



**UiT** The Arctic University of Norway

Faculty of Humanities, Social Sciences and Education

## **Planning for More-Than-Human Coexistence in the City**

Exploring Gull Management Strategies in Tromsø and Worcester

Katharina Berg

Master's thesis in Nordic Urban Planning Studies   SPL-3901   June 2024



## **Acknowledgements**

I owe the greatest debt of gratitude to my supervisor Anniken Førde, who was continuously patient and understanding when progress with this study was going slow. Your guidance was invaluable as well as instrumental in the completion of this study. I would also like to give a massive thank you to the people in both Tromsø and Worcester that were willing to speak to me, generously lending their time and sharing their wisdom and perspective with me. Finally, I am so thankful to my parents, who were willing to give time to listen and were willing to join me in my fieldwork to make the process as smooth as possible. Without all of you, this study would not have been possible.



## **Abstract**

Seabirds have been increasingly entering our cities, and with it has come the need to consider other species in the city. Multispecies planning is becoming more relevant, though the ways and speed at which it can be implemented into the discipline can vary. This study is designed as a comparative case study between Tromsø in Norway and Worcester in England, who have both had their own experiences, conflicts, and management strategies when it comes to addressing the gulls. To investigate how these cities attempted to plan for coexistence with the urban gulls on their roofs, I interviewed both experts and residents who have had firsthand experience with the gulls. The findings and analysis found that whilst Tromsø and Worcester share some similarities in having to deal with red-listed species, and used similar strategies to mitigate conflicts, Tromsø has made more progress in moving towards coexistence with gulls in the city. Worcester, in comparison, has not made as many steps towards coexistence, and this partially stems from the pervading negative attitude towards the gulls, and the species of gulls in Worcester being more aggressive than the gulls in Tromsø.

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## 1. Introduction

In the face of shifting climates and environments, the makeup of our urban populations is being confronted with an influx of change. Nowhere is this more prevalent than in the increased presence of seabirds among the city streets, a visually-distinct far cry from their prior homes among the natural landscapes of the cliffs and sea. Their arrival and settling dictates that there needs to be changes in how we humans approach and understand the various facets of the city and highlights a historically less-considered aspect of the urban: non-human wildlife.

In order to achieve this, cities must be understood as more than simply a domain reserved for humans alone, but as a more complex, interconnected network of multiple species. This concept has been called being ‘more-than-human’, which can be defined as “contexts in which multiple species and processes come together to produce a result” (Elton, 2022). In recent years, there have been further developments towards understanding cities in this way, which can be observed through the multitude of relevant literature that has been published – such as Houston et al.’s article ‘*Make kin, not cities! Multispecies entanglements and ‘becoming-world’ in planning theory*’ and Isaacs & Otruba’s article ‘*Guest Introduction: More-than-human contact zones*’, which were published in 2018 and 2019 respectively, to name a few. There have also been developments to address the presence of seabirds entering the city – such as Wilson’s (2022) work ‘*Seabirds in the city: urban futures and fraught coexistence*’.

However, one must wonder how such transformations can be identified and implemented in a landscape that has been so thoroughly dominated and constricted through a human-centric lens. While the dilemma presents itself as an arduous task, it is one that must be attended to, which Thrift (2021) outlines in his book ‘*Killer Cities*’. He argues that “unless we can build more human cities where coexistence is not just a slogan, where diplomacy is not just another name for dominion, where we can experience the rude shock of the planet’s otherness as something other than just an additional weight to be borne, the planet is likely to falter” (p. 6). In simpler terms, “we need to alter our ways of being urban” (ibid.). There is hope, in a sense, that we can divert from the tracks our cities have been driving along – that cities can become something more than just a human domain, and they “can be a vital element of an expanded and mutually inclusive definition of humanity, rather than the vision of the city that has become engrained in many cultures which makes no room for animals except as adjuncts to the human.” (ibid., pp. 2-3). The impending ‘demographical’ transformation of seabirds moving into the city serves as only one facet of this ongoing development in planning theory.



The migration of seabirds to the city brings with it its own challenges and questions to consider, further punctuating the urgency for such a paradigm shift to occur in planning. One immediate challenge lies in reconciling the competing needs and behaviours of humans and seabirds within our shared urban environments. Unlike traditional urban wildlife, such as pigeons or squirrels, seabirds can bring with them unique ecological requirements and behaviours that have been shaped by their marine origins. Understanding and accommodating these needs whilst simultaneously addressing the needs and expectations of human residents presents a rather complex puzzle.

In addition to the challenges, the arrival of the seabirds prompts deeper reflections on the moral and ethical dimensions of urban development. How do we ethically engage with non-human species within shared urban spaces? What obligations do we have to protect and preserve biodiversity, particularly in environments shaped by humans? These questions further necessitate a re-evaluation of our ethical frameworks and value systems, challenging us to cultivate a more inclusive and compassionate approach to urban living.

## ***1.1. Background and Context***

### *1.1.1. Norway*

In recent years, Norway has witnessed a noticeable shift in the habitat preferences of their seabirds, with an increasing number of them migrating from their traditional coastal environment of the cliffs to the urban environment of the city. This phenomenon has sparked considerable interest among researchers and planners alike, as it is the representation of a significant change in the ecological dynamics of urban locations. There are various birds that have moved into the city from the sea in Norway, such as the *Larus* gulls and the black-legged kittiwakes, and this migration can be attributed to several complex factors, such as the availability of food, access to nesting sites, the relatively low presence of natural predators, or as a result of climate change.

The migration of the kittiwakes, in particular, is what has attracted the most attention. In Norway and other areas of the North Atlantic, the kittiwake population has been declining at a rapid rate over many decades. The reasonings behind this fast decline are not fully understood too well as the situation is very complex, but food shortages and increased predation have been considered as likely very important factors (Fremstad & Næss, 2022). As such, they have begun to shift towards nesting in the cities along the Norwegian coast, likely for the reasons as stated before. Additionally, kittiwakes are not entirely synonymous with the other species of gull that

have been seen in the cities. In particular, they have a much friendlier disposition towards humans, and unlike *Larus* gulls will not steal food. In fact, they are typically not attracted to the city for food-related reasons, as they live exclusively off of small fish and crustaceans and fulfil all of their nutritional needs out at sea (ibid.).

The movement of the kittiwakes into the city of Tromsø has been rather recent, with the first pairs being observed a little south of the city centre back in 2016 (Benjaminsen et al., 2022, p. 8). However, since then, the numbers have only grown, rising to 13 pairs in 2017 and then further to 160 by 2021 in Tromsø city centre (ibid.). In conjunction with this growth, projects pertaining to the seabirds' movement into the city have been launched. One such particular project is that of *Fuglan Veit*, of which their aims are to provide new knowledge and awareness about seabirds moving into the city, as well as to improve the nesting situations for endangered seabirds through multidisciplinary collaboration (Fuglan Veit, n.d.). Despite this, the kittiwakes (and the other gulls) are not viewed favourably from other perspectives, such as the media, where they are typically framed as 'villains' (Novotny, 2023, p. 2). Interestingly, however, the use of the name 'kittiwake' tended to be associated with more positive framing, in contrast to when the name 'seagull' was used (ibid.). As such, this has sparked some debate about how seabirds should be viewed in the city – 'positively or negatively?', and further exemplifying the dilemma of 'how can we plan with species that are perceived differently?'

These unfavourable perspectives exist for a variety of reasons with the kittiwakes despite their friendlier attitude. This can come down to that fact that noise and smell are very much still prevalent annoyances, no matter the species – and thus all gulls are often considered as unwanted neighbours. While preventative measures and attempts to scare the birds away from their chosen nesting places have been made, it has been found that – for example – when a kittiwake has established its nesting place, it will continuously return to that exact spot, and if nesting is physically prevented, it will simply move to an alternative nearby location (ibid.). As such, in order to mitigate this, Tromsø has begun the construction and implementation of 'kittiwake hotels', with the intent to lure birds to alternative nesting ledges (Katz, 2020). This idea originally started being implemented in 2018, but it was not until 2022 that the kittiwake hotels in Tromsø started to become successful at attracting the kittiwakes to the structures themselves. The most recent and most popular hotels currently in Tromsø is located at Muséparken. For this specific project, a renovation project of a nearby building required a method of removing the nesting kittiwakes from the structure, and as such the hotels were built in order to reduce the smell, the noise and the damage being done to the building. The current

success of this method has improved confidence in the kittiwake hotels, and there is hope they could be used elsewhere in the city (Tromsø kommune, n.d.). Because of its relevance and importance to the ongoing developments in more-than-human approaches in the city, the Muséparken kittiwake hotel project will be a major part of the Norwegian portion of this study.

### *1.1.2. United Kingdom*

The presence of urban gulls in the United Kingdom is not a new revelation, as they have been situated in British cities for decades. In fact, it has been noted that the colonisation of gulls, mostly in coastal cities, began possibly as far back as the early 1940s (Rock, 2005, p. 340), and that regional populations of urban gulls may actually be much larger than estimated (ibid., p. 352). Some areas of the U.K. experience higher gull presence than others, such as the Severn Estuary Region (SER), which is a region that encompasses “Birmingham in the north, South Wales in the west, Somerset in the south and Wiltshire in the east” (ibid., p. 340). The SER has been the chosen location of a survey before – during ‘Seabird 2000’ (1998-2002) – which resulted in the observation of 5,769 apparently occupied nests of roofs (ibid., p. 341), though it should be understood that making accurate assessments in an urban environment is rather complex (ibid.).

Not only are there a plentiful number of these gulls – studies have also shown how their ability to adapt has allowed them to thrive in the city, in terms of supplying food sources. Particularly, a study in 2020 (that investigated whether urban gulls could adapt their foraging schedule to follow human-activity patterns) found that the foraging patterns tended to match with the timing of school breaks and the opening and closing times of the waste centre (Spelt et al., 2020, p. 274), highlighting just how accustomed gulls have become to the urban environment. The gulls that have been seen, however, in England have typically been the larger species of gulls, such as the Herring Gull and the Lesser Black-backed Gulls (Rock, 2005). Unlike kittiwakes, these species do more than create noise or make mess – they also exhibit aggressive behaviours, which opens the door for many more conflicts to occur (ibid., p. 347).

Naturally, with such great numbers has come numerous solutions to ‘deal with the problem’. One such method is that of scaring the gulls away, typically by producing loud noises or placing ‘threatening’ objects to deter nesting to installing netting across a rooftop. However, this has proved to be only temporarily efficient, as these methods are quickly recognised and thus ignored by the gulls (Rock, 2012, p. 61). Another is the process of roof netting, physically preventing gulls from landing on roofs, which has shown effective results – provided that the

netting is correctly installed and effectively maintained – but can also be incredibly expensive (ibid.). There used to also be the idea of using more lethal methods – such as the use of poison – to regulate gull populations in the UK, but many councils have long since declared that such methods are completely out of the question (Rock, 2005, pp. 349-350) and such practices have ultimately become illegal. By far one of the most effective means of managing urban gull populations has been through egg-oiling, as it both prevents eggs from hatching and prolongs the incubation period of the adult gulls, resulting in less noise (ibid., p. 350), but does not solve the problem indefinitely, and requires explicit given permission to do so.

### *1.1.3. Threatened Species and the City*

With approximately two-thirds of the entire human population being concentrated along the coast, the processes of development and urbanisation were inevitable (Perkol-Finkel et al., 2012, p. 1457). This has led to the radical transformation of natural landscapes, inevitably creating unique challenges and opportunities for wildlife – particularly threatened species – these urban environments. Despite often being viewed as spaces where biodiversity does not belong, cities can play an important role in the conservation of threatened species (Ives et al., 2016, p. 117) by acting as refuges for them, providing new, alternative habitats and resources. An analysis in 2014 by Aronson et al. found that across 54 separate cities across the world, approximately a third of them are home to globally threatened bird species, and as such it is important to recognise that there is a growing need for planning that needs to accommodate and foster this biodiversity (Aronson et al., 2017).

This comes across as a sort of paradoxical relationship, as urbanisation is one of the key contributors to the negative impacts of biodiversity, particularly through habitat loss, but cities can also provide shelter for threatened species in a way that allows them to flourish more effectively than they did in their natural habitats (Luna et al., 2018, p. 17). However, this can ultimately lead to the ‘urbanisation’ of these species, which – whilst helping them survive – means that their native ecological functions are no longer conserved (ibid., p. 1), and this can have long-term consequences on ecosystems. However, that does not mean the city should not facilitate their existence – in fact, the reality of threatened species flocking to urban spaces in order to survive means that the city must do what it can to protect these threatened species. To fail to follow through would be, however unintentionally, enabling extinction.

Knowing this, the case of Tromsø’s growing urban kittiwake population becomes increasingly relevant, as kittiwakes are on the International Union for the Conservation of Nature’s Red List

of Threatened Species (ICUN Red List (a), 2018). Additionally, the Herring Gull and the Lesser Black-backed Gull can also be found on this list (ICUN Red List, 2021; ICUN Red List (b), 2018). The list is an important indicator of the health of global biodiversity and can be used as a tool to “inform and catalyse action for biodiversity conservation and policy change” (ICUN Red List, n.d.), and as such is an important aspect to consider when it comes to addressing the state of gull populations inside the city. The gulls – in some capacity – are a threatened species, and thus the city must attempt to treat them as such. As such, now more than ever, it showcases that should be a strong need to incorporate multispecies planning in our cities.

#### *1.1.4. The Urbanisation of Seabirds*

The urbanisation of seabirds as they move into the city creates a fascinating angle for studies of urban ecology. As the urban landscape is not typically categorised as a natural habitat for most wildlife, their movement into the city introduces a new dynamic with their environment and a new way of life for them to become accustomed to. Most bird species can be categorised as either ‘urban avoiders’, ‘urban adapters’ and ‘urban exploiters’ (Seress & Liker, 2015, p. 381), depending on how they tolerate and utilise urban resources. Urban avoiders, as the name suggests, are the most negatively affected by urbanisation, thus resulting in their lower numbers. Urban exploiters are the opposite, as they are the species with the highest abundance in urbanised areas as they not only tolerate them but prefer to remain there. Located in the middle of the spectrum are urban adapters, who tend to reside in areas of intermediate levels of disturbance, as well as make sizeable use of urban resources (ibid.). Seabirds, as can be observed with their growing numbers in cities, tend to be either urban adapters or urban exploiters. Amongst many of these seabirds, gulls have become particularly noteworthy for their mass migration and somewhat successful adaptation into urban environments.

Having originally been coastal dwellers, who used to rely solely on the marine environment for sustenance and nesting purposes, gulls have been drawn to the city by a variety of factors – the primary one being the availability of alternative food sources, typically through urban waste such as leftover food, which enables them to thrive (Rock, 2005). Additionally, the urban environment provides an abundance of new nesting sites – especially roofs and ledges, which can mimic their original cliff-side habitats (Soldatini et al., 2008). Not only this, but the chance for a reduced presence of their natural predators could also have influenced their migration to the city (Møller, 2012).

This shift in habitat also highlights the behavioural difference that evolve within urbanised birds. Cities are home to many different types of pollution, such as light, noise and chemical pollution, and these can all be linked to phenotypic changes (Isaksson, 2018, p. 244). Other than these, the main introduction to these birds is the presence of humans – which all species tend to perceive as a threat to them – and these constant encounters with humans is very likely to increase stress (ibid.). This also goes the other way, with human reactions to birds being both species-specific and context-specific (ibid.). However, there are signs that some birds – particularly gulls – that have begun to adapt to human encounters, as there is evidence that shows that it is possible for these birds to understand and plan a foraging schedule that allows them to minimise contact with humans while acquiring access to food (Spelt et al., 2020, p. 279).

#### *1.1.5. The Challenges of Coexistence*

As is typical in any instance of great change, the introduction of urban gulls provides its own challenges and conflicts with preexisting norms within the city – none being more obvious than the human population itself. With their presence in the city, this opens the door to – as mentioned – new, unestablished encounters between different species, and this highlights the growing importance of establishing coexistence between the inhabitants of the city in the face of potential conflicts. Not only this, but as gulls can be seen as both a nuisance as well as an integral part of the urban ecosystem, this highlights that a delicate balance must be struck between human activities and wildlife conservation. Literature on human-wildlife conflict, interaction and coexistence has increased exponentially in the last couple of decades, but unfortunately “work on conflict outpaces work on interactions and coexistence 3-fold” (König et al., 2020, p. 787).

It is important to remember that gull management in urban spaces can also pose ethical and practical dilemmas. That is, strategies such as egg destruction, habitat modification with deterrents and – to the most extreme degree – culling can be highly controversial and can potentially face opposition from certain organisations or members of the public. Additionally, in practical terms, coexistence is an incredibly complex goal to achieve in the city, especially when involving birds due to their annual movements. As such, they never remain in one place indefinitely, and their ability to come and go make it challenging to successfully deduce planning and management solutions (Muderere, 2011, p. 181). Not only that, but there is “no one size-fits-all solution” (König et al., 2020, p. 793) when it comes to coexistence, as effective

urban wildlife management requires taking into consideration the wishes of all involved stakeholders (Heltai, 2013, p. 21) in order to produce a well-rounded result, which is always context-specific.

## ***1.2. Research Question***

In order to achieve a more comparative angle for this study, two separate cities have been chosen as case studies. These cities are Tromsø, located in the northern Troms county of Norway, and Worcester, located in central England's West Midlands region in the United Kingdom. Both of these cities have had encounters with the seabirds that have been settling in the city, making them adequate cases to compare, and have the potential to both highlight how these two cities can learn from each other and how other cities can employ diverse strategies in order to plan with urban gulls.

To understand the relationship between planning decisions and urban gulls, this thesis will revolve around the concepts of contact zones, conflict zones and tolerance zones – concepts that will be elaborated on in the theoretical framework chapter of the thesis – and to reflect this, the overarching research question is as follows:

- How can cities plan for human-seabird coexistence?

In order to answer this, this thesis will address the following sub-questions:

- What are the conflict zones between humans and seabirds in the city?
- How are tolerance zones implemented into the planning and design of spaces in order to foster coexistence between gull and human activities?

This study will rely heavily on interviews as a main part of the methodology, with the supplementary method of field observations. At its core, this study wishes to understand the current state of the 'more-than-human' in cities, and aims to provide a foundation from which further implementations of tolerance zones can be created in cities to encourage future coexistence.

## **2. Theoretical Framework**

This chapter will present the extensive framework of theories and concepts that aims to assist with and contribute to answering the research question and sub-questions. There are many concepts that come together and build off one another in the discipline of multispecies-oriented planning, and they will be elaborated on here.

## ***2.1. The More-than-human Approach***

Urban planning has traditionally observed cities through a human-centric lens, often neglecting to consider the intricate relationships that can exist between humans and non-humans within urban environments. However, a growing body of literature and research has been advocating for a paradigm shift towards a more inclusive perspective – the ‘more-than-human’ approach. The literature has existed for a long time but has started appearing more and more since the beginning of the twenty-first century, with the likes of works by Whatmore (2002), Van Dooren (2014), and Thrift (2021), who explore the hostilities that have formed between humans and non-human, with Van Dooren and Thrift especially highlighting its relation to non-human extinction. What can be found is that embracing a more-than-human approach can help to challenge the prevailing anthropogenic bias that has been prevalent in urban development, by acknowledging the agency, subjectivity, and significance of non-humans in the shaping of urban environments, which can be supported by Lorimer’s (2010) statement that one of key components of more-than-human geographies is “a sustained inquisition of the modern cartographies that establish which forms and processes have agency, challenging the ontologies of humanism that draw attention to the diverse objects, organisms, forces and materialities that populate an emergent world and cross between porous bodies” (p. 238).

As such, the concept of the ‘more-than-human’ approach is fundamentally vital when it comes to understanding and addressing human-gull encounters within the city. In exploring the management strategies employed by cities to address the influx of gulls into the urban environment, it becomes imperative to situate the research within the theoretical framework of ‘more-than-human’ planning. More-than-human planning recognises that cities are not exclusively human spaces but are, in fact, shared habitats that encompass a multitude of diverse species. From its concept alone, this approach would clearly be integral to sustainable urban development – yet Fieuw et al. (2022) states that “scholars from environmental humanities as well as in urban design and planning are calling for a more-than-human approach to smart and sustainable development”, as that this approach is far from having been fully implemented in our cities as of 2024.

By embracing this perspective, planners can better understand the complex socio-ecological dynamics at play and move beyond the narrow focus on human needs and interests to consider the needs and behaviours of non-human actors as integral components of urban planning processes, creating “a planning sensibility that [does] not base itself on hubristic notions of human exceptionalism, but instead [leans] against an extended, relational and satiated ethics of



care, nurturing and killing” (Metzger, 2015, p. 146) and cements the idea that “the phenomenon of place is in no way exclusive to human existence” (Metzger, 2014, p. 1002). Considering these previously ignored aspects of the urban landscape can then further help shape coexistence in the city, and can aid in “[ensuring] that the contours of urban coexistence are firmly situated within wider socio-environmental futures” (Wilson, 2022, p. 1148). Thus, in order to effectively understand how the different groups of species can live together in the city, we must consider the wider perspectives, and from this we can better situate coexistence within the broader social and environmental challenges that await us in the future. This more comprehensive view can assist with ensuring that urban planning is more aware of and attuned to these wider influences and future scenarios.

However, it is always important to keep in mind that there is “no ‘one size fits all’ of planning methodology” (Metzger, 2015, p. 146), and that when it comes to following a more-than-human approach to planning, one “must therefore be prepared to face up to wicked or even tragic choice of priorities” (Metzger, 2019, p. 197). The more-than-human approach may tend to encourage the integration of ecological principles and conservation strategies into urban development plans in order to foster coexistence and sustainability and recognises that wildlife are major stakeholders in the urban landscape, but it is not a perfect approach without problems. However, just because it has its own set of shortcomings does not mean it should be disregarded, as ignoring these urban ecological changes, especially in the ongoing movement of developing sustainable cities, would be detrimental, and addressing such concerns would be vital to avoiding “a planetary ecocide” (Fieuw et al., 2022, p. 6).

The restructuring and recasting of urban development processes with a more-than-human perspective could also bring its own benefits, enabling us to become more innovative when it comes to planning, such as “more responsive and improved climate-adapting planning tools and narratives for diverse forms of future city growth” (ibid., p. 6). This highlights just how important a more-than-human perspective would be in the race to produce and develop more effective and responsive sustainable practices within the city – something that becomes more relevant than ever in this age of global climate uncertainty. Approaching urban challenges from the more-than-human side can enable us to better recognise the complex ways in which humans and non-humans interact and exist with urban spaces and can “bring about the transformational reform work needed to bring about genuine urban sustainability” (ibid., p. 7).

Furthermore, effectively incorporating the principles of the more-than-human approach into planning practices in the city would require multidisciplinary collaboration between a variety of actors that had their own diverse forms of knowledge. Latour (2004) agrees with this general notion, as he explores how science and democracy can interact – and states that “collaboration with scientists and hovering over the same instruments that the detection of dangerous propositions by politicians is going to be able to nourish public life” (p. 144). Thus, it can be inferred that such an approach enables planners to move beyond the anthropogenic perspectives that cities were built upon and thus encourage them to embrace the potential interconnections that can exist between humans and non-humans when it comes to shaping the future of urban environments. Discarding the purely anthropogenic approach would allow it to be replaced with a more ecologically-based approach, which can then situate planners and other experts “in the context of an active engagement with the constituents of their surroundings” (Ingold, 2000).

In summary, the more-than-human approach offers a valuable framework for the reimagining of urban planning practices in the context of coexistence with species other than humans. By acknowledging the agency and significance of the non-humans within the urban environment and expanding their knowledge base through diverse collaborative efforts, planners can work towards making more inclusive and ecologically sustainable cities. As Franklin (2017) put it, this new narrative can allow us to recognise that cities “teem with life forms, technologies, agencies, materialities, and ecological associations and niches whose concatenations comprise a characteristically diverse ‘more-than-human politics’” (pp. 203-204).

## ***2.2. Nature in the City***

Urban environments are often perceived as antithetical to nature, characterised by densely built spaces and the presence of human activities, with areas of nature typically being relegated to designated parks or green spaces. However, contemporary urban planning theories increasingly recognise cities as dynamic socio-ecological systems where nature and urban life and coexist and mutually benefit from each other. The concept of ‘nature in the city’ challenges the traditional dichotomies between urban and natural spaces and proposes that urban areas are in fact dynamic ecosystems where both humans and wildlife can both interact and coexist. It advocates for integrative approaches that enhance biodiversity and ecological health within urban contexts.

Cities are not devoid of nature; they are complex habitats where many species – including those typically considered ‘wild’ – have been able to adapt and learn how to thrive. From green

spaces and urban parks to vacant lots and waterfronts, cities can harbour a diversity of habitats that support a wide array of flora and fauna, including species like seagulls that have adapted to urban environments. As such, over the years, the relationship between humans and nature has been continuously undergoing a profound transformation, as in the face of increased urbanisation and development, there have been a growing number of concerns regarding the resulting separation of humans from natural environments (Duvall, Lennon & Scott, 2017, p. 480).

Thus, ‘nature in the city’ encapsulates the multifaceted interactions between urban residents and the natural world within the built environment. Unlike traditional dichotomies that posit cities and nature as separate entities, this perspective helps us to recognise the intricate entanglements that have begun to characterise urban ecosystems, because even if the land may seem simple from a birds-eye perspective, “on the ground the picture grows more complicated, because of the unavoidable details” (Thompson, Steiner & Carbonell, 2016, p. 9). In the case of this study, seagulls are one such group of species that has become increasingly present in cities. While originally coastal birds, gulls have managed to expand their habitats to include the urban environment, typically being drawn there by the abundance of food sources or the high potential for nesting sites. With their presence, they have long been viewed as nuisances, but that does not devalue their existence – they contribute to urban biodiversity, and their survival showcases how nature has the capacity to adapt and thrive in anthropogenic landscapes.

Sustainable urban development also plays a role in how nature has become to be reconsidered in the city, as this particular type of development has been highly sought in the face of current global environmental challenges, which has led to planning efforts searching to “reconcile economic growth and societal enhancement with safeguarding the environment” (Duvall, Lennon & Scott, 2017, p. 496). As such, this could lead to the growing discussion of how cities can create spaces that satisfy both the needs of ‘nature’ as well as the needs and desires of the public who wish to have more contact with ‘nature’ (Li & Mell, 2019, p. 3), as there has been a large amount of evidence to support the idea that people hold ‘nature’ in high regard and are willing to support investments of greener public spaces (ibid., p. 7). Colding et al. (2020) supports this train of thought, exploring that in order to enhance the transition to urban sustainability, “the city and its culture must allow people’s ‘nature-care-taking behaviours’ to develop over time” (p. 11) – showcasing how much of a role that ‘human care’ has in sustainable development. However, it is important to keep it mind that even cities that contain

a higher percentage of green spaces can still feel like “isolated pockets for daily use or the occasional visitor” (Thompson, Steiner & Carbonell, 2016, p. 11) – but that does not need to be the case for every single city that exists.

The notion of coexistence with wildlife in the urban environment involves the rethinking of urban planning and management strategies to accommodate and support the needs of both humans and wildlife. This requires a shift from viewing wildlife as pests and recognising their role in urban ecosystems. Urban planning must address the challenges and opportunities presented by species like seagulls, which have had a history of eliciting polarised views (especially in the media). Strategies for coexistence include designing urban spaces that minimise conflict and enhance positive interactions between humans and wildlife. This involves the facilitation of habitats to help support the needs of wildlife, whilst also considering the effect on human health and safety. An example of this could be the provision of alternative nesting sites in less obtrusive areas in order to mitigate conflicts. Education and community engagement are also vital in fostering a culture of coexistence and appreciation for urban biodiversity (Adams, 2005).

The integration of nature in the city is a multifaceted endeavour that requires the reimagining of urban spaces as important socio-ecological systems. By adopting principles found with the discipline of urban ecology, promoting human-wildlife coexistence, and fostering supportive networks, planners can create spaces in the city that are not only suitable for humans but also suitable for wildlife, such as seabirds. This approach underscores the potential for harmony between urban development and ecological health, which can then contribute to a sustainable future.

### **2.3. Encounters**

In urban ecology and sociology, the theory of ‘encounters’ emphasises how significant interactions between humans and wildlife can be in shaping the urban environment. It suggests that cities are sites of continuous encounters between humans and non-humans, and that these interactions play a crucial role in defining urban life and urban space. The presence of seagulls is one such example that exemplifies this concept, as they are becoming a common part of the ‘urban experience’ around the world. Encounters can be more than just simple incidental interactions and can instead be pivotal moments that shape the perceptions, behaviours, and reactions of both human and non-human actors. These encounters can range from casual observations to conflicts over resources and space. Each encounter carries its own set of

implications for how cities manage and adapt to the presence of gulls. However, it is important to keep in mind that “encounters are fraught with power inequalities, some of which have violent implications, while all encounters are defined by risk and uncertainty” (Wilson (a), 2019, p. 35).

Encounters with seagulls in the urban environment can be both unremarkable and extraordinary, which in turn has a hand in influencing public perceptions and urban practices. Seagulls, as opportunistic feeders, are commonly found in coastal cities where they interact with humans frequently, often around food sources (Buller, 2014). These encounters are not merely passive observations, but often involve active engagements that can result in both positive and negative outcomes for humans and seabirds alike. From a positive perspective, encounters with wildlife can enhance urban biodiversity and contribute to the aesthetic and experiential richness of the city. Such interactions can foster a sense of connection with nature, even in highly urbanised environments, which in turn can promote environmental awareness and management amongst urban residents (Lorimer, 2007). For instance, feeding gulls in parks or close to waterfront areas can be recreational activity that urban residents can enjoy, which highlights the potential for a pleasant coexistence between humans and seabirds. Conversely, negative encounters, such as gulls scavenging rubbish or exhibiting aggressive behaviour towards humans, can lead to conflicts. These interactions often result in nuisance complaints and calls for management interventions (Rock, 2005). Urban planners and wildlife managers face the challenge of mitigating these conflicts through strategies that balance human needs and biodiversity conservation. For example, modifying waste management practices to reduce food availability or designing urban spaces that discourage gull nesting in problematic areas can be effective measures (Goumas et al., 2020).

The theoretical framework of encounters can also draw attention to the spatial and temporal dimensions of human-seabird interactions. Urban spaces are not homogenous; they consist of various micro-environments where encounters can occur differently based on different factors, such as the time of day or the time of year. Understanding these nuances is imperative for implementing development that support coexistence. For example, waterfront areas and public squares may experience a different frequency of gull encounters compared to a residential area, which then necessitates the use of targeted management approaches.

Furthermore, the concept of encounters encourages a rethinking of urban spaces as shared habitats. This perspective aligns with the more-than-human urbanism approach, which

advocates for the recognition and inclusion of non-human actors in urban planning processes (Houston et al., 2018). By acknowledging the agency of gulls and other urban wildlife, planners can create more inclusive and resilient urban ecosystems.

Ultimately, encounters with gulls in the city are a multifaceted phenomenon that significantly impacts urban life and urban planning. By examining these interactions through the theoretical lens of encounters, planners can better understand the complexities of human-wildlife coexistence and develop strategies that foster balanced and sustainable urban environments.

#### ***2.4. Contact Zones***

Contact zones can be a rather perplexing concept, owing to their inherent diversities and situations. They are crucial for understanding the dynamic interactions that can occur between human and non-human species with urban environments. The term was originally coined by Mary Louise Pratt, where it was defined as a space where “cultures meet, clash and grapple with each other, often in contexts of highly asymmetrical relations of power such as colonialism, slavery, or their aftermaths as they are lived out in many parts of the world today” (Pratt, 1991, p. 34). These zones are not merely physical spaces, but also socio-ecological interfaces where complex relationships can unfold.

It has been said that contact zones are “spaces of (colonial) encounter” (Isaacs & Otruba, 2019, p. 700). Yet, whilst contact zones do not necessarily facilitate all encounters, ‘encounter’ is one of the main objects of study within them, as without encounters there can be no contact zone (ibid.). As stated, these encounters can have negative outcomes in some contexts, which is why it is imperative to understand the fundamental aim of approaching contact interactions between these parties, especially in a more-than-human reality. When applying a more-than-human lens to instances of contact, there are three intersecting aims: multiplying perspectives (for recognising non-human agency in the space), intervention (for addressing situations of injustice), and decolonising knowledge production (ibid., p. 702). Understanding these aims can help to shape a space that fosters coexistence between humans and non-humans, as they highlight the various shortcomings that can exist in current planning practices.

Though, viewing the relationship between humans and wildlife through the lens of the contact zone does not come without its issues. Wilson (b) (2019) highlights these potential problems very clearly, stating that a “focus on species should not displace a concern for other forms of difference” (p. 726), and further stresses that the way in which we may translate the experiences of wildlife may be problematic, wondering if it “is desirable or even possible” to do so “without

reducing difference into more familiar systems of meaning” (ibid.) – highlighting the ever-present risk of losing information in translation when it comes to non-human species. Furthermore, there is no anticipating what this open exposure will result in for non-humans – one can always hope that there will be positive outcomes, but it is crucial to keep in mind that focusing on non-humans “can lead to forms of exposure that can have damaging or lethal consequences” (ibid.) – that it can result in unintended conflict.

Naturally, in the context of this study, these contact zones can formulate in any spaces where humans and gulls overlap, such as parks, waterfront areas, or even residential areas, due to gull behaviours such as nesting or foraging for food. Understanding contact zones is crucial for recognising spaces where conflicts may occur between humans and wildlife. Identifying these contact zones can allow planners and ecologists to implement strategies that can attempt to minimise negative interactions and promote coexistence by providing them with a valuable framework for potentially understanding and managing what interactions occur between humans and gulls in the urban environment.

## ***2.5. Conflict Zones***

However, contact zones are not spaces of perfect peace, as “experiences of shock, surprise, and rupture” can occur in moments of “human-animal contact” (Wilson, 2017, p. 28). These, usually negative, reactions highlight a noticeable concept that should not be ignored in contact zones containing these particular interactions: conflict zones.

Conflict zones in urban environments refer to areas where human activities and wildlife intersect, which can often then lead to competition for resources and space. Similar to contact zones, these zones are characterised by the interactions that can occur between humans and non-humans, which can result in both positive and negative effects. Understanding these zones is vital in understanding how to mitigate conflicts as well as promote coexistence - they provide a crucial framework for analysing the interactions and tensions that arise when urban spaces become shared territories between humans and wildlife. In cities experiencing a growth in seagull numbers, these zones of conflict become focal points for understanding how urban management strategies are devised and implemented to cope with them.

As cities expand, wildlife species such as seagulls have begun to adapt to the urban landscape, which has the potential to led to conflicts, particularly when animals are perceived as nuisances or threats. It has been established that gulls have started to take advantage of the new food sources and nesting sites that can be provided by human infrastructure (Belant, 1997). As has

been established in previous chapters and sections, there are a variety of reasons as to why the gulls' have been attracted to the urban environment, such as the aforementioned the abundance of new food sources and the availability of nesting sites, but also due to their prior habitats no longer being liveable due to climate change or increased predation. However, their presence brings them into direct contact (and subsequent conflict) with human activities and infrastructures through problems such as the fouling of buildings, public spaces, and other urban infrastructure, or their high levels of noise and aggressive behaviour during the breeding seasons (Rock, 2005). As Wilson (b) (2019) says: “whilst (...) examples of human-animal conflict must be placed in their specific cultural, political, and ecological contexts, they (...) tell us something about conceptual and/or physical borders and boundaries” (p. 717).

Strategies that implemented in conflict zones can involve be either reactive or proactive. Proactive measures are those taken before the conflict has escalated, whilst reactive measures are those taken after the conflict has escalated (Reychler, 1998) – so in this case: before a conflict zone is established, and after one has been established, to an extent. While Reychler's (1998) refers to human conflicts such as war, these measures can also still be applied in urban planning. For example, in relation to gulls, reactive strategies can be the installation of deterrents in ‘problem’ areas where there has previously been the most conflict, such as netting, spikes, and hawking to scare gulls away. These measures aim to reduce the negative impacts that gull presence has on human welfare and infrastructures. However, reactive approaches alone are often insufficient for long-term coexistence and can lead to the problem simply being displaced rather than resolving it completely.

In contrast, proactive strategies in planning for gulls could focus on addressing the underlying causes of the conflicts and aim to foster conditions that are conducive to sustainable coexistence. Examples of proactive strategies could be the development of alternative habitats and encouraging public education campaigns. Alternative habitats could entail the creation of designated nesting areas away from zones of high conflict, and public education campaigns play a vital role in potentially reshaping human attitudes and behaviours towards the gulls, promoting tolerance, and encouraging practices that further minimise the potential for further conflict – such as proper waste disposal or dissuading the feeding of wildlife.

## ***2.6. Tolerance Zones***

Tolerance zones, as the name suggests, refer to spaces where humans and non-humans are expected to tolerate each other's presence, as “tolerance is the positive attitude that is advocated



towards diversity” (Madanipour, 2016, p. 1). Bannister & Kearns (2013) state that “the function of tolerance is defined as the capacity of the citizenry to negotiate harmonious encounters with difference and to engage with difference to secure improvements to social wellbeing” (p. 2700)

From this, we can extrapolate and can understand tolerance zones as being spaces that have the potential to accommodate both human activities and the natural behaviours of wildlife, theoretically with the goal of fostering a balance between urban development and biodiversity conservation. These zones are premised on the idea that urban environments can be designed and managed in a way that can accommodate the presence of wildlife with compromising on other aspects such as human well-being or urban functionality.

Urban environments do tend to showcase a significant relationship with tolerance (Huggins & Debies-Carl, 2015, p. 267). Tolerance, as a word, does not typically have nice connotations, as when you tolerate something, you effectively ‘put up with it’ – there is not a strong association with a positive attitude, such as respecting something (Madanipour, 2016, p. 8). However, tolerance zones are theoretically easier to identify as spaces where interactions between humans and non-humans can be less antagonistic and unpleasant.

The primary goal of these zones is to create a space in the urban landscape that accommodates wildlife, thereby reducing the negative interactions between humans and wildlife. This approach aligns with the principles of urban ecology, which emphasises the importance of integrating natural elements into urban planning to enhance biodiversity and ecological resilience (Alberti, 2008). Implementing tolerance zones therefore involves strategic planning and design to produce environments that are attractive to wildlife but do not interfere with human activities to a significant extent. In the case of gulls, this could include designated feeding areas, alternative nesting sites, or roosting spaces that are somewhat isolated from areas that experience a high level of human traffic. Not only this, but the designing of tolerance zones for gulls must consider several ecological and behavioural factors. Gulls are highly adaptable birds, as could be observed in Spelt et al.’s (2020) study where the gulls were able to adapt their foraging schedule in Bristol to follow the patterns of human activity over the course of the day, and are often attracted for a variety of reasons, such as the availability of food resources or an abundance of available nesting sites (Rock, 2005). As such, effective tolerance zones should address these sorts of factors so as to not neglect the gulls’ needs for survival.

The establishment of tolerance zones offers numerous benefits for both humans and wildlife. If viewed from an urban planning perspective, these zones have the capacity to:

- Reduce human-wildlife conflicts:

By creating designated spaces for wildlife to thrive, tolerance zones minimise the likelihood of negative encounters, such as reducing the aggressive behaviours that can be seen from gulls during breeding seasons (Burger, 1981).

- Enhance urban biodiversity:

Tolerance zones can contribute to the environmental and ecological diversity of cities, thus promoting healthier and more resilient urban ecosystems (Dearborn & Kark, 2010).

- Promote environmental awareness:

These zones can serve as educational tools, helping the residents of the city understand and appreciate the role that wildlife can play in diverse urban environments (Miller, 2005).

However, whilst tolerance zones have the capacity to offer a promising solution for managing wildlife populations in the city, there are still several challenges that must be addressed. Examples of such challenges include ensuring that there is a consistent enforcement of the proper regulations, and that the ecological integrity of the space is maintained. Additionally, urban planners must balance the needs of wildlife with other urban development goals, which can potentially lead to conflicting priorities. However, overall, tolerance zones have the capacity to represent a forward-thinking approach in planning by assisting with developing human-animal coexistence. By carefully involving these types of zones and managing them effectively, they can provide cities with the chance to enhance both their environmental sustainability as well as work towards improving the quality of life for all of their inhabitants, whether they be human or non-human.

### **3. Methodology**

This chapter starts by explaining the comparative study approach that has been utilised in the structuring, processing and analysis of the data and material in this thesis. This is followed by Section 3.2., which will elaborate on what methods have been used in this study – consisting of semi-structured interviews and observational fieldwork.

#### ***3.1. Research Design – Comparative Study***

This study has been designed as a comparative study, and as such has chosen to focus on two distinct case study locations. Comparative case studies aim at analysing patterns, similarities,

or differences between the cases (Mills, Durepos & Wiebe, 2010). As touched upon briefly in Section 1, there are some existing similarities between Tromsø and Worcester on a contextual level, in that they both have a long history of having a presence of seabirds in the city, and that they have both taken steps to address the growing conflicts between the seabirds and the human population through the use of deterrents. However, there are also some differences between these cities beyond their geographical location – such as their experience with collaborative management efforts, their ways of communicating with the public, and attitudes towards the gull presence. As such, comparing these two case studies would be beneficial to answering the overarching research question of ‘*How can cities plan for human-seabird coexistence?*’, as differences can exist between even between two incredibly similar cities, and comparing and contrasting two unidentical cities provides a stronger foundation for understandings that can be applied to a wider variety of cities experiencing the same influx of urban seabirds.

### ***3.2. Data Collection***

In this study, multiple methods and sources of information were used to acquire relevant data. I conducted semi-structured interviews with a number of people in each case study location to enhance the depth of understanding about their current situations and progress and conducted in-person fieldwork in both cities in order to gain a better observational understanding of the areas.

#### *3.2.1. Semi-structured Interviews*

The type of interviews conducted were of the semi-structured variety, with respondents varying in terms of their occupation and/or role when it comes to interacting with gulls in the cities. These interviews were held mostly in person in both Norway and the United Kingdom, though in some instances were held online for some respondents who were unable to meet. The interviews were conducted with a variety of actors, as I spoke with those who could be considered ‘experts’, such as architects, researchers, and municipal staff, as well as to civilians who have had more personal encounters with gulls in the city.

The choice was made to make the interviews semi-structured as, to a certain degree, these types of interviews are open-ended. They can allow respondents to talk freely but also ensures that the interview will remain mostly on-topic. This can open up opportunities for both myself and the respondents to have the interview in a more comfortable, conversational setting (Flick, 2018, p. 227). A number of questions related to the objectives and other relevant information to this study guided the interviews and can be found in the Appendix (see the thematic interview

guide in Appendix A), though there were alterations made to each individual interview guide per interview, as the role and/or occupation of the respondents changed.

In total, eleven interviews were conducted – three for the Norwegian context and eight for the British context. For Tromsø, I spoke with an architect, a project leader, and a conservation biologist, as all three have been involved in some capacity with the ongoing kittiwake hotel project in Tromsø, and – in the case of the conservation biologist – have experience with working with the kittiwakes in other ways (as will be elaborated in the analysis). For Worcester, I spoke with a gull officer and a senior advisor at Natural England, as well as six different residents living in the city. The gull officer was naturally approached as they are one of the key leaders in gull control in the city, and as such is very knowledgeable on the current situation with the gulls in Worcester, and the senior advisor at Natural England provided key intel on how gull control in Worcester – and in England as a whole – is regulated and managed in terms of acquiring permission to act. The six residents were visited during a two-day-long city tour that was provided to me by the gull officer, as they have had prior experiences with the gulls and have had management practices done at their residencies.

The architect, the project leader, and the conservation biologist in Tromsø, as well as the gull officer in Worcester, were all selected and contacted through researching existing urban seabird circumstances in both cities. Some of the respondents in the Norwegian context were in contact with my supervisor, and so contact with myself was easily established through that connection, whilst the other respondents in Norway and the United Kingdom were found through personal research into what other people have been involved in urban gull-related mitigation projects in either of the two cities. The interviews were either conducted in the respondent's office, outside (in the case of some of the residents in Worcester) or on an online call, as this was the most reasonable option when considering the geographical distances and amount of time available. All of the interviews were conducted between the beginning of March 2024 to the middle of May 2024, and typically lasted at least thirty minutes. The respondents' identities were kept mostly anonymous for their privacy, though in most instances the respondents consented to the revealing of their work positions (or their status as a 'resident') and municipality/county. Additionally, the interviews were recorded with verbal consent, and then were transcribed afterwards. The choice was made to transcribe manually in order to avoid losing any data, as well as to actively reflect on the interviews during the transcription process (Davidson, 2009). Moreover, the interviews were all conducted in English, as that is the only language I am fluent in.

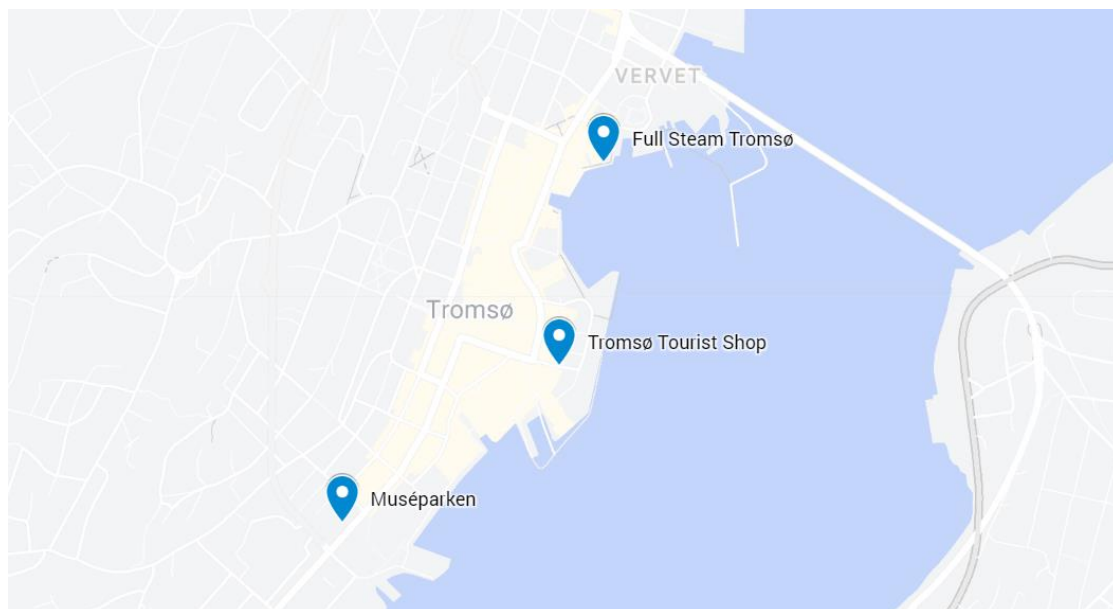
The data I collected from the semi-structured interviews was further bolstered by municipal documents – particularly in the British context, where the gull officer was willing to share two gull censuses conducted by Peter Rock (from 2020 and 2022) and also provided the official review of gull control published by Worcester City Council in 2023, which allowed me to gain more context on the gull control situation in Worcester. In the Norwegian context, I was directed towards a report published by the Norwegian Institute for Nature Research (NINA) in 2022 titled ‘*Urbane krykkjer i Tromsø. Effekter av tilrettelegging eller avvisende tiltak*’ (in English: ‘*Urban kittiwakes in Tromsø. Effects of facilitation and mitigation*’). This report effectively details the ongoing situation with urban kittiwakes in the city, how they have been monitored, how they have been managed and what effects these management techniques have had. The reason for using these documents in tandem was to enrich my research with concrete information, and to effectively contextualise the current state of affairs in both locations as much as possible. The goal of the interviews was, ultimately, to gain a deeper and better understanding of the potentially different approach to management and attitudes towards urban gulls. However, a limitation of this method was that each interview tended to require thorough research and understanding of the topic beforehand, which could only be achieved to a limited extent due to time constraints.

### *3.2.2. Observational Fieldwork*

With observations as one of the key methods for gathering data – according to Jan Gehl and Birgitte Svarre (2013) – I aimed to provide a greater understanding of city life. I sought to find out how people could potentially interact with gulls in public spaces, observe what potential conflicts occur, and what behaviours may be connected to gull presence. I approached this through writing down, analysing, and interpreting my data, after which I compared my observations to the information and insights gained from the various interviews I conducted.

Structured observation is a method with a variety of strengths and weaknesses. It is naturally inclusive, as it entails the observation of, and therefor gains data on, all users within a public space. However, it is a time-consuming method, which can pose challenges for research that needs to be conducted in a limited time frame (Khan, 2021). Regardless, the wide scope that structured observation provides can enhance the understanding of how different spaces can operate in different situations and at different times of day. It was also important to understand that in studies like this with limited time scopes, results can vary depending on when the observations were made.

For this study, I chose three distinct locations in both case cities to conduct my observations. In Tromsø, this was Muséparken, Tourist Shop Tromsø and Full Steam Tromsø (see Figure 1). In Worcester, this was St. Martin’s Gate Car Park, Cathedral Square, and Blackpole Retail Park (see Figure 2). These six locations were chosen as prior scouting had shown that there was a noticeable gull presence at all of them and that human presence was almost constant, opening up the opportunity for observing potential interactions. These sites were visited three times a day over the course of two days – this was mostly due to the time constraints I was under when in Worcester, as I had limited time there. All observations were conducted in April, and the sites were visited approximately at 9am, 12pm and 7pm, with each individual observation being conducted for a duration of 10 minutes.



*Figure 1: Map of the three observation sites in Tromsø (Google Maps, edited by author)*

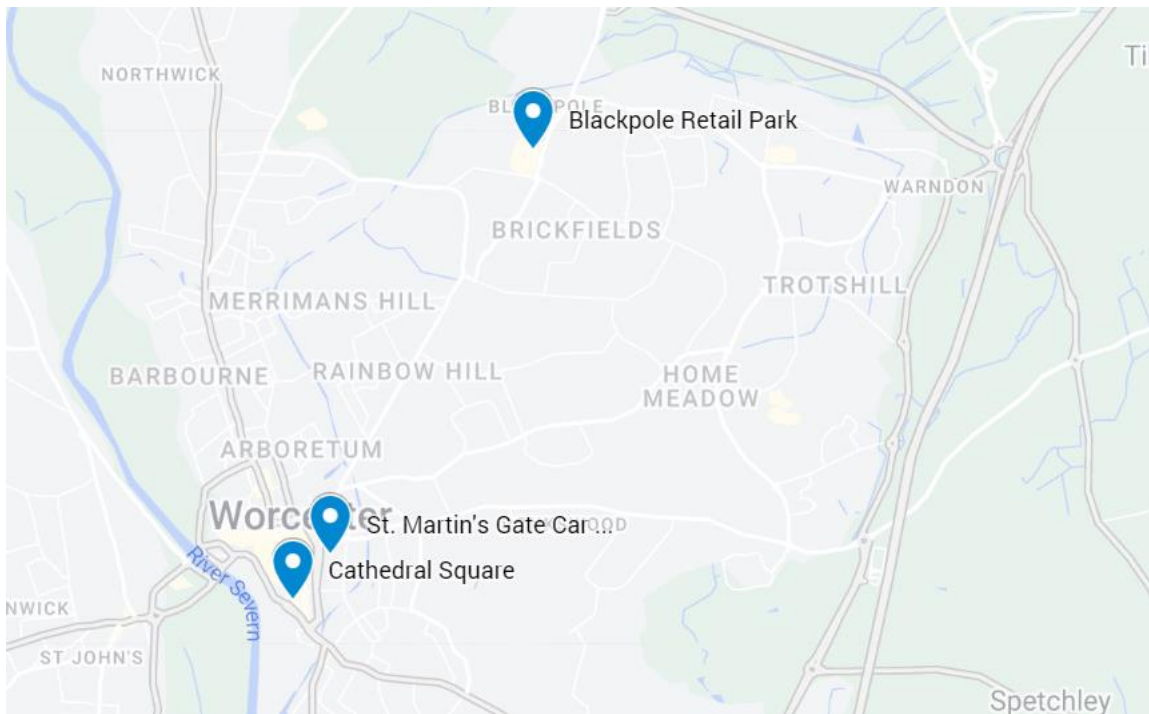


Figure 2: Map of the three observation sites in Worcester (Google Maps, edited by author).

Before my first observations, I decided on my approach, and chose to focus on the physical and human observations to glean an understanding of the environment, behaviour, and conflicts. When possible, I also recorded my personal feelings during my observations with the aim to remain unbiased by separating these personal feelings from the observations. As Gehl & Svarre (2013) describe it, I aspired to be “...an invisible non-participant who takes in the big picture without taking part in the event” (p. 5). Furthermore, I made sure to document my observations in writing in the moment, recognising that memory is not reliable when it comes to research (Low et al., 2019). In addition to this, I recorded a brief video for my use only before moving on to the next site – this was as an extra precaution in the event that I found myself wishing to recall exactly what the site had been like for each individual observation.

In order to get the most information out my observations in the limited time I had available, I drafted a list of questions to act as an observation guide, which included the following points:

- How many gulls are there (and what species are they)?
- What are the gulls doing?
- What might have attracted the gulls to this space?
- How many people are there?
- What are they doing? Are they stationary or moving through the space?

- What sounds can I hear? Is it quite noisy or quiet?
- What is the weather condition?
- Are there any direct interactions occurring between humans and gulls?

With these guiding questions, I was able to attempt to get the most that I could out of the environment for each visit on a visual and auditory level. These notes, combined with the brief video recordings, gave me the ability to evaluate each of my observations after they had been completed.

#### *3.2.2.1. Guided Walks*

During my research, I was able to partake in a guided walk in both cities that enabled me to gain a better understanding of the gull presence and management techniques.

In Tromsø, this was in the form of a ‘kittiwake workshop’ with Wild Lab Projects. This workshop is part of a citizen science project which aims to educate and change the way that people perceive the kittiwakes, as well as to gain observational data that can then be shared with the Norwegian Institute for Nature Research (NINA). NINA can then potentially use this data to better anticipate conflicts, monitor the kittiwake colonies in town, and provide information on better alternative nesting and breeding sites for the kittiwakes (Wild Lab Projects, n.d.). When I joined this particular workshop, we were provided with a route to follow of already-mapped kittiwake nests and were told to count the number of kittiwakes present at each site.

In Worcester, the Gull Officer invited me on a two-day guided walk to various parts of the city where gull management techniques have been implemented, which was where I was able to speak with and interview some of the residents that have had a history of conflict with the gulls. While I did not take in-depth observation notes at every site, due to the sheer multitude of them that were visited, the walk was undeniably vital for gaining an understanding in how gull management works in Worcester, and enabled me to ask further questions with the Gull Officer whilst out ‘in the field’. We visited a variety of locations, ranging from the residential houses of Britannia Square and the Waterside estate to an industrial area in Lower Wick, all of which have experienced challenges with the gulls, and all of which have had management done to some extent.



### ***3.3. Validity and Limitations***

One strategy employed to maintain as much validity as possible within the study was the triangulation of different methods and data sources. This was done to both offer a new perspective and give grounding for further exploration. By definition, triangulation concerns “the use of multiple methods or data sources in qualitative research to develop a comprehensive understanding of phenomena” (Patton, 1999 in Carter et al., 2014). Furthermore, “triangulation also has been viewed as a qualitative research strategy to test validity through the convergence of information from different sources” (Carter et al., 2014). In the case of this study, interviews and observations – as well as any relevant literature – have been used to collect diverse data regarding the topic, which reinforced the research with valuable information and evidence that helped to guide me through the rest of the study.

One could consider that a core weakness of this study is that it would typically be impossible to generalise from the findings due to the limited size of my multiple-case-study approach, as it was conducted within two specific, restricted geographical areas in two different countries. However, generalisation is only one way of gaining knowledge; in fact, “the case study is useful for both generating and testing the hypotheses but is not limited to these research activities alone” (Flyvbjerg, 2006, p. 229). This common misconception – that case studies fail to contribute to the general scientific knowledge because they are context-based and biased – has also been debunked by Flyvbjerg (2006). In his article, he argues that if a case study is carefully considered and critically chosen, and if researchers look for cases deliberately, then the strategic choice may – in fact – add to the generalisability of the case study.

That being said, my analysis and findings concern two different cities in two different countries: Norway and the United Kingdom. The reason I selected these two countries is that despite their simultaneous borders with the North Sea, there are potentially just as many differences between them and the ways in which they interact with seabirds moving into their cities. However, it is not possible – nor is it my intent – to cover the entire scope of what these are on a national scale in this study. Furthermore, the participants in this study were relatively few in number and purposefully chosen. This means that, although one cannot generalise from the trends occurring in these locations (as they are case-specific and are not representative of their respective countries as a whole), they are nonetheless incredibly valuable examples and can aid in laying the foundation for further research.

Another key limitation of the study – especially in regard to literature and reports regarding the Tromsø context – was that the report published by NINA was originally written in the country’s native language of Norwegian. As a result, accessing and interpreting any literature like this was not straightforward, and while online translation programs were used to translate it into English, this was not entirely reliable (something I clearly observed when ‘kittiwakes’ was continuously translated into ‘crutches’), and as such it is possible that information could have been misinterpreted in the translation process.

### **3.4. Ethical Considerations**

It is important to consider the ethical implications of conducting research, especially when gathering data and conducting research in public spaces. As all sites I visited in both cities could be considered public spaces, both observations and photographs tend to be permissible (Gehl & Svarre, 2013, p. 6). Regardless, an effort was made to not photograph any individuals, and to ensure that anyone photographed was not identifiable in the images. Furthermore, I made sure not to include any identifiable descriptions of people within my recorded observations, or even in the interviews, apart from work position. When conducting the interviews, I first made sure to ask if they were comfortable and interested in being interviewed – and all voluntarily agreed to do so. Additionally, all participants were provided with an information letter to explain the objectives of the study and how their data would be processed. Moreover, all participants were made aware of the consent form within this information letter, which they were required to sign in order for myself to officially acquire permission to both interview them and make note of their occupation/role. I have made sure to secure their mostly-complete anonymity in this study.

## **4. Findings and Analysis**

This section aims to assist in answering the overarching research question: ‘*How can cities plan for human-seabird coexistence?*’, as well as provide insight into answering the sub-questions of ‘*What are the conflict zones between humans and seabirds in the city?*’ and ‘*How are tolerance zones implemented into the planning and design of spaces in order to foster coexistence between gulls and human activities?*’. This will be done by first presenting all my findings from both my interviews, observations, and relevant literature to form a narrative for the Norwegian context, which will then be followed a narrative for the British context using the relevant data that I collected for that case study. Lastly, the final section will compare the

research and information gained from both case studies to investigate what similarities and what differences exist between the two.

#### **4.1. Tromsø**

##### *4.1.1. Gull Movement to the City*

Seabirds have had a long-established history with nesting on the Norwegian coast, with recorded observations noting the nesting of seabirds on coastal buildings in Norway as far back as the 1970s (Benjaminsen et al., 2022, p. 7). The phenomenon is not particularly ‘new’, but in the last decade or so, it has been observed that the number of urban seabirds has been greatly increasing. In the case of Tromsø, there are three species of gulls that can be found around the city: the herring gull, the common gull, and the black-legged kittiwake. Out of these three, the kittiwake had been receiving the most attention for their movement from their traditional coastal habitats to the city; this is, in particular, due to the current state of the kittiwakes on a population-level. Currently, the black-legged kittiwake is registered as being endangered (EN) on the Norwegian red list for species, as the birds have been experiencing a steep decline in their numbers along the coast as far back as the 1990s (ibid., p. 4), and some of the proposed reasons for this has been the threat of climate change and predation from other animals (ibid., 6) – which coincides with Wilson (2022)’s remark that environmental changes (and rapid urbanisation) are what have driven seabirds to seek refuge in cities.

The investigations on the kittiwakes in Tromsø have been somewhat recent, as they only started to be followed back in 2017, where only a total of 13 pairs were recorded in the city. Continued research has shown, however, that this has grown exponentially in the following years, with as much as 380 pairs being recorded in 2022 (Benjamin et al., 2022, p. 4). Despite the progress that has been made with the kittiwakes, however, I was unable to find exact figures for the current state of the herring gull or common gull populations in Tromsø. As such, most of the focus on gull management in Tromsø will be related to the kittiwakes, as it appears they have been the main target for planners and other actors to address.

During the independent observations, it was found that the most abundant species at all three sites were kittiwakes. However, particularly at Tourist Shop Tromsø, the recognisable cry of herring gulls was heard from the roof of the nearby Nordnorsk Kunstmuseum and I was able to catch sight of a small number of them perched higher up on the roof, but in the end this paled in comparison to the sheer amount of kittiwakes present. No common gulls were able to be identified during the observations, but a few were identified briefly during the kittiwake

workshop. However, common gulls may not have been spotted during the observations due to the fact that I did not possess a pair of binoculars at that time. This is because that while the gulls in Tromsø are different species, there only exists smaller differences (as can be seen in Figure 3 below), between them that are incredibly difficult to spot at long distances. As such, it is entirely possible that common gulls were present during the observations, but it was difficult to spot them.

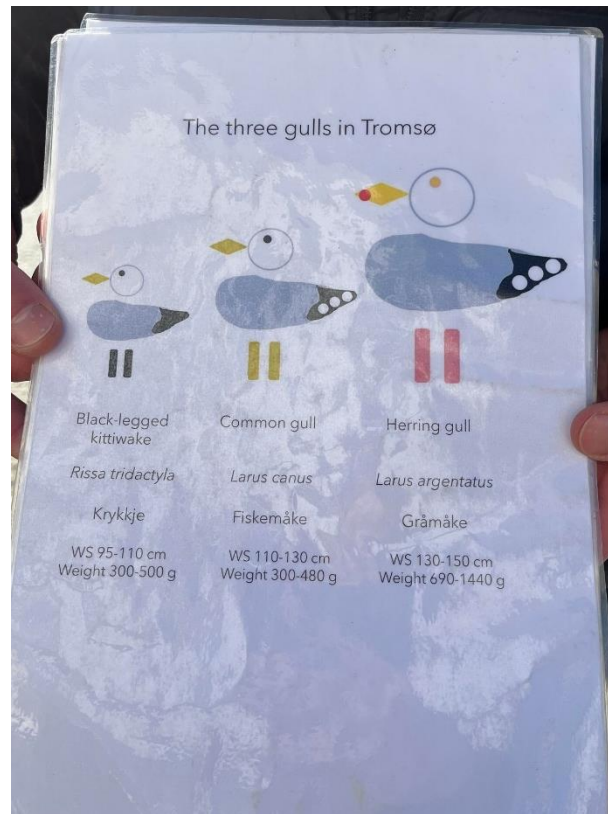


Figure 3: Identification card illustrating the differences between the three gull species in Tromsø (photographed by author).

The gulls typically settled on either the facades of buildings or on the roofs. There did not appear to be any type of building that particularly favoured in terms of its shape, but it is possible that the gulls chose to settle in places that artificially replicate their original habitats to some extent – such as the facades of the buildings being similar to the sheer ocean cliffs. While not agreeing with this outright, Wilson (2022) does acknowledge that urban kittiwakes have “swapped the cliffs of the coast for the artificial structures of the city” (p. 1138), which has been the inciting incident for the following debates regarding the kittiwakes. Additionally, most of these settling spots were in close proximity to the waterfront. These observations coincide with Benjaminsen et al.’s (2022) report, where their map showcasing Tromsø city centre’s kittiwake colonies from 2017 to 2022 illustrates that all of these colonies are located very close to the waterfront (p. 17).

#### 4.1.2. Conflicts and Deterrents

As previously explored in Section 1.1.1., kittiwakes – unlike the other species of gulls in Tromsø – do not scavenge for human food nor are they particularly aggressive, making it decidedly quite unique. However, that does not mean they are without their conflicts, as what kittiwakes have done is build their nests in large, very visible colonies (Sandvik et al., 2014) that ultimately end up concentrating their smell, droppings, and noise on certain buildings and in certain areas of the city – in the case of Tromsø, this appears to be more in the city centre closer to the water, as the route walked during the kittiwake workshop did not stray far from the waterfront. While this study was unable to procure any information via interviews with residents in Tromsø to gain further insight into what conflicts exist on a more personal level amongst the local population, the amount of news coverage that has come out to discuss the kittiwake conflicts every summer suggests that some semblance of a troubled relationship exists between the gulls and the people (Novotny, 2023, p. 2), and the architect actor was aware of existing conflicts:

“They’re not aggressive, they’re very kind, but they do make a lot of noise.” (Interview, Architect, 2024).

These conflicts were increasingly apparent during the independent observations and workshop, with noise from the kittiwakes being incredibly prevalent at every single site. This was most apparent at Muséparken and Full Steam Tromsø – which was also observed to have an incredibly high kittiwake presence (as can be seen in Table 1) – but was present to a slightly lesser extent around Tourist Shop Tromsø and other less-occupied sites observed during the workshop.

Table 1: Observed approximate number of gulls at each site (and in the surrounding area) during independent observations in Tromsø.

	Day 1			Day 2		
	Morning	Afternoon	Evening	Morning	Afternoon	Evening
<b>Muséparken</b>	55	59	62	38	41	51
<b>Tourist Shop Tromsø</b>	22 (26)	30 (22)	20 (25)	22 (13)	22 (16)	3 (23)
<b>Full Steam Tromsø</b>	34 (33)	47 (32)	36 (34)	35 (27)	44 (25)	26 (24)

However, other issues – such as droppings – were incredibly common at the sites. At Muséparken this was a little less obvious due to grassy terrain, as well as most of the fouling

being concentrated around or on the kittiwake hotels, but at both Tourist Shop Tromsø and Full Steam Tromsø there was a large presence of bird dropping visible on the surrounding rooftop areas as well as on the pavement (see Figure 4).



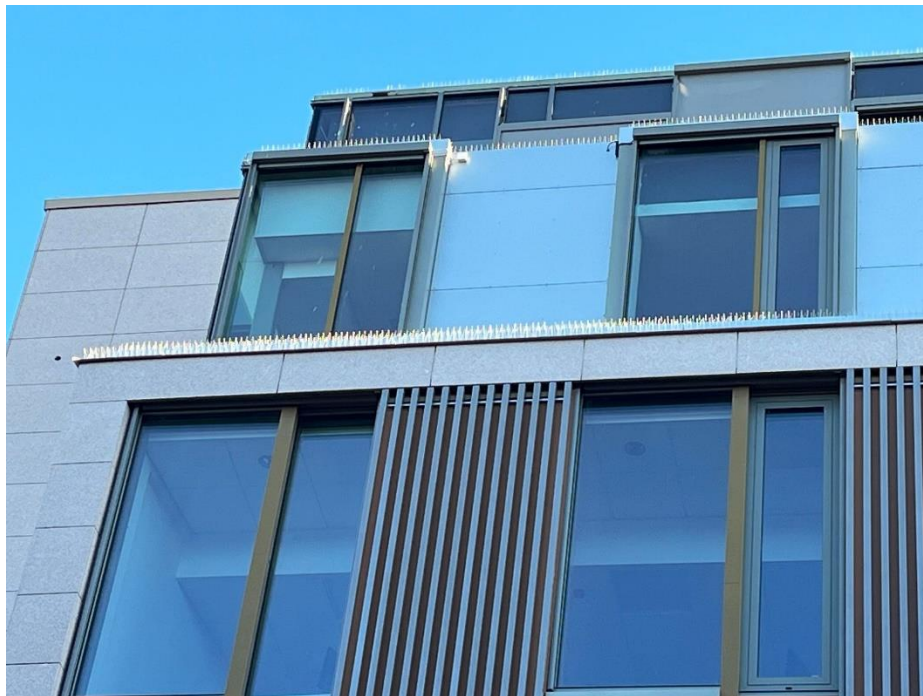
*Figure 4: Kittiwake dropping on the pavement just outside of Nordnorsk Kunstmuseum (photographed by author).*

These conflicts were addressed with reactive strategies, as deterrents were initially only implemented after the kittiwakes had settled – going off of Reychler’s (1998) definition of strategy types. Tromsø has made use of a variety of deterrents in order to mitigate the nuisances that the kittiwakes have brought to the general public. These deterrents were very apparent during the kittiwake workshop, where they were pointed out to each of the participants by the guides. In the past, the most commonly utilised deterrents were either spikes or netting (Benjaminsen et al., 2022, p. 9), and this was easily witnessed during both the independent observations (particularly around Tourist Shop Tromsø), the kittiwake workshop, and when I was walking around the city for recreational purposes (see Figure 5 and 6).

However, these have not been the only reactive deterrents that have been used against the kittiwakes. Observations revealed other less-widespread methods, such as a sizable scaffolding structure beside Nordnorsk Kunstmuseum that blocked the entire western-facing façade (Figure 7), the boarding of window frames at Tourist Shop Tromsø to discourage nesting on

the windowsills by restricting the amount of space, as well as the installation of slanted strips of material on smaller potential nesting sites on parts of buildings in order to decrease the number of stable spots for the kittiwakes. Benjaminsen et al.'s (2022) report also noted the use of other deterrents that I was not able to locate as easily, such as fire-gel, bird kites, and live power cables. In regard to the fire-gel, this deterrent was used during the initial phases of the Muséparken project as a way to scare the kittiwakes away from their nesting spots on the building, but I was unable to ascertain if it has been used anywhere else in Tromsø.

“[Our partner in Newcastle] taught us about fire-gel. It’s this sort of substance made from food and smells spicy. And to the birds, it looks like fire, and so they don’t land.” (Interview, Project Leader, 2024).



*Figure 5: Spikes along the roof edge of a building along Fredrik Langes Gate in Tromsø (photographed by author).*





Figure 6: Netting over wall signage at Sjøgata 31/33 in Tromsø (photographed by author).

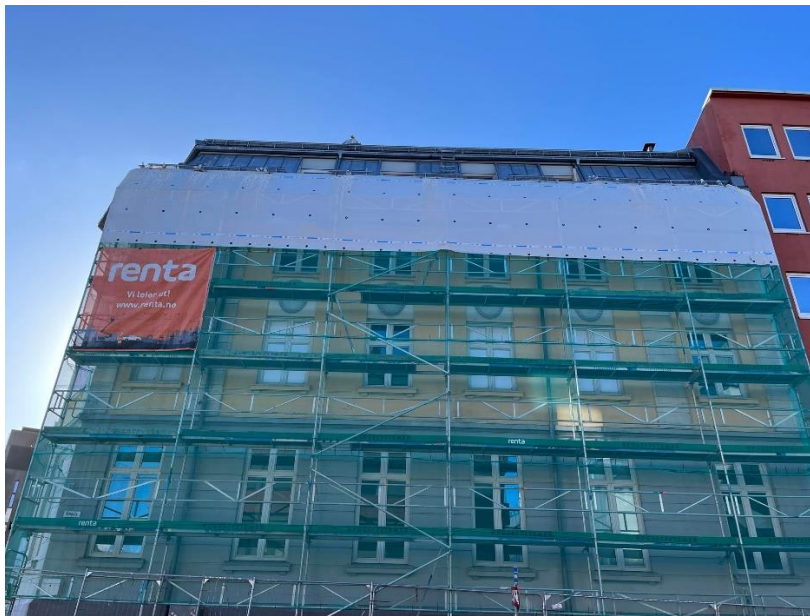


Figure 7: Scaffolding that has been put up outside of Nordnorsk Kunstmuseum, blocking off the façade and causing the kittiwakes to nest on top of the scaffolding (photographed by author).



As mentioned prior, Benjaminsen et al. (2022) produced a map of kittiwake colonies in Tromsø (p. 17). These locations also matched up with where deterrents were found during the observations and the kittiwake workshop.

However, the success of these deterrents has been quite mixed. While the deterrent methods of netting, boarding window frames and spikes have proven themselves to be effective in deterring nesting on the specific buildings, they have also proved themselves to not be one-hundred-percent effective at stopping the problems and conflicts entirely. This has been very obvious in the case of the spikes. Further research has actually found that these can be very ineffective for multiple reasons; in some cases, kittiwakes will still build their nests on them regardless (thus creating somewhat of a cushioning between the spikes and the gulls), and in the worst-case scenarios, the kittiwakes nesting there have gotten either seriously injured or perhaps even killed (Ruché, 2024) via impaling (Benjaminsen et al., 2022, p. 29). Additionally, in the case of the nets, it has been recorded that kittiwakes can become trapped in the material, which can – again – result in injury or death. These problems add an additional burden on a species that is already undergoing a massive threat to their population numbers.

“Last year, the most striking was the use of spikes. That was common and very inefficient – we quantified that. All the nests we monitored were actually built on some kind of deterrent, and a lot of them were spikes. They were not efficient, and they were injuring birds and probably killing them – at least the chicks.” (Interview, Conservation Biologist, 2024).

Other deterrents, such as the power cables and the bird kites, have been proven to have mixed results as well in regard to their effectiveness. The live power cables have shown potential, but there have been many debates over whether it is truly effective (Benjaminsen et al., 2022, p. 24), and their effectiveness can come down to whether or not they are installed correctly (ibid., p. 31). The kites that imitate birds of prey have also been rather ineffective (ibid., p. 24), as after a while the gulls typically get used to their presence. In the case of fire-gel, it was found during the Muséparken project that Tromsø was not an ideal environment for it to be as effective as it could be, due to the city’s propensity for snowfall for large periods of time within a year.

“But up here we have the snow – that’s the big problem. When we have put down the fire-gel and it has snowed afterwards, then [the fire-gel] doesn’t work. So, we can only use it on places where snow will not fall.” (Interview, Project Leader, 2024).

Furthermore, these measures are not always effective in reducing or removing conflicts. In the scenario that the deterrent is successful, and the kittiwakes do move elsewhere to nest, this does not eradicate the overall issues that the kittiwakes bring. What the deterrents do is simply relocates the conflict to a different space, opening up the opportunity for more conflicts to arise with different citizens in the city.

From what the project leader actor communicated to me, there have been other gull management initiatives that have been implemented in Tromsø, though obtaining any relevant documentation on this proved very difficult. In particular, they spoke of some developments being made with outdoor bins, in that they have been given lids in order to dissuade the larger gulls from scavenging for food in those spaces – thus limiting the potential attraction to certain spaces:

“There are some places. [...] They have the garbage bins that they put the garbage in, and they have closed it so the birds can’t get into it.” (Interview, Project Leader, 2024).

However, there has been one particular proactive strategy that have been attempted in Tromsø. This strategy was not a deterrent, but instead acted as an alternative.

#### *4.1.3. Taking Responsibility*

This proactive strategy was the kittiwake hotels. In line with Thrift’s (2021) desire to navigate out of the ‘killer city’ narrative, these hotels are a strategy that is rooted in facilitating the kittiwakes’ nests and does no harm. The conceptualisation of the kittiwake hotel is still quite new, in a way mirroring the progress that has been made with the more-than-human approach. The hotels are especially new in comparison to the other methods of deterring birds, but they have quickly proven themselves to be a main choice of managing the urban kittiwakes in a way that will allow them to thrive. Despite only being in the starting phase, they bring along with them the hope that this friendlier approach to gull management will persist in future plans and strategies:

“This is the beginning. This is the first. [...] And that’s good. So hopefully in the future, they’ll develop more strategies.” (Interview, Project Leader, 2024).

This is the start of a planning movement that Metzger (2015) referred to, in that the kittiwake hotels were not simply borne from a sole desire to make the city better for humans, but that they embrace the ethical side of the urban – that they were borne from a sense of ‘care’. Through this, the kittiwake hotels are a step towards what Colding et al. (2020) was supporting

– creating an opportunity to allow ‘nature-care-taking behaviours’ to develop over a period of time. As such, but the hotels represent a promising development in the future of urban development and the future of ‘more-than-human’-related planning. Not only this, but the kittiwake hotels and what they stand for are new ideas for some, and it opens up the opportunity for further education in various disciplines, such as architecture, who may not be as familiar:

“This is our first time, actually, doing this kind of thing. [...] I don’t think any of the architects have done any work that’s similar.” (Interview, Architect, 2024).

The role of the hotels is to be alternative nesting sites for the kittiwakes, allowing the structures to become covering in nesting material and fouling rather than the occupied buildings nearby. There have been past attempts at facilitating kittiwake hotels in Tromsø prior to the project at Muséparken. Noticeably, there was an attempt to create a kittiwake hotel in 2018 on an unused structure at the end of Sørsjeeten – a concrete pier that stretches out into the water a little north of Framsenderet – but this was not successful. This was theorised to be due to the location being too exposed to the elements as well as being too far from the already-established nesting sites in the city (Benjaminsen et al., 2022, p. 11), and the lack of mobility to be able to rectify any of these problems meant it was abandoned. However, it did act as a learning opportunity, and eventually assisted in furthering the understanding of what would be needed for a kittiwake hotel to work and be successful.

This failed attempt was eventually followed up by more kittiwake hotels just south of Framsenderet. In conjunction with the building of the kittiwake hotels, deterrents were also used on the Framsenderet building to ‘push’ the kittiwake off and hopefully towards the hotel. The hotels were constructed for the 2022 season, and they proved themselves to be very effective alternative nesting sites for the kittiwakes who used to nest on Framsenderet – likely due to the fact that it was only a short distance away from where the gulls had nested the year before (ibid., p. 20). However, similar to the other kittiwake hotel at Sørsjeeten, these hotels are permanent fixture. Despite this, however, they are still successful today, as these older hotels can be observed from Muséparken, where I was able to see that they were very much still in use.

In the case of this study, the progress that has been made at Muséparken in Tromsø was of the upmost importance. The initial project in this space was the renovation of the Tromsø Kunstforening (TFK) building, in which the presence of the kittiwakes in the area was highlighted, due to the sheer number of them nesting on the building’s façade.



*Figure 8: The former TFK building at Muséparken, currently undergoing renovation (photographed by author).*



*Figure 9: The mobile kittiwake hotels at Muséparken (photographed by author).*

Similarly to Framsenderet, deterrents (in this case, netting) were used to remove the kittiwakes from the building's façade, and they successfully migrated over to the hotels. These kittiwake hotels at Muséparken have been the result of intensive collaboration between a variety of actors, from researchers to architects to artists (which will be elaborated on in the following section), which was pertinent to its success. This harkens back to the concept of 'nature in the city', where Latour (2004) supports the idea that implementing the more-than-human approach

(in this case, the kittiwake hotels) effectively depends on the collaboration between different people.

Despite their success, however, the new hotels at Muséparken are not without their challenges. It became quite clear through discussion with the architect involved in the project that the kittiwake hotels and the work that went into creating them was a new area of study and a new experience for them and their firm, and that they struggled initially as there was not much local information for them to fall back on during the starting phases of the renovation project. As such, they spoke of how there was a much higher risk of needing to go through ‘trial and error’ when doing projects such as these, especially as wildlife can be unpredictable:

“There’s a risk that they might not come back to it, I guess. That can always happen.” (Interview, Architect, 2024).

They spoke of how they encountered such a challenge during the Muséparken kittiwake hotel project. In the original installation of the kittiwake hotels, three structures were placed at differing distances from the art museum’s façade (directly next to the building, three metres away, and six metres away), with the hope that the kittiwakes would immediately move to them. In order to influence this, they also covered the façade of the building in netting to deter the kittiwake once they returned. In the end, once the kittiwakes returned to Muséparken, they found that only the hotel directly next to the building was used, and that the other two hotels were completely empty (Interview, Project Leader, 2024). A few days after this was noted, the two remaining hotels were then relocated to be closer to the building like the other one, and the following day all the hotels were in use (*ibid.*). This is a related example of what Wilson (b) (2019) spoke of, when they spoke of ‘losing information in translation’ when it comes to non-human species. They could not speak with the kittiwakes, and so they tried what they thought would work through what information they could get. This information showed its flaws, and they acted accordingly, and this showcases how much of a learning process this way of planning is. In fact, following this recovery, a couple of weeks later, the hotels were slowly moved away from the building, and it was discovered that the kittiwakes did – in fact – return to the hotels even after these small movements.

These kittiwake hotels at Muséparken are within a tolerance zone, which has been integral to its initial continued success (Interview, Architect, 2024). The eventual plan for the kittiwake hotels at Muséparken is that in the future a permanent fixture will be designed and constructed in the park, and that this will act as the kittiwake nesting site for the foreseeable future

(Interview, Project Leader, 2024). This harkens back to the definition that Bannister & Kearns gave about the function of tolerance, as the end goal for these hotels is so that they will facilitate harmonious encounters between humans and kittiwakes. Additionally, the entire project is a great example of what Houston et al. (2018) wrote about; that more-than-human planning can produce inclusive, ethical relationships that can help non-humans in the city to flourish in the future.

#### *4.1.4. Creating New Alliances for Coexistence*

One way of incorporating the principles of more-than-human planning is the use of multidisciplinary collaboration between a variety of actors that come from different background, as implied by Latour (2004). In Tromsø, one such success in showcasing this was the successful outcome of the kittiwake hotels at Muséparken, as the collaboration there played a substantial role in the project's success. In this case, there were numerous actors involved in the project, such as Tromsø Municipality, architects, researchers at NINA, Tromsø Kunstforening, and independent artists (Tromsø kommune, n.d.), who all had their own supporting role:

“We have a collaboration with two artists. The municipality is sort of the leader of the project, in the sense that they finance the whole project.” (Interview, Architect, 2024).

The two artists involved in the project were ultimately instrumental in the initial designs and the creation of the kittiwake hotels, and Tromsø Municipality itself is the financier of the whole project. The researchers at NINA provided vital details and information about the kittiwakes themselves, and there has been some involvement with Wild Lab Projects since the kittiwake hotels went up, as they have been helpful in counting the number of kittiwakes and studying how effective the hotels have been from a ground-level perspective.

However, the collaboration in Tromsø has gone further than local – it has gone international. There has been communication with Newcastle in the United Kingdom, which has similarly been going through its own challenges with its growing urban kittiwake population – albeit Newcastle has been dealing with them being in the city for a much longer period than Tromsø has.

“That’s our international link. [...] We’ve all been to Newcastle to see how they’ve been coping and how they clean their streets and their shops and listening to taxi drivers and their opinions and so on and so on – because they’re like forty years ahead of us. They’ve had the kittiwakes as a sort of urban challenge since, well, at least forty years.” (Interview, Architect, 2024).

While it was not so effective in the long term, it was from collaboration and communication with Newcastle that Tromsø was informed of the potential to use fire-gel as a safer deterrent at Muséparken (Interview, Project Leader, 2024). And, despite some failures along the way, this collaborative experience has been a great learning opportunity for all of the different actors involved. The architect I spoke with confirmed that they believe that addressing biodiversity is something that will be carried on into future projects, and with that comes the opportunity for more collaboration and more chances to grow and improve.

#### *4.1.5. Engaging the Public*

While not involved explicitly in the production and development of the kittiwake-related planning decisions, the public has also been a crucial component to the success of the kittiwake hotels at Muséparken. As Adam (2005) asserts, the engagement and the education of the community is an important aspect when it comes to attempting to foster a culture of coexistence for biodiversity in the urban environment, and this was no different in the case of Tromsø's kittiwake hotel projects.

The conservation biologist that I interviewed has had links to Wild Lab Projects, a nonprofit organisation that is dedicated to contributing to nature conservation, citizen science and regenerative travelling (meaning that the participants that join their projects leave a net-positive impact on the places that they visit). In 2022, Wild Lab Projects began their first research partnership with NINA for their project focusing on kelp forest restoration, and this partnership has continued in the years since. One of their many available citizen science projects is that of a kittiwake walk, and the aim of it is to “educate and change the way people look at kittiwakes, with the empathy they deserve” (Wild Lab Projects, n.d.). The core activity of the project is to walk along a prescribed route that includes all current mapped nests in Tromsø, and to monitor them by counting the number of kittiwakes at a certain site and/or tracking if there are Apparently Occupied Nests (AONs) – which essentially means checking to see how many kittiwakes are incubating their eggs. Because of this, the map of kittiwakes in Tromsø used for the workshop is always changing, with new sites being mapped once they are noticed, which effectively highlights how useful this citizen science project is in the grand scheme of understanding the kittiwakes in Tromsø.

“We look for all the nests, and once all the nests are mapped, then we just draw a path. [...] It changes every year, definitely. It's only the second year for us, but yeah, it's going to change, especially with the increasing use of deterrents and with the increase of the [kittiwake] population.” (Interview, Conservation Biologist, 2024).

However, there was one aspect that was noticed during my own experience with the workshop – a lack of local Norwegian representation amongst the attendees. During the workshop, there was only one Norwegian present – and this was one of the guides. When discussing this with the conservation biologist, they stated that the kittiwake project has been statistically more popular with tourists in comparison to the locals, since local Norwegians do not typically attend. While it is difficult to define exactly why this is the case without intensive research and communication, we have the capacity to theorise:

“It could be [difficult to try and convince Norwegians to join] as everything is in English. Of course, Norwegians can speak English, but it could be that if we were communicating in Norwegian, we would have more Norwegians.” (Interview, Conservation Biologist, 2024).

In addition to the citizen science workshop, there have been a fair number of events, public talks, and educational campaigns that have occurred in Tromsø, most of which has been related to the Muséparken kittiwake hotel project – which in particular has been instrumental in showcasing to a wider audience what is possible with multidisciplinary management as well as engaging and education the local public and beyond:

“The Architectural Association in town has been interested, so we’ve had some talks there. And then we have the information channels now – such as television stations that are coming up from Germany and France.” (Interview, Architect, 2024).

One such example of an educational campaign about the urban kittiwakes was that of the ‘I Love Seagulls!’ exhibition, which was actually organised by Tromsø Kunstforening – who used to occupy the building at Muséparken before the renovation began – and was held in the summer of 2023. This exhibition showcased artistic, activist and science-based practices that actively related to the ongoing kittiwake ‘issue’. On their website, they explain that “the artworks dream of a better coexistence between people and birds, in poetic, practical, and long-term ways” (Tromsø Kunstforening, n.d.). All these campaigns and developments showcase that there may be potential for a change in attitude towards the kittiwakes, though that is not easy to quantify.

#### *4.1.6. From Conflict to Acceptance?*

In the bustling city, the relationship between humans and gulls unfolds a complex dance of conflict and coexistence. Urban residents have had to navigate their daily lives whilst intersecting often with urban gulls in ways that can evoke a range of emotions – from frustration to admiration. This interplay of human and gull lives in the city provides a vivid illustration of



what Wilson (2022) describes as “fraught coexistence”. The presence of seagulls, while sometimes unwelcome, becomes an integral part of the urban fabric, challenging residents to reconsider their place in a shared environment. While conversations with the local residents living in Tromsø were unable to be secured for this study, the information gleaned from established research by Novotny (2023), the interview with the conservation biologist, and the independent observations provided enough of a foundational understanding of the attitudes towards the gulls – specifically the kittiwakes – in the city.

During both the independent observations and the kittiwake workshop, any explicit human-gull encounters were extremely limited. However, there was a constant human presence at each of the three observation sites, though the amount of people differed. There were some outliers, at certain times. During the afternoon observation period on the second day at Muséparken, I noticed an older woman walking up directly to the kittiwake hotels, where she remained as she took pictures with her mobile phone. She wandered from hotel to hotel doing this, for a period of approximately five minutes. On the other end, I witnessed many times over the various observations that the kittiwakes were very comfortable to leave the hotels to briefly soar around the space before eventually landing back on their respective shelf of the hotel. These were all positive encounters, despite the potential power inequalities at play (Wilson (a), 2019), but simple observation cannot determine personal attitudes, and they cannot catch all encounters.

Through the interviews and observations, the attitude towards the urban kittiwakes came across as a mix of both positive and negative opinions. During all eighteen total site observations I conducted in Tromsø, one of the only direct interactions I witnessed between people and gulls was a couple of people stopping to take photographs of the kittiwake hotels with their phone. It is important to note, however, that these people were only observed doing so at Muséparken, and not at either of the other sites. Additionally, a large majority of the people observed at all three sites at each time did not remain in those areas for an extended period of time, and instead were simply walking through them. In the case of Muséparken, the bulk of people who did not leave the park immediately were people waiting nearby at the Polaria bus stop at one of the entrances to the park. Despite not witnessing many explicit interactions between humans and kittiwakes, it appeared that most people were not bothered by the gull presence, and I observed that a majority of people chose to walk through the park using the established desire paths that go quite close to the kittiwake hotels, rather than walking around the side of the park and down to the concrete pavement along the main road (Strandvegen). While it may not be conclusive

evidence, it could indicate that there is some semblance of acceptance towards their presence in the park.

Furthermore, during the kittiwake workshop conducted by Wild Lab Projects, I observed that there were clearly positive feelings towards the kittiwakes. This workshop was attended by primarily tourists or non-locals, which may have played a part in this overall outlook, though a large number of the non-locals stated that they have lived in Tromsø for multiple years. Upon interviewing one of the guides from this workshop – the conservation biologist – they shared that they believed that there is more of a negative perception of the birds from the locals, claiming that the naturalist way of thinking is not as common in Norway:

“There are very few naturalists in Norway. So being a naturalist in Norway – they exist – but it’s very uncommon compared to the UK or France or Germany or the US.” (Interview, Conservation Biologist, 2024).

While I myself was unable to corroborate this statement, it has been documented that seagulls carry negative connotations and certain stigmas, especially in the media – which has been well documented in Novotny’s thesis on the local news framing of human-wildlife conflict in Norway. Novotny (2023) found that media stories typically viewed the urban kittiwakes through a ‘villain’ lens, a framing that was similarly used for the *Larus* gulls in the city, but does also note that “kittiwakes could become an accepted part of the background in the media and urban landscape” (p. 61). However, that is not to say that there have not been steps towards fostering a more accepting attitude towards seagulls. This can be obviously seen in the existence of the ‘I Love Seagulls’ exhibition that was mentioned before, which provided a very readily accessible opportunity to everyone in Tromsø to learn more about the kittiwakes and help to change their views on them settling in the city. Despite this positivity, however, it still remains likely that negative perceptions of both the larger gulls and the kittiwakes still pervade to an extent in Tromsø at this point in time, even if my independent observations have not provided explicit evidence of this.

Lorimer (2007) does provide a good foundation for understanding these attitudes – the positive opinions can be linked to a recognition of the gulls’ ecological and aesthetic contributions (in this case, knowing that the kittiwakes are endangered), whilst the negative perceptions are predominantly tied to unpleasant interactions, such as all the conflicts that have occurred between humans and gulls in the city. Additionally, Wilson (b)’s (2019) exploration of contact zones illuminates the nuances of human-gull encounters, emphasising the need to acknowledge

the diverse perspectives and interests at play in the urban environment. The slow shift in attitude towards positivity suggests that there is a potential path to accepting the gulls and coexisting with them.

## **4.2. Worcester**

### *4.2.1. Gull Movement to the City*

The United Kingdom has had a long, established history with seagulls residing in its cities which dates back many decades. According to Rock (2003), the first recorded breeding of a pair of gulls in Worcester was around 1982 – though they state that it is possible that the Worcester colony started at a slightly earlier date. As such, at first, Worcester does not seem so different to other British cities until you consider its geographical location. Interestingly, despite being traditionally coastal breeding birds, gulls have, over the years, made their way further inland to cities such as Worcester, likely via travelling up the estuary of River Severn from the east coast near Bristol (Interview, Gull Officer, 2024), and have repeatedly returned to these inland locations year after year. This in itself brings up a very interesting dichotomy of how gulls can be perceived on the coast versus how they can be perceived when they are present inland (which will be elaborated on in Section 4.2.6).

In Worcester, the two most visible species of gulls are that of the lesser black-backed gull and the herring gull. Surveys conducted by Peter Rock in both 2020 (p. 13) and 2022 (p. 8) have shown that Worcester is primarily dominated by the lesser black-backed gull. Additionally, the 2022 survey highlights that herring gulls have seen an increase of 19% in population, and the lesser black-backed gull has only experienced a 2% increase. However, there is still a large difference between the different gull species populations, with Rock giving the lesser black-backed gulls a ratio of 4.6:1 against the herring gulls.

From an overall perspective, the 2020 survey conducted found that the estimated number of urban gulls in Worcester was between 1,018 pairs and 1,126 pairs, resulting in an average of 1,072 pairs (Rock, 2020, p. 4). In 2022, the new survey found that this number had increased. The estimation population became between 1,074 pairs and 1,186 pairs, averaging as 1,130 pairs in total (Rock, 2022, p. 4), as such indicating that there had been an increase of 58 pairs in the span of two years. In the wake of the increasing gull population, Worcester had come up with a somewhat unique solution: the hiring of a specific individual who will investigate the gull-related issues and complaints in the city. This is the Technical Officer for Gull Control, and it is a fairly new part-time position, as the actor I spoke with has only held this particular

position for a few years, whose goal is to support both residents and local businesses in reducing the impact that gulls have in the city (Worcester City Council, 2019, p. 2).

#### *4.2.2. Conflict with Residents*

Compared to other species of birds, herring gulls and lesser black-backed gulls are no strangers to showing aggression to others. As such, it is only natural that encounters with the gulls in Worcester have a high chance of causing conflict. However, aggression is not the only issue; the stealing of food and general noise disturbances could be considered common conflicts as well.

Nowhere was this more obvious than with the various residents of Worcester. Over the course of the two-day guided walk, every resident that was interviewed shared their own personal stories about their experiences with the urban gulls – and considering that these residents resided in different places all across Worcester, it was not difficult to understand that spaces of conflict are numerous in the city. These conflicts occurred as the residents and the gulls occupied the same general space, being typically residential buildings, which harkens back to Wilson’s (2017) statement that human-animal contact open up the opportunity for “experiences of shock, surprise, and rupture” (p. 28) – as naturally these two groups are experiencing some semblance of contact as they encounter each other in a shared space. Additionally, through the guided walk and independent observations, it was found that human-gull conflicts have also occurred in other spaces than residential roofs, such as along the High Street in the city centre or at St. Martin’s Gate Car Park.

I was able to speak with a resident of a senior care house, who was terrorised by the adult gulls after a chick unfortunately fell into the resident’s garden, and the resident took it upon themselves to relocate the chick to the nearby canal. The subsequent attacks were detrimental to the resident’s mental health, as they felt like they were “trapped in [my] own home” (Interview, Resident #1, 2024). The resident went on to clarify that no matter which exit they used to leave the residency, the gulls continuously found them, swooped at them, and “emptied their stomachs” on them. Both Resident #2 and Resident #5 expressed similar concerns of aggressive behaviour around their homes – with the latter stating that their pet dog had been the victim of swooping as it had clearly been denoted as a threat by the gulls. The council has made notes of these different conflicts in the official review from 2023

“There are many negative aspects to having an urban gull population breeding in Worcester, including the fouling of buildings, paving, vehicles and people, damage to buildings, injury from attacks and fear of gull attacks.” (Worcester City Council, 2023, p. 1).

A reoccurring theme that kept cropping up with each resident interview was that every instance of conflict resulted in a level of sleep deprivation for the humans affected, with one such resident mentioning that their spouse is now “addicted to sleeping tablets” (Interview, Resident #3, 2024) due to the sheer volume of noise that the gulls generate on their roof.

“The noise at three or four o’clock in the morning was quite extreme. So poor [other resident] was getting it all day over there, and then in the mornings he was being woken up at three o’clock, and—whereas we can’t prove cause and effect here—he had a massive stroke and had to move. We got off quite likely, me and my [spouse], in that they’re now addicted to sleeping tablets to stay asleep all night.” (Interview, Resident #3, 2024).

As such, it could be inferred that deterrents that actively chase the gulls away from the residential homes were the best course of action – coexistence would be incredibly hard to achieve, especially with the gulls posing a threat to public health and public safety.

#### *4.2.3. Licensing – Permission to Interfere*

However, before these conflicts can be addressed and subsequent gull control methods can be implemented, permission must be given. In the United Kingdom, all gulls and other wild birds are officially protected under the Wildlife and Countryside Act from 1981 (Interview, Senior Advisor at Natural England, 2024). When it was first brought into action, the Act was a fairly simple representation of wildlife law, but the legal picture in 2024, decades later after its initial publishing, is much more complex, as the Act has undergone many amendments and supplements in the past forty years. For the gulls, this Act dictates that it is illegal for people to “intentionally kill, take, or injure gulls, take or destroy their eggs, or to damage or destroy any gull nests while they’re in use or being built” (RSPCA, n.d.). On the basis that the population numbers of natural nesting gulls were declining along the coasts, a high level of protection has also been awarded to herring gulls specifically, as they have been categorically red-listed, whilst lesser black-backed gulls are on the amber-list (giving them a slightly lower level of protection).

In England, specifically, wildlife laws are enforced by the Department of Environment, Food and Rural Affairs (DEFRA), and one of the agencies under DEFRA is that of Natural England. Natural England is a quasigovernmental body that has been given the power to either provide

licenses for or prosecute against any infringements of wildlife species that are protected by the Wildlife and Countryside Act (Interview, Gull Officer, 2024). There are other bodies that are capable of doing similar if gulls are illegally culled, such as the police or the RSPCA (ibid.), but Natural England has been the biggest correspondent for Worcester in terms of being able to address the urban gull problem as thoroughly as it has, as they have the delegated power from the government to license any actions that involve wildlife protected under the Wildlife and Country Act (ibid.).

As such, in order to do any interventions in the city, you must first obtain an official license to do so. Prior to 2019, this was a much easier process, as not much evidence of gull disturbance was required in order to be able to contact pest control companies to remove the gulls. However, this has advanced greatly – notably in 2021, as this was the year that Natural England introduced a screening service that would allow people to communicate what their issues were, which could then be appraised by Natural England, and they ultimately decide whether or not it warrants the issuing of a license to intervene.

“In 2019, it was basically a free-for-all. [...] It was just a different culture – like people didn’t probably even see them as ‘protected’, so you’ll get a lot of people now that say “oh, the gulls have been protected since 2019” but no, they’ve always been protected. It’s just that they had a very, very loose regulatory mechanism around them.” (Interview, Senior Advisor at Natural England, 2024).

Gull control is no longer attached to a general license, but instead a license that requires substantial evidence that action needs to be taken – for example: if there are threats to public health or public safety. While this newer process is more time-consuming, it is more effective at protecting the gulls – which is one of Natural England’s clear priorities as some species of gulls in Worcester, like the herring gull, is red-listed in the United Kingdom.

#### *4.2.4. Response with Deterrents*

There was a diverse range of deterrents that were observed both during the guided city walk and the independent observations. The most prominent were spikes, roof netting, cages over chimneys, and ‘steel caterpillars’ (spiked cylinders), which have all been installed on the rooftops to either cover up potential nesting sites or to make nesting more challenging in general. There was also a mention of hawking (in this case, the use of a real hawk to scare the gulls away) which has been used in prior years but was unable to be utilised in 2024 due to budgetary constraints.



*Figure 10: Spikes that have been installed outside of a store at Blackpole Retail Park in Worcester (photographed by author).*



*Figure 11: Roof netting on Sanctuary Care building in Worcester (photographed by author).*



*Figure 12: Steel caterpillar on a rooftop (alongside spikes) in Hamilton Square in Worcester (photographed by author).*

The independent observations showcased a noticeable shift in gull presence of the course of two days (see Table 2 below), and that is likely supposed to be how it is. Much work has been done at Cathedral Square and the surrounding area (such as the High Street) in terms of gull control, with hawking actually having been used in the past in the square – this was quite effective in reducing the number of birds that would typically loiter around the area (Worcester City Council, 2023, p. 5). In fact, hawking in general has been quite an effective method for deterring gulls, as it has proven to be very helpful in other parts of Worcester, such as at Laslett’s Alms-houses and Britannia Square (ibid.) – which are both residential spaces. The allocated budget for gull control during 2023/2024 was £70,800, which enabled an additional amount of gull control work to be funded through partner contributions. The work will also continue through the non-breeding season (Worcester City Council, 2023, p. 5) and will mainly focus on gull proofing.

*Table 2: Observed approximate number of gulls at each site (and in the surrounding area) during independent observations in Worcester.*

	Day 1			Day 2		
	<i>Morning</i>	<i>Afternoon</i>	<i>Evening</i>	<i>Morning</i>	<i>Afternoon</i>	<i>Evening</i>
<b>St. Martin’s Gate</b>	6 (31)	8 (27)	16 (61)	9 (24)	5 (29)	7 (53)
<b>Cathedral Square</b>	12	7	1	10	27	9
<b>Blackpole</b>	15	16	22	16	13	24



In the review report for 2023/24, it is stated that attempting to measure the success of the ongoing gull management programme is quite complex as majority of the issues are qualitative (Worcester City Council, 2023, p. 5). However, what could be understood from the interviews conducted with the various residents around Worcester, the opinion of the proofing that has been installed has been largely positive. From the perspective of the residents, the proofing has been incredibly successful and have done much to improve their quality of life. Resident #2 clarified that they thought the deterrents were “money well spent”, and all of the other residents that were spoken to expressed similar gratitude towards the gull officer and the work they had done to solve gull-related issues around their homes.

#### *4.2.5. The Potential for Future Alliances*

Despite the extensive progress that has been made in gull-proofing certain buildings, the gull officer stated that there have not been many large-scale collaborations between them and other actors in Worcester, but that there is potential for such an endeavour to take place. They spoke of how they have been involved in a collaborative effort further south, in the city of Bath, in a project involving the redevelopment and redesigning of derelict industrial buildings, which have been prime gull nesting spots in the past.

“What therefore happened was that the building developer was put in touch with me so that I could therefore advise on the design, and that information was then transferred to the architect. I was actually given the initial design proposals as a plan and various drawings [...] and I immediately identified a number of, if you like, unnecessary aesthetic features of the site, such as tall signs that gulls could potentially nest on top of.” (Interview, Gull Officer, 2024).

The gull officer spoke of two potential sites in Worcester for collaborative development in the future, though was unable to share the exact names of these locations due to confidentiality. However, they did share that one was a derelict site that could be developed into a care home, and that the other was located within a heavily residential area. As such, there is hope for some collaborative planning to occur in Worcester, but none has happened yet.

In terms of engaging and educating the public in the gull situation in Worcester, any techniques that have been used have been on quite a small scale. However, that does not mean that what has been done does not work. One such way in which the council has connected with its residents in addressing and discussing the gulls is through the design and Worcester is one of many British cities that have constructed and designed a couple of advice leaflets, which are catered towards either residents or local businesses. These leaflets not only provide these

groups with general information on the gulls (such as how many gulls there are, when they are most aggressive, and that they are protected under the Wildlife and Countryside Act 1981), but also offer courses of action that can be taken to potentially reduce conflicts and to stop attracting gulls to places of contact.

The Worcester Regulatory Services website is the method by which residents and businesses can file their complaints about gull-related nuisances or problems. However, the gull section of their website is more than just a form – it provides residents and businesses with all the necessary information they could theoretically need, from information about what problems gulls can give them, to what options for gull control there are, to providing insight into what progress the city council has made in addressing the gulls. Overall, it provides great, educational information for its users, and comes across as very open, easy to understand, and easy to navigate.

However, the gull officer did speak of potentially contacting architectural schools:

“Another part of the process could be educating architects as well. In parts of the UK where gulls are nesting – and I’ve got to say, that’s increasingly everywhere, because I think most UK cities now have a resident gull nesting population – [a course of action] would actually be to educate the architectural profession. We’re talking about actually contacting schools of architecture at universities and asking if they would consider this.” (Interview, Gull Officer, 2024).

While this is currently only an idea for the future, it does appear that Worcester is taking steps in the right direction towards being involved in the more-than-human.

#### *4.2.6. The Potential for Future Coexistence and Future Management*

It became quite evident from the first observation at St. Martin’s Gate Car Park that the gulls in Worcester are much more accustomed to human presence than other species of birds in the city. This was showcased through their clearly unaffected attitude towards the presence of cars within their nesting spaces, to the point where I even witnessed them settling down on the roofs of parked cars (see Figure 13 below). This was similarly reflected during my observations at Blackpole Retail Park, as the noticeable herring gull presence appeared rather lax with the human presence, as some of the gulls were comfortable enough to also land on parked vehicles (Figure 14) or loiter around the parking lot (Figure 15).



Figure 13: A pair of gulls resting on a car roof at St. Martin's Gate Car Park in Worcester (photographed by author).



Figure 14: A pair of gulls on the roof of a truck at Blackpole Retail Park in Worcester (photographed by author).



*Figure 15: A pair of gulls wandering on the ground at Blackpole Retail Park in Worcester (photographed by author).*

However, at Cathedral Square, the gull presence in the immediate vicinity was distinctly lacking at certain times of day – especially in the evening (Table 2). This could potentially be attributed to the smaller human presence meaning there is less opportunity for food, as well as the presence of various spikes on the roofs of the various surrounding buildings.

“A few years back, we lived on the coast in Wales. And sure, we had gulls there too, but it was by the sea so – you know – we kind of expected them there. We don’t think they should be here – it’s too far away from the coast.” (Interview, Resident #4, 2024).

Tolerance zones, as mentioned before, are spaces that have the capacity to accommodate both humans and wildlife in a way that can foster a balance between urban development and biodiversity conservation. From what I can understand, this sort of zone does exist in Worcester, but in a more unique way. In fact, tolerance zones come across as a much more fluid concept, in that they are more defined as “a place where [we] haven’t received complaints about the gulls yet” (Interview, Gull Officer, 2024). The gull officer elaborated further, explaining that when a complaint comes in from a resident or a business, then that area can be classified as an ‘intolerance’ zone, and that wherever the gulls choose to relocate to then becomes a new tolerance zone until complaints start coming in from there.

When I spoke to the senior advisor at Natural England – who has been very involved and has worked with the gull officer in Worcester before – they stated that this sort of approach is rather unique to Worcester, and that this is a good thing. From their perspective, what has been great

about Worcester’s approach to the gulls is that they have chosen to identify ‘gull sensitive’ zones, which have been imperative to the success of their gull control techniques:

“They determined where some people are really sensitive to gulls, and they’ve said “right, well, we’ll exclude them from these areas and they’ll probably move, hopefully to other areas where it’s not as bad”.” (Interview, Senior Advisor at Natural England, 2024).

These ‘gull sensitive’ zones clearly mirror what the gull officer was referring to when explaining the ‘intolerance’ zones. As such, it is evident that identifying and understanding what spaces are ‘gull sensitive’ or ‘intolerant’ and what spaces are ‘tolerant’ is a very effective approach to gull management in Worcester, as it showcases what places gulls can and cannot coexist – at least for a period of time.

Unfortunately, the current future does appear rather bleak in terms of financial support for gull control in Worcester. It was published by various online news sources such as the BBC, The Worcester News, and Yahoo News UK that the budget for gull control was to be much less in 2024 than it had been in previous years, and this was a fact corroborated by the gull officer as they confirmed that deterrents that had been utilised in the past (such as hawking) were no longer feasible in 2024. The budget in 2024 is around £35,000, due to the financial problems within the Worcester City Council, whilst previous years – such as 2022 – the total budget was closer to £75,000, after a roughly £40,000 was “agreed to be handed over during budget setting” (Barnett, 2023).

Upon my initial meeting with the gull officer, they were greatly interested in what has been done up in Tromsø – where I am currently located – and was very open to and interested in hearing about what techniques had been implemented to address the urban gulls (such as the kittiwake hotels). As it stands currently, it is quite evident that while Worcester’s approach to the gulls is based almost exclusively on the use of deterrents, there is an openness and a willingness to learn about other, less hostile strategies of dealing with the gulls in the city.

As Reychler (1998) clarified, conflict can be address proactively or reactively. In the case of Worcester, their proposals for future management will contain a mixture of the two. This can be found in their most recent review of their gull control programme, where they state they have – and will continue to – engage in the proactive and reactive removal of gull nests, eggs, and chicks (Worcester City Council, 2023, p. 6). However, there has also been discussions to have a more proactive relationship with Natural England in regard to acquiring licensing (ibid.). This is due to the strict regulations that Natural England have enforced in order to qualify for

licensing that cause control strategies for certain locations to take a much longer amount of time to be legally administered. In the Annual Gull Control Review from 2023, it does make note of alternative methods that could have been considered. One of these options was that of a widespread cull of the gulls, but it quickly makes note that this would be greatly unlawful, that the council would never acquire permission from Natural England to do so, and that – realistically – a cull would be rather ineffective because of gull behaviour (ibid., p. 8) and would have to be repeated year after year in order to remove the gulls from Worcester.

### ***4.3. Comparison***

This section aims to investigate what similarities and differences can be found between Tromsø and Worcester, in regard to their conflicts, management strategies, collaborative efforts and public engagement. This will be done by comparing the data outlined in the previous two sections.

#### *4.3.1. Similarities*

The analysis of Tromsø and Worcester's circumstances and strategies regarding urban gulls shows that they have some similarities despite existing within two different countries.

To start off, one of the most notable similarities between Tromsø and Worcester is that their management strategies have been greatly shaped by the difficulty and restrictions they have encountered due to the species they are planning for. These limitations exist for identical reasons, being that the black-legged kittiwakes and the herring gull have been red-listed (as well as the lesser black-backed gull being amber-listed) in their respective countries, and as such means that any management must be intensely scrutinised as the protection of the gulls is the highest priority.

Secondly, Tromsø and Worcester also share some of the same methods of deterrence, specifically in their choice of using spikes and roof netting. Through both independent observations and guided walks, it was clear that these two methods were incredibly prevalent throughout both cities. However, there were also evidence of different methods being implemented, which will be elaborated on in the following section.

Another similarity is how new gull management to this degree is for both cities, in a sense. Whilst Tromsø's actions stem from a more recent development in the wildlife demographic in the city, Worcester's approach is also rather new in regard to their hiring of the gull officer to address gull-related problems in the city.

#### 4.3.2. Differences

Despite their similarities, there are some notable differences that pervade each case's narrative.

One of the first notable contrasts was the difference between what deterrents they use. Whilst both Tromsø and Worcester have employed the use of spikes and netting, their choices and strategies do diverge after that. Within the Norwegian context, this manifests in the form of their kittiwake hotels and the use of large scaffolding to obscure and block walls and facades, whilst within the British context, these alternative deterrents materialise in the forms of steel caterpillars and cages. Additionally, the perspective on the deterrents was different – in Tromsø I found that the attitude towards spikes (especially from those who care about the kittiwakes) were much more negative. However, in Worcester, the use of spikes was viewed much more positively, likely as the attitude towards the herring gulls and lesser black-backed gulls has been much more negative.

Leading on from that, one very obvious distinction between the two cases was the attitude towards the seagulls in the city. In Tromsø, there was a distinctly more positive outlook on the gulls in the city – though this was specifically towards the kittiwakes. While I was unable to ascertain the attitude towards the larger gull species through independent research, Novotny's research on media framing provides substantial evidence that it is likely that the perception of the larger gulls is more negative, due to a 'villain' lens typically being placed on them. However, in contrast to this mix of positive and negative opinions in Tromsø, no such positivity was found with Worcester's residents towards the gulls – through their bad experiences with the gulls at their homes, it became clear that the prevailing attitude towards the gulls was more of annoyance and disdain. However, one resident did mention that they would not feel so negatively about the gulls if Worcester were a city on the coast, highlighting that this negativity can partially stem from the gulls being an invasive, almost alien-like species to Worcester and its residents.

Another difference was that of the level of collaboration. In Tromsø, it was apparent from the first interview and initial research that collaboration between various actors of various background was a fundamental necessity for the kittiwake hotels and their eventual success. However, in comparison to Tromsø, there has been very little progress in terms of multidisciplinary collaboration in gull management in Worcester. At this point in time, the extent of their collaboration is their communication with Natural England in order to qualify

for a license to intervene with gull nesting sites, whilst Tromsø has managed to build a more established network.

One of the main differences found was that Tromsø has taken steps towards implementing measures that address coexisting with the gulls, whilst Worcester has not. Tromsø is unique in that it has begun using kittiwake hotels as a nonlethal method to reduce conflicts in the city. However, Worcester has been more limited in its progress towards coexistence, and this is likely due to the gulls in Worcester being the more aggressive species, as well as the pervading negative attitudes towards the gulls from the residents.

## **5. Discussion**

In this thesis, I sought to gain an understanding of how two distinct cities have planned for some semblance of human-seabird coexistence. In this task, I was able to interview both experts and residents involved in gull management in Tromsø and Worcester, as well as engaged in observational fieldwork to situate myself amongst the gulls in the city. Through this data gathering and analysis, I aimed to explore and compare how cities can plan for coexistence and attempt to understand how much of a role conflict and tolerance played in planning for gulls.

In this study, I brought together two cities that have not previously been compared before. With this, I was able to realise how different attitudes shape management decisions and reactions to them. Some of these opinions were influenced through encounters, showcasing how vital a role encounters can play in the future of multispecies planning. This was very obviously seen in Worcester, where most encounters with the gulls have been negative – resulting in conflicts that have become so serious that they pose a threat to public health and safety. As such, it feels almost expected that a more-than-human mindset has not physically materialised in Worcester yet, as the conflicts are too loud and too debilitating to even consider coexisting in the same spaces at this point in time. In contrast, Tromsø has not experienced as serious conflicts with the kittiwakes as Worcester has with its herring gulls and lesser black-backed gulls, and as such this has allowed for more positive encounters to take place.

This all harkens back to Thrift (2021) and his concept of killer cities. There is a belief that cities can become ‘rehabilitated’ and offer brighter futures for all species in the city – be they human or non-human. Tromsø has started down this path already, to an extent, as they have begun to fundamentally reassess how multispecies coexistence can occur. Worcester has not reached this point yet, as seen by their use of reactive deterrents, so could – in a sense – be considered a



‘killer city’. However, killer cities do not have to remain killer cities, and even just the smallest step towards tolerating the gulls in certain areas of the city (like some spaces in Worcester do) is a step in the right direction. Cities develop at different rates, and it seems that Tromsø and Worcester are no different.

## **6. Conclusion**

In conclusion, this thesis has delved into the complex dynamics of human-seabird coexistence within urban environments, with the aim of addressing the pressing need for effective urban planning strategies. Through the exploration of two distinct case studies, it became evident that urban spaces are fraught with challenges and conflicts stemming from competition between humans and gulls. Understanding how and where these conflict zones are is paramount in devising sustainable solutions that do not prioritise one stakeholder over the other, but instead prioritises the needs of both of them. These conflict zones are borne from bad encounters, and can occur anywhere humans and seabirds share a space.

However, tolerance zones make up the foundation of planning for coexistence. In circumstances of bad human-non-human relations, tolerance is the basis for success. A tolerance zone is one of the core reasons for Muséparken’s success with the kittiwake hotels, and the fluidity of them in Worcester is why it has been so difficult for them to make steps towards coexistence.

Moving forward when planning for coexistence, it is imperative for everyone involved, should they be urban planners, policymakers, or citizens to collaborate closely in developing cohesive and comprehensive strategies that can contribute to an urban environment where difference can be tolerated. Ultimately, by embracing the principles of coexistence and incorporating them into planning practices in urban environments, cities can aspire to become harmonious environments where both humans and seabirds can thrive together in shared spaces. How long this will take, however, is a question that is too complex to answer.

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## **8. Appendix**

### ***8.1. Appendix 1: Thematic Interview Guide***

#### **1. Contact Zones**

Where are the current interactions between humans and gulls occurring in the city?

What sort of interactions are occurring?

How does this influence public spaces?

#### **2. Conflict Zones**

What current conflicts exist between people and urban gulls?

Under what circumstances could further conflicts develop?

In what locations are there the potential for conflict?

#### **3. Tolerance Zones**

How can tolerance zones be identified and how are these negotiated?

Are there areas where urban gulls are currently tolerated?

Are there other areas where we can potentially tolerate them?

#### **4. Challenges and Successes**

What challenges can occur when integrating tolerance zones?

How are the challenges/conflicts dealt with in the city?

Are there examples of successful projects of coexistence?

#### **5. Future Considerations**

What lessons have been learnt regarding the integration of tolerance zones?

How have the results of coexistence projects influenced the future of tolerance zones in urban design?

How can urban planning work to improve coexistence in the city?