

Exploring the Wellbeing of Residents In Redcliffs in the Aftermath of the Canterbury Earthquake Sequence

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Executive Summary

Introduction

Following the Canterbury Earthquakes Sequence of 2010 and 2011, the population of Christchurch have suffered a great deal of loss to both lives and infrastructure. One of the hardest hit suburbs during these earthquakes was the area of Redcliffs in the South east of Christchurch city. Although Christchurch is on the road to repair, much uncertainty exists at all levels of society. In particular residents and those trying to help local communities have a lack of information of what is happening in their communities and information on the current state of the area.

Impacts and Context

Significant loss of life, wellbeing, business and residential properties ensued following the 2010/2011 Canterbury Earthquake Sequence. The residents of Redcliffs went without water, sewerage and electricity for numerous weeks. Close proximity to the Port Hills fault has created ongoing seismic disturbances, difficulties and impacts on a personal and community scale.

Community Impacts

Research by Wilson (2012) has shown the impacts that a disaster may have on a community, and the corresponding resilience trajectories which may ensue. Following a disaster, three trajectories can be conceptualised. These being: (a) rapid readjustment and recovery, (b) slow readjustment and recovery and, (c) inadequate readjustment and recovery (Figure 1).

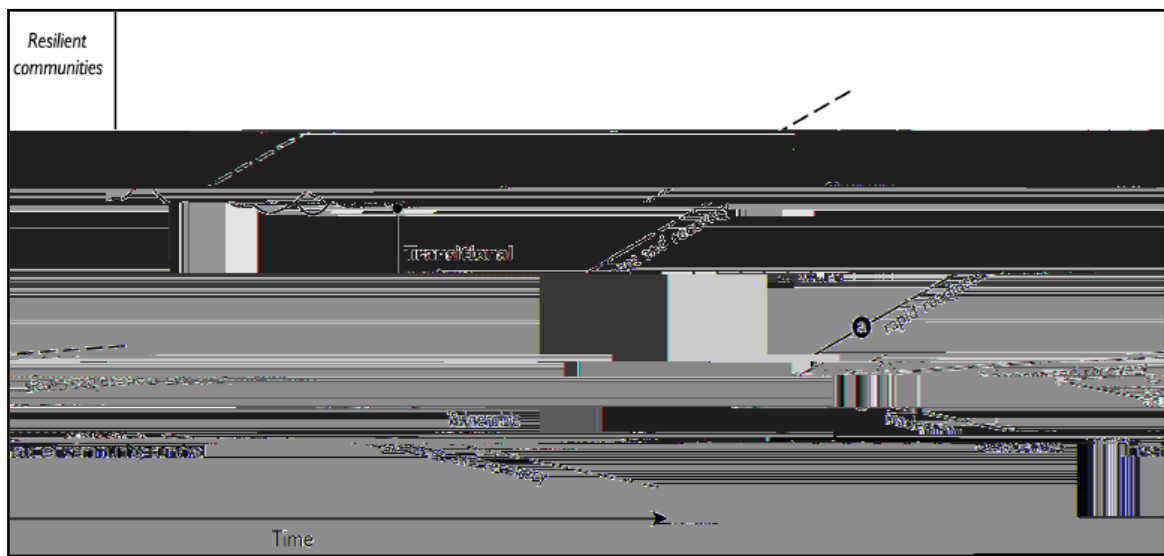


Figure 2: Resilience trajectories following a disaster (Wilson 2012).

Closure and Relocation

The closure of the Redcliffs Primary School, and temporary relocation to Van Asch School, Sumner occurred following the 22nd February 6.3 Magnitude Earthquake. This relocation has caused significant disruption within the local community. Instead of being within walking distance to Primary School, every morning these students have to commute to Sumner. The Kidsfirst Kindergarten and Redcliffs Library have also been closed and temporarily relocated following the 22nd February 6.3 Magnitude Earthquake. These facilities have been temporarily relocated, until a suitable permanent location can be built. These temporary locations are proving fruitful within the community.

Business Impacts

Many businesses have been disrupted following the Canterbury Earthquake Sequence. The Redcliffs New World has become permanently closed until further notice. This has resulted in the local residents of Redcliffs having to commute out of the area to obtain vegetables, groceries and other amenities. Fortunately the local dairy has increased the range of groceries and food items available for the Redcliffs community. However, this is only seen as a short-term fix for a service which is sorely missed within the community.

Housing and Services Impact

Severe damage to housing has occurred within Redcliffs. Many houses immediately under the cliffs have become decimated by rock fall, resulting in significant loss of life and residential properties.

Methods

This section discusses the application of our chosen methodology for our Redcliffs community research project. Within this section we will outline the four different techniques that were used within this research. We will explain the key purpose of each method in relation to the mode of data we obtained. This data will be of assistance to the Redcliffs community, in aiding a successful recovery. The selection of our methods were established with a particular reference to our research objectives, which were alluded to above.

Our objectives were chosen based on what aspects of the Redcliffs community have felt severest impacts of the Canterbury Earthquakes Sequence. Some key areas of social uncertainty that were recommending to us by the Sumner Bays Union Trust: the lack of demographic statistics and the rehabilitation of community buildings: the three key buildings that we focused on was the Redcliffs public library, the Kids First Kindergarten and Redcliffs New World, all of which had been severely damaged from the Christchurch Earthquake. Both of these aspects were of a high importance to Redcliffs community as a collective, hence these two objectives became the primary rationale of our methodology.

To accomplish the objectives of our research we considered different modes of data collection when designing our methodology. In order to gather data sets that would successfully reflect our key objectives, we decided upon four methods to collect both quantitative and qualitative data. Each method would aim to collect different information and the prominent use of surveys would increase the reliability of our results (Spronken-Smith, 2005).

Our research group chose four different methods: A) a Census, B) local library survey, C) local business survey D) GIS Projection of Redcliffs Area.

A) *Census*

The Census was the primary method used within this research project. The mini census was set out in a quantitative format. This method considered the key objective of population shift within the Redcliffs area. In the aftermath of the Christchurch Earthquakes, we can infer that the Redcliffs population has declined, due to resident vacating the community. In order to define the geographic boundaries of our mini census sample area, we divided the Redcliffs community into 20 meshblocks: each of these contained the areas from s ction of Rj.1 E209(as6un)-9(c).cme

Results and Discussion

Census

In response to our primary objective to quantify the change in population we compared our Census results to data collected in the 2006 Census to serve as a pre-earthquake estimate. Of the 1004 homes in the Redcliffs area, as indicated by 2006 Census data, we successfully collected records for 765 homes (Appendix E). This included 230 uninhabited homes, and 508 full responses. Full responses (participants) could not be gathered from all respondents due to time constraints or an unwillingness to participate, in which case the recording of the population was prioritised. Of the 230 uninhabited homes discovered throughout our surveys; the results of earthquake damage, demolition, construction and fear for safety, only 124 (Appendix F). This inconsistency indicates that the impact of the Canterbury Earthquakes on . While the fear for safety in Redcliffs homes is likely the main driver for home abandonment, the state of some houses does indicate that some residents left by choice. The generally higher socioeconomic demographic that makes up Redcliffs would support this, with many residents having the economic option to

The primary aim of our Census was a quantitative analysis of the Redcliffs population in its current state following the Canterbury Earthquakes. From the accumulation of our surveys we confirmed the Redcliffs population at 1325 residents, with 76.2% of homes surveyed. Using the number of homes unsuccessfully covered in our survey (239), and the averages of our current age/sex data of the community we estimated the population contained within those homes to create our total population figure of 1739. In comparison to the 2006 Census figures, covering the same households as we surveyed, the population has reduced by an estimated 631 residents between 2006 and 2012 (Appendix G). 239 unsurveyed homes does leave significant uncertainty in our estimates and the nature of our estimation assumes some amount of homogeneity within the community.

An examination of the demographic distribution of the Redcliffs population shows that the age composition has not significantly changed following the earthquakes. The ageing population concentrates in the older age groups in both the 30-64 and 65+ ages as it did in 2006 (appendix H). All of the age groups show relatively similar drops, except for the 14-19 age group which appears to have risen. The population structure remains the same as the 2006 population with relatively uniform changes occurring across Redcliffs, indicating that the ability to move is not limited by age group.

The employment status of participants very much reflected our population demographic findings, with a predominance of full-time workers (55%) and one third of residents being

community fixture even if a Christchurch City Council partnership is required, sacrificing their independence.

Business Survey

15 local businesses responded to our survey, including the BP, the Redcliffs Dairy and The Spur Cafe, key assets of the community following the Earthquakes, all of which report some level of disruption following the earthquakes. 100% of these businesses also report increased levels of stress and anxiety (Appendix L) and one third of respondents attribute job losses to the impact of the earthquakes. A reduction in foot traffic was noticed by 87% of businesses with 6 observing a major drop (Appendix M). We received a mixed response with satisfaction over communication with both the Christchurch City Council and CERA (Appendix N). 60% of respondents were unhappy with this governmental consultation while one third were satisfied with the current quality of communication. 100% of participants believe that business will recover and continue to grow in the future, while 87% of these see the return of the local New World as a key factor in the return of business to the region.

Previous research by Wilson (2012) how the resilience of people can vary in the face of disaster. The community of Redcliffs appear to be recovering well and are of a resilient nature, in the face of adversity. Research by Smith et al. (2011) studied the impacts of flooding on farm communities within the Manawatu, New Zealand. This research shows that when confronted with adversity, the farmers looked to broader community support for aid in recovery. This appears to be the case within Redcliffs, with increased community support and communications aiding community resilience.

Limitations

Census

With our Census of Redcliffs the primary limitation was in the sheer scale of the study, with an approximate 1004 homes to be covered. With a completion rate of 76.2%, error in the precision of our data exists as the remaining population was estimated from the number of

Positionality did influence our Census results as the perceptions of our research group and the research itself influenced the responses we received, specifically with the health and safety related questions (Moore 2012). Due to the personal nature of responses to such questions, responses would be appropriately tailored to a level that the participants would be comfortable with, which may not necessarily be the truth. In such an instance the results of our Census do not accurately reflect reality (Moore 2012).

Library

The library survey was limited by two main factors, the selection of participants and the role of intersubjectivity. With only 50 participants only a limited sample of opinions were recorded. The use of the Library book sale limited this sample to those attending this public event over a very limited time period. The open nature of this sampling meant that the data was biased towards members of the library but also included people with no connection to the library or the Redcliffs Community. While a fair and even sample was recorded, an event associated with the Library but within the Redcliffs community would have resulted in opinions more useful for our research.

Intersubjectivity was a significant influence on our results as the concept of each question was interpreted differently by each participant, and were affected by explanations of each question (Gillespie & Cornish 2009). These explanations relating to the status of the Library, its role as a community library and the current situation with the Christchurch City Council would all have influenced the answers given, by modifying their understandings. Additionally these questions, as supplied by the Volunteer Library were worded in a way that answers were more likely to be more socially conscious.

Business

The business survey aimed to establish the viability of the Redcliffs Central Business District after the devastation to infrastructure and population shifts. The questionnaire was designed to provide qualitative information on impacts, changes and future aspirations each business had experienced. Questions created a bias towards positive responses towards survival, being part and parcel of business nature. Positionality of businesses as key locations may have enhanced the positive responses within the survey as a definite optimistic response was obvious from all businesses surveyed. The question on whether the New World should return gained a 100% favourable response rate. Although our community response on the New World was also positive, the reasoning for the two respondent sets answers was directly different. Business bias only saw the New World return as increased traffic flow and turn-over while the wider community saw the return as a community asset of key social importance.

Online Kidsfirst Kindergarten survey

This survey proved difficult to conduct and provided an understanding of complexities that can arise during community research. Our initial brief included Redcliffs Kidsfirst kindergarten as part of our study which had been initiated by a parent of the kindergarten contacting the university. However, as Beryl McCombes Redcliffs Kidsfirst kindergarten is a private business, no consultation was conducted with management on behalf of the research subject in the first stages. Discussions were made by us with head office including the Managing Director and it became clear that due to differing strategic and diplomatic reasonings that the online survey should not be conducted. We maintained a professional relationship with Kidsfirst staff and management and gained an understanding of different objectives and outcomes stakeholders have in community outcomes.

Conclusion

Redcliffs has incurred a negative population shift since the recent Christchurch earthquake events of 2010 and 2011. This change has had a direct impact on the community for long term post disaster recovery. Quantitative and qualitative research findings presented in this report are important factors in the effective delivery of services in the post- disaster environment and can improve the recovery trajectory for Redcliffs.

Acknowledgments

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Redcliffs Community Associates

Eddie Hayes - Sumner Bays Union Trust, Community Development Worker and liaison

Theresa Murphy -

Jan McLauchlan- President of Redcliffs Public Library Inc

Rose Phillips - Redcliffs Public Library Inc

Fletcher Stanton -

References

Abbot, O. (2007). 2011 Census Coverage Assessment and Adjustment Strategy. *Population Trends*, 127, 7-14

Gillespie, A. and Cornish, F.

Appendix

Appendix A: Meshblock Codes Used to Define Redcliffs in our Research

2702502
2702300
2701506
2701800
2701501
2701300
2701400
2701200
2701900
2701507
2701600
2702000
2701700
2701505
2701503
2702501
2702200
2702100
2702400
2701504

Appendix B: Census Form

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Redcliffs Community Survey
Part 1

Name:

Address:

Residence:

Gender: Male Female

Age: 0-29 30-64 65+

Employment: Full-time Unemployed Student

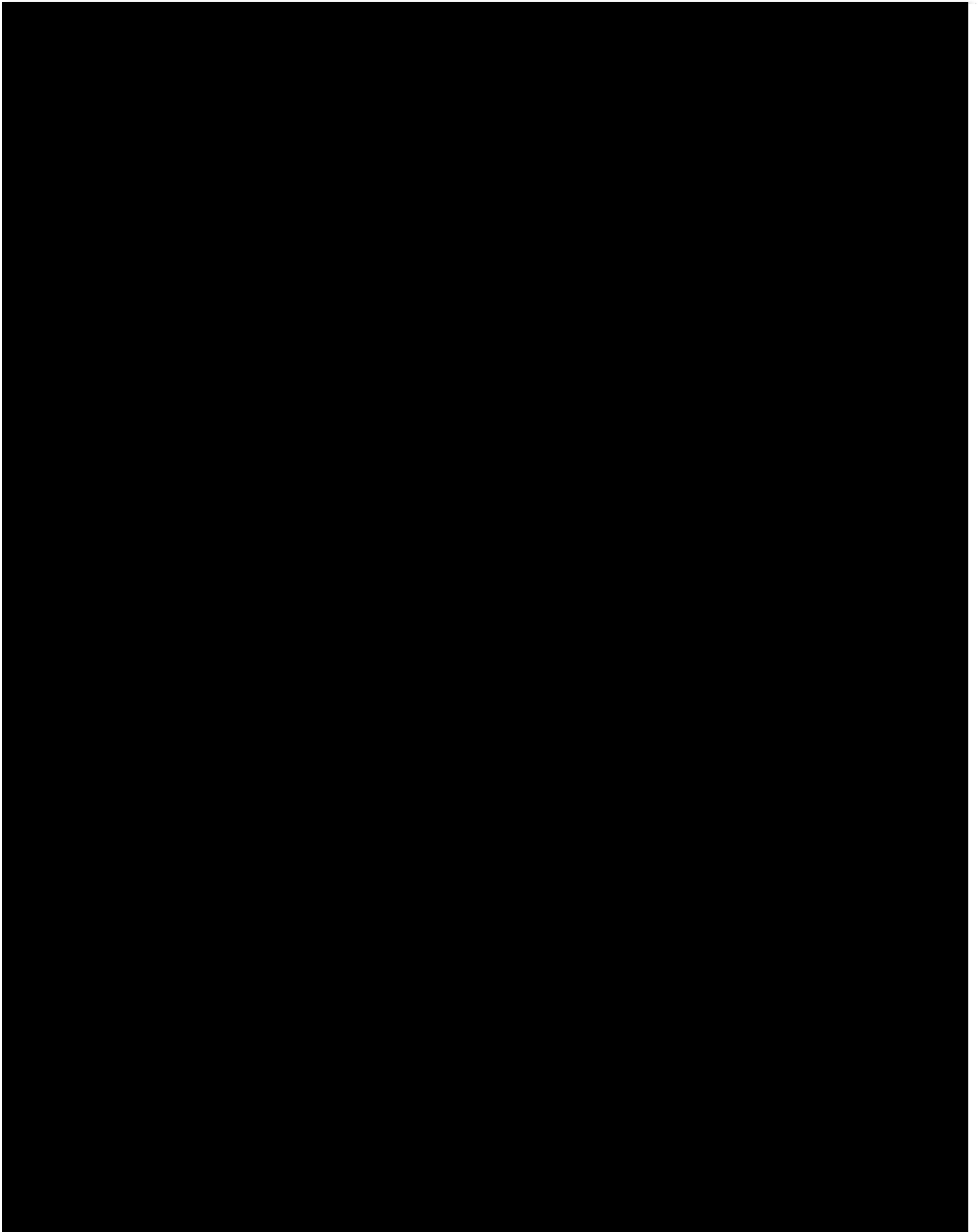
Do any of your household members use the Redcliffs Community Library? Yes No

Do your pre-schoolers attend Kindergarten? Yes No

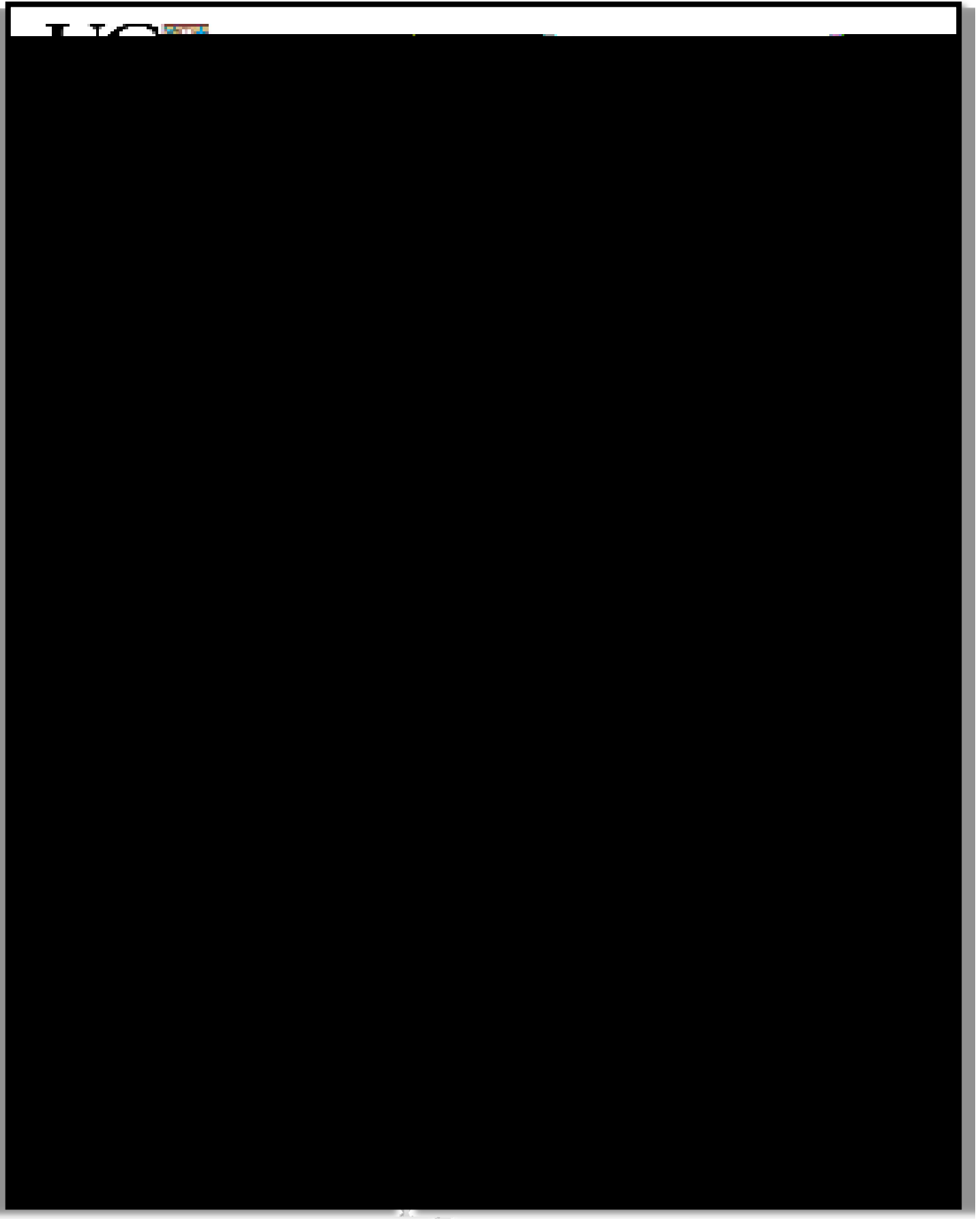
Progress: 100%

Next

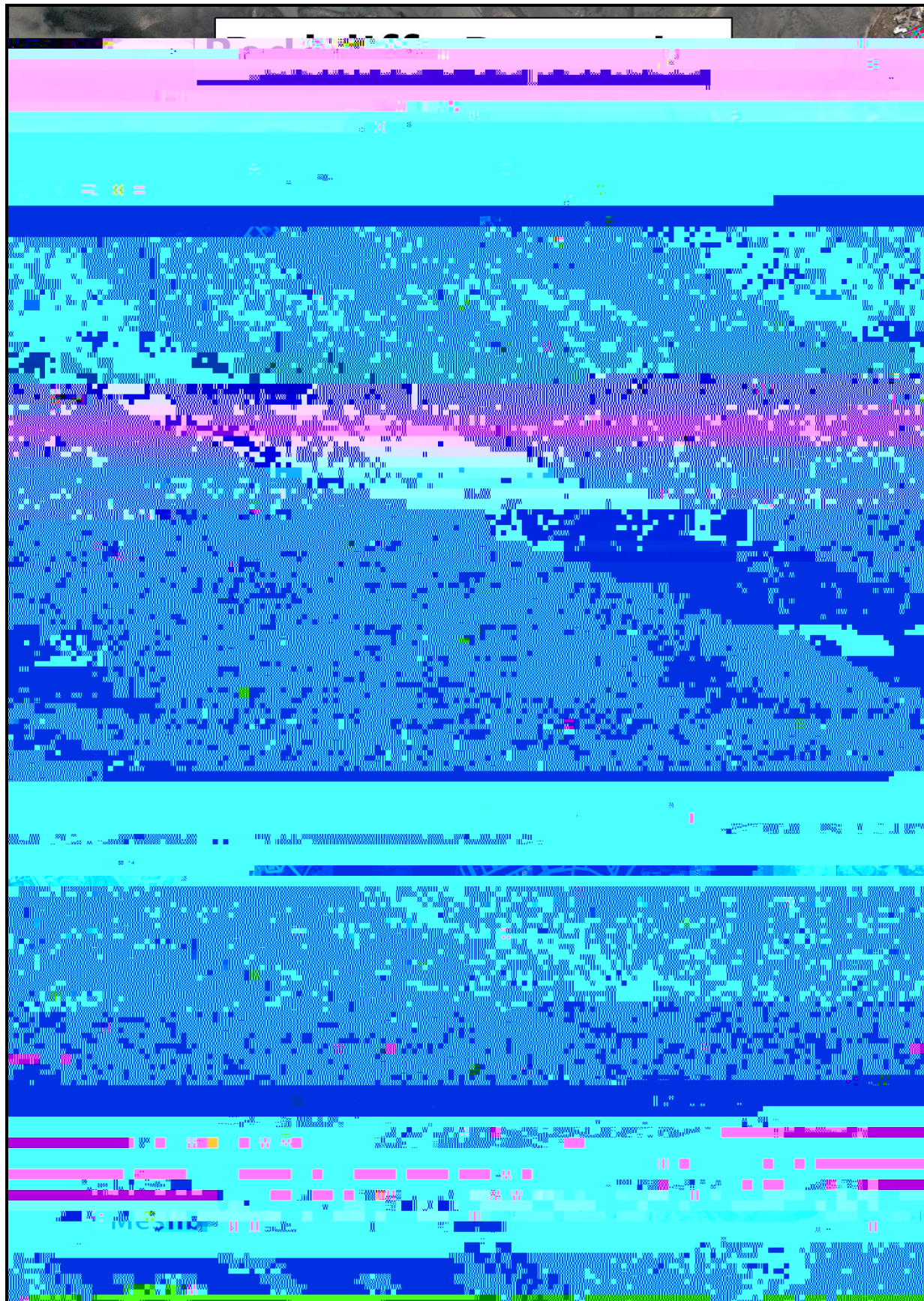
Appendix C: Library Survey Form



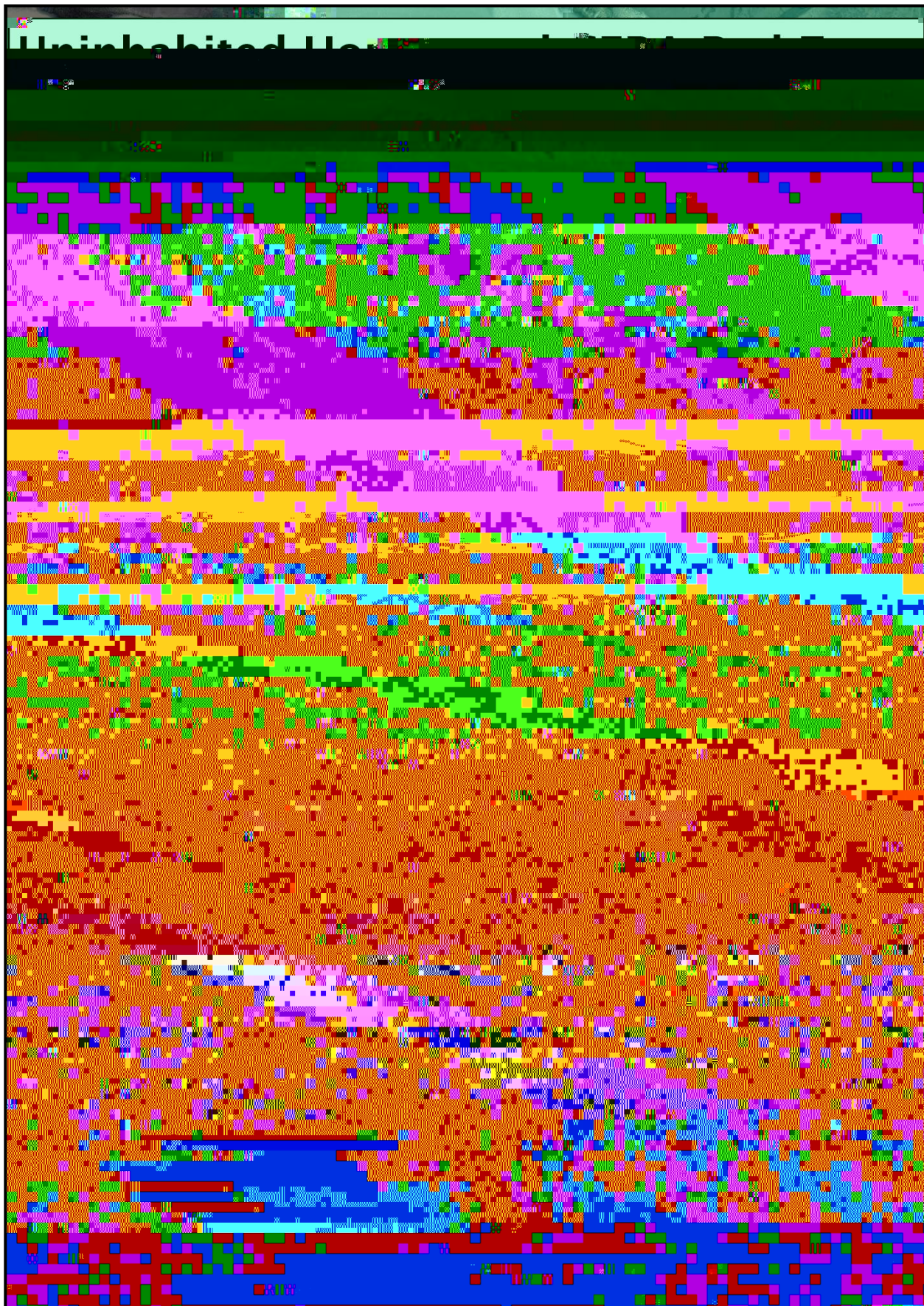
Appendix D: Business Survey



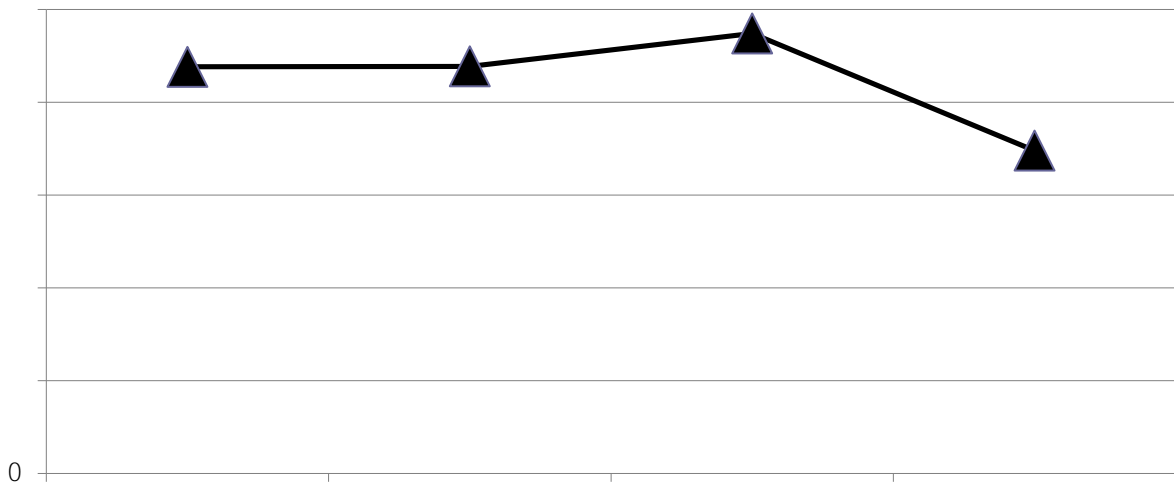
Appendix E: GIS Map of Redcliffs Properties and Overlay of Meshblocks



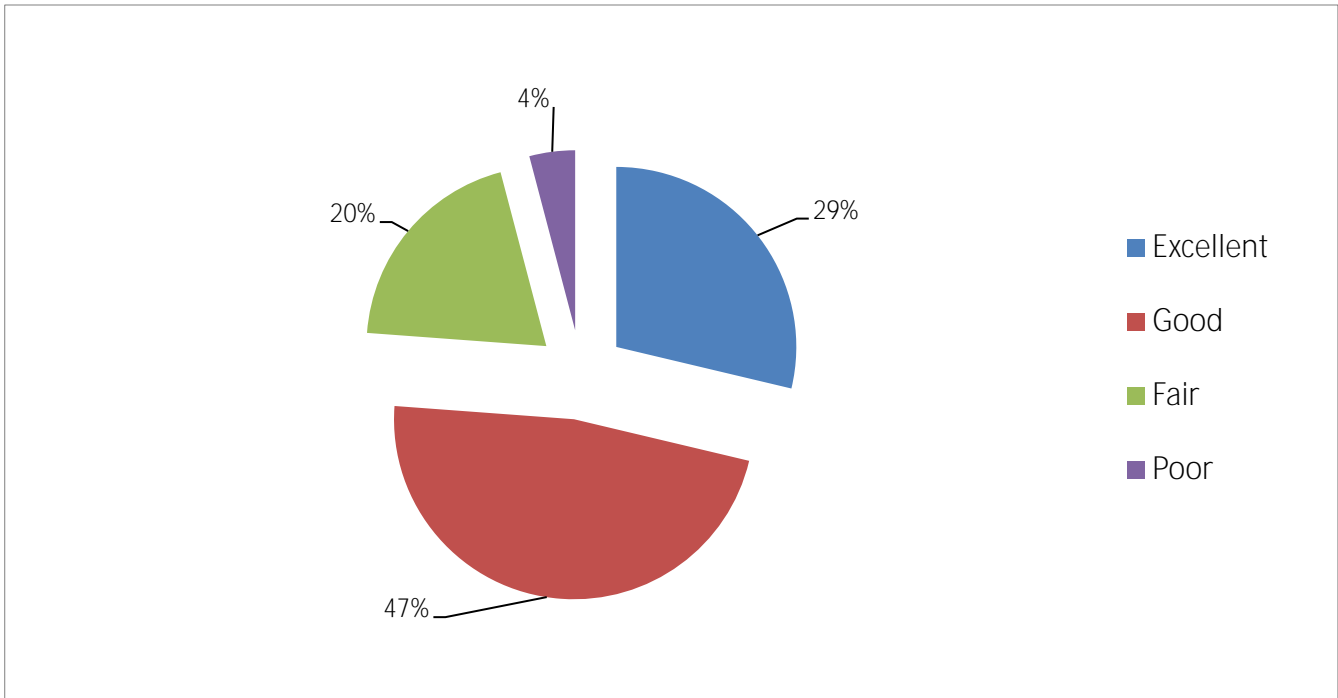
Appendix F: GIS Map of the CERA Red Zone and Uninhabited Homes in Redcliffs



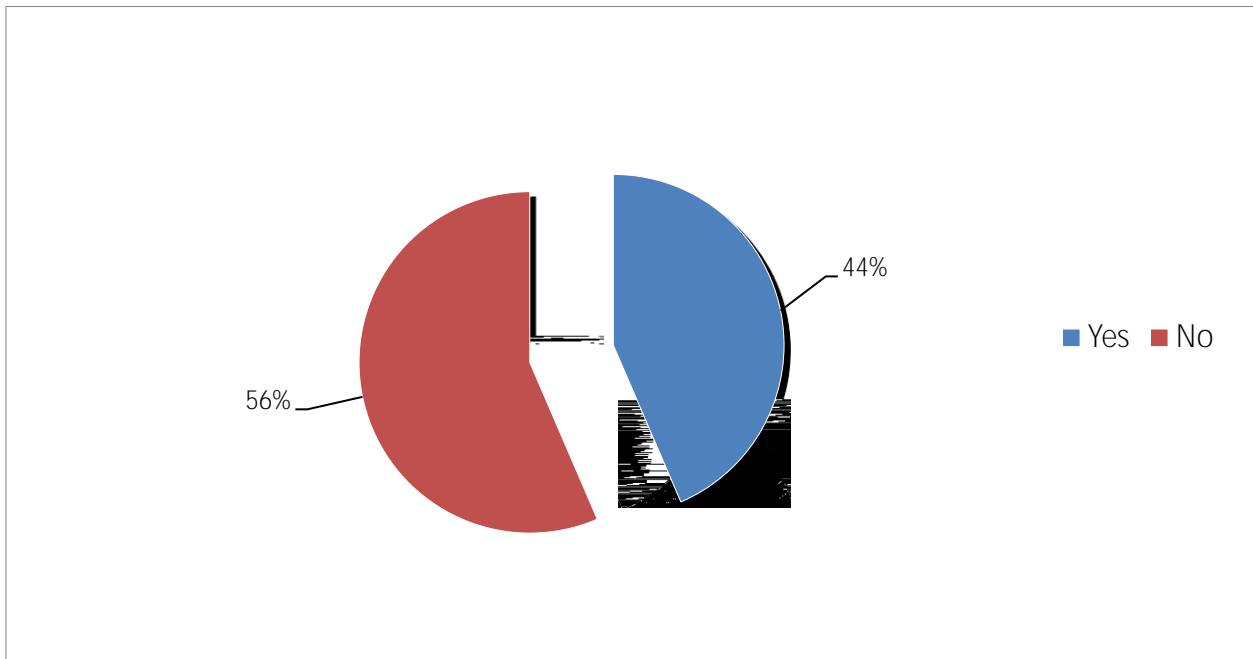
Appendix G: Population Change Graph



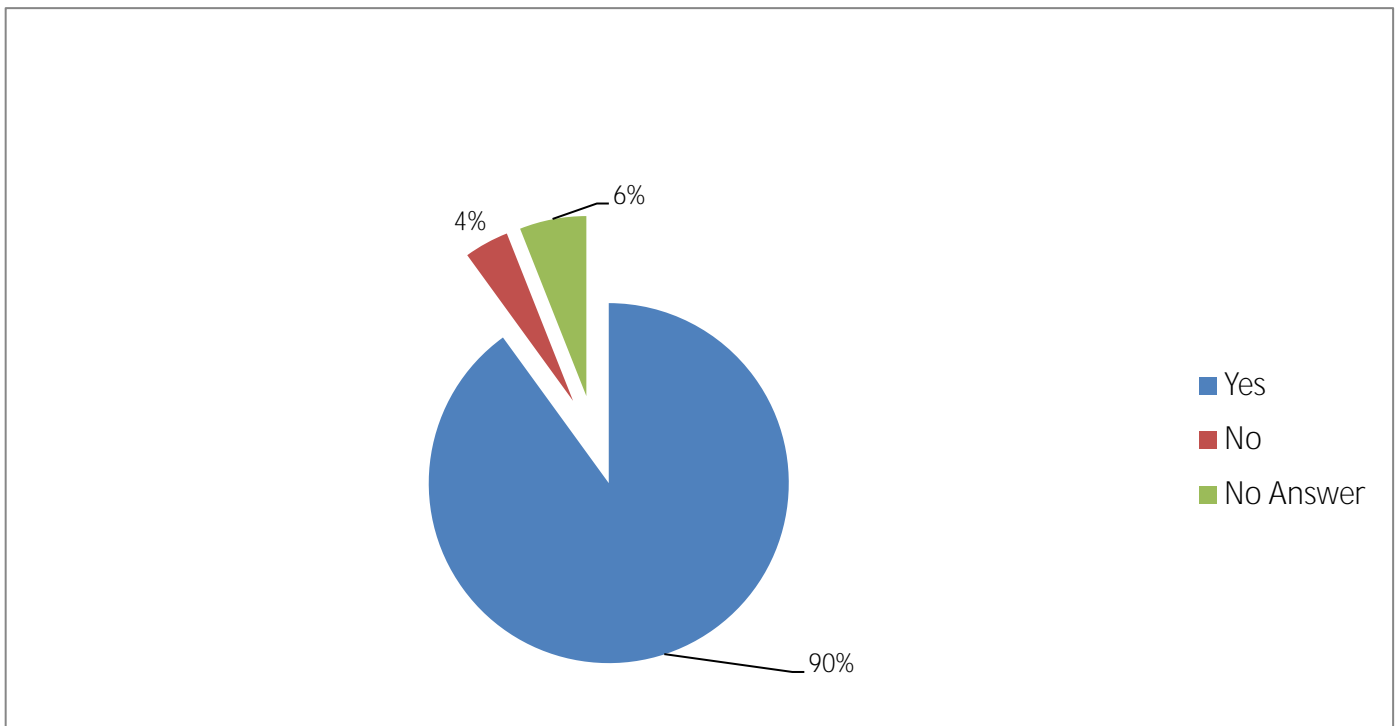
Appendix I: Self Assessed Health of Census Participants



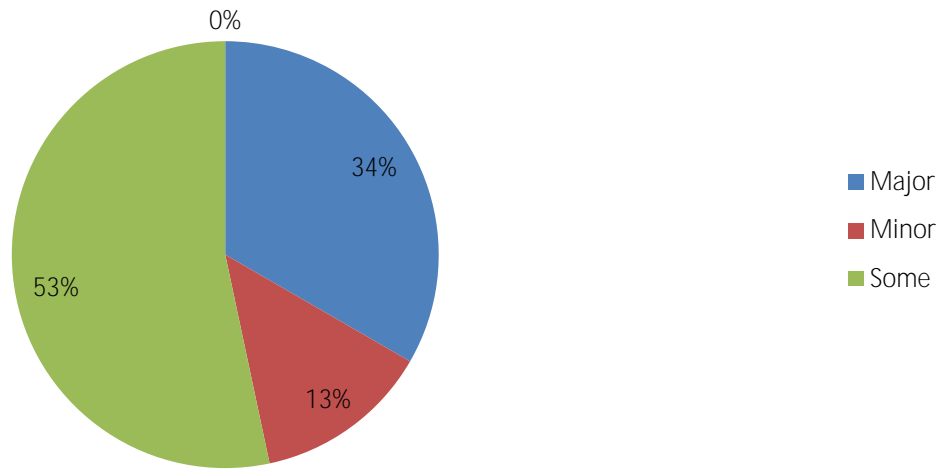
Appendix J: Library Users Within Redcliffs



Appendix K: Response to a CCC Rebuild of Volunteer Library



Appendix L: Increases in Stress and Anxiety by Businesses



Appendix M: Reduction in Foot Traffic Observations

Appendix N: Response of Businesses to Satisfaction with Administrative Departments