

An investigation into the 'sustainable' match day experience at the Tottenham Hotspur Stadium

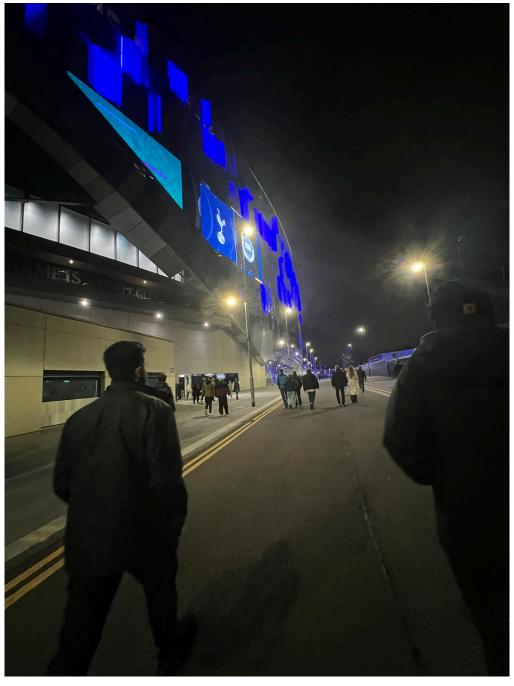


Figure 1- Photograph Outside the Tottenham Hotspur Stadium walking up to the East entrance, Photograph by Author

Contents

Introduction	3
Literature Review	4-6
Case Study, Context and Research Study	7-8
Research Method	9-10
Findings and Analysis	11-19
Conclusion	20
Bibliography	21-22
Image Bibliography	23
Appendix 1 - Supervision Log	24-27
Appendix 2 - Ethics Form	28-32

An investigation into the 'sustainable' match day experience at the Tottenham Hotspur Stadium

Introduction:

The research in this dissertation is focused on understanding the fan experience on a match day at the Tottenham Hotspur Stadium. My research study explores the question 'Does the Tottenham Hotspur Stadium provide a sustainable match day experience and achieve both successful community engagement and urban integration into Tottenham as a city?'. The experience of architecture and spaces is subjective but there are views on how architecture should influence user interactions and experiences of urban landscapes. My case study is the Tottenham Hotspur Stadium. Built within the last 10 years, it is one of the newest, fully built, stadiums actively operational England. Being situated within a populated urban landscape, it should have been designed in line with the recent sustainability targets. Hence when analysing the fan experience, there has been enough time passed for the stadium to mature and amend any initial issues it could have faced and respond to any new methods for a more sustainable experience. The purpose of this research would then be to judge the execution of the stadium in conjunction with the fan experience on a match day, as that is when the stadium and its facilities are best used for their purpose.

The literature review will use academic sources that will highlight the key themes of urban landscapes and the user experience of architecture. These themes will create a baseline for the sort of data the research study aims to collect. The review will explore themes around user interaction, community and social engagement through experiences within a city, the importance of transport and the effect of large-scale structures on an urban landscape. The dissertation will draw on academic sources within the field of architecture that construct views on what makes a city thrive and be sustainable to understand the features required for the stadium to contribute to this.

The Tottenham Hotspur Stadium, designed to focus on sustainability, provides a compelling example for analysis. This dissertation will focus on the match day experience, examining how the new stadium has built a relationship with its urban landscape whilst tackling sustainability goals with stadium design; this will be achieved through an auto-ethnographic report of my match day experience accompanied by mapping. Key areas of research investigation include transportation methods, waste management systems, atmosphere and the stadium's integration into its local urban environment. Combining personal observations with mapping alongside existing research, the study will assess how successful the Tottenham Hotspur Stadium is in delivering its sustainability promises and embedding into its urban landscape through its community and social engagement to assess the overall match day experience.

Literature Review:

'The Death and Life of Great American Cities' by Jane Jacobs

In her book "The Death and Life of Great American Cities" Jane Jacobs shares her views on creating a successful, people-driven city structure. Jacobs looks at the impact that large-scale structures and projects have on shaping a city. She argues that these structures shape an urban landscape rather than the people, who should be the centre of design. "The ballet of the good city sidewalk never repeats itself from place to place, and in any one place is always replete with new improvisations" (Jacobs, 1998, p. 50) Jacobs conveys her point that humans should be the centre of urban environments. The metaphor 'ballet' suggests that streets and the public space are moving, bustling with life. The design of which should encourage interaction and provide functional pieces of the city. The view on 'new improvisations' suggests adapting to the changing local context and environment of the city which in turn encourages flexibility in design and spontaneity in the user experience. Lewis Mumford criticised Jacobs's lack of knowledge in the field of formal urban planning. He noticed cities were functioning very well despite not following Jacobs' views on urban planning and suggested that her beliefs were subjective to the city.

"The more successfully a city mingles everyday diversity of uses and users in its everyday streets, the more successfully, casually (and economically) its people thereby enliven and support well-located parks that can thus give back grace and delight to their neighborhoods instead of vacuity." (Jacobs, 1998, p. 111). She draws on how diverse cities, that encourage walkability in their environments, will have strong social connections as the people using them 'mingle' creating interactions with the community. Having diverse activities on these streets like the shops inhabiting them would also invite people to mix and support the local community. These were the cities that were 'thriving' for Jacobs.

Ultimately, it can be inferred that Jacobs suggests that for a city to 'thrive' and be a 'success' it needs a structure embedded into its fabric which orientates around the people who inhabit it. Jacobs ends her book with "But lively, diverse, intense cities contain the seeds of their own regeneration, with energy enough to carry over for problems and needs outside themselves." (Jacobs, 1998, p. 448). For a city to be sustained over time it would actively promote user engagement. Walkability and interaction with the city promote social and community relationships, the metaphor 'seeds' and 'regeneration' is targeted at users of the city that can form a connection and harvest an energy where the community grows the city.

'The Eyes of The Skin: Architecture and the Senses' by Juhani Pallasmaa

In the book "The Eyes of The Skin: Architecture and the Senses" Juhani Pallasmaa explores sensory architecture. Pallasmaa tries to explain how relying more on haptic

perception for architectural designs can detract away how all the senses work together to experience space. The book explores how architecture should evoke embodied experiences and emotional responses, connecting people more deeply with their environments. One of the themes Pallasmaa explores is the human experience with architecture and spaces- phenomenology.

"I experience myself in the city, and the city exists through my embodied experience. The city and my body supplement and define each other. I dwell in the city and the city dwells in me." (Pallasmaa, 2012, p. 43). Pallasmaa displays his feelings on how the human experience of a space resonates with each other to form a proportional connection. It is as if one lives within the other. In essence, the experience of architecture in a city is an interaction of human experience through memories. This way it is the city living within the human as it is the human that interacts with spaces to make them dynamic and then form interactions and memories within a space. This suggests that humans can make a city adapt for purpose through their actions, suggesting that cities can shift over time depending on how humans want to experience the space.

This idea is explored by Pallasmaa further. "The elements of architecture are not visual units or gestalt; they are encounters, confrontations that interact with memory." (Pallasmaa, 2012, p. 68). Although a statement by Edward Casey, Pallasmaa uses this to convey his view that architecture is experienced by the transmissions of memory within a space. Architecture is not quantified through linear constructs; it is built from a conjunction of things that interact with one another to form architecture. It is the user interaction, aesthetics, experience, and such elements that form memories within a space that form the architecture. This reinforces the idea: that the shift of the dynamics within a city or space, flexible for purpose and adapting for temporality is dependent on human interaction.

Haptic perception is another theme Pallasmaa explores in the book. "The computer is usually seen as a solely beneficial invention, which liberates human fantasy and facilitates efficient design work... Computer imaging tends to flatten our magnificent, multi-sensory, simultaneous and synchronic capacities of imagination by turning the design process into a passive visual manipulation... drawing by hand as well as working with models put the designer in a haptic contact with the object, or space." (Pallasmaa, 2012, p. 13-14). In this passage, Pallasmaa suggests that computers and automation are killing the design of architecture. Architecture is being robotised, leading to more systematic and efficient products of work. Architecture and space that lack the user connection and haptic relationship limit the interaction in a design. Machinery and automation within a design, although mostly helpful and efficient, can distance the human connection and in turn, the human experience is not fully captured.

'The Production of Space' by Henri Lefebvre

In the book 'The Production of Space' Henri Lefebvre explores how spaces are used and made. "Space is not a thing among other things, nor a product among other products: rather, it subsumes things produced and encompasses their interrelationships in their coexistence and simultaneity – their (relative) order and/or (relative) disorder. It is the outcome of a sequence and set of operations and thus cannot be reduced to the rank of a simple object." (Lefebvre, 1992, p. 73). Through this, Lefebvre views space as a social construct, it is adaptive and flexible and a result of social processes and interactions.

'Sport, Space and the City' by John Bale

In the book "Sport, Space and the City" John Bale reflects on the relationship between sports stadium, in particular football stadiums, and their urban environments. His book focuses on stadiums within England and explores the cultural significance of football as a sport to both stadiums and their landscapes. He describes his views on how stadiums create a place for cultural interactions "The stadium may create a sense of place because of its quasi-religious connotations, its 'homely' character or its scenery. In the future it may come to be loved and enjoyed as part of our heritage." (Bale, 1993, p. 64). He extends on this using David Seamon's views on stadium and football culture "Such places create what David Seamon rather grandly calls 'place ballets' - the bringing of people together and hence fostering a collective entity, enhancing the quality of life (Seamon 1979: 64-5)." (Bale, 1993, p. 68). Once again drawing links to the view that stadium culture initiates social interactions.

Case Study, Context and Research Study:

The Tottenham Hotspur Stadium

Construction of the Tottenham Hotspur stadium finished in 2019 and the first game to be played here was April 3rd, 2019. There is a large amount of information online claiming how the stadium practises sustainable methods of performance. The user experience can sometimes be overlooked when discussing how sustainable this stadium is. I believe the match day experience and the ability to deliver the same experience consistently as well as maintaining a strong connection with the Tottenham city landscape is just as important for the stadium. This led to the decision to choose the Tottenham Hotspur Stadium as a case study to conduct research surrounding a 'sustainable' experience. The location of the stadium was a major factor in the selection of the stadium as it can be argued that being successfully embedded as a large-scale structure in London can be difficult. The issues around carbon emissions and the intricacies of the diverse cultures, fitting into the landscape can be a massive challenge.

When analysing how 'sustainable' the match day experience is it is important to define what is meant by a 'sustainable' experience. Within this study, the 'sustainability' of the match day experience was looking at how the stadium has embedded into Tottenham as a city with a brief overview of the sustainable environmental choices the stadium has made with its facilities and performance on a match day. The focus is more on the relationship the stadium has with its urban landscape because many studies on the sustainability from a carbon footprint impact are available. Whilst stadiums are shifting to become 'greener' there has not been much reflection on the impact this may have on the city and user experience.

The research aims to understand 'Does the Tottenham Hotspur Stadium provide a sustainable match day experience and achieve both successful community engagement and urban integration into Tottenham as a city?'. Although important to note, this stadium has not been built on directly new land or moved drastically like other stadiums. The old home of Tottenham Hotspur Football Club, White Hart Lane, was on the same piece of land as the new stadium [Refer to Figure 2]. So, when looking at the community integration there is an argument that there will not have been any change since it has not significantly moved locations. The idea of the research is to look at how the city is affected on a match day by the stadium hosting a game. Some examples of the factors that could be explored are pedestrian traffic, business and shop interactions and the effect of the stadium's sustainable features. Most importantly, the purpose of this would be to understand how I as a fan would be impacted and the effect it has on my experience.



Figure 2- Image of new stadium mid-Construction when Tottenham Hotspur Football Club had played their final game at White Hart Lane, Photograph from @SpursOfficial on X

Research Method:

Auto-ethnographic Study of my Fan Experience on a match dayaided by mapping

In order to best assess the match day experience, I chose to conduct an auto-ethnographic study by attending a game at the Tottenham Hotspur Stadium, this report will be accompanied by mapping to help analyse my findings. Within this research study, I wanted to look at the user experience specifically. Through fan experience on a match day, I was able to maximise the effectiveness and use of the stadium and facilities as well as being able to actively experience the design. I documented my journey to the game and assessed how I interacted with the city and the stadium's facilities, evaluating the sustainable practices implemented by the venue. I reflected on how the design of the stadium influenced my experience as a spectator. Throughout I analysed the effects of the match day on the surrounding area, providing insight into the integration with Tottenham as a city. I conducted some academic readings prior on research studies to help with what I should be looking out for and recording my user experience through an architectural lens.

To gather information on whether the stadium provides a sustainable experience there was some prior research and revision I undertook before attending the match. I had a look at the information available online as well as checking over the information I have heard through the news previously about the reported 'innovative' design of the Tottenham Hotspur Stadium and how it has impacted fan experience as well as the efficiency in the match day service. Although the primary focus of the study was specifically on how the stadium design and execution influence the experience of a fan. This involved researching their approaches for suitable travel and transport for fans, how they have made the stadium more sustainable and efficient as well as understanding how as a fan you would record this and experience it.

Despite all this, I did come across some limitations when conducting my research. Attending the game meant I was one user experiencing a certain element of the stadium facilities. Different tiers within the stadium expose the user to different facilities. To experience these, I would have to purchase the tickets to give me the authority to enter these areas. Doing this would have meant I could experience more of the stadium facilities, but I was not fortunate enough to get access to these tickets. Hence, my research was focused more on the match day experience that all fans would be able to experience regardless of their ticket status, areas of communal access like the streets outside or communal bar and alike.

Although there was a minimal risk of ethical concerns when tackling my research method, there were a few areas I had to be cautious about. Being an auto-ethnographic study, the opinions on my experience were going to have a bias as it would be what I analysed- which would be difficult to completely cut out. However, I still had to

remain truthful about what I saw and experienced and could not alter any findings to fit a narrative I wanted to create in my dissertation or portray my experience at this stadium in a certain light in my comparison to other stadiums as this research is targeted specifically for this visit and no other stadiums. Further, there were also issues with any sketches that I may have produced where I had to avoid drawing any people unless necessary for a drawing. The stadium was densely populated with the public naturally so getting clear drawings was difficult. But even then I would not try to compromise any identification and draw a generic human figure, blurring identities through sketches or something similar. When talking about any businesses or private entities, I must keep them anonymous and refer to them as more generic names when talking about their impact on my study.

Findings and Analysis:

An account of my match day experience at the Tottenham Hotspur Stadium

Report

On Wednesday, October 31, 2024, I attended the Tottenham Hotspur versus Manchester City Round of 16 Carabao Cup tie. I used tube services from Hounslow, West London to Seven Sisters, North London [Refer to Figure 3].

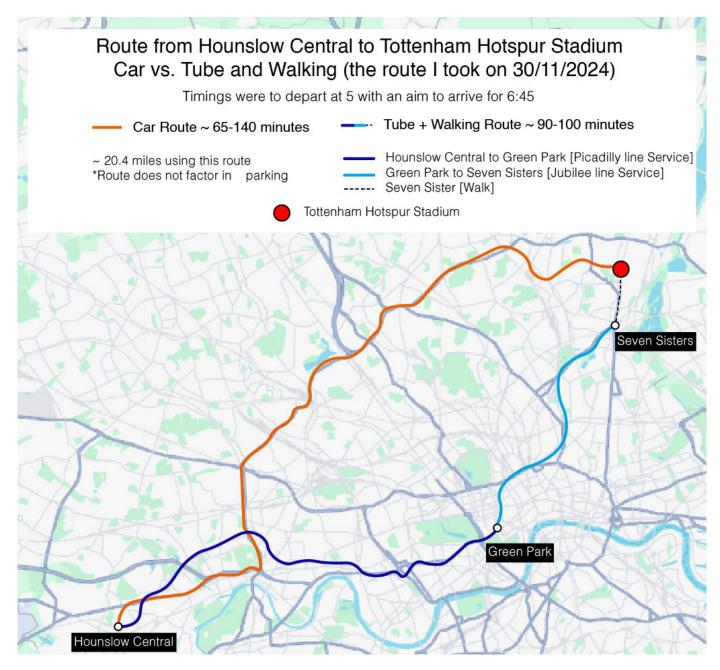


Figure 3- Map showing route to the stadium for author, taking car versus taking public transport and walking, Map by author

Taking such transport is part of the club's promotion of sustainable travel methods to games and events (Hotspur, 2023). I chose to take the tube to the Seven Sisters station as I was aware of the High Road— the main road adjacent to the stadiumbeing closed during a match day. There are different stages to the road closures depending on the time before, during or after the match or event [Refer to Figures 4, 5, 6, 7, & 8]. Further information for which is available on the club website. (Road closures I Stadium I Tottenham Hotspur, no date).



Figure 4- A map showing the reltionship of he roads and stadium without and road closures, Map by author



Figure 5- A map represeting what is meant by 'expanded concourse' by road closures- Phase 1, Map by author



Figure 6- A map represeting what is meant by 'expanded concourse' by road closures- Phase 2, Map by author



Figure 7- A map represeting what is meant by 'expanded concourse' by road closures- Phase 3, Map by author



Figure 8- A map represeting what is meant by 'expanded concourse' by road closures- Phase 4, Map by author

The road closures make it easier for the travelling fan to navigate to the stadium as I noticed the 'concourse' temporarily expands outside of the stadium [Refer to Figures 4, 5, 6, 7 & 8]. The extra space allows fans to safely gather around before a game or celebrate together after a game. In doing so, fans are encouraged to take more sustainable routes of travel to the game in the form of public transport, E-bikes [Refer to Figure 9] and/or walking. These alternatives are less of a hassle than driving to the game where there would be limited access and cut down on carbon emissions and costs. People are deterred from paying the high parking fees at the stadium and going through London traffic. Navigating to the stadium on public transportation

means fans would end up interacting more as they all take similar routes to the game in public environments. This was evident in my journey as both pre-game and post-match fans from both teams congregated together singing, chanting, conversing as were walking to and from the stadium but also around the extended concourse area.

The streets surrounding the stadium buzzed with activity. a blend of fan activity and sales of match merchandise. Alona the route to the stadium, vendors attempted to sell such merchandise, whilst designated some pubs were assigned Tottenham or Manchester City fans for the day. The pubs had limited capacity and were set to a

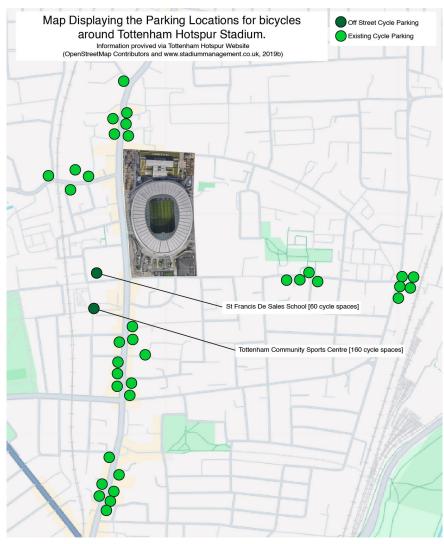


Figure 9- A map showing the location of bicycle parking locations, provided by Tottenham Hotspur Stadium website (Cycling I Stadium I Tottenham Hotspur, no date) Map by author

fan base to prevent altercations between fans. Local businesses and corner shops seemed to be busier than when I visited the area on a non-event day, offering cheaper pre-match options compared to prices for food and drink inside the stadium [Refer to Figure 10]. The mural of former player Harry Kane painted on a street wall near the stadium entrance had fans around taking photographs of or with the piece of art and club history, symbolizing the integration of the stadium into the local urban landscape and fostering a sense of community pride.

Once inside, the stadium's design and facilities showcased its sustainability



Figure 10- A collection of maps that show the observations with user interactions explored through walking through an urban landscape and links with the diversity of the landscape, map by author

credentials. Information for this can be found on various sources affiliated with the stadium [links to more information on the stadium's sustainability methods can be found in the bibliography]. Food and drinks were served using recyclable materials, with marked drop-off points to put your cups and food boxes for reuse or recycling. Facilities like 'The Goal Line Bar', the longest in Europe, catered to the fan tradition of pre-match and post-match drinks. Despite its high volume of users, its automated systems ensured efficiency and reduced resource wastage. Semi-automated beer dispensers minimized waste. As a customer I would go and order my drink the staff member would then select the drink I ordered and place a cup on a machine which then pours the beer or liquid in from the bottom of the cup through a small suction hole. Being semi-automated the machine pours the required amount of liquid without any spillages and the suction cup bottom means that, unless interfered with, the drink cannot spill from the bottom either. Although this system was replacing just the beer pouring system, other drinks from cans and bottles like soda, water or juice were just emptied from the bottle to the cup by the staff. Water-saving measures, such as

self-regulating taps and toilets, further exemplified the sustainable features installed in the state-of-the-art facility. These features were a marked improvement compared to other stadiums I visited, where plastic cups and inefficient systems often resulted in excess waste.

The layout of the stadium spaces caused some confusion, access to the different levels of the stair system was difficult to navigate, for example, to navigate from the West to South side of the stadium you would have to do so from the ground floor, access on floors above was restricted to staff only.

During the match, the bowl-shaped design of the seating created an intimate atmosphere, even from the upper levels where I sat. The bowl-like design allows for the acoustics to sound amplified, and the chanting by both sets of fans- but mainly the home fans due to the larger population- created an intense and loud atmosphere.

Post-match, the emphasis on sustainability continued. E-bikes stationed near the stadium provided an enticing, quick and green travel option for fans. Many fans, including myself, still relied on other public transport like the tube. Hence, I made the walk back to Seven Sisters station. Walking back along the same route I took to get to the stadium I observed changes to the street environment. Pre-match, fans were arriving in waves as different fans arrived at scattered intervals. But, post-match, all fans tried to leave and make their way home as quickly as possible pushing and shoving their way through, many fans were also on the lookout for food. Restaurants and fast-food shops outside the stadium quickly filled with fans seeking more affordable post-match meals, while pubs remained closed to avoid overdrinking. The streets reflected the pre-match vibe except instead of waves of fans travelling to the game it became one massive wave of fans trying to get home. Street vendors made their way back onto the expanded concourse to try to sell some match day exclusive merchandise one last time.

Analysis

There were many negative views on the impact of large-scale structures on city life and growth. As established in the literature review the idea within architecture is that such structures are detrimental to a city as they cause the planning and structure of the city to focus on them rather than the main inhabitants of the city, the people. Large structures are generalised as hindrances for cities. Using the view on walkability being a major factor in this, the influence the stadium has on encouraging walkability can be seen as a positive. Through walking communities of fans interact on the streets, and these interactions can create memories whilst also fostering social and community engagement. Fans take in each other's companies before the game singing and chanting creating an uplifting atmosphere and vibe that can generate positive emotions about a space. The travel from the station to the stadium

makes the journey through the city enjoyable; a journey that would otherwise be sped up and missed through travelling by car. You take in the streets and sites around you, experiencing the city's architecture. The importance of almost enforcing the walkability onto the city because it was adapting to the match day led to the public also adapting. This builds on Pallasmaa's idea "I experience myself in the city, and the city exists through my embodied experience." (Pallasmaa, 2012, p. 43).

There is an argument that walkability was not the primary goal of the road closures the stadium caused. Walkability may have been a byproduct of the stadium trying to reduce vehicular traffic adjacent to the stadium to allow fans to congregate around a larger 'concourse' outside the stadium. The issues with traffic around the area limiting transport access could have resulted in the emergence of walkability to the stadium. This can be backed up with the E-bike stations around the stadium which although encourage a more sustainable transport method, would discourage walkability. In that case, walking comes because of spontaneity, this spontaneity creates a way for new interactions creating new memories within spaces.

The expanded concourse relates to Pallasmaa's idea that a city can experience growth and be sustainable by being flexible and adaptive. Closing roads off and transforming the surrounding city streets into a concourse show how well-embedded the stadium is in its immediate surroundings. Whilst aesthetically the architecture may not seem as though the spaces as connected, the way the space is used and the experience the user undergoes connect them. The commercial forms of architecture lure fans in to gather and promote social and economic gain within the community. This can also be related to Pallasmaa's idea of architecture being experienced through human interactions creates memories. These memories form an attachment to a place and make people feel like they are a part of the city fabric. Ultimately this attachment makes users care, which will mean more people will want to look after the city support businesses around and sustain the city.

This journey to the stadium fans draws different areas of the streets and city to the user's attention. Knowing the prices of food in the stadium, fans may well look to local businesses to get a pre-match meal. Interacting with these people will form a relationship with the community. As Jacobs demonstrates cities that will thrive and can be classed as 'sustainable' are the diverse cities that 'mingle' can profit both socially and economically. This journey to the stadium fans draws different areas of the streets and city to the user's attention. Knowing the prices of food in the stadium, fans may well look to local businesses to get a pre-match meal. Interacting with these people will form a relationship with the community. As Jacobs demonstrates cities that will thrive and can be classed as 'sustainable' are the diverse cities that 'mingle' can profit both socially and economically. With Lefebvre's views, we can understand that it is these social processes and interactions that are what make spaces. This creates growth within the city where new spaces are formed due to the adaptive nature of the concourse.

Whilst in a conventional view of sustainability the facilities within the stadium are successful and the engineering on reducing water waste are positive as well as the limit of food and drink waste. There can be some issues with the automation and efficiency of machinery. Like Pallasmaa suggests that 'computers' extract the human connection in a work process, the semi-automatic beer fill system denies the interaction between the bartender and customer where conversations and relationships could have been made. In such tasks where conversations may arise may not happen because the human need for work is neglected. When human interaction is limited the development of memories is limited and of course the experience of architecture is limited.

You relate your match day experience will all that happens pre-match, during the game and post-match. This would include interactions both outside the stadium and games within the city. It is outside the game where interactions with people and the city occur more frequently and where stronger connections can be made. It is through these connections that relationships are built and sustained which as discovered work together with sustaining the life of a city. This fosters a stadium culture that becomes affiliated with Tottenham as a city. This relationship makes the stadium a cultural icon for the city, suggesting the importance of maintaining its permanence to the city and providing the maintenance and sustainability of a city.

Conclusion:

To conclude, on a match day, the stadium transforms the city around it, forming relationships with Tottenham and enforcing interactions with the community that promote the user experience within the city. A major downside to large-scale structures on urban landscapes was their negligence on human interactions. The Tottenham Hotspur Stadium, however, rejects these claims. On a match day, the stadium seems to bring the city alive encouraging walkability and interactions with other users of the city and local businesses helping the city profit both socially and economically. This helps the city thrive as it diversifies the city's possibilities as each street welcomes new interactions. These interactions go on to form memories which we understand from Juhani Pallasmaa that architecture is a mixture of elements and a key element of experiencing it is the memories created by user interactions.

As an assessment of the question 'Does the Tottenham Hotspur Stadium provide a sustainable match day experience and achieve both successful community engagement and urban integration into Tottenham as a city?', judging how much of a success with the points stated can be slightly subjective. The answer would be a yes but in two parts. Yes, the stadium is a successful match day experience that integrates with the urban landscape and engages with its community. And yes the match day experience shows the right signs to be sustainable in terms of embedding into the urban landscape and providing the right elements to help a city thrive and grow and in turn be sustainable as a city. Cultural and historical structures are examples of structures that are tied into the city fabric and this culture expands to the inhabitants of the city. This is reflected by how important the stadium is to the city reinforcing the idea such structures are important to sustaining a city.

As mentioned before there are limitations as to the different experiences fan engages in depending on the ticket they purchase. Adding on to this, there may be other factors that could affect the experience that could not be assessed due to the nature of the report. The time of day of the match can influence the city around it, the weather, consistency in experiences (attending multiple games) comparisons with other stadiums and the opposition fans that come. Away fans in this case came from Manchester so they could have been more interested in exploring the city culture and hence interact more compared to fans from another club within London.

Nevertheless, this research was targeted specifically for the match day experience at Tottenham Hotspur Stadium and the analysis I made from the research suggests that the Tottenham Hotspur Football Club have created a successful experience and in my opinion it is sustainable.

Bibliography:

- Definition of Stadium: 'stadium' (2024). https://dictionary.cambridge.org/dictionary/ english/stadium.
- Information on Stadium at Olympia: What is the Oldest Stadium in the World? (no date). https://www.ultras-tifo.net/news/7036-what-is-the-oldest-stadium-in-the-world.html.
- Journal Article on stadium design in 1900s America: Carlino, N. (2021) 'Bleacher Bugs and Fifty-Centers: The Social Stratification of Baseball Fans through Stadium Design, 1880–1920,' Buildings & Landscapes Journal of the Vernacular Architecture Forum, 28(1), p. 5. https://doi.org/10.5749/buildland.28.1.0005.
- Jacobs, J. (1998b) The death and life of great American cities.
- Rereading Jane Jacobs: 10 Lessons for the 21st Century from "The Death and Life of Great American Cities": Pedersen, M. (2022) Rereading Jane Jacobs: 10 Lessons for the 21st Century from 'The Death and Life of Great American Cities.' https://www.archdaily. com/878317/rereading-jane-jacobs-10-lessons-for-the-21st-century-from-the-death-andlife-of-great-american-cities.
- Lewis Mumford's review on 'The Death and Life of Great American Cities': Villegas, A.L.N. (2019) Lewis Mumford's review of Jane Jacobs 'The Death and Life of the Great American Cities.' https://lewisnvillegas.wordpress.com/2018/12/01/lewis-mumfords-review-of-jane-jacobs-the-death-and-life-of-the-great-american-cities/.
- Lewis Mumford's review: The Legacy of Jane Jacobs (2008). https://www.chronicle.com/ article/the-legacy-of-jane-jacobs-15989/.
- Pallasmaa, J. (2012) The eyes of the skin: Architecture and the Senses. John Wiley & Sons.
- Lefebvre, H. (1992) The production of space. Wiley-Blackwell.
- Bale, J. (1993) Sport, space, and the city. Routledge.
- Football Ground Guide (no date) English football stadiums Football Ground Guide. https://footballgroundguide.com/leagues/england.html#:~:text=There%20are%20a%20 total%20of,promoted%20to%20League%20Two%20Bromley.
- Hotspur, T. (2023) 'Tottenham Hotspur announced as Premier League's greenest club for fourth year running,' Tottenham Hotspur, 11 May. https://www.tottenhamhotspur.com/ news/2023/may/tottenham-hotspur-announced-as-premier-league-s-greenest-club-forfourth-year-running/.
- Cycling I Stadium I Tottenham Hotspur (no date). https://www.tottenhamhotspur.com/ the-stadium/attending-matches/getting-here/cycling/#:~:text=We%20encourage%20 spectators%20to%20cycle,cycle%20map%20for%20the%20locations.
- OpenStreetMap Contributors and www.stadiummanagement.co.uk (2019b) T o t t e n h a m, Off Street Cycle Parking Hubs. https://www.tottenhamhotspur.com/media/23078/ thfc_cycle_s106_map-001eh.pdf.
- Road closures I Stadium I Tottenham Hotspur (no date b). https://www.tottenhamhotspur. com/the-stadium/attending-matches/getting-here/road-closures/.

- Further Information on Tottenham Hotspur's Sustainability Practises:
- Sky Sports (2019) 'Tottenham's new stadium: All you need to know about Spurs' new £1billion ground,' Sky Sports, 25 March. https://www.skysports.com/football/news/11675/11657806/tottenhams-new-stadium-all-you-need-to-know-about-spurs-new-gbp1billion-ground.
- Sports, S. (2019) 'How Tottenham's stadium was built,' SkySports, 3 April. https://www.skysports.com/watch/video/sports/11682912/how-tottenhams-stadium-was-built/more/6.
- Hogwood, C. (2024) 'How Tottenham Hotspur Stadium became NFL's perfect UK home as Chicago Bears and Jacksonville Jaguars arrive in London,' Sky Sports, 10 October. https:// www.skysports.com/nfl/news/12118/13230787/how-tottenham-hotspur-stadium-becamenfls-perfect-uk-home-as-chicago-bears-and-jacksonville-jaguars-arrive-in-london.
- Yew, O. (2024) 'Future of Football: What does the future look like for stadium development?,'
 Sky Sports, 27 March. https://www.skysports.com/football/news/12040/12923024/sky sports-future-of-football-what-does-the-future-look-like-for-stadium-development.
- To care is to do I New Stadium I Tottenham Hotspur (no date). https://www.tottenhamhotspur.com/the-stadium/passionate-about-our-planet/.
- Institution of Civil Engineers (no date) Tottenham Hotspur Stadium. https://www.ice.org.uk/what-is-civil-engineering/what-do-civil-engineers-do/tottenham-hotspur-stadium.
- GreenBlue Urban (2022) Urban tree planting projects GreenBlue Urban. https://greenblue.com/gb/case-studies/tottenham-hotspur-stadium/.
- Feehan, A. (2024) Sustainable building success stories: Tottenham Hotspur Stadium. https://networks.verdantix.com/climate-innovation-network/sustainable-building-success-stories-tottenham-hotspur-stadium.
- Hotspur, T. (2023) 'Tottenham Hotspur announced as Premier League's greenest club for fourth year running,' Tottenham Hotspur, 11 May. https://www.tottenhamhotspur.com/ news/2023/may/tottenham-hotspur-announced-as-premier-league-s-greenest-club-forfourth-year-running/.
- Perez, J. (2022) How Tottenham Hotspur is Leading the Way in Sustainability. https://oceanconservancy.org/blog/2021/08/10/tottenham-hotspur-sustainability/.
- Pearson, N. (2024) Earth Day 2024: What are Tottenham doing to be more sustainable? https://www.bbc.co.uk/sport/articles/czq5x51wv3vo.
- Billington, J. and Billington, J. (2019) Tottenham Hotspur Stadium designer reveals challenges and secrets behind the project. https://www.stadia-magazine.com/features/ tottenham-hotspur-stadium-designer-reveals-challenges-and-secrets-behind-the-project. html.
- Bentley, S. (2024) Facade design for Tottenham Hotspur Stadium. https://www.burohappold.com/articles/facade-design-for-tottenham-hotspur-stadium/.

Figures Bibliography:

- Figure 1: Photograph Outside the Tottenham Hotspur Stadium walking up to the East entrance, Photograph by Author (Shalin Desai)
- Figure 2: Figure 2- Image of new stadium mid-Construction when Tottenham Hotspur Football Club had played their final game at White Hart Lane, Photograph from @ SpursOfficial on X
- Figure 3: Map showing route to the stadium for author, taking car versus taking public transport and walking, Map by author (Shalin Desai)
- Figure 4: A map showing the reltionship of he roads and stadium without and road closures, Map by author (Shalin Desai)
- Figure 5: A map represeting what is meant by 'expanded concourse' by road closures-Phase 1, Map by author (Shalin Desai)
- Figure 6: A map represeting what is meant by 'expanded concourse' by road closures-Phase 2, Map by author (Shalin Desai)
- Figure 7: A map represeting what is meant by 'expanded concourse' by road closures-Phase 3, Map by author (Shalin Desai)
- Figure 8: A map represeting what is meant by 'expanded concourse' by road closures-Phase 4, Map by author (Shalin Desai)
- Figure 9: A map showing the location of bicycle parking locations, provided by Tottenham Hotspur Stadium website

availableat: Cycling | Stadium | Tottenham | Hotspur (nodate). https://www.tottenham | hotspur.com/the-stadium/attending-matches/getting-here/cycling | #:~:text=We%20 encourage%20 spectators%20 to%20 cycle, cycle%20 map%20 for%20 the%20 locations.

OpenStreetMap Contributors and www.stadiummanagement.co.uk (2019b) To t t e n h a m, Off Street Cycle Parking Hubs. https://www.tottenhamhotspur.com/media/23078/thfc_cycle_s106_map-001eh.pdf.

Map by author (Shalin Desai)

 Figure 10: A collection of maps that show the observations with user interactions explored through walking through an urban landscape and links with the diversity of the landscape, map by author

Appendix 1

supervision log sheet

It is very important that both you and your supervisor have a clear agreement of the actions and next steps to follow towards a successful completion of your dissertation. You are required to use this template to track all your discussions, notes and feedback received.

Student: Shalin Desai

Supervisor: Vsevolod Giorgi Kondratiev-Popov

Date: 11/10/2024

A report/draft was submitted for discussion: Yes___ No___

Feedback from supervisor

- The research question has to be more precise.
- You can't analyse the economic impact as you will need the data for this to be readily accessible which isn't possible for an undergraduate dissertation.
- Social impacts and fan experiences are more feasible to research and study
- Focus on one stadium and make this your case study, 5000 words is not that much to talk about when you consider all the subcategories of the dissertation
- You could think about the cultural aspects of the stadium, looking at the stadium before and after its construction
- If you want to focus on Tottenham Hotspur Stadium you could analyse the sustainable transport opportunities like the e-scooters or ebikes
- Identify other spaces that link with the stadium culture within the stadium landscape, the city of Tottenham
- You could look at the people working there and see how the stadium impacts them. A possible research method for this could be interviews-looking at how the stadium engages with the community
- An academic reading for your literature review would be Jane Jacobs- "The Death and Life of Great American Cities".

Next steps

- Refine the research question and focus on one stadium to be used as your case study.
- Understand one specific thing that you want to research and study, it must be achievable for an undergraduate dissertation
- Read the book that has been recommended, noting important quotes and themes down for the bibliography remembering the page number.
- Think about themes you can study and write about in a 5000-word dissertation

Any other issues discussed	 Don't get too worked up on ethics first focus on a key theme you want to research for your dissertation that can be researched or studied, this can then highlight what research method would apply to your dissertation.
signature of supervisor	
signature of student	Shalio
Date: 15/11/2024 A report/draft was submitted for different supervisor	liscussion: Yes No • Focus on Jane Jacobs- "The Death and Life of
	Great American Cities". Looking at Social and large infrastructure impact on a city • Collion Rose- Collage City. Auto-ethnographic mapping Architecture perspective of the city. Create/design cities to make them more interactive and rich full of potential • Critical outlook on Stadiums impact on the city • Look at the city historically and what the difference is on the city between the old stadium and the new stadium • Jan Gehl → Danish Designer, street furniture, life of the street and how people use the streets. Research study: vendors, signs and e-bikes
Next steps	 Look at Tottenham as a city and how it is culturally identified/built up. How the stadium does or doesn't fit in the city Understand your literature review is an opinion on the topics as an overview of points

Any other issues discussed

 When reading these books also read secondary articles that give other people's views on the author's work to understand the opinion and concept to see if others agree with the points being made

signature of supervisor	
signature of student	Shalio

Date: 20/12/2024

A report/draft was submitted for discussion: Yes____

es___ No___

Feedback from supervisor

- Pinpoint a specific point within Jane Jacobs's book, that relates to the stadium and zone in on that aspect.
- Stadium design provides a visitor experience in line with sustainability.
- The human bartender is robotized; their role is limited to putting a cup on a machine and taking payments. At a bar, there is a community aspect with interactions with people while pouring a drink, going for refills, etc. Worker alienation is a driver of capitalism. Taylorism and forwards → how machinery is automating human/worker service. Human automation.
- Literature looking at this →
- Community spirit of football in a positive way
- Criticism of stadium sustainability, green-washed
- 1-dimensional sustainability, automation with machine design.
- Impact of architecture of experience of spaces, experience with design. How architecture designs for community and sustainable practise.

Next steps	 Narrow the auto-ethnographic to what the question is and refine the question for a 5000-word dissertation. Pick one specific element that can be exhausted through research and literature review. Refine the question to what the research method is and link it to the auto-ethnographic study. The literature review should have a look at the different sides of the argument that you are exploring. If you get the time and the opportunity, survey land across a timeframe to see the stadium's impact on the surrounding landscape. Look at the sustainable personal account.
Any other issues discussed	 Production of Space by Henry Le Favie. Looking at how a stadium blends city architecture with internal space architecture for experience. Looking at the sustainable conception. Moveable consumption architecture. Link to the idea of gentrification. People selling things about football- not the focus of this. Displacing people. Technological/ sustainability argument. Look at an understanding of whether the stadium is sustainable. Look at credible sources that analyse sustainability. Don't say that is sustainable, present an understanding of thisnot a fact but more of a researched opinion.
signature of supervisor	
signature of student	Shalio

Appendix 1

Application for Approval of Research Ethics

Researcher / Student: complete and email to your Supervisor/PI Supervisor / PI: check and email to:



sbe-undergrad@reading.ac.uk [for BSc research]
sbe-postgrad@reading.ac.uk [for MSc and MArch research]
grp-stbe-sbeethics@groups.reading.ac.uk [for PhD, EngD and Staff research]

School of the Built Environment

	Section 1 - Does your project involve any of the following	:
i)	Participants, samples or data identified and accessed via the NHS;	No 🔻
ii)	Participants whose capacity to give informed consent may be impaired within the meaning of the Mental Capacity Act 2005 (i.e. reduced capacity resulting from conditions including, but not limited to, dementia, mental illness, learning disabilities);	No 🔻
iii)	Questions that might reasonably be considered to be impertinent or be likely to cause distress to the	No 🔻
	participants;	No 🔽
iv)	Significant risk of harm to the researchers or participants which cannot be mitigated by reliable measures;	
v)	Participants who could be considered 'vulnerable' (i.e. children under the age of 18, persons in a disadvantaged or marginalised position including but not limited to, race gender, sexuality, disability, religion, people in need of care, patients in hospital or physical health condition, those affected by drug abuse, refugees and social minority groups);	No 🔻
vi)	A funding body requiring review by UREC rather than by devolved sub-committee.	No 🔻

IMPORTANT: If you have answered yes to any of the above, even if your study is a questionnaire or similar, an application to the University Research Ethics Committee (UREC) is likely required.

Supervisors/PIs, please contact **grp-stbe-sbeethics@groups.reading.ac.uk** for further guidance before proceeding to the next section

Section 1 - Project Summary

Project Title:

"How has the Tottenham Hotspur Stadium been embedded into the city's urban landscape and impacted social and community engagement while responding to the challenges with sustainable stadium design?

Applicant (Researcher/Student):

Name: Shalin Desai

Email address: Shalin.Desai@student.reading.ac.uk

Status: BSc

Supervisor / Principal Investigator:

Name: Vsevolod Giorgi Kondratiev-Popov

Email address: v.s.kondratiev-popov@reading.ac.uk

Summarize your Research Topic in one or two sentences:

For my research topic, I am investigating how the Tottenham Hotspur Stadium has integrated into Tottenham's landscape while tackling the challenges with stadium design. The investigation will particularly look at how the development has impacted the community and the social experiences the stadium reveals.

Is this a Nil Return? Yes If YES: Submit your form.

If NO: Continue to Section 2...

TO SUBMIT YOUR FORM:

- Applicant: Read Section 4 and email it to your Supervisor / Pl.
- Supervisor / PI: Read Section 4 and check any relevant Appendices have been completed. Email to relevant address (see top of this page).
- If a Nil Return or Questionnaire/Survey, approval is given by Supervisor/PI submitting the form. Otherwise, the form will be forwarded to REC for approval.

Further Information

Many of the boxes on this form, including this one are deliberately **SPACE LIMITED.**

This **MUST** be your University email address. Using your University email

This **MUST** be your University email address. Using your University email.

This should be a very short summary of one or two sentences in everyday language, describing **WHAT** you are investigating (e.g. I am investigating green supply chains and how they impact on cost of construction).

Research projects with ethical no 'Nil issues are classified as Return'. using Usually this means research publicly available secondary data.

Projects including the following examples are NOT 'Nil Returns' direct 'NO': and you should answer data, contact with people, personal potentially sensitive documents or records, interviews. questionnaires. surveys, safety issues etc.

If you are unsure then reply 'NO'.

A Nil Return is approved by the Supervisor / PI and is not usually checked by the Research Ethics Committee.

Section 2 – Research Methods

BRIEFLY, Describe your Research Methods:

The research method I wish to undertake is an auto-ethnographic study of a matchday experience to a game at the Tottenham Hotspur Stadium. The study will explore the experiences fan to see how the stadium has integrated with the landscape. It will explore my experience of travelling to the area and then also explore how or even if the stadium has created a culture within its surrounding landscape. I will explore the experience before and after the game and understand how the context beyond the stadium interacts with the experience to explore the social aspects and urban integration. This may be aided by sketches and a report of my experience on the day.

Please tick all that apply:

	Questionnaire (Complete Appendix A)	
	Simple Survey	
~	Environmental Survey	

If only these methods are used, then the application is approved by the Supervisor / PI when the form is submitted (as per Page 1). You do not need to complete Section 3.

	Interviews (Appendices B/C and sample questions in Appendix D)
	Photos/Filming (Apps.B/C and add filming notice in App.D)
L	Other (Use Appendix D for any other information)

Applications using these methods will be forwarded on to the Research Ethics Committee for review. **You must complete Section 3**.

Check that you have included any further information as required, using relevant Appendices such as:

- Draft Questionnaire (Appendix A)
- Information sheet for participants (Example in Appendix B)
- Consent form to be signed by participants (Example in Appendix C)
- Draft Interview Questions (Use Appendix D)
- Public Notices e.g. filming (Use Appendix D)
- Recruitment Adverts (Use Appendix D)

Further Information

This should be a summary of **HOW** you will investigate your topic. Describe, in no more than a few sentences, the methods you will use (e.g. interviews, filming, observation, analysis of documents, photography, focus groups, etc.) Include details such as: what type of data, you will gather, how many participants, how they will be approached, what they will do, if/how you will be accessing documents, etc. If you are interviewing, use Appendix D to provide examples of questions. If you are filming or photographing, describe how you will anonymize images. If filming in a public place, use Appendix D to attach your public filming/photography notice.

Where reasonably possible, you should provide every participant in your research with an Information Sheet (Appendix B), and obtain from them a signed Consent Form (Appendix C). If for ANY REASON you are unable to do this, you should

contact your Supervisor / PI or the Research Ethics Committee.

Three research methods are approved by the Supervisor/PI and not usually checked by the Research Ethics Committee:

Questionnaire (set of questions asked face-to-face or remotely)

Simple Survey (e.g. observing or documenting things other than people)

Environmental Survey (data from sensors, with permissions as appropriate)

Questionnaires MUST include a consent statement (which might be given verbally) to clarify issues such as: confidentiality, voluntary participation, anonymity, data management, informed consent, etc. (see example in Appendix A). Environmental Surveys should include a brief description including: type of sensors, location of sensors, permissions required etc.

Supervisors should assess these on a case- bycase basis. If in any doubt, also tick the 'Other' box to refer the application to the REC for approval, and complete Section 3 to describe and consider any ethical issues.

Section 3 – Ethical Issues

Explain, in detail, the ethical issues associated with your project and its context. Describe your strategy for handling these ethical issues.

Some ethical issues may arise with some of the sketches I may conduct. Being in London, and it being a matchday there will be heavy public traffic to be expected. Hence when sketching I will try to avoid drawing humans unless necessary to show an interaction or use of space; if I am to draw a human, I will not compromise any identification and draw a generic human figure or something similar. Visting/interacting with local businesses or places linked to the stadium I will be anonymous in my report and refer to them by a generic name such as a 'restaurant'.

How will you store your data (including signed consent forms)?

I will store my data on a password protected laptop or password protected online storage for 1 year after the completion of my research.

How long will you retain your data?

I will retain the data and after 1 year the research will be destroyed

Further Information

might include: compromising Issues participants by asking them to reveal sensitive information, controversial research topics, proprietary technical information. vulnerable involvement of young or existing relationships with people, participants (student, spouse etc.), cultural or language differences, coercion or deception, place of interaction (public place, workplace, hazardous environment etc.), revelation of criminality, uncovering health issues, exposure to pain or distress, physical contact generally, consumption of food or drink, risk to personal safety of the researcher and the participants, inconvenience or intrusion, environmental impact.

THIS LIST IS BY NO MEANS EXHAUSTIVE - YOU MUST IDENTIFY ALL ISSUES RELEVANT TO YOUR OWN PROJECT AND EXPLAIN HOW YOU WILL DEAL WITH THEM.

If an application to the University Research Ethics Committee is required, you will be contacted by the SBE Ethics Committee. If you are unsure, please contact the SBE Ethics Committee before submitting your application. People 'unable to give informed consent' are usually children (under 18s) or vulnerable adults. It is a legal requirement that staff and students undergo a Disclosure and Barring Service check before engaging in research when in a position of trust. 'Special Relationship' includes for example: spouse/partner; employer/employee; teacher/student etc.

All data, including signed consent forms, must be stored securely (e.g. on a password protected laptop; in a locked office, etc.) All data and consent forms must be removed from personal storage and returned to SBE (usually to the supervisor/PI) if/when the researcher leaves SBE.

BSc / MSc dissertation data would usually be destroyed 1 year after completion. PhD / Staff research data should be retained for 3 years post-research by default. Research supported by external funders may have specific requirements (e.g. note RCUK requirements).

Section 4 – Checklist and Confirmation

Applicant:

I have discussed the content of this form with my supervisor/PI

~

• I have thoroughly considered the ethical issues pertaining to my research and I have thoroughly considered how I will address and manage safeguarding issues (both anticipated and unanticipated)



• The Participant Information Sheet includes a statement to the effect that the project has been reviewed by the appropriate Research Ethics Committee and has been given a favourable ethical opinion for conduct.



• I have carefully considered my data management plan and the Participant Information Sheet contains the relevant Data Protection information.



• All relevant supporting documentation is included (e.g. Appendices)



• I am aware that if I commence data collection without ethical approval my actions constitute research misconduct and are subject to disciplinary action



• I confirm that to the best of my knowledge I have made known all relevant information to the Research Ethics Committee, and I undertake to conduct this research in line with the information provided. I will inform the committee of any such information that subsequently becomes available, whether before or after the research has begun.

PRINT NAME:

Shalin Desai

- Please email the completed form (including the APPENDICES as required) to your Supervisor / PI
 (from your University email address)
- NO FURTHER ACTION IS REQUIRED

Supervisor / PI:

- I have checked the content of this form and the attachments, and to the best of my knowledge I have made known all relevant information to the Research Ethics Committee, and I undertake to inform the committee of any such information that subsequently becomes available, whether before or after the research has begun.
- To confirm this statement, please email the form (from your University email address) to: sbe-undergrad@reading.ac.uk [BSc]
 sbe-postgrad@reading.ac.uk [MSc and MArch]
 grp-stbe-sbeethics@groups.reading.ac.uk [PhD, EngD and Staff research]
- NO FURTHER ACTION IS REQUIRED