due to its complex and

abstract nature. But also due to its ready-made form that, through being unable (and unwilling) to be developed within the process, failed to provide space for, or support, the negotiations needed to close the gap between all involved.

(3)

Rather than attempt to elicit responses through direct questioning, participatory design methods must stimulate and support ordinary conversations, from which discussions concerning the methods and purposes of learning, as well as the places they unfurl within, might emerge.

At the beginning of workshop 02 my colleague and myself were given an extended tour of the Academy by two students, chosen for us, who were at the end of their foundation year (year 7). During the tour two narrative threads emerged: While the first was relatively formal, comprising the content of the tour itself – the name and purpose of the spaces we were shown, who was allowed to use them, when, and what for. The second, which wove in and out of the first, was much more personal. Often stimulated by questions or comments posed by my colleague or myself, it provided a much richer account of the Academy grounded in the experience of our guides. Consequentially, whereas the knowledge contained within the first was matter-of-fact, that in the second provided tangible glimpses into how the Academy's spaces and structures worked on an everyday level from the perspective of its users. For example, when shown the outdoor terraces we were first informed of their purpose – outdoor learning spaces –and second of the lived reality – that they were (sadly) underused and that our guides desired them to contain more green space that could be used to sit or lie on, rather than planters surrounded by hard seating and concrete paving (a desire which echoed comments made in workshop 01).

In contrast to the direct approach taken by the game-based method used in workshop 01, the process of showing my colleague and myself around the school on foot provided a stable structure that was able to both prompt and support ordinary conversations, through which glimpses into the school's lived reality, through the eyes of our guides, were revealed. The importance of using methods that provide a stable structure for conversation from which knowledge might emerge was also found during the second part of workshop 02, wherein drawing was used as a method through which participants were asked to explain 'the structure of their school, and what this meant for their day to day lives'. For example, on one table of four, all participants put forward a different

understanding of how their school was structured. While their individual verbal explanations articulated this well, their ‘in-progress’ drawings enabled me to join in with these conversations – to act within them, with drawing the common structure through which we each articulated our own understandings, made sense of each others, and co-produced shared new meanings.

07.4 | *Adaptations resulting from the pilot study*

Despite the problems which surfaced through its undertaking, the pilot study proved successful overall, leading to a number of developments in the participatory design methods proposed and strengthening the methodological approach taken.

The most obvious change to the methods proposed is the decision not to proceed further with the game-based method – *negotiating place*¹, the pilot also resulted in a number of other developments: (1) To ensure that the project has a clear and tangible purpose that is relevant to the lives of participants, the remaining methods have been reconfigured as two-stages within a single process, whose overall focus is the re-design of a specific place within each context (e.g. an outdoor classroom). (2) This reconfiguration increases the length of time spent with each group of participants (one group in each school), which in-turn increases the available space within which to negotiate the process’s purpose as well as the nature of relationships between all involved. (3) The remaining methods have been revisited – with method one – exploratory mapping – simplified to remove ambiguity and to increase its flexibility, making it easier for participants to appropriate it through use to suit their needs.²

While the pilot study predominantly supported the methodological approach proposed herein, it led to a number of refinements too – including: (1) an increased awareness of the need to maintain a broad yet nuanced definition of participation that includes and distinguishes between the many acts of negotiation that might occur, whether of compliance, resistance, manipulation, subversion, appropriation, protest, or withdrawal, whether active or passive, expected or unexpected (e.g. Gallacher & Gallagher, 2008); (2) a fuller understanding of power that couples Massey’s conception of power as imbuing the interrelations between individual (human and nonhuman) trajectories (2005) with Gallacher and Gallagher’s understanding of power as existing “only in action” – that is,

1 While *negotiating place* has been dropped from this investigation, I will continue to explore and develop it outside of this thesis and as part of my ongoing collaboration with architects at SCABAL – whom this thesis is being undertaken in collaboration with.

2 A detailed description of methods is provided in the following section.

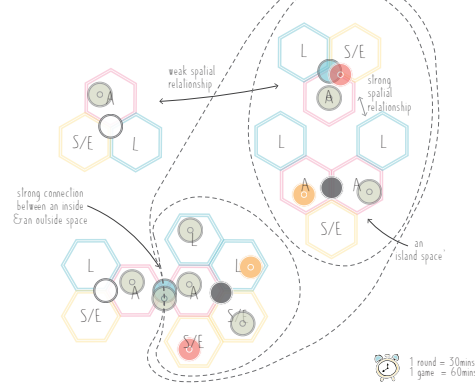
as produced only through “actions that affect other actions” rather than as a “commodity” that can be “acquired, exchanged, shared or relinquished at will” (2008, p. 502). And (3), a strengthened belief in the importance of “methodological immaturity” that, through “privileg[ing] open-ended process over predefined technique”, is able to see as well as access the potential within the unpredictable actions of participants (2008, p. 509); an approach to research that does not promise to “uncover a preexisting World” but instead offers “experimentation, innovation and ‘making do’ (*ibid.*).

I.2 Participatory Design Method Used (extract from Registration Report)

(Images of *Negotiating Place: instruction booklet* begin on following page)

negotiating PLACE

>> planning our ideal school <<<



>> ROUND 01 <<

In round 01, players work together through stages A-E to reflect on and plan out their EXISTING school - the activities and actions that happen on both an everyday and long term basis, the different types of spaces that exist and their particular environmental qualities, as well as the various ways in which learning takes place for different people.

>> ROUND 02 <<

In round 02, players work together through stages A-E to reflect on and plan out their IDEAL school - the activities and actions that happen on both an everyday and long term basis, the different types of spaces that exist and their particular environmental qualities, as well as the various ways in which learning takes place for different people.

>> CHOOSING CHARACTERS <<

The game is played from the perspective of 3 different characters - chosen at random or assigned before the game begins:

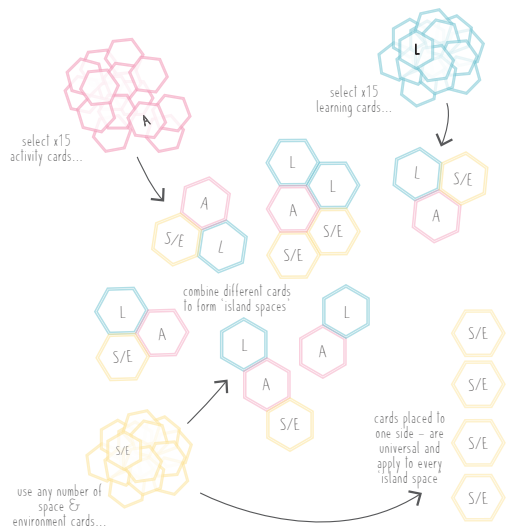
- >> students <<
- >> x2 teachers <<
- >> x1 head-teacher <<

'STAGE A'

>> creating islands <<

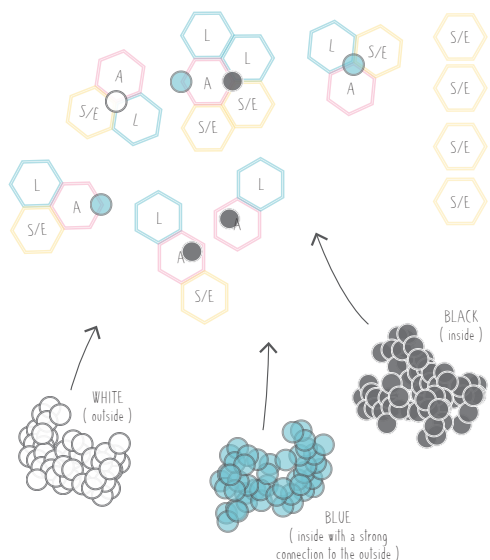
Prior to starting the game, players should use mind-maps to create 3 'card decks' - ACTIVITY, LEARNING and SPACE & ENVIRONMENT. The game is then played using 15 cards from each the 'activity' and 'learning' decks, as well as the entire 'space & environment' deck.

In 'STAGE A' players should use the perspectives of their assigned character to combine activity, learning, space & environment cards in different ways to create individual 'island spaces' - each of which represents a specific place within the school. E.g. A sports hall, an outdoor classroom, a space to eat, a space to read etc...



'STAGE B'

>> inside/ outside <<



In 'STAGE B' players add counters to the board to express if a space is inside (black), outside (white), or inside with a strong connection to the outside (blue) - such as large opening doors or lots of big open-able windows.

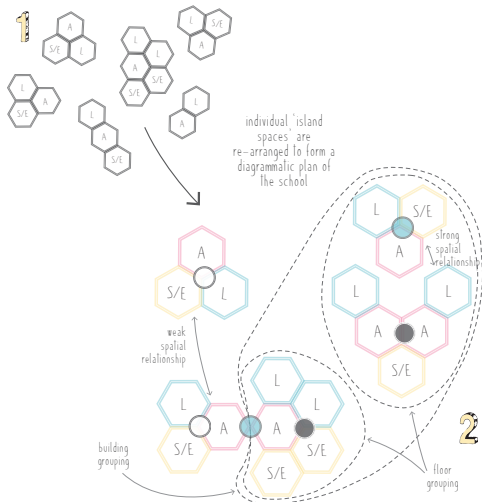
'STAGE C'

>> arranging the islands <<

In 'STAGE C', players re-arrange the individual 'island spaces' to create a diagrammatic plan of the school:

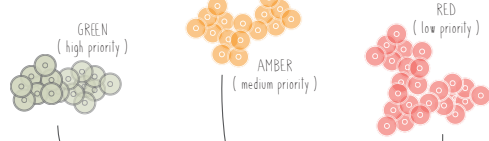
Spaces that need to be close to each other in the school are placed close to each other on the board. And spaces that need to connect physically or share the same larger space are combined.

Multiple island spaces can be grouped into a single building by circling them with thread. To express a building with multiple floors circle multiple floors (circles).



'STAGE D'

>> setting priorities <<



In 'STAGE D' players add counters to the board to assign levels of priority to different aspects of the school:

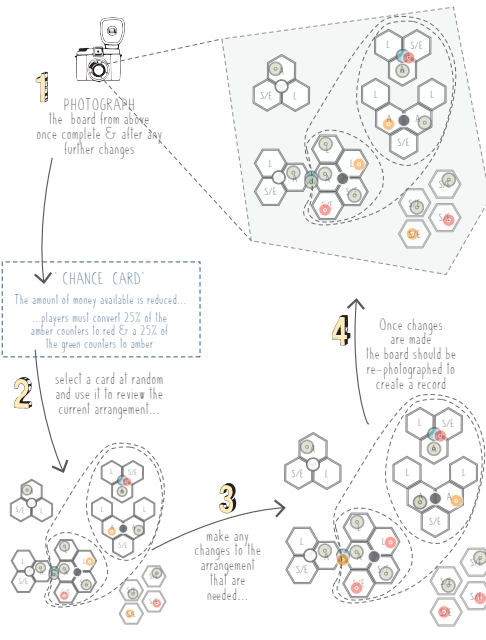
Green counters express a high priority level, amber a medium and red a low.

Using a red counter doesn't mean that a particular card is removed from the board, only that it is less critical should choices need to be made (e.g. financial restrictions or competing needs).

'STAGE E'

>> Testing <<

In 'STAGE E' the final arrangement is photographed from above (1), after which players use the 'chance cards' to 'test' the final arrangement against a number of different situations (2). If changes are required, they are made (3) and then the arrangement is re-photographed (4) before another 'chance card' is selected (2).



J Locating myself, a story so far

Where I am makes a difference to who I can be and what I can know
(Rendell, 2010, p. 150).

Architectural education

I spent the eight years prior to beginning my doctoral studies in architectural education and practice. The years in education were spent at the University of Sheffield's School of Architecture (SSoA): first, between 2007 and 2010 (BA); second between 2013 and 2015 (MArch). When and where is important. Jeremy Till became head of SSoA in 1999. Under his leadership, SSoA developed a strongly social ethos that believes in the potential of design to make a difference to those it affects, both directly and indirectly. For this it has gained international recognition. Also under Till, SSoA pioneered the use of "Live Projects". Introduced in 1999 and much copied today, Live Projects see groups of Masters' students undertake six-week collaborations that are "real, happening in real time with real people" (SSoA, 2005). 'Participation' was at the heart of each of the two Live Projects I undertook, with the experiences I gained working to forge and shape the journey that led to and continues through this thesis.

Rooted in the former of these projects and informing the later, my Master's dissertation set up and undertook a six-week design project to explore the role of communication in engaging young people in the design and creation of spaces they use (Bellfield, 2015a). The design project explored grew out of my relationship with Helen at school S and forged the ground within which the work with school S presented herein is rooted.

Architectural practice

In the years in between my respective periods at SSoA I gained experience working in architectural practice, including in housing, community, and education sectors. Through working on new-build academies, as well as smaller school renovation projects (in public and private sectors) I witnessed first-hand the diverse challenges raised by current procurement policy: the difficulty in persuading parties to invest time, money, and energy in engaging with users, especially children, played an early role in influencing my academic interests since.

My experiences gained through architectural education and practice, as well as construction, all contribute significantly to shaping and driving the doctoral research presented herein; to shaping and driving my resolve to strengthen our collective understanding and knowledge about how to engage meaningfully *with* children and young people in the ongoing exploration, critique, subversion, and adaptation of everyday school environments.

