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# Ageing-in-Place at Naturally Occurring Retirement Communities (NORCs): A Case Study on Bribie Island, Australia

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Abstract: Through a case study on Bribie Island in Queensland, Australia, this study investigates Naturally Occurring Retirement Communities (NORCs) as a viable alternative for ageing-in-place. Aim: The objectives were to investigate why older adults relocate to Bribie Island, how they perceive their living environment, and their future relocation intentions. Method: The research data were attained through semi-structured interviews with 21 Bribie Island residents, aged 65 and older. These data provided the basis for an in-depth understanding of the residents' perspectives and experiences, with respect to their community and living conditions. Results: The findings indicate that, overall, the participants expressed a high level of satisfaction with their current living environment; however, they also highlight areas for improvement, particularly the transportation and healthcare facilities. Significantly, most respondents confirmed their desire and intention to continue residing on the island. Conclusion: As exemplified by this Bribie Island case study, this study confirms that NORCs offer desirable settings for ageing-in-place. Recognizing the diversity and range of personal preferences, this study emphasizes the importance of ongoing research to develop responsive, inclusive, and supportive environments, to strategically improve the amenities within future NORCs.

**Keywords:** ageing-in-place; NORC; older people; inclusive living environments; perception; retirement communities; urban planning; quality of life

# 1. Introduction

The world's demographic makeup is currently experiencing an unparalleled transformation, with the prominent emergence of an ageing populace. Forecasts indicate that by 2050, individuals aged 65 and above will constitute approximately 16% of the global population, equating to nearly 1.5 billion individuals [1]. This paradigm shift towards an ageing population necessitates a deeper understanding of the unique needs and expectations of this demographic group, particularly in relation to their future living environments. Concurrently, a significant trend is emerging among older populations, who are indicating their clear preference to age-in-place. This is based on their desire to maintain their independence, remain actively involved in their communities, and to continue to live in their homes as they grow older [2].

NORCs have emerged as a compelling exemplar, in response to this. NORCs are defined as geographic or residential areas, although not originally intended for older adults, which have organically evolved into havens for older people due to ageing-in-place or migration patterns [3]. Even though nearly four decades have passed since the inception of the NORC concept, its definition continues to evolve in response to shifting times and a diversity of applications. Currently in Australia, a NORC is defined as a community



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that includes 40% (or more) of household members who are aged 65 years and older [4]. As an exemplar of the ageing-in-place model, NORCs have been subjected to extensive examination and synthesis, as explained comprehensively by E, Xia et al. [5]. NORCs offer a unique opportunity to examine the nexus between ageing, community dynamics, and built environments [6].

Recent studies show that Australia, and especially South East Queensland, has witnessed a rapid growth of NORCs over the past decade [4]. The 2021 Australian Bureau of Statistics (ABS) census data show that the number of NORCs in the Greater Brisbane region alone reached 165, which is almost double the 2016 data (92 NORCs). Moreover, although they only account for 2.76% of the total census suburbs, these 165 NORCs accommodate 10.08% of the total older household residents in the Greater Brisbane region. One case of particular interest is Queensland's Bribie Island that has met the NORC definition for many years: in 2021, 63.9% of its residents were at least 50 years old, and 44.6% were at least 65 years old (2021 ABS census data).

Although the number of NORCs in Australia is growing rapidly, surprisingly, they remain largely overlooked in society. Despite NORCs presenting a significant opportunity for Australian society, to date neither academic research nor government policies have examined this emerging option for older Australians to age-in-place; ageing-in-place not only results in a better quality of life for older Australians, but it also results in significant savings to costly public expenditure on residential aged care [7,8]. As NORCs have occurred organically and without policy intervention, there is value in (1) identifying their positive features that are of benefit to people as they age; (2) establishing those features as a model for ageing-in-place; and (3) advocating to various levels of government to better support and promote ageing-in-place through replicating or adapting these features.

The aim of this research was to explore whether NORCs are a suitable and promising alternative for ageing-in-place, using Bribie Island as a case study. By conducting indepth interviews with older residents on Bribie Island, this study investigated (1) why older residents relocated to Bribie Island (the formation of this NORC); (2) how residents perceived the current living environment on Bribie Island (the quality of living in this NORC); and (3) their future intentions to stay or leave (the future of this NORC). By augmenting the existing body of knowledge pertaining to the evolution of NORCs in Australia, the case study research findings identify potential areas for improvement in current NORC living environments, and provide actionable insights for urban planners, architects, and policymakers. Ultimately, the research objective was to enable the design and development of more responsive and supportive living environments, that better meet the evolving needs and aspirations of older people residing in NORCs.

This paper is structured to provide readers with a comprehensive summary of the explorative study, as follows:

Firstly, Section 2 establishes the theoretical and contextual foundations of the research, while also explaining the concept of NORCs and their significance in ageing societies. Importantly, it summarizes the key elements currently existent within the case study context of Bribie Island, to help the reader understand and consolidate the broader implications of this study.

Next, Section 3 describes the research methodology. This includes the criteria applied when selecting Bribie Island as the case study location, an understanding of the participants' demographic profile, and the data collection and analysis techniques which were utilized.

In Section 4, the primary findings from the collected data are presented. These findings offer insights into the motivations, experiences, and perceptions of the elderly residents of Bribie Island.

Section 5 presents an interpretation of the findings, by both linking these to existing literature, and highlighting the broader implications for the development and sustainability of future NORCs.

Finally, Section 6 synthesizes the findings, and proposes recommendations for future research and policy formulation, in the field of ageing communities.

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# 2. Background

## 2.1. Ageing-in-Place

The concept of 'ageing-in-place' embodies a pivotal framework within the current and emerging fields of gerontology and societal structures. Pertaining to the capacity and aspiration of older individuals to maintain residence within their familiar domestic settings and community environment, NORCs allow individuals to age-in-place while preserving their safety, comfort, independence, and overall quality of life, irrespective of age, income, or ability level [9]. It is increasingly being recognized that the facilitation of independent living provides beneficial alternatives for older populations and societies, as opposed to supported living arrangements such as aged care facilities [10].

Ageing-in-place initiatives typically facilitate the sustained independence of older people within their established communities, where robust social networks comprising family and friends already exist. Empirical evidence underscores the beneficial outcomes associated with ageing-in-place. From a social perspective, for example, it offers potential strategies to prevent early placement in aged care facilities, to mitigate the demand for expensive health services, to generate service delivery efficiencies through economies of scale, and to enhance opportunities for community participation, volunteerism, and leadership [11]. While from an individual perspective, the ability to age-in-place can support an ageing person's self-efficacy, strengthen their social support systems within the community, and promote a sense of familiarity and belonging [12]. Furthermore, improvements to individuals' cognitive function and their daily life activities have also been observed, along with a reduction in depressive symptoms in older people who age-in-place [13].

The dynamic nature of human lives, environmental conditions, and government policy can significantly impact living conditions as time progresses, thus necessitating frequent, flexible, and adaptive responses [14]. In this regard, Lau, Scandrett et al. [15] identified three categories of barriers to ageing-in-place: (1) individual, (2) community, and (3) societal. Firstly, individual concerns include disease prevention to circumvent disabilities (e.g., limitations in daily living activities) [16], sustaining social connections (e.g., family and neighborhood ties) [17], and making timely modifications to the home and living environments [18]. Secondly, and at the community level, the provision of services addressing the social and health needs of vulnerable older people is crucial [19]. Finally, at the societal level, public assistance is necessary, to ensure adequate resource allocation for the older residents remaining within their communities [20]. To enable people with impaired mobility or disabilities to undertake renovations to allow them to continue residing in their homes, concerted effort from individuals and local communities is required [15]. Interestingly, despite the growing desire to age-in-place, a 2012 study reported that a mere 18% of households had resided in the same house for 20 years or more [21]. Given this context, a well-facilitated NORC holds the potential to harness coordinated community efforts to support ageing-in-place, thus providing an argument for further scholarly exploration [22].

## 2.2. Naturally Occurring Retirement Community (NORC)

The concept of NORCs is generally applied to communities which have not been explicitly designed to meet the specific needs of older adults, but which have naturally evolved to accommodate a substantial percentage of this demographic, through organic migration patterns [3]. The formation and future of NORCs are, therefore, determined by the organic migration of older adults in the community. The primary appeal of NORCs is access to neighborhood services tailored to seniors' needs and abilities, combined with security and proximity to peers. The geographical concentration of older adults within NORCs allows for efficient service delivery, while fostering effective relationships among residents, communities, service providers, and the public sector. Consequently, NORCs are considered to be an ideal model for strengthening the physical and psychological well-being of older individuals [23].

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Despite growing scholarly interest, a detailed definition of a NORC remains to be developed and universally accepted. Various definitions have been proposed, but these differ in terms of specific details. There is broad agreement that a NORC is a geographical area or group of housing units that were not originally designed specifically for older people, but which have, over time, become home to a significant proportion of older residents. However, there is still no consensus on the specific parameters that constitute this 'significant proportion,' particularly regarding the specific age threshold and percentage of older residents.

Drawing from the evolution of NORCs in the United States and considering Australia's unique demographic features, E, Xia et al. [24] proposed an Australian adaptation of the NORC concept. They defined this as a community where 40% or more of the household members are aged 65 years or older. This new conceptual framing provides an economical and efficient model, for facilitating successful ageing-in-place amongst older Australians.

In the United States, Naturally Occurring Retirement Community Supportive Service Programs (NORC-SSPs) are community-based initiatives, which aim to provide tailored services to NORC residents to meet their unique needs. These programs, which are financed by a combination of public and private funding, facilitate collaboration between residents, housing associations, community stakeholders, and health and social service providers [25]. Services provided through NORC-SSPs include case management, transportation assistance, recreational and educational programs, and volunteering opportunities. These are united in their intention to optimize the well-being and health of older residents, while enabling them to maintain comfortable and independent living [26]. The NORC-SSP model is flexible, thus allowing for the identification and delivery of specific and necessary services for older individuals ageing-in-place. Programs such as these will improve the quality of living in NORCs.

# 3. Materials and Methods

# 3.1. Method

The methodology utilized in this study was a case study approach, which facilitates an in-depth and comprehensive analysis of a single, specific case within a real-world context [27]. This method was beneficial to the research study, as through analysis of a variety of data sources, it allowed for a nuanced understanding of complex phenomena within their actual context [28], and enabled exploration of the intricate interrelationships between these variables.

The first phase of the case study was the spatial analysis of Bribie Island demographic data, obtained from the ABS 2011, 2016, and 2021 censuses. The geographic distribution of older adults (for this study—people aged 65 years or older) was assessed using ArcGIS 10.8.1 software, which provided mapping of the distribution of the older population across different areas in Bribie Island. Using this map, the areas with a high concentration of older adults were then identified as NORCs.

The second phase of the case study consisted of street interviews with older residents on Bribie Island. These semi-structured interviews were arranged into three central themes: (1) the formation of the Bribie Island NORC; (2) the current living environment in Bribie Island; and (3) the future of the Bribie Island NORC. This approach enabled the respondents to freely share their thoughts, feelings, and experiences with the research team, and the ability to provide more detail when prompted.

## 3.1.1. Bribie Island

As shown in Figure 1, Bribie Island is situated in the northern part of Moreton Bay, in Queensland, Australia. Bribie Island's unique geographical location, demography, and living environment make it an ideal setting for this NORC case study research, to provide a better understanding of older residents' perceptions of their living environment.

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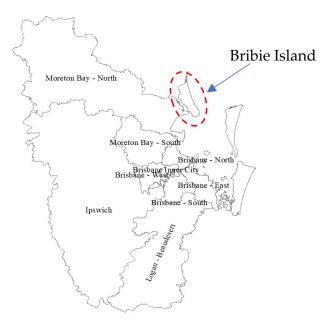


Figure 1. Map of the Greater Brisbane region and highlighting the location of Bribie Island.

Primarily, the island's demographic structure is characterized by a significant proportion of older residents, thereby making it a good example of a NORC. After the last ABS census (2021), it was reported that over 50% of the island's population were aged 60 years and over, which is significantly higher than the national average in Australia. This considerable concentration of older adults provides a rich context for understanding the dynamics of ageing-in-place, within an unplanned retirement community.

Secondly, the living environment of Bribie Island, characterized by a mix of residential areas, recreational facilities, and natural attractions, provides a unique setting to explore the perceptions and experiences of older residents. The island's unique combination of coastal living, community amenities, and residential structures, which were not designed with any specific consideration for older residents, offer a valuable case to investigate the impact of living environments on ageing experiences.

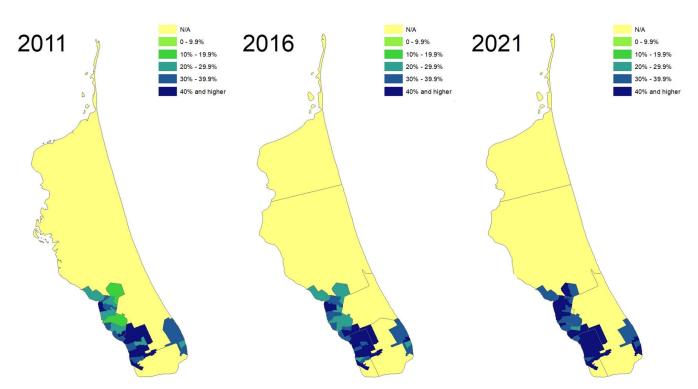
Finally, the selection of Bribie Island as a case study is also underpinned by the need to understand the dynamics of NORCs within an Australian context. While a significant amount of NORC research has been conducted in the United States, more region-specific research to understand how the concept and experience of NORCs translates to different cultural, social, and geographical settings is necessary. The insights gained from this case study could inform Australian ageing-in-place policy and planning strategies, while simultaneously contributing to the broader international dialogue about NORCs.

# 3.1.2. Bribie Island ABS Census Data Analysis

Analysis of Bribie Island population data from the ABS Censuses over the past decade revealed a consistent growth trend in both the total population and the proportion of individuals aged 65 and older. The total population grew from 17,045 in 2011 [29] to 18,142 in 2016 [30], and further to 20,612 in 2021 [31]. Concurrently, the proportion of residents who are 65 or older has also significantly increased during this time.

The Bribie Island ABS data accessed for this research is classified as Statistical Areas Level 1 (SA1s). SA1s are geographic areas which are designed to maximize the geographic detail available for Census of Population and Housing data. SA1s are determined using multiple criteria, the most important of which being the population size. SA1s generally have a population of 200 to 800 people, and an average population of about 400 people. Figure 2 shows the comparative growth of the proportion of SA1-level older residents (aged 65 and over) on Bribie Island [32], as recorded in the 2011, 2016, and 2021 ABS Census data.

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**Figure 2.** Bribie Island SA1 geographic areas showing the percentage of older residents (aged 65 and over) comparatively growing in 2011, 2016, and 2021.

The number of NORCs on Bribie Island expanded substantially over this period as well. In 2011, there were 10 identified NORCs. This increased to 15 in 2016, and more than doubled to 32 in 2021. Correspondingly, the number of older adults (aged 65 and over) residing in these NORCs also grew considerably. Housing 1961 older adults in 2011, these NORCs grew to accommodate 2963 in 2016, and this number more than doubled again, to 6405 by 2021. Figure 3 shows the steady increase in the distribution of NORCs on Bribie Island in 2011, 2016, and 2021.

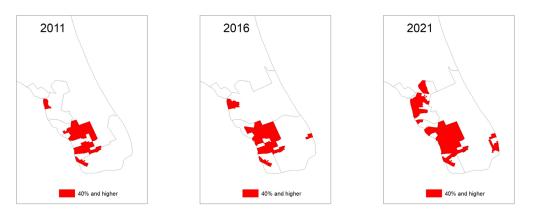


Figure 3. Bribie Island NORC distribution, steadily increasing in 2011, 2016, and 2021.

These trends illustrate the growing appeal of Bribie Island as a retirement destination and result in a notable increase in NORCs. The increasing number of older adults residing in these communities indicates a positive perception of the built environment among this demographic, a factor that is essential for their well-being and satisfaction. These quantitative findings provide the foundation for a more detailed understanding of the qualitative interview data collected from the older residents of Bribie Island's NORCs.

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## 3.2. Data Collection Methods: Interviews

Semi-structured street interviews were conducted in the second phase of this case study. Bribie Island residents aged 65 and above and who are retired or nearing retirement were targeted as participants, resulting in 21 residents being interviewed by the researchers. The rationale behind selecting 21 participants was grounded in achieving data saturation in qualitative research, as suggested by Guest, Bunce et al. [33]. This sample size provided a diverse and representative understanding of the residents' experiences in NORCs, and allowed for a comprehensive range of perspectives [34].

Semi-structured interviews were conducted with each session lasting approximately 45 min–1 h [35], to ensure consistency while also allowing enough flexibility for participants to express their views in detail. The interviews were scheduled during the day on weekdays, with the aim to reach a greater proportion of residents. Participant recruitment took place in various public places including streets, shopping centres, cafes, and restaurants. Criteria included the confirmation of participants' age (65 and above), and that they were residents of Bribie Island or planning to become permanent residents in the near future.

A broad range of ages along with a fairly equal representation of both genders in the participant group was actively sought, to allow for a broader understanding of the experiences and perceptions of older residents in Bribie Island's NORCs. Recruiting participants from a variety of locations also helped to ensure that a representative crosssection of the area's older population was included in the sample.

A semi-structured interview format was selected to allow for a pre-determined sequence of questions, while also offering participants the flexibility to contribute to the discussion based on their unique experiences and insights. The interviews were structured around three main themes, to encompass a broad range of aspects associated with life on Bribie Island, including the following:

- Reasons for relocating to Bribie Island: The aim of this theme was to identify the
  motivating factors that prompted the participants to choose Bribie Island as their
  place of residence. Identified factors included natural appeal, safety, community spirit,
  and/or proximity to family and friends.
- 2. Perceptions of Bribie Island's living environment: In this theme, participants were asked to discuss their satisfaction of various amenities, services, and environments on Bribie Island. This included discussions about healthcare facilities, public transportation, leisure facilities, the accessibility of shops and services, and the natural and social environments of the NORCs.
- 3. Plans for the future: During the final theme conversations, participants were asked whether they planned to stay on or leave Bribie Island, in the future. This provided an understanding of the participants' future plans, and in particular, whether they aspire to age-in-place on Bribie Island, and if so, what they believe is necessary to facilitate this.

Each interview was recorded with the consent of the participants, who were informed of their right to withdraw from this study at any time and without providing any reasons. This research method was approved by the authors' human research ethics committee, in advance of the commencement of the interviews.

## Demographic Information

Twenty-one people participated in the research interviews. Twelve participants were male and nine were female, and the average age was 71.6 years. Among the participants, the largest group (n = 12) fell within the age range of 65–74, with the subsequent group aged 75–84 comprising eight individuals, and only one participant was aged over 85. Regarding the duration of residency on Bribie Island, seven participants had lived there for over 10 years, three had been living there for 6–10 years, six had a residency spanning 1–5 years, and four had been residents for less than 1 year. Additionally, one participant was planning to relocate to the island in the near future.

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# 3.3. Data Analysis

The interview data analysis was completed with the assistance of NVivo (Release 1.7.1), a qualitative data analysis software. This application facilitated the management and organization of the data, enabling an efficient and systematic analysis process.

The data were analyzed using the six-step thematic analysis approach proposed by Braun and Clarke [36]: (1) Familiarization with Data; (2) Generating Initial Codes; (3) Searching for Themes; (4) Reviewing Themes; (5) Defining and Naming Themes; and (6) Producing the Report. Applying this thorough and iterative data analysis process, comprehensive descriptions of data were generated, to capture the perspectives of older residents from NORCs on Bribie Island, concerning their built environment.

#### 4. Results

The analysis of interview data resulted in the identification of three primary thematic categories: (1) reasons for moving to Bribie Island; (2) perceptions of the environment (satisfied or not satisfied); and (3) willingness to stay or leave. Table 1 provides the framework established through the qualitative thematic analysis, and outlines the key topics that respondents raised, mapped according to theme and category. Appendix A provides more detail of the thematic analysis framework, including the number of respondents who identified and/or discussed each of the key topics.

Table 1. Qualitative thematic analysis framework.

Themes	Categories		Topics Coded	
(1) Reasons to move to Bribie Island	Economic Considerations		Affordability, Down-sizing	
	Natural Environment		Climate, Beauty of Environment, Sea coast	
	Lifestyle		Convenience of work, Good fishing, Good lifestyle, Life change, Retirement living, Semi-urban, End of travel	
	Social and Family Connections		Resident since childhood, Family, Nice people, Take care of parents, Small community	
(2) Perceptions of the Environment	Environment satisfied	Built Environment	Art gallery, Cinema, Clean, Close to city and airport, Club and pubs, Community, Day hospital being built, Dog park, Lovely cafes, Low level of building, No traffic lights, Park, Restaurants, School, University of the Third Age Close enough to Beach, Bus station, Club, and Pubs, Medical, Park, Playground, Shopping centre and Walking park Easy to access to Health services, Government services and Public transportation	
		Natural Environment	Beach, Island, Quiet, Relaxing environment, Sea view, Walking environment, Weather	
		Social Environment	Bus service, Convenient, Good council, Low density of population, Medical, Property affordability, Safety	
	Environment not satisfied	Built Environment	Need More: Car park, Chemist, Hospital, Another bridge, Bigger supermarket, Bikeways, Transportation, Restaurant, Road access, Dog off-leash area Need less: High-rise building, Speed limits, Retirement villages, Traffic Environment: Flooding	
		Social Environment	A lot busier, Commercial fishing affects environment, No activities when dark, Too many people coming	

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Themes	Categories		Topics Coded
(3) Willingness to stay or leave	Leave and back again	Lifestyle	Like fishing, Love traveling
	Stay to the end	Built Environment	Built environment better than other places, Convenient life, Everything close
		Natural Environment	Clean air, Good climate, Near beach, Sea view
		Leisure Activities	Club, Good musicians, Relaxed life
		Local Services	Bus service, Healthcare, Senior university
		Economic Considerations	Property affordability
	Will leave	Economic and Environment Considerations	Financial situation, Love countryside

Table 1. Cont.

# 4.1. Theme 1: Reasons for Moving to Bribie Island

#### 4.1.1. Economic Considerations

"I can't afford Brisbane, but I can afford a house here especially compared with similar amenities and natural beauty."

Economic considerations were one of the reasons that influenced participants' decisions to move to Bribie Island. For older adults, particularly those who are retired or nearing retirement, the cost of living and housing affordability were crucial factors taken into consideration when determining where they choose to live.

Affordability was mentioned specifically as a reason for moving to Bribie Island. Known for its relatively low cost of living compared to other metropolitan areas, Bribie Island presents an attractive option for older adults who are looking to maintain or improve their standard of living in a cost-effective manner.

The opportunity to downsize was also discussed as a primary economic motivation for relocation. Downsizing can be an effective strategy for reducing living expenses and maintenance responsibilities, freeing up resources that can be used for other aspects of life such as healthcare, recreation, or saving for future needs.

The lower cost of property on Bribie Island, as compared to more urban locations, was raised by a participant. This aspect, coupled with the island's serene environment and well-connected community services, makes it a preferred destination for older adults seeking to balance economic considerations with quality of life.

#### 4.1.2. Natural Environment

"What brought me to Bribie Island? Well, I must say it was a combination of factors, but the first thing that really captured me was the sea view. There's something incredibly calming about being able to look out of your window and see the ocean stretching out as far as the eye can see. I've always felt a connection to the sea, and here, I get to experience it every single day."

The natural environment of Bribie Island, and particularly its climate and coastal location, was continually mentioned by the participants as a major attraction. Participants specifically mentioned the pleasant climate of the island as a reason for moving there. The mild and sunny climate (common in this part of Australia) can provide numerous health benefits, including facilitating outdoor physical activity, promoting social interaction, and reducing the risk of seasonal affective disorder.

In addition to climate, the coastal location of Bribie Island was appealing to participants. Coastal regions have been associated with better health outcomes due to factors like improved air quality, opportunities for physical activity, and the psychological benefits of being near water.

The 'blue space' effect [37] refers to the positive impact that bodies of water, such as oceans, lakes, rivers, or ponds, can have on mental and physical well-being. Like the known benefits of green spaces (national parks, forests, etc.), 'blue spaces' offer various advantages,

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including reducing stress, promoting relaxation, improving mood, and enhancing overall mental health. Access to or views of water bodies have been associated with increased feelings of calmness, restoration, and improved psychological well-being, highlighting the therapeutic effects that water environments can have on human health, emotional well-being, and reduction in stress, and providing a valuable advantage for older residents.

# 4.1.3. Lifestyle

"I was looking for the ideal setting for my retirement years. I wanted a place that offered a slower pace of life but still had some urban features. Bribie Island seemed like the perfect semi-urban location that provides that balance."

Highlighting the island's potential for supporting a healthy work–life balance, a participant mentioned moving to Bribie Island because of convenience for work. The easy commute, coupled with the island's abundant leisure activities, enhances residents' quality of life. From fishing, mentioned as a positive aspect of living on the island, to other recreational activities facilitated by the natural environment like beach outings and park visits, Bribie Island offers a variety of leisure pursuits that cater to the older population.

The island's lifestyle was another key consideration for relocation. "Good lifestyle" was noted as a significant factor for moving to Bribie Island. The island's semi-urban setting provides a peaceful yet engaging environment—a slower pace of life without the disconnection often associated with rural living. Furthermore, a participant cited "life change" as a reason for relocation, suggesting the appeal of a new lifestyle and rhythm in their retirement years.

Bribie Island was particularly attractive for those considering retirement. Some participants explicitly mentioned "retirement living" as their reason for moving to Bribie Island. This is consistent with the broader appeal of the island as a location for NORCs. The combination of accessible healthcare, favourable climate, engaging social environment, and recreational facilities make the island an appealing destination for those seeking a fulfilling retirement life.

## 4.1.4. Social and Family Connections

"I moved to Bribie Island primarily because of its strong sense of community and the family connections I have here; it feels like an environment where social ties really matter."

Several participants mentioned that "family connections" influenced their decision to move to Bribie Island. For some, the island was chosen because it was close to family members already residing there. This proximity allows for more frequent interactions and stronger family ties, which can be particularly important for older adults who often rely on family support. In two instances, participants moved to Bribie Island specifically to "take care of their ageing parents", further emphasizing the role of family responsibilities in residential decision making.

Some of the participants mentioned that they moved to the island because they had been visiting it since they were young. This familiarity with the area, along with its community and lifestyle, could significantly influence the decision to move. Many of these participants associated Bribie Island with positive childhood memories, further contributing to their sense of continuity and belonging.

Bribie Island's close-knit and friendly community were also key factors cited as reasons for relocation, some noting that the people on the island contributed to their decision. This sense of community is essential, especially for older adults, as it fosters a sense of belonging and provides a critical support network. This social environment plays a crucial role in promoting the well-being of older adults residing on the island.

The "small community" aspect of Bribie Island was highlighted by a participant as a contributing factor to their decision to relocate there. Small communities, like those prevalent on Bribie Island, often foster strong social connections and support networks. These are particularly crucial for older adults as they navigate the various challenges

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associated with ageing. A strong sense of community can lead to better social engagement, reducing feelings of loneliness and improving overall quality of life.

# 4.2. Theme 2: Perceptions of the Living Environment

#### 4.2.1. Built Environment

The built environment plays a crucial role in determining the quality of life of its residents, particularly for older adults who may have specific needs or preferences. In this study, the participants shared a variety of views about the Bribie Island built environment, highlighting both satisfactory and unsatisfactory aspects.

"I'm really happy with the built environment here on Bribie Island, mainly because everything is so conveniently close. It makes life a lot easier."

Most participants expressed their satisfaction with the "close proximity" and "accessibility" of essential services and amenities. Many of these participants specifically mentioned the convenient location of shopping centres on the island, suggesting the significance of easy access to daily needs for the older residents. The close proximity of other amenities, such as cafes, clubs and pubs, parks, and medical facilities, was also valued, as this reduced the need for long-distance travel, offering a more comfortable and convenient lifestyle.

The island's recreational and cultural facilities also received positive feedback. The presence of an art gallery and a cinema were appreciated by several participants. Such facilities not only offer leisure and entertainment, but also contribute to creating a vibrant and engaging community, and hence enriching the lives of the residents.

Several participants praised the specific features of the island's location and built environment. Participants mentioned the benefit of being close to the city and airport (located relatively nearby, in Brisbane), indicating the importance of external connectivity for the residents. The low level of buildings, absence of traffic lights, and easy access to government services were also considered to be a positive, suggesting participants' preference for living in a peaceful and hassle-free community.

Healthcare facilities on Bribie Island were generally considered to be satisfactory, with the (currently under construction) day hospital noted very positively by many participants. However, some participants advised in contrast, that they were not satisfied with the existing healthcare facilities, expressing concern that there were not enough nearby hospitals. This disparity in responses emphasizes the importance of sufficient and accessible healthcare for older people, who each have varied and diverse needs, and access to mobility.

"I have to say, I'm not entirely pleased with the built environment here on Bribie Island lately. The issue is that it's becoming increasingly popular, and that's causing traffic congestion. It's just not as peaceful and easy to get around as it used to be."

Despite the overall positive feedback, several areas of the built environment were still perceived as inadequate or needing improvement. Traffic was a common concern, with half of the participants mentioning it as an issue. The need for additional infrastructure, such as another bridge, was also discussed by a third of the participants. Others voiced their concerns about a perceived lack of car parks, chemists, supermarkets, bikeways, public transportation, and restaurants. These issues highlight the demand for continuous improvements, to support a more active, connected, and convenient lifestyle for older residents.

Interestingly, while some participants appreciated the low-level buildings and lack of traffic lights on Bribie Island, others expressed dissatisfaction with certain elements of the urban landscape, such as the perceived overabundance of retirement villages and high-rise buildings. This feedback suggests a tension between maintaining the island's tranquility and low-density lifestyle, while also responding to the accommodation needs of a growing older population with a diversity of expectations.

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#### 4.2.2. Natural Environment

"I absolutely love the natural environment here on Bribie Island. The sea view is just mesmerizing; it's like living in a postcard. Plus, the atmosphere is so quiet and relaxing. It feels like a constant vacation but also like home. I couldn't have asked for a better setting to enjoy my later years."

Access to the natural environment has a positive impact on older residents' quality of life, while simultaneously making their living spaces more attractive. The participant responses regarding Bribie Island's natural environment were both significant and varied.

Overall, participants showed a high level of satisfaction when discussing Bribie Island's natural environment. Both the beach and access to sea views were widely valued, with some participants also positively commenting on their access to places where they could walk easily and safely. Other important factors, such as the relaxing environment, the quiet atmosphere, and the island's good weather, were also highlighted. The close proximity of residents to natural elements, such as the beach and the sea, along with the opportunity to access outdoor activities, contributed significantly to the satisfaction of Bribie Island's NORC residents.

This overwhelming appreciation for and access to the natural environment is a key factor in attracting older residents to Bribie Island and enhancing their quality of life. The island's natural assets, such as the beaches, sea views, and walking environments, provide opportunities for outdoor activities, relaxation, and enjoyment, thereby contributing positively to both the physical and the mental well-being of older residents.

## 4.2.3. Social Environment

Another crucial aspect that shapes Bribie Island NORC residents' perceptions of their living spaces is the social environment. Participants' responses varied, indicating a range of both positive and negative views about their social environment.

"One of the things that stood out to me is how safe the community feels. You can walk around at night without worrying, and that's a big deal for someone my age. Additionally, the services here are excellent; people are generally friendly and the customer service in local businesses is good. It just makes daily life a lot easier and more enjoyable."

Various satisfying aspects of the social environment, including the importance of a "sense of safety", underscore the significance of security for older residents. Some participants praised the quality of the medical services, while others valued the efficiency of local council services. The "low population density" was also discussed as a positive by one participant, suggesting a desire for less crowded living environments.

Interestingly, the concept of "convenience" was raised when discussing social environments, with the participant valuing the convenience of the island bus services. These positive aspects reflect the importance of how supportive and accessible social infrastructure contributes to older residents' contentment.

"For one, it's gotten a lot busier than when I first moved here, which takes away from the sense of a close-knit community. But what bothers me more is that there's really not much to do when it gets dark. I came from Melbourne. I still can't get used to the activities and social events just shut down in the evenings. I wish there was more to do in the community after dark."

Despite all the positive aspects that were raised, some participants voiced their frustration with other, more specific, social environment issues. For instance, the recent influx of people to the island has resulted in disruptions to the peaceful and low-density lifestyle, and this was considered a matter of concern by several of the older residents. These participants stated that Bribie Island has become "a lot busier," while in contrast, another participant criticized the "lack of activities after dark".

Interestingly, one participant noted the negative impact of commercial fishing on the environment. While not considered a social issue, this observation demonstrates the Buildings **2024**, 14, 266 13 of 21

interconnectedness of social and environmental factors in shaping people's perceptions of their living environments.

This broad range of participant responses underscores the complex requirements which must be balanced in order to meet the diversity of social needs within growing older populations. Maintaining the appeal of Bribie Island for older residents, therefore, includes not only improving and expanding services, but also managing population growth to preserve the island's unique social and environmental character.

# 4.3. Theme 3: Willingness to Stay or Leave

"Bribie Island used to be known as 'god's waiting ground' because you're coming to wait, you know, before you die."

When discussing their plans for the future, most participants expressed their intent to remain living on Bribie Island, for the rest of their lives. Their reasons were varied and included: the built environment, the natural environment, the leisure activities, the local services, and economic considerations. Motivated by their love for the countryside or their financial situation, only a few participants conveyed their intent to leave the island in the future.

Bribie Island's built environment was considered to be superior to other places by the NORC residents, who admired the conveniences of life on the island and the close proximity of essential services. In addition to the built environment, the natural environment was also cited as a key attractor for Bribie Island residents, with clean air, desirable climate, proximity to the beach, and sea views all being highlighted. There was broad agreement that access to leisure activities and local services were integral to residents' commitment to remain living on the island. The presence of clubs, quality musicians, and opportunities for relaxation were also valued. Importantly, the availability of services such as public transport (bus services), healthcare, and a senior university added to residents' overall contentment. The economic affordability of property on Bribie Island was noted as a reason to stay, underlining the significance of financial considerations in residents' future planning.

Nevertheless, not all residents who were interviewed planned to remain on Bribie Island, long term. Some participants discussed their intention to leave due to their financial situation or their desire to return to the countryside. This diverse range of responses indicates that while NORCs like Bribie Island can be an attractive option for ageing-in-place, individual preferences and circumstances can greatly influence residents' future plans.

The data show that many residents have strong ties to Bribie Island, leading them to eventually return to the island, even after leaving. These ties could be due to various factors not explicitly determined through the dataset, such as social connections, familiarity with the environment, or the benefits of living in a NORC. Notwithstanding this, the importance of developing an environment that residents value enough to return to reinforces the potential of NORCs as a viable model for ageing-in-place.

# 5. Discussion

This exploration of older residents' perceptions and experiences of living in NORCs on Bribie Island offers a multifaceted understanding of the promising potential of these communities, for ageing-in-place. The following discussion consolidates and extends the interpretation of the results, proposing implications for future research, policy making, and urban planning, within the context of a rapidly ageing society.

Participants' insights of their current living environment on Bribie Island were instrumental in helping to examine the quality of life in NORCs. Generally, residents expressed high satisfaction levels, which can largely be attributed to the unique design and configuration of the NORC. These features included a variety of aspects, among which were the physical layout of the neighborhoods, ease of access to various amenities, safety features, and aesthetic considerations. Accessibility to essential services such as healthcare and retail establishments was agreed to be integral to residents' satisfaction. This finding confirms

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previous studies that emphasize the need for 'age-friendly' urban design, which caters to the mobility and service needs of older adults [38].

In general, participants agreed that they were highly satisfied with the current Bribie Island built environment, and this was predominantly attributed to the available amenities and the environment provided by the NORCs. However, the responses also indicated that there are still some areas for improvement, and in particular, those concerning transportation, healthcare facilities, and opportunities for more social engagement. These findings strengthen the case for the importance of thoughtfully designed and well-planned built environments, in facilitating ageing-in-place.

Critical to residents' positive experience is accessibility to a variety of facilities and services, within a comfortable radius from their homes—such as healthcare facilities, parks, cafes, public transportation, and the local shopping centre—which holds significant implications for their well-being. Accessibility to these amenities has the added advantage of promoting social participation, active ageing, thus further enhancing the overall well-being of older residents [39]. The contribution of these facilities to residents' satisfaction aligns with the principles of urban design aimed at being 'age-friendly' [40]. Previous studies have also identified that a critical determinant to quality of life for the elderly population is mobility and ease of access to services [41]. These findings reinforce this observation, providing evidence that an age-friendly built environment significantly contributes to the attractiveness of NORCs. By ensuring that the needs of older adults are met within their immediate surroundings, NORCs facilitate independent living and strategies to age-in-place.

However, to achieve 'age-friendly' urban design, merely having access to these facilities is not sufficient. The spatial arrangement and proximity to these services also play a key role in enhancing their utilization [42]. For example, despite the presence of facilities, access can be inhibited, or even prohibited, if there is too great a distance to traverse, traffic conditions are poor, or the terrain is too challenging to navigate. These considerations highlight the importance of urban design that responds to the specific service needs and mobility restrictions of older populations. Additionally, the presence of and access to green spaces such as parks contributes to not just physical health through encouraging physical activities, but also to mental well-being, by providing spaces of tranquility and opportunities for social interaction [43].

Despite this, satisfaction with the built environment was not universal. Some older residents shared their frustration about specific aspects of the infrastructure. This included items such as bad traffic, the need for an additional bridge, inadequate car parking, lack of chemists and hospitals, and a desire for more supermarkets, restaurants, and road access to these. Additionally, some of the residents believed that the prevalence of high-rise buildings was problematic. These concerns are a reminder that NORCs not only need to support older adults' needs, but they must also aim to mitigate potential stressors that could negatively impact residents' well-being.

While participants indicated that Bribie Island's existing transportation and healthcare facilities largely satisfy resident needs, concerns were raised regarding certain aspects of these that require attention for further improvement. Specifically, participants expressed concerns about the growing pressures on transportation, mainly due to the recent and increasing influx of tourists, which is negatively impacting the tranquility sought by residents. This surge has contributed to frequent parking shortages on the island, and increasing traffic congestion across the only bridge that connects the island to the mainland. The idea of constructing an additional bridge was discussed, but residents agreed that this solution presented a dilemma for them: while it would ease traffic congestion, it might also lead to an increase in the number of visitors, thus negatively impacting the island's quiet character.

A significant concern that was raised by the participants was the absence of a hospital which can provide comprehensive healthcare services on the island. While the day hospital (which was still under construction during the time that the interviews were

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conducted) may address some healthcare needs, patients will still need to be transported to the mainland hospital (around 40 km away in the town of Caboolture) for emergencies. The bridge to the island does not contain an emergency lane, risking a potential delay in critical medical treatment. This is especially of concern when the drive can take over an hour, when the bridge and areas around it are congested with traffic. Further research is required to identify these specific areas for improvement, to respond to the residents' concerns and their growing demands.

In addition to the amenity provided by the built environment, the natural environment is another crucial aspect that plays a significant role in the satisfaction levels of older adults living in NORCs. The appeal of the natural environment on Bribie Island, characterized by its abundant green spaces, beaches, and wildlife, was clear in the participant responses. Many residents emphasized the positive effects of the local natural environment on their mental and physical health. This aligns with previous research that advocates for the preservation of natural environments, to promote relaxation, increase physical activity, and reduce stress in older adults [44]. However, issues such as the management of local wildlife and the maintenance of public spaces were also raised, underscoring the importance of proper environmental stewardship in these communities.

The social environment of a NORC, characterized by the interactions, relationships, and activities within the community, is equally crucial in shaping older adults' perceptions of their living environment. Participants in this study generally expressed appreciation for the sense of community on Bribie Island, including the friendliness of their neighbors and the shared experience of ageing among most residents. This sense of camaraderie aligns with previous research showing the positive impact of social support on older adults' well-being [45]. However, concerns about a lack of social activities and the risk of social isolation were also highlighted by several participants, reinforcing the need for purposeful efforts to create and sustain opportunities for social engagement within NORCs.

In terms of future intentions, most of the respondents expressed a desire to continue residing in Bribie Island, underscoring the strong appeal of NORCs as an effective model for ageing-in-place. Their commitment to the island and its community was clear, highlighting the success of NORCs in fostering an environment conducive to longevity and satisfaction in later life. This finding supports existing literature that affirms the value of NORCs in enabling older adults to age in a familiar environment, while maintaining their independence and connections to their community [46,47].

However, it is important to note that participants' intentions to remain in Bribie Island were often conditional, largely dependent on the improvements in certain aspects of their living environment. Predominant issues identified included improved public transportation, enhanced healthcare services, and more opportunities for social engagement. These reflect the diverse needs and aspirations of older adults that should be acknowledged and catered to, for NORCs to continue to be a favourable setting for ageing-in-place. This calls for a continuous assessment of the living conditions in NORCs, involving residents in the evaluation process, to identify potential areas of enhancement [48].

In addition, the question of future care needs was a recurrent theme among participants. As they age, their needs and abilities might change, potentially requiring more specialized care and support. While the NORCs model emphasizes independent living, a comprehensive and integrated care system within these communities will be vital to address these evolving needs. This further necessitates the integration of health and social care services within the NORCs model, a concept gaining recognition in ageing research [49].

Notwithstanding the general preference for ageing-in-place within the Bribie Island NORC, our findings also revealed a segment of older adults who envisioned alternative living arrangements for their later years. A small but notable number of respondents expressed a desire to return to the countryside for their retirement life. This preference stems from a nostalgic longing for a slower pace of life, closer ties with nature, and perceived stronger sense of community in rural settings [50]. This underscores that the

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'one-size-fits-all' model does not apply to ageing and reiterates the importance of offering a variety of living arrangements for older adults to choose from.

Furthermore, it is vital to develop more responsive and inclusive environments within NORCs. This study highlights the importance of such environments, but there is a need for a deeper exploration into what these improvements entail and how they can be achieved. Future research should focus on identifying specific areas within NORCs that require enhancement to better support the diverse needs of their residents. This involves not only physical infrastructure improvements but also social and community-based interventions. Key areas for improvement may include the development of more comprehensive health-care services, enhanced transportation systems, and increased opportunities for social engagement and community involvement. Research should also explore how NORCs can be designed or modified to be more inclusive of various cultural, social, and health backgrounds, ensuring that all residents feel welcome and supported.

The findings of this study underscore that NORCs, with their distinct characteristics and adaptability, present a viable option for ageing-in-place. It is essential, however, that urban planners, architects, and policymakers concentrate on improving these communities in two key aspects: the built environment and the social environment. Enhancements to the built environment should include accessible healthcare facilities, reliable transportation systems, and age-friendly urban design. In terms of the social environment, a focus on fostering social engagement is crucial. Social engagement refers to the creation and maintenance of interactive, supportive networks and activities that encourage participation and connection among older adults. This includes community events, clubs, and volunteer opportunities that foster a sense of belonging and purpose. By addressing these aspects, NORCs can be better equipped to meet the changing needs of the ageing population, thereby enhancing their livability and efficacy as a setting for ageing-in-place.

# 6. Conclusions

This research has provided comprehensive insights into the experiences and perceptions of older adults residing in NORCs, specifically focusing on Bribie Island, Australia. Our findings highlight that NORCs have significant potential to facilitate ageing-in-place, by creating a supportive and conducive built environment.

The reasons that attracted older adults to relocate to Bribie Island primarily revolved around its appealing natural setting, availability of amenities, and sense of community, suggesting that these elements are key to the formation and attractiveness of NORCs. Residents' generally positive perceptions of their current living environment in Bribie Island further affirm the promise of NORCs as viable environments for ageing-in-place. Yet, there remain areas for improvement, particularly relating to transportation, healthcare facilities, and social engagement opportunities, which would require the attention of urban planners, architects, and policymakers to ensure these communities' continued viability.

With respect to future plans, most respondents expressed a desire to continue residing in Bribie Island, which bodes well for the future of NORCs. However, there are varying preferences and aspirations among older adults, indicating that NORCs may not be the ideal solution for everyone. Some older adults expressed a longing to return to the country-side or to temporarily depart from the island, demonstrating the need for a flexible and inclusive range of housing options and support services to cater to the diverse needs of an ageing population.

Despite the careful design and execution of this study, there are several limitations that should be acknowledged. Firstly, this study's findings are based on a single case study of Bribie Island, Australia. While this provides a detailed examination of the specific situation in Bribie Island, the results may not be generalizable to other NORCs in different geographical locations. Secondly, the data were primarily collected through interviews, which are subject to self-report bias. The accuracy of the responses depends on the participants' self-perception and honesty, and there may be discrepancies between their reported experiences and actual lived experiences. Thirdly, the number of participants in this research, while

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adequate for a qualitative approach, was relatively small and may not fully reflect the diverse perspectives and experiences of all the older residents in Bribie Island. Fourthly, this study lacks detailed analysis on the challenges and limitations of ageing in NORCs, such as infrastructural issues, social isolation, and adaptability to residents' changing needs, thus future research for a more comprehensive understanding is required. Fifthly, the lack of comparison to other ageing-in-place options has limited the generalizability of findings. It would therefore be beneficial to compare NORCs with different ageing-in-place communities in the future, to better understand their relative strengths and weaknesses.

Future studies should aim to encompass NORCs across varied geographical and sociocultural contexts, thereby broadening the understanding of diverse ageing experiences. It is recommended that these studies employ mixed-methods approaches, integrating quantitative surveys with qualitative focus groups, to enrich the data and provide a nuanced understanding of the experiences and perceptions of older adults in different NORC environments. This approach will not only address the current study's limitations, but it will also contribute to a more holistic and comprehensive view of ageing-in-place within diverse NORC settings.

In conclusion, this research validates the potential of Bribie Island NORCs as a suitable and promising option for ageing-in-place, provided they are designed and managed in a manner that responds to the evolving needs and aspirations of their ageing residents. However, the future of NORCs will hinge upon continued research, evaluation, and improvements in the built environment and service provision, as well as a commitment to understanding and accommodating the diverse needs and preferences of older adults. The findings from this study should be seen as a valuable contribution to the ongoing discourse on ageing-in-place and will hopefully inspire further research in this area, both within Australia and globally.

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Appendix A. Detailed Thematic Analysis Framework

Themes	Categories	Topics	No. of Interviewees
Age	65–74		12
	75–84		8
	85 and over		1
Gender	Female		9
	Male		12
How long stay	1–5 years		6
	6–10 years		3
	Over 10 years		7
	Under 1 year		4
	Will move		1

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Themes	Categories		Topics	No. of Interviewee
	Economic Considerations		Affordable	1
	Economic Considerations		Down-sizing	2
	Natural Environment		Climate	1
			Beauty of Environment Sea coast	1 3
	Lifestyle		Convenience of work	1
_			Good fishing	1
Reason to move to			Good lifestyle	1
Bribie Island			Life change	1
			Retirement living	2
			Semi-urban End of travel	1 1
			Resident since childhood	2
	Social and Family Connections		Family	2
			People	2
			Take care of parents	2
			Small community	1
			Art gallery	1
			Cinema Clean	2 2
			Close to city and airport	2
			Club and pubs	5
			Community	1
			Day hospital being built	6
			Dog park	1
			Lovely cafes	3
			Low level of building	1
			No traffic lights Park	$rac{1}{4}$
		Built Environment	Restaurants	2
			School	1
			University of the Third Age Close enough to:	1
			Beach	5
			Bus station	1
	Environment satisfied		Cafe	1
			Club and pubs	2
Perceptions of the			Medical	2
Environment			Park Playground	3 1
			Shopping centre	8
			Walking	1
			Easy to access to:	
			Health services	1
			Government services Public transportation	1 2
			Beach	1
		Natural Environment	Island	1
			Quiet	2
			Relaxing environment	3
			Sea view	4
			Walking environment Weather	5 1
			Bus service	1
			Convenient	1
		Social Environment	Good council	2
			Low density of population	1
			Medical	3
			Property affordability	1
			Safety	2

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Themes	Categories		Topics	No. of Interviewees
Perceptions of the Environment	Environment not satisfied	Built Environment	Car park not enough Chemist not enough Flooding High-rise building Hospital not enough Need another bridge Need bigger supermarket and more Need lower speed limit Need more bikeways Need more public transportation Need more restaurant Need more road access Off-leash area not enough Too many retirement villages Traffic	1 1 1 2 4 6 3 1 1 1 1 1 1 1 1
		Social Environment	A lot busier Commercial fishing affects environment No activities when dark Too many people coming	2 1 1 3
Willing to stay or leave	Leave and back again	Lifestyle	Fishing Love traveling	1 1
	Stay to the end	Built Environment	Built environment better than other places Convenient life Everything close	1 1 1
		Natural Environment	Clean air Climate Near beach sea view	1 1 1 1
		Leisure Activities	Club Good musician Relaxation	2 1 1
		Local Services	Bus service Healthcare Senior university	1 2 1
		Economic Considerations	Property affordability	1
	Will leave	Economic and Environment Considerations	Depend on financial situation Love countryside	1 2

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