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ASSESSING THE QUALITY OF BATHING BEACHES AND THE ROLE OF SEASONALITY IN TOURISM ON THE ISLE OF WIGHT: A COMPARATIVE STUDY

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Abstract

Over the years, the number of tourists visiting beaches in the summer has increased. This has led to call for more facilities, and investment in development of tourist sites. This report focuses on the quality of bathing beaches in the Isle of Wight, out of season. The BARE system was used to evaluate 17 bathing beaches located on the Isle of Wight. This method considered 5 main parameters; Safety, Facilities, Water Quality, Scenery and Litter. These were then assessed and combined to create a final grading. It was found that urban and resort beaches lacked many of the aspects in the grading criteria, with the highest scoring beach rating 3*. The rural and remote beaches were recorded as poor, the lowest rated 1*.

It was found that there were substantially less facilities available out of season than in season (when the results were compared to a previous study.) There was a lack of facilities, and not only those which could be considered 'summer specific' i.e. sunbeds, umbrellas, boat hire. In fact, there was also a lack of clean and open toilets, showers, shops and cafes. Safety was another main issue, as there was a lack of lifeguards at all sites. Not only this, but there was generally a lack of safety equipment at many of the village and rural beaches. Litter was improved from the previous study, and there was significantly less litter at nearly all the sites. This report details recommendations based on the BARE findings, and if followed, would increase the quality of the beaches observed.

1.0- Introduction

The BARE system can be used to assess the quality of bathing beaches in a range of locations. This project assessed the quality of 17 bathing beaches on the Isle of Wight. The aims and objectives of the project are detailed below.

1.1 Aim and Objectives

The aim and objectives for the project are as follows

Aim:

17 different bathing beaches around the Isle of Wight will be classified using parameters found in the BARE analysis method, the results will be compared to a past study to determine whether there is a difference in beach quality in and out of season.

Objectives:

1. To evaluate beach quality on 17 main bathing beaches around the Isle of Wight using the multi-faceted BARE system

2. To make recommendations based on the BARE findings, address management issues and suggest recommendations for improvement of the observed parameters at the Isle of Wight beach sites

3. To carry out a comparison of results with a previous study (*Finch 2007),* to evaluate differences and suggest changes to increase tourism out of season.

1.2 Hypothesis and Null Hypothesis

Hypothesis: There will be a difference between the quality of bathing beaches in and out of season on the Isle of Wight.

Null Hypothesis: There will not be a difference between the quality of bathing beaches in and out of season on the Isle of Wight.

1.3 Scheme of Work

Table 1 shows that the objectives outlined in the project are meeting the definition of SMART objectives.

Objective	Specific	Measurable	Attainable/ Acceptable	Realistic/ Revelant	Time Bound
1.	Specifically based in the Isle of Wight	Using the BARE method, data can be accurately collected at each beach	Extra information can be supplemented with other resources	This will provide the beaches to be analysed	2-3 weeks
2.	Looks at the management issues on specific bathing beaches in the Isle of Wight	Parameters of Safety, Facilities, Litter and Scenery will be observed in the BARE analysis test	These recommendations can be made after visiting the sites	This information will help to suggest ways in which beach quality can be improved from BARE results	4 weeks
3.	A comprehensive comparison between Out of season and in season quality of bathing beaches in the Isle of Wight	Using Finch's results to compare and contrast	After visiting the sites, and comparing the current results with past results from the same beaches.	This will show if any major management changes have been made, and reasons for change can be suggested	10 weeks

Table 1: SMART Objectives (Source: Author)

Outcome	Milestone	Deliverable	Methods and Resources
1. To evaluate the quality of bathing beaches on the Isle of Wight using the BARE technique	1.1 Literature review on BARE analysis and beach study areas 1.2 Locating beach areas 1.3 Rating beaches using the BARE system	Research on the Isle of Wight, statistical data and extensive research on the selected bathing beaches.	Process of Literature Review Researching Techniques Field Trip
2. To make management recommendations to increase the quality of the bathing beaches evaluated by the BARE method	2.1 Survey and analyse all 17 beaches, looking at potential 'weak' areas in management 2.2 Research previous methods and surveys	Visiting beach sites and completing background research	Trip to sites Literature Review
3. To carry out a comparison between current and past BARE results	3.1 Look at past study and compare in and out of season results	Examining a particular previous study and comparing issues/ limitations	Analysing Study (Literature Review) Research
4. Evaluate and analyse beach types	4.1 Assess beach criteria 4.2 Present results in graphs and charts	Presentation of findings/ comparisons Research BARE method	Field Trip Research

Table 2: How the objectives will be investigated (Source: Author)

Chapter 2 – Literature Review

2.1 Tourism in Coastal Areas

The beach holiday has played an integral role in the popularity and development of tourism within the UK. *(Walton, 1983)* The acceptance of beach holidays began in the Victorian era, and catered for a rapidly expanding working class holiday market. *(BBC, 2011)* Beach bathing also became popular in the Victorian era, and over time became the norm.

Historically, beach tourism has met the needs of all classes, allowing an easy and moderately affordable holiday destination. Through cohabitation of beaches in the 19th century, there were suggested connections formed between livelihoods and classes. *(Franklin, 2014)* During the start of the 21st Century, tourism as an industry continued to boom, becoming in the forefront of the developed world's consciousness. *(Hall et al, 2008)* This tradition has carried through to the modern day, with 42%* of people saying they had visited the coast in 2015 for a daytrip or longer *(BBC News, 2015) (a)*

The Coastal area does not only provide a holiday destination, for some the reasons for visiting coastal areas are deeper rooted. 64%* of people said that they take their loved ones to the coast to bring back 'happy memories' *(BBC News,2015)(b)* suggesting that a sense of nostalgia is important for many in terms of visiting the coast. Beach holidays are described as 'an utterly sensual experience' as with many 1950's and 60's fashions, the beach holiday has a sense of 'retro chic nostalgia' which cannot be found with other holidays. *(Hosking, 2009)*

	Q3 2012			Q3 2011		
All	Total trips	Total trip expenditure	Avg. spend per trip	Total trips	Total visitor expenditure	Avg. spend per trip
Domestic overnight	321,817	£65,206,561	£202.62	336,900	£69,337,400	£205.81
Overseas overnight	24,442	£4,283,705	£175.26	19,200	£2,743,300	£142.88
Sub-total	**346,259**	**£69,490,265**		**356,100**	**£72,080,700**	
Domestic day	206,039	£5,264,296	£25.55	208,300	£6,095,000	£29.26
Overseas day	14,540	£376,586	£25.90	16,900	£625,800	£37.03
Sub-total	**220,579**	**£5,640,882**		**225,200**	**£6,720,800**	
Total value	**566,838**	**£75,131,148**		**581,300**	**£78,801,500**	

Table 3: Total tourism volume and visitor expenditure- Summer 2011/2012 (Red Funnel, 2012)

*5047 people surveyed

In terms of the Isle of Wight itself, figures show an undulating data set. What is apparent is the value of tourism for the Isle of Wight (As shown in Table 3) Tourism in the Isle of Wight is significant as this income is of paramount importance to the rural community, and has also played a key role in regenerating many small towns, utilising their potential for growth. *(DEFRA, 2000)*

2.2.1 SWOT Analysis of Tourism in the Isle of Wight

Strengths: - *Events such as Cowes week, Isle of Wight Festival* - *World centres for yachting* - *AONB abnd SSSI sites* - *Comparative sunshine hours* - *Plenty of accomodation* - *Good transport links* - *Culture and heritage sites, such as Carisbrooke Castle/ Osbourne House*	*Weaknesses:* - *Image of island- elderly and rundown* - *Seasonality in Tourism* - *Travel time/ costs involved in visiting* - *Resorts needing repair/ modernisation* - *Lack of parking* - *Overcrowding on road infrastructure*
Opportunities: - *The tourism industry increases* - *Overseas investment interest* - *Partnerships* - *Improvement in non tourist sectors* - *Green industry and Sustainble tourism*	*Threats:* - *UK holiday market in decline* - *Fuel costs (ferry and domestic)* - *Could lose it's difference and become more generic* - *Competition*

Table 4: SWOT analysis (Source: Author) (Adapted from Isle of Wight Tourism Development Plan, Isle of Wight Council, n.d) (a)

It can be seen in Table 4 that there are many aspects of tourism on the Isle of Wight.

2.2 Assessing Public Perceptions on Beach Quality

Public perception on the quality of a beach is important to tourism, as if beach quality is perceived to be low, less people are inclined to visit. If beach services or infrastructure are poor, the beach generally is less desirable to visitors *(Cervantes et al, 2008)* by using a standardised method to assess perceptions, effective beach management can occur.

Anthropogenic factors are cited as the highest reason for visitor dissatisfaction, with 30%* of visitors quoting litter and man-made debris as a cause for concern. Alongside this, 7.5%* of these visitors claimed poor facilities and dog excrement were to blame for their negative views of a beach. *(Jedrzejczak, 2004) (a)*

Consultation with beach visitors has increased over the last 50 years, enabling the understanding of their needs, behaviours and preferences. Beach environments are in some cases the main attraction for an area (especially on a small island such as the Isle of Wight) this has been the case over time as tourism development has been focused on beaches, bathing and meeting recreational needs. Public participation in beach matters was facilitated by the Aarhus convention, 1998, giving public involvement and consultation in environmental issues. *(Marin et al.2009)*

There have been many studies into the natural features at a site, and the perception of beach quality. Factors such as a sandy beach are of great important to beach users. (Jedrzejczak, 2004) (b) This study showed that many users valued aesthetic features.

Another factor in public perception is the beach user's profile, as a person's perception is heavily influenced by their profile. *Roca et al, (2009),* found that users classed as 'loyal and local' are more concerned with natural beach values and environmental issues. Whereas visitors coming for a 'short stay' have a greater issue with facilities and they are also less concerned with the issue of overcrowding. The local visitors must live with the consequences such as the state of the natural beach environment.

Therefore, it makes sense as to why this is a more prominent issue for them. Visitors to the area are mostly concerned about the conditions on the day they are there, which does usually revolve around availability of parking and other facilities.

The age of beach users is also key to assessing public perception on beach quality. Semeoshenkova et al. (2011) discovered that a "high percentage of respondents at all sites were in the middle-aged category, 26-50 years old" Although this is a broad age category, it reflects a high interest in seaside management within this group.

The beach user perception of litter is also an indicator of beach quality. *Tudor et. al* (2003) assessed the perceptions of beach debris on 8 beaches. It was found that the most "offensive" forms of pollution came from litter that could seriously harm beach users. The least offensive forms of litter were from natural sources, such as seaweed and natural debris. Overall, there has been a wide variety of research conducted into public perceptions of beach quality.

2.3 Beach Quality Management

Simm et al.(1995) (Cited as Micallef et al. 2002) defined beach management as "the process of managing a beach, whether by monitoring, simple intervention, recycling, recharge, beach control structures or a combination of these techniques" alongside this, looking at "acceptable compromise" with finance whilst assessing factors such as; coastal defense, conservation, public facilities and development goals. It is to be suggested from this that beach quality management is a complex concept, which can be achieved in many ways, but to have successful management, all aspects should be examined. The quality of the beach environment is of paramount importance in the popularity of bathing beaches. Good beach management is integral to sustaining a pleasant bathing environment and visitor satisfaction. With leisure time on the rise, beach recreational management has "become an increasingly important component of Integrated Coastal Zone Management" (Micallef et al, 2002)

2.4 Beach Management

With increasing demands being placed on beach areas, effective management is a necessity. Families, children, couples and local visitors to overseas holidaymakers, the beach environment needs to meet their needs. Many beach managers are presented with a wide range of issues, and poor management strategies can lead to negative user experiences, therefore affecting levels of tourism in the area. As *Houston,* (n.d) found, "healthy beaches meant a healthy tourist economy" This means that effective beach management, can enable healthy beaches, creating a healthier economy. On the Isle of Wight, effective management may indeed lead to healthier beaches, and the sustainability of the tourism sector in beach areas.

2.5 Beach Rating Systems

Many systems are in place to control and enable beach rating. Through presentation of awards, visitors feel they can trust the quality of the beach. Similarly, if a beach is given few awards, this reflects lower beach quality, therefore methods can be put in place to improve and gain awards in future. Rating systems are also important to visitors as 72% of beach users agreed that award status is important in beach selection. (*Nelson, 2002)(a)*

However, *McKenna (2010)* conducted a study into the importance of the Blue Flag award on the public's perceptions. This study concluded that the finding did not support the view that beach awards attract visitors. This study may show that beach awards may not overall attract visitors, but they could be an attractive quality that visitors consider when selecting a beach.

In fact, *Nelson,*(b) (2002) discovered that out of 469 beach users surveyed, 63% said that they were unsure if the beach they were visiting held a significant beach rating. This suggests that more information could be given for beach rating systems to be better recognised. The main issues are that beach users may not understand the meaning of beach awards. In this study, 58% of beach users claimed that they "had knowledge of beach awards" however, only 32% stated that ratings influence their decision of which beach to visit. This suggests that although the public can have a general

understanding, beach rating systems do not solely affect whether they visit a beach or not. A mixture of other factors, such as locality, facilities and scenery may influence decisions alongside beach rating systems.

2.6 Awards and Rating Systems

2.6.1 Blue Flag Award

Figure 1-Blue Flag, 2016 (b)

The Blue Flag Award is awarded on an International scale as is largely considered as the highest standard award for beaches. This award is given by the Foundation for Environmental Education. The Blue Flag Award is not solely based on the level of water quality at a site, the award itself is better suited to beaches with resorts, with many facilities. Therefore, the Blue Flag Award is not necessarily the most suitable award for selecting a bathing beach. The criteria for assessment of a bathing beach in this way are split into four categories; Environmental education and information, water quality, environmental management and safety and services. *(Blue Flag, 2014)(a)*

2.6.2 Seaside Awards

Figure 2 Seaside Awards, n.d (b)

Formally known as the Quality Coast Award, the Seaside Award sets a nationwide standard for the best beaches. Unlike the Blue Flag Award, beaches are vastly different in facilities and profile. The award aims to allow visitors to find a safe, clean and well managed coastline area. It also gives beach managers a three-year action plan, enabling development and a holistic approach to beach management. *(Seaside Awards,n.d) (a)*

2.6.3 Water Quality Awards

There are three main water quality awards which apply to the Isle of Wight:

EU Bathing Water Quality Standards

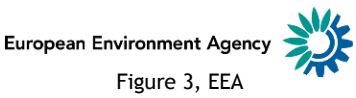

Figure 3, EEA logo, EEA 2016

The EU Bathing Water Quality Standards are in place and tested by the European Environment Agency (EEA) and the European Commission.

The main aims of these standards are to:

- Set out how water sampling should be done, setting a standardised method
- Sets baselines for acceptable levels of bacteria in a sample
- Creates three main standards- good, excellent and poor

Results are published each January, for the past year. Although the standards give baselines for three bacteria, the EU only reports on 2 of them. (*European Commission, 2016)* In 2015, bathing beaches in the UK were awarded overall 59.5% excellent water quality, 27.4% of good standard and only 1.6% of bathing waters were classed as 'poor'. (*EEA, 2016)*

UK Bathing Water Quality Standards

The UK Bathing Water Quality Standards are tighter than the EU regulations, however they are based on the EU directive. These standards require the measurement and reporting or all 3 suggested bacteria. The Environment Agency are responsible for testing in UK bathing waters, and they take 20 samples a year (from May-September) as this is classed as the bathing season. (*Beachlive, n.d)*

Figure 4 Environment Agency, 2015

2.5.3.1 Solent Water Quality Awards

The Solent Water Quality awards were created in 1992. They are managed through the Solent Forum, who oversee marine management in the region. The award scheme helps beaches to clearly display the quality of their environment. *(Cagilaba, 2005)*

The criteria are as follows:

- One representative sampling point of bathing water at a location can enter the awards
- EU water directive standards must be met
- Water can not contain any gross pollution by sewage or faeces
- Supporting data from earlier years must be given also

2.6 Seasonality in Tourism

Seasonality can be defined as "as temporal imbalance in the phenomenon of tourism, which may be expressed in terms of dimensions of such elements as visitor numbers, visitor expenditure, traffic on highways, transportation, employment and attraction admission" Butler (1994) (cited as Seaton et al.)

Seasonality creates peaks and troughs in the tourism employment market. Employment has grown, however, there will always be a seasonal consideration. Businesses have tried to cut seasonality in tourism, by hiring fewer people at the start of season, and firing fewer people at the end of season. This helps to "fill in troughs" in business economics. *(Ashworth et al. 1999)*

There are many seasonal factors to consider when analysing the quality of bathing beaches. The change in climate is a significant factor in seasonality of tourism. Climatic conditions such as; "temperature, rainfall, snowfall, sunshine and hours of daylight" (*Baum, 2001) (a)* all contribute towards seasonality. Especially in the summer, factors such as temperature and sunshine hours are higher. This makes the beach environment more desirable at these times of year. "Seasonality attracts guests during favoured climatic conditions" *(Adler et al, 2004)* It is well documented that seasonality does indeed affect the number and frequency of visitors to a location.

2.7 Managing Seasonality in Tourism

The tourism industry faces fluctuations of demand based on seasonality worldwide. *(Handlechner, 2008)* There are many ways in which seasonality can be managed in tourism. Firstly, the increase of activities and overnight stays out of season. If the number of people saying increases, then so does profit. The effects of seasonality in tourism not only cause problems for the tourism suppliers, but stakeholders such as residents, employees and tourists. *(Commons et al) (cited as Baum et al, 2001) (b)* This suggests that there are many stakeholders that are affected by seasonality in tourism. Therefore, it is important for effective management to reduce the negative effects of seasonality.

On the Isle of Wight, many feel that development of tourism cannot occur without development of the Island. The Island needs “a development plan with tourism at the heart” as opposed to a “separate tourism strategy”. (*The Isle of Wight Tourism Development Plan, n.d) (b)*

2.9 Finch (2007)

There has been a previous study into the quality of bathing beaches on the Isle of Wight. *Finch* (2007) assessed 17 bathing beaches on the Island using the BARE analysis technique *in* season. This assessed the quality of 5 parameters; Safety, Facilities, Litter, Water Quality and Scenery. She found that there was a large range in beach quality across the Isle of Wight. The highest grading received was 3*, which was awarded in the village beach category. Finch also found a variety of generic issues at all sites. Improvements were also needed in the facilities of beaches at high season, along with improvement to safety. She also suggested increasing the efficiency of litter collection. This report will assess the same 17 bathing sites, using the methods detailed in *Finch* (2007) and compare the results to establish differences in and out of season, suggesting recommendations relevant to 2017.

Chapter 3 – Methodology

3.1 Selection of Sites

After conducting secondary research and looking at which sites Finch (2007) had analysed,17 sites were then chosen for analysis using the BARE method (see Figure 5) Whilst there could have been modification to the sites observed it was felt that using the sites previously studied would allow for greater comparison of results. These beaches were also selected as they are the main bathing beaches, and there is readily available secondary information on facilities, safety and general data, making the process of data collection easier, as a background could be gained before the primary data was collected.

Figure 5: Map of bathing beaches on the Isle of Wight (Isle of Wight Attractions, 2013)

Due to the size of the island, sites were closer together than on a longer stretch of mainland coastline, and this allowed for easier data collection. Management on the island was the same across all sites and meant that recommendations could be easily communicated, and easier implementation, as a standard can be set for that managing body (the Isle of Wight Council)

3.2 The Isle of Wight

Cicin-Sain (1998) proposed that there are many factors which affect a coastline, including; waste disposal, shipping, research, environmental protection and recreation. Integrated coastal management relies on all these factors coming together and being affectively managed. There are many ways the Isle of Wight markets itself, and beach quality has a vital role in the marketing of the island. In 2017, Southern Water alongside the Environment Agency launched a 'Beauty of the Beach' program, which encouraged people to help manage beach quality by picking up litter, as water quality standards are "stricter than ever before". *(Southern Water, 2017) (a)*The Isle of Wight uses beach awards to promote the quality of its beach areas and these have helped to boost tourism.

Figure 6 Beauty of the Beach logo (Southern Water, 2017) (b)

However, since 2015, 4 of the blue flag beaches on the island have lost their blue flag status; Sandown, Ventnor, Yaverland and Colwell Bay. The reason given was that the council knew the beaches would not meet the necessary criteria in the safety parameter, with the removal of marker buoys and emergency phone facilities. *(BBC News, 2015)* This was attributed to the change in management and maintenance, meaning there was less budget for these facilities. Until these facilities are installed, the beaches will not pass the Blue Flag criteria, which may affect the quality of the beaches. The Island's official tourism website stipulates that "Isle of Wight beaches are recognised as being some of the best in Europe" *(Isle of Wight, 2017)* The Island promotes the quality of its beaches heavily, and it is a main factor that attracts visitors, however, there needs to be better management in order to uphold these claims. The current beach awards are shown in Table 5.

Beach	Blue Flag Award	Seaside Award	Water Quality Award
Bembridge			Good
Colwell Bay			Excellent
Compton			Excellent
East Cowes			Excellent
Freshwater Bay			No data available
Gurnard			Good
Ryde East			Good
Sandown			Good
Seagrove			Good
Shanklin			Good
Springvale			No data available
St. Helens			Excellent
Totland			Excellent
Ventnor			Excellent
West Cowes			Excellent
Whitecliff Bay			Excellent
Yaverland			Good
Key:	NOT PRESENT	GOOD	VERY GOOD

Table 5: Beach Awards at Each Beach in 2016 (Source: Author, data: The Seaside Awards, b, 2016) (Environment Agency, 2017)

The Island also likes to market itself as being an "England in miniature" *(Red Funnel, n.d)(b)* and upholds this autonomy. However, *Grydehoj (2011)* stated that many residents of the Isle of Wight have difficulty in defining what makes the island unique, with many identifying with the mainland as their main source of culture and heritage.

3.3 The BARE System

Morgan (1999) created a checklist to evaluate beach areas based on many factors. This checklist incorporated a range factors deemed important to beach users. After, Williams et al. (2009) devised a beach star rating system. This method includes parameters of Safety, Water Quality, Facilities, Litter and Scenery. There are also a range of physical and human factors (see Appendix 8.1) these parameters are based on the main aspects which affect beach user happiness. (Figure 7)

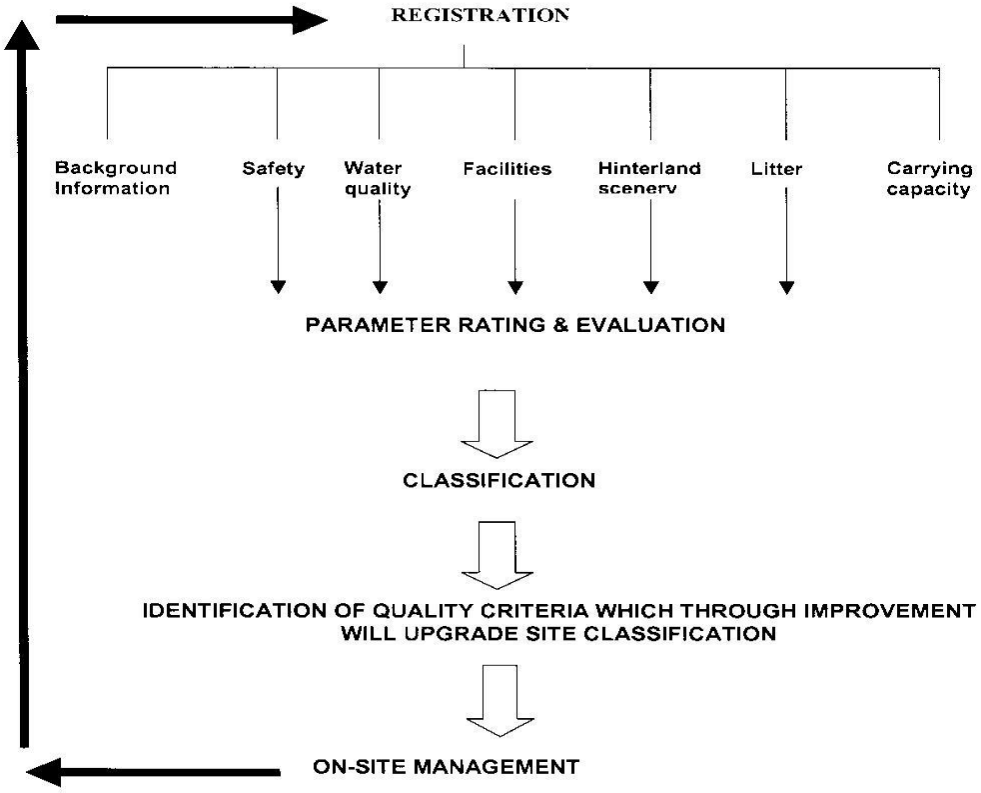

Figure 7: How the BARE system works, Williams et al. (2009)

The BARE methodology was used to collect the beach quality data from the Isle of Wight. This method not only rates the beach, but also examines land around the beach area. It considers 5 main beach types, and marking criteria varies depending on how developed a beach area is. (See Table 6)

CLASSIFICATION	DESCRIPTION
• **Resort**	A resort is a self-contained entity which fulfils all the recreational needs of beach users to different degrees, the majority of whom reside at the resort hotel which is integrally linked to the beach. A resort maybe sited within any type of environment but as a rule has no nearby industrial activities. As a rule a resort beach is private, owned or directly managed by the associated hotel complex. As a rule, the beach resort is not open to the public but when it is, day visitors use the resort against payment.
• **Urban**	Urban areas serve large populations with well-established public services such as primary schools, religious centres, post offices and a well-marked central business district. In the proximity of urban areas, one may find commercial activities such as fishing/boating harbours and marinas.
• **Village**	A village is located outside the main environment and is associated with a small but permanent population reflecting access to organized but small scale community services (primary schools, religious centres and shops). The village environment would also include tourist villages, mainly utilized in the summer months as well as 'ribbon development' between urban and rural environments. It is arguably the most difficult definition of the five main bathing area types. Village beaches may be reached by public and private transport.
• **Rural**	A rural area is located outside the urban environment. It is not accessible by public transport and has virtually no facilities. Housing in the rural area is limited in number (generally 0-10 but may be more depending on the size of the coastal stretch)
• **Remote**	Remote areas are largely defined by difficulty of access (largely by boat or on foot). They may be continuous/ on the fringe to rural areas and on occasion to village environments but not with urban areas. They are not supported by public transport and have very limited (0-5) temporary summer housing.

Table 6: Beach Classification, Williams et al. (2009)

A high scoring beach in these beach classification must have a range of safety measures. Alongside this, continual water quality monitoring, a wide range of facilities and regular cleaning.

3.4 Fuzzy Logic Theory

During the coastal scenery evaluation, certain parameters can be subject to 'vague concepts' based on human nature. The fuzzy logic theory assesses the possibility and degree of each factor considered. *(Ergin et al., 2004)(a)* The significance of each factor is based from data produced by questionnaires carried out in the UK and Mediterranean, which concluded that litter, water colour, noise, built environment and coastal landscapes were at the top of beach users' priorities. An example of fuzzy logic is shown in Figure 7.

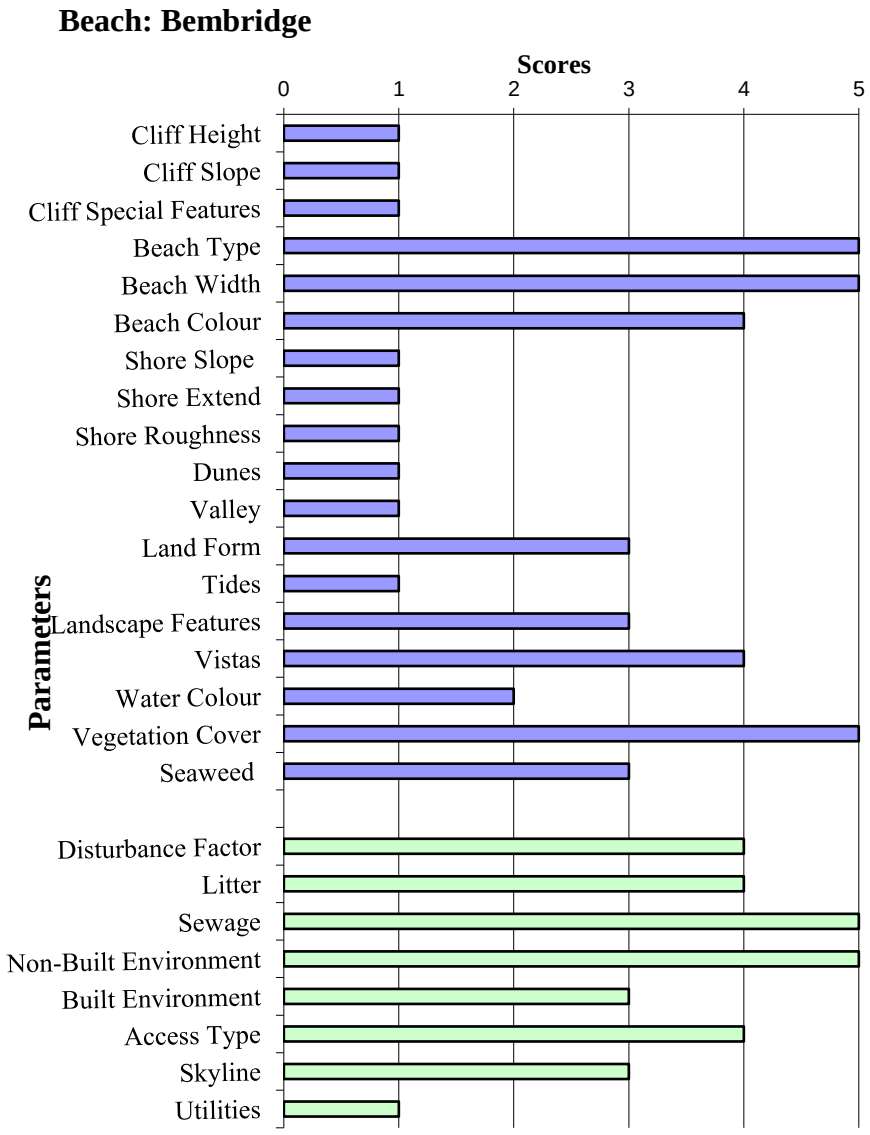

Figure 8: Fuzzy logic histogram for Bembridge Beach, (Source: Author)

3.5 BARE Analysis on the Isle of Wight

The assessment of beach sites was conducted in October 2016, using the BARE method. The weather conditions out of season caused some problems in terms of assessment. *(As shown in Plate 1)*

Plate 1: Conditions at time of assessment at Compton Bay (Source: Author)

As can be seen in Figure 10, the lack of light conditions made it hard to complete the coastal scenic evaluation. It was hard to differentiate between water and sand colours. All scoring counts towards the final scenic evaluation outcome, and was heavily affected by weather at the time. Below is a table, detailing which beaches were analysed on which days.

7th October 2016	8th October 2016
Seagrove	Gurnard
Springvale	West Cowes
Bembridge	Ventnor
Whitecliff Bay	Sandown
East Cowes	Shanklin
St.Helens	Yaverland
Ryde East Sands	Colwell Bay
Freshwater Bay	Compton Bay
	Totland

Table 7: Timetable of Beach Assessments (Source: Author)

The sites shown in Table 7 all had an initial visit and a repeat visit. This was because when the observation was taken, it could not always be guaranteed low tide, and that the conditions at the site were safe to carry out the study. The conditions at each site made visibility consistently low, so any discrepancies at each site were reviewed on the return visit.

The data presented in this study was sourced from primary and secondary sources, through site fieldwork visits and desk study investigations. The data collection methods and type are detailed below in Table 8.

Data Type	Data Content	Data Medium
Primary	Beach type	On site
Primary	Litter numbers and count	On site
Primary	Safety feature analysis	On site
Primary	Water quality award identification	On site
Primary	Available beach facility analysis	On site
Primary	Coastal scenic assessment	On site
Primary	Beach quality awards	On site
Primary	Observe sensitive areas	On site
Secondary	Beach locations and access	Desk study/ Online
Secondary	Water awards/ current standards	Desk study/ Online
Secondary	BARE system analysis	Desk study
Secondary	Facilities identification	Desk study/ Online
Secondary	Beach usage data	Desk study/ Online

Table 8: Data collection methods by type (Source, Author)

Although the data in this project is mainly based on primary collection methods, secondary research was essential to collecting background data on the beaches. As there was limited time at each beach, this meant that additional data, found during desk studies was important in determining the overall profile of the beaches both before the site visits, and after during the data analysis process. This was especially useful in the less observable parts of the BARE method. The parameters used to analyse each beach as part of the BARE analysis technique are detailed in the following sections.

3.6 Parameters

Parameters help to categorise beach aspects into groups within the BARE technique. Full parameter criteria can be found in Appendix 8.1.

3.6.1 Facilities

The facilities parameter takes into account a variety of activities and amenities which are generally found at a beach. Within the technique, different amounts of facilities are different for each beach type (Resort, Urban, Village, Rural or Remote) for example, a Resort beach is expected to have the maximum amount of facilities, reducing the more remote the beach is.

3.6.2 Safety

Safety is of paramount importance at the beach, due to the many problems and issues that can arise. If the safety feature was present, then this was recorded. Desk research was used to identify the main safety features. This was then verified at the site location. Each beach was then given a mark for safety per its beach type.

3.6.3 Litter

The litter survey is a subjective assessment observing 100m length of a beach, whilst recording litter frequency. This was done using a protocol designed by NALG (the UK's National Aquatic Litter Group) (*Somerville, 2003*) This method involved counting the amount of litter from each of the categories and marking the bracket that best suited the area on the evaluation form.

3.6.4 Water Quality

Water quality assessment was carried out by researching the water quality mark previously given. For all beaches on the Isle of Wight, water quality was at the highest level. A visual assessment was also carried out to identify factors which contribute towards poor water quality. These results were then analysed to produce an overall score for water quality, which contributed to the overall grading of the beach.

3.6.5 Hinterland Scenery

This part of the beach evaluation involved circling the most relevant rating from a scale of 1 to 5. The table was split into physical and human characteristics to fully assess the characteristics of the beach. These results are analysed by a program, which considers fuzzy logic theory. This then creates a D value for the beach considering all factors (As shown in Table 9)

GRADING	DESCRIPTION
Class 1	Extremely attractive natural sites with very high landscape value, having a D value above 0.85.
Class 2	Attractive natural sites with high landscape value, having a D value between 0.65 and 0.85
Class 3	Mainly natural sites with little outstanding landscape features, or urban sites with exceptional scenic characteristics and a D value between 0.35 and 0.65
Class 4	Mainly unattractive urban sites with a low landscape value and a D value between 0 and 0.35
Class 5	Very unattractive urban site, intensive development with a low landscape value and a D value below 0

Table 9: Class rating system (Ergin et. Al, 2004)

3.7 The Role of Parameters In Beach Classification

By using each of these parameters to analyse the bathing beach areas, the different grades are compiled to create a final grading. The classification of a beach depends on many different factors, and beach type. These grades from the 5 parameters, allow a classification to be matched with the beach and the overall beach quality can be decided and compared.

Chapter 4- Results

Introduction

All the data from the parameters; safety, water quality, facilities, scenery and litter have been collected and combined to create a star rating for each beach. The results of the BARE analysis are separated by beach types and are detailed below. For the evaluation method for class rating, please see Chapter 2. The results for each beach are laid out over these pages, detailing the positive and negative features which could be targeted by management at the beach. The beach types divide the results as follows; urban, resort, village, rural and remote.

4.1 Urban Beach Results

4.1.1 West Cowes

Site	Safety	Water Quality	Facilities	Scenery	Litter	Star Rating
West Cowes	C	A	C	D	A	3*

West Cowes is a small width pebble and shell beach. (Figure 9) facilities and scenery were the main factors which needed improvement here. Due to the proximity of the road to the beach, noise at this location was not a problem identified. This location would benefit from more accommodation, and this could economically benefit the area during events such as Cowes week. Although there is a café and beach shop in high season, these were not open on the day the assessment was completed. Clean showers and restaurants were also not available and again this would bring not only more facilities to the beach users, but more income in this area from tourism. Safety was another parameter that was highlighted as important, as there was a lack of safety parameters at the location.

Figure 9: Aerial View of West Cowes, (Google Maps, 2017)

4.1.2 Gurnard

Site	Safety	Water Quality	Facilities	Scenery	Litter	Star Rating
Gurnard	C	A	C	D	B	3*

Gurnard beach was a sandy, gold beach. The area is home to a sailing club as many beach huts on the promenade (Plate 2) the beach was accessed down a small road, which led to a small area down by the café, as shown in Figure 10. There is a large amount of space between the roads and the beach, which although this hinders access, keeps the road noise to a minimum. The beach was relatively quiet on the day of the survey, which was good as it meant a vehicle could be brought down, however, if there was a higher number of people, this could have been an issue. In terms of facilities, there was a lack of sunbeds, showers and secondary accommodation. This could be for several reasons, firstly seasonality, as sunbeds and water sports activites may have not been appropriate. Safety was categorised as a 'C', again, like many of the beaches, lifeguards are absent, alongside first aid and bathing markers.

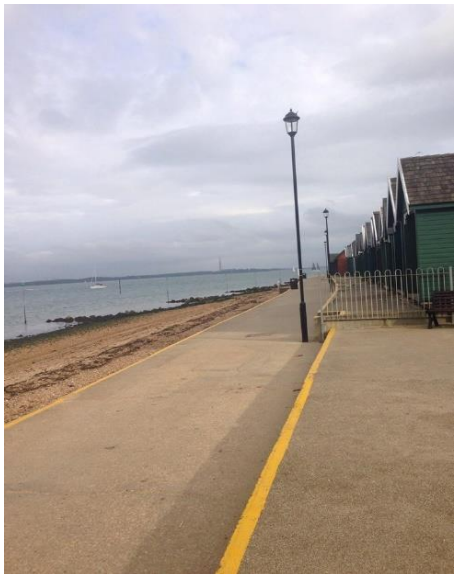

Plate 2: Gurnard Sea Front
(Source: Author)

Figure 10: Aerial View of Gurnard, (Google Maps, 2017)

4.1.3 East Cowes

Site	Safety	Water Quality	Facilities	Scenery	Litter	Star Rating
East Cowes	C	A	D	C	B	1*

East Cowes is an urban beach, which is situated 10 minutes from the ferry terminal. As seen in Figure 11, the beach is backed by fields and woodland. There was a lack of many facilities such as restaurants, sunbeds, showers and wheelchair access. There is however a small café, which was closed on the day, therefore deemed unavailable. There was also a kids play area, picnic area and campsite. East Cowes had a fair amount of facilities concentrated in one area. Safety was an issue here also, awarded a ‘C’, lifeguards were not present and there was no bather zonation. There was also a lack of first aid posts. If the safety, facilities and scenery increased then the beach would achieve a higher rating.

Figure 11: Aerial View of East Cowes, (Google Maps, 2017)

4.2 Resort Beach Results

4.2.1 Ryde Sands

Site	Safety	Water Quality	Facilities	Scenery	Litter	Star Rating
Ryde	C	A	B	C	A	3*

Ryde was one of the top scoring beaches. The beach had many safety and facility features, and it was apparent that a lot of work had been put into the signage and information that visitors could find there. The facilities that were missing were sunbed hire, and umbrella hire. This could be due to time of year, or them not being in demand at this location. The scenery at this location was sensitively designed, as there was a diverse mix of accommodation, facilities and environmental areas.

The beach was not busy when visited out of season, but most if not all necessary facilities were open and available. In the summer months, it was predicted that this beach would be very popular with tourists, therefore adequate beach cleaning would need to be in place to cope with the increased amount of waste. The scenery score was generated from several factors, and if it were to increase to 'B' then the beach would have an increased star rating.

Figure 12: Aerial View of Ryde, (Google Maps, 2017)

4.2.2 Sandown

Site	Safety	Water Quality	Facilities	Scenery	Litter	Star Rating
Sandown	C	A	C	D	C	2*

There was a high amount of development and housing around Sandown beach. (As shown in Figure 13) There were many facilities available during summer seasons, such as deck chair hire, sun loungers, wind breaks and beach huts for hire. However, these were not available on the day. Alongside this, there was also storage of kayaks and water sport equipment on the beach front, suggesting that although it may not have been used recently, it was present. The main issue at this location was litter, and this may have been due to the seasonality, meaning the beach was cleaned less frequently out of season.

Figure 13: Aerial View of Sandown, (Google Maps, 2017)

4.2.3 Shanklin

Site	Safety	Water Quality	Facilities	Scenery	Litter	Star Rating
Shanklin	C	A	C	D	B	2*

Shanklin was a sandy beach, with a promenade, housing many summer activities. For example, there was a café, toilets, disabled toilets, a shop, beach hut hire and a first aid point. There was also an arcade, and adventure area. However, the play area was shut, and there was no sunbed hire. This location is very popular with tourists in the summer, hence why there are so many places to accommodate them. There were information boards about the beach, and its history. However, there was an absence of public showers. The balance of natural and built environment was well designed and there were relatively low levels of litter.

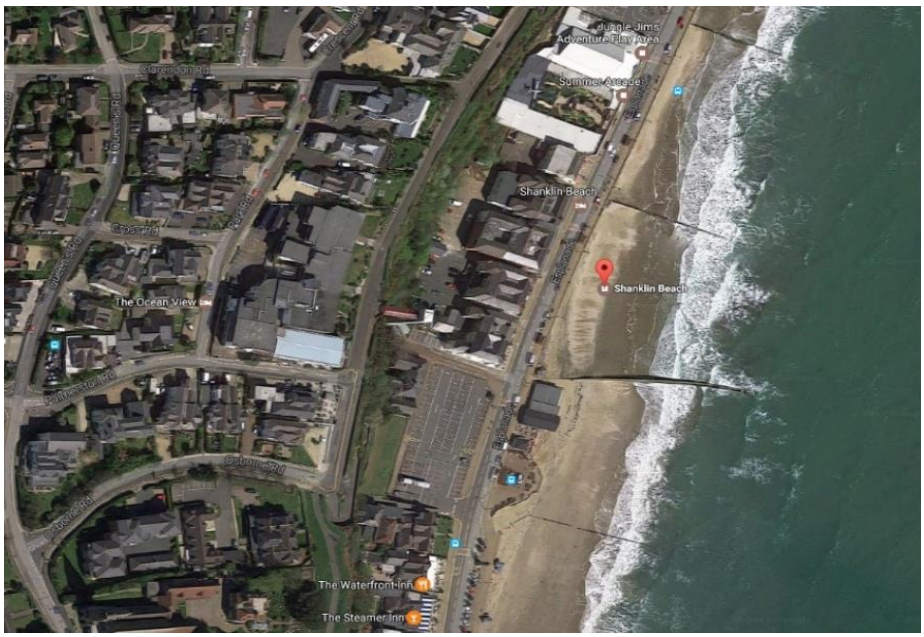

Figure 14: Aerial View of Shanklin, (Google Maps, 2017)

4.2.4 Ventnor

Site	Safety	Water Quality	Facilities	Scenery	Litter	Star Rating
Ventnor	C	A	C	D	A	2*

Ventnor was a mix of shingle and sandy beach, with many facilities, as seen in Figure 15. There were several facilities which cater to tourists, however few of these were open on the day. The main issue in terms of scenery here is the proximity of cars and passing traffic, alongside the parking also. There was a lack of lifeguards on the day, along with no zonation markers. There was also a lack of sunbed hire and other high season based activities.

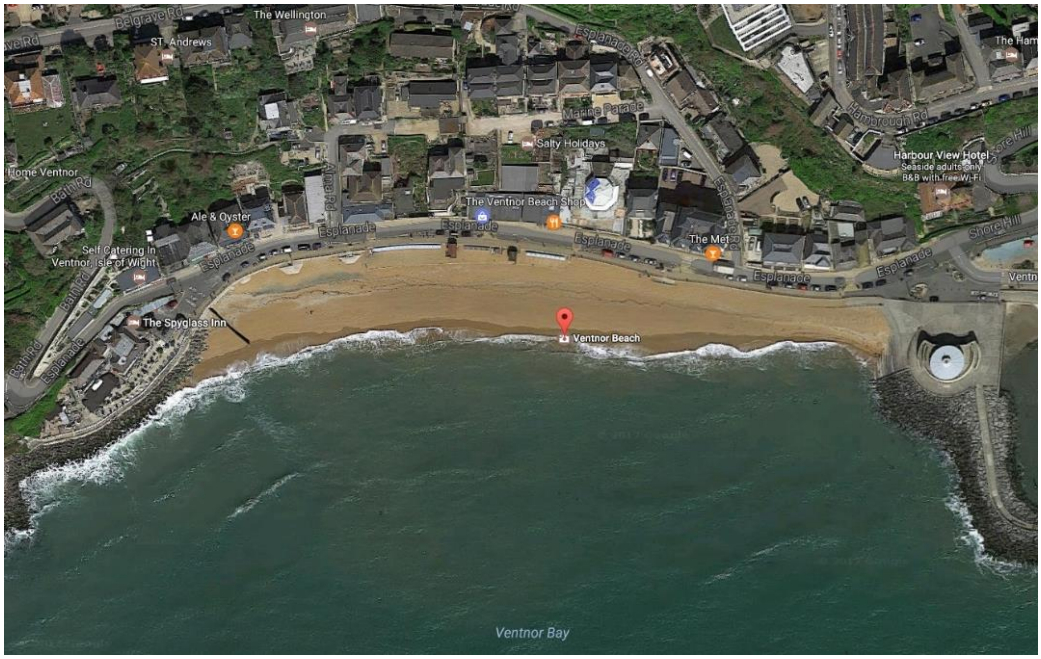

Figure 15: Aerial View of Ventnor, (Google Maps, 2017)

4.2.5 Whitecliff Bay

Site	Safety	Water Quality	Facilities	Scenery	Litter	Star Rating
Whitecliff Bay	C	A	D	C	A	2*

Whitecliff Bay beach was a long, sandy beach located at the bottom of steep cliffs (as shown in Figure 16) this beach was connected to a holiday park, which made access difficult. The access to the beach was limited for the public, and was more catered to the people staying in the caravan site. The scenery here was natural, with long sandy expanse and high cliffs. The main areas of interest were safety and facilities. There was a lack of lifeguards and zonation markers, alongside first aid posts. The absence of lifeguards may be due to the seasonality, as there were few people on the beach during the assessment. Also, due to its lack of public access, there may not be a need for lifeguards at that time of the season. There was hardly any litter on this beach, and this again could be due to lower numbers of visitors. The café was closed on the day of the visit, and there were little to no tourism based facilities such as sun bed hire or toilets. This may be since the beach is at the back of the caravan park, and the average visitor there does not need these facilities because they can go back to their caravan for showers, toilets and refreshments.

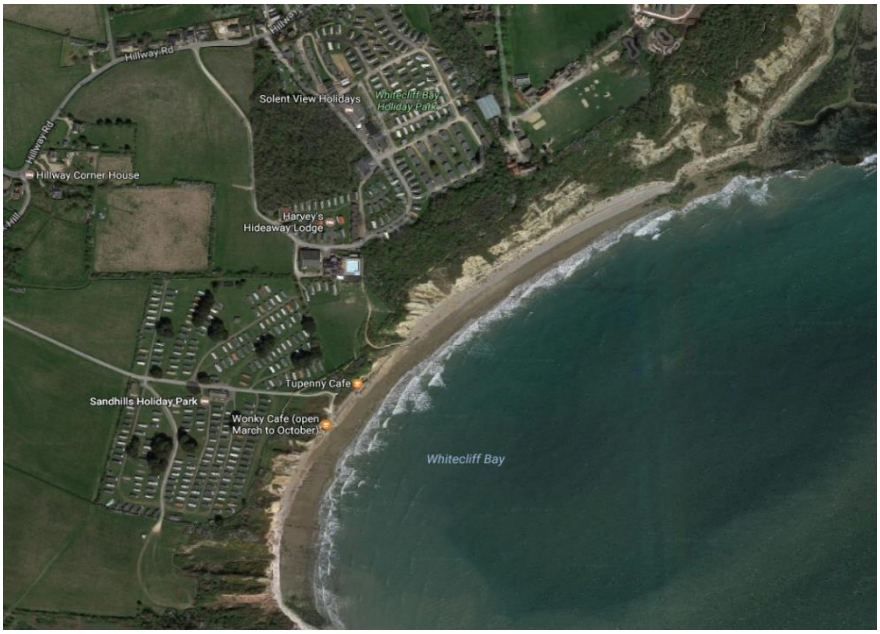

Figure 16: Aerial View of Whitecliff Bay, (Google Maps, 2017)

4.3 Village Beach Results

5.3.1 Colwell Bay

Site	Safety	Water Quality	Facilities	Scenery	Litter	Star Rating
Colwell Bay	B	A	B	C	B	3*

Colwell Bay is a popular village beach, and the surrounding area is home to accommodation, cafes and shops. The overall layout of the beach is detailed in Figure 17. The beach had apartment complexes and was one of the beaches that had many amenities backed into one area of the beach, near the entrance. On the day of the visit, some shops were shut but the café was still open. However, many of the summer activity shops (selling buckets, spades and inflatables) were closed. This was because off season, these items are not generally 'sellable' therefore it would not be economical for the shops to open at that time of year. The beach itself was generally smaller than some of the other beaches that were examined. However, this beach had good disabled access. The litter on this beach could be attributed to dog walkers, with faeces being identified on the day of the survey.

Figure 17: Aerial View of Colwell Bay, (Google Maps, 2017)

4.3.2 Bembridge

Site	Safety	Water Quality	Facilities	Scenery	Litter	Star Rating
Bembridge	C	A	D	D	B	1*

Bembridge beach is home to the RNLI lifeguard station, which dominates the beach landscape, as shown in Figure 18. This beach is mainly used by the local population, and during the visit it seemed to be less of a tourist beach, when compared to the other beaches which were assessed. This was shown by the lack of restaurants, sunbeds, shops, clean showers and fresh water taps. There was an absence of lifeguards, even though there is a RNLI base present. There were not any public information boards either, which would have helped to find about the restrictions and safety information. By increasing the safety at the site, this would improve the star rating, along with the construction of facilities at the beach. The litter score was 'B', and therefore more regular cleaning may be needed out of season to improve this, alongside implementation of bins and cigarette receptacles. This would also help improve the scenery value, as litter is counted towards the coastal scenic evaluation score.

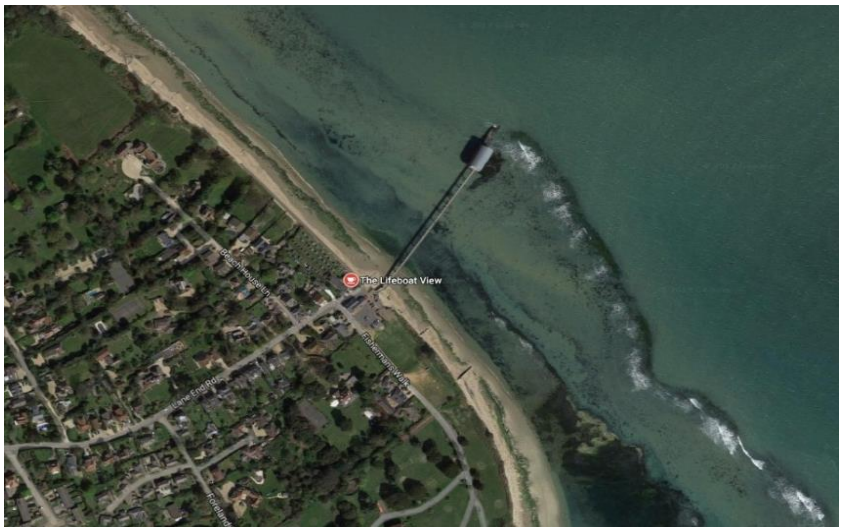

Figure 18: Aerial View of Bembridge, (Google Maps, 2017)

4.3.3 Freshwater Bay

Site	Safety	Water Quality	Facilities	Scenery	Litter	Star Rating
Freshwater Bay	C	A	D	C	B	1*

At Freshwater Bay, there was limited development in the scenery parameter. There were a couple of small cafes, which were closed, alongside a shop and self-catering cottages, as shown in Figure 19. The beach had a sloped front, and this meant there was a build-up of rock material in some parts of the beach. In terms of safety, there was a lack of lifeguards and zonation, but there were notices and a safe bathing environment. Water quality, as with all the beaches was rated 'A'. There was a low level of human interference and traffic due to the lack of development. This also could have been due to the time of year. There was a relatively low amount of litter, but to increase the score to an 'A', regular monitoring and cleaning should be carried out.

Figure 19: Aerial View of Freshwater Bay, (Google Maps, 2017)

4.3.4 Springvale

Site	Safety	Water Quality	Facilities	Scenery	Litter	Star Rating
Springvale	C	A	C	C	B	3*

Springvale is a shingle beach which had limited development around the area behind the beach, as shown in Figure 20. There was a woodland, and a restaurant across the road from the entrance to the beach, which was open on the day. Due to the size of the beach, there is no designated parking point. Cars park behind a wall which separates the road and the beach. This reflects in the scenery score of 'C' for this location. There were warning zones and safety equipment present, but there was a lack of lifeguard presence and marine zonation. As mentioned, there were restaurants and accommodation, but an absence of shower facilities. There were some isolated seaweed spots, which if cleared would improve the scenery score.

Figure 20: Aerial View of Springvale, (Google Maps, 2017)

4.3.4 Yaverland

Site	Safety	Water Quality	Facilities	Scenery	Litter	Star Rating
Yaverland	B	A	C	C	A	3*

This site had many natural features, with little human development, as shown in Figure 21. The beach has large open areas of sand, and this allows for many activities and multi uses by visitors. The beach itself was larger than many of the other sites, and this means that there may have to be more time taken for litter cleaning. There was a restaurant and adequate parking at the site. Despite there being nearly all safety features present, there was no lifeguard service and this brought the safety score down. There was accommodation, but no public shower facilities. The beach scenery score was affected by the lack of buffer zone between the road and the beach, this meant that noise from the road could be heard, and vehicles could be seen from the beach.

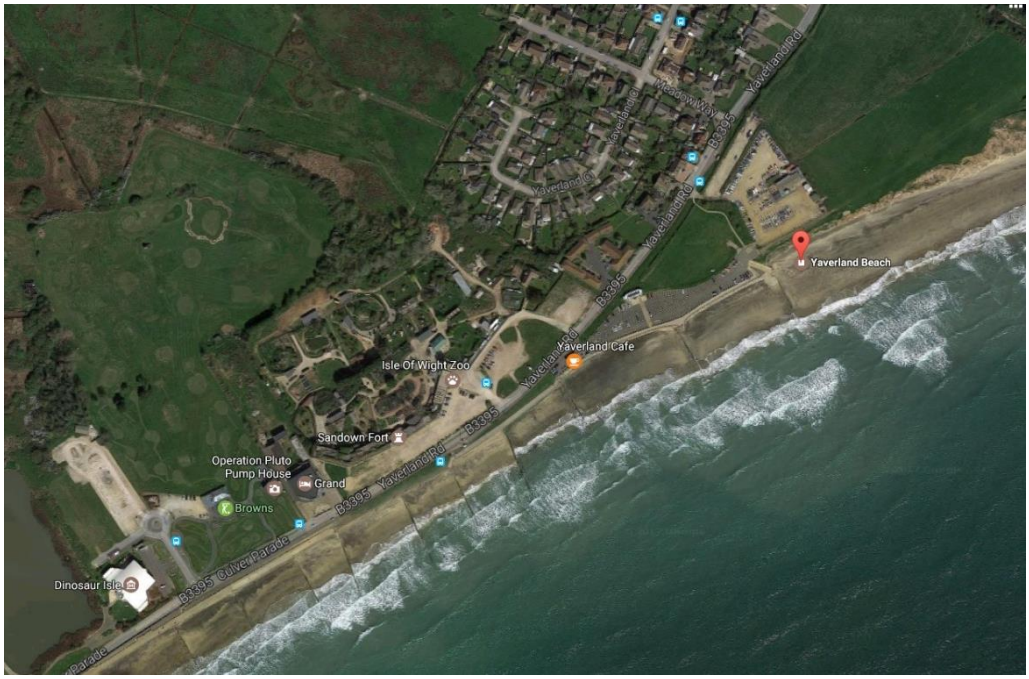

Figure 21: Aerial View of Yaverland, (Google Maps, 2017)

4.3.5 St. Helens

Site	Safety	Water Quality	Facilities	Scenery	Litter	Star Rating
St.Helens	B	A	C	C	A	3*

This location was categorised as a rocky shore, which allows for rock pooling in the summer seasons. There was a camp site at the back of the beach site, (as shown in Figure 22) however due to the lack of development in the area and absence of tourist shops and activities, it was classified as a village beach. There was a slight buffer zone separating the vehicles from the beach, however, they can still be seen from the beach site. Accommodation and a café were present, however there was an absence of public showers. The litter score here was excellent, and to continue this, regular cleaning should occur. There was a National Trust site, which may explain the lack of development towards the lower part of the beach.

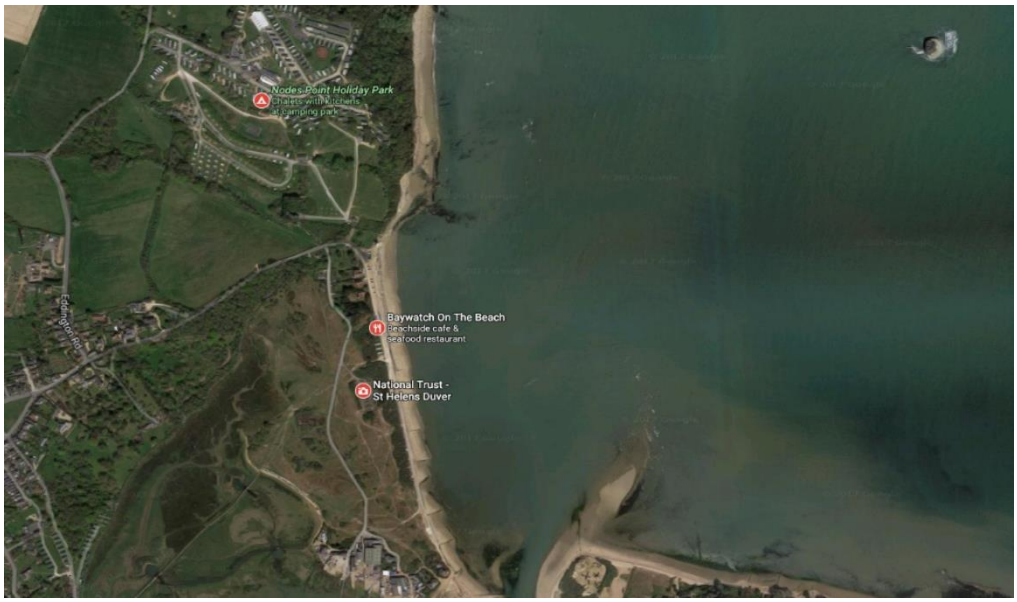

Figure 22: Aerial View of St. Helens, (Google Maps, 2017)

4.4 Rural Beach Results

4.4.1 Seagrove Bay

Site	Safety	Water Quality	Facilities	Scenery	Litter	Star Rating
Seagrove	n/a	A	n/a	C	A	2*

Seagrove had limited development around the beach area, as shown in Figure 23. There is a popularity for water sports and motor boating in this area. The safety parameter is not applicable when assessing rural beaches, therefore it has not been analysed, and the same is true for facilities. There were no signs of human impact on the beach, but the road caused some noise at this location. Hard concrete groynes were present, and these could be replaced by wooden groynes to improve the aesthetics of the area.

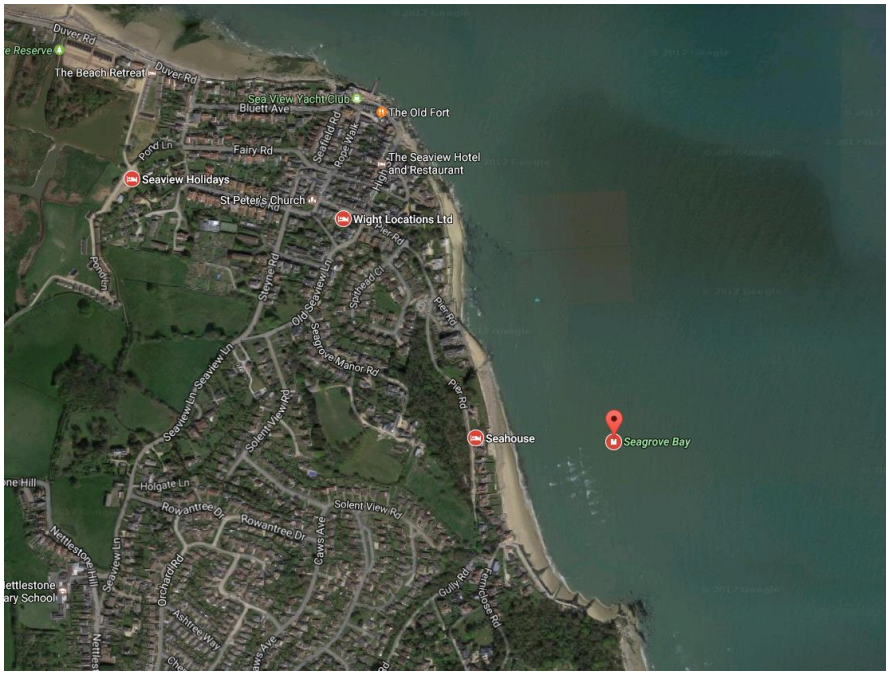

Figure 23: Aerial View of Seagrove Bay, (Google Maps, 2017)

4.4.2 Totland Bay

Site	Safety	Water Quality	Facilities	Scenery	Litter	Star Rating
Totland Bay	n/a	A	n/a	C	A	2*

Totland Bay had number of natural aspects, with a sand and shingle beach and pier, shown in Figure 24. Due to this, there was a lack of human influences on the beach, when compared to others in the assessment. The facilities here do not count towards the overall grading, but a café was present. The only area to improve is scenery. To do this, a buffer zone needs to be created to increase the aesthetics of the beach.

Figure 24: Aerial View of Totland Bay, (Google Maps, 2017)

4.5 Remote Beach Results

4.5.1 Compton Bay

Site	Safety	Water Quality	Facilities	Scenery	Litter	Star Rating
Compton Bay	n/a	A	n/a	D	B	2*

Compton Bay was a remote, sandy beach located at the bottom of the cliffs (see Figure 25 and Plate 3) the beach was located at the bottom of steep steps, and wasn't easily accessible. There was a car park, however, this was at the top of the cliff, meaning anyone with mobility issues would not be able to visit this location. Facilities such as a toilet were present, however were in a state or disrepair. There were National Trust informational signs, which gave tourists information about the site and its environmental aspects. This beach provides environmental beauty, due to its location, and it could be argued that the environmental tranquility is more important to tourists than facilities at this location, as if a tourist wants a generic 'summer beach' which has all the facilities, there are plenty elsewhere on the island. There was some litter present, as shown in Plate 4 below, and this lowered the scoring to a 'B'.

Plate 3: Cliffs at Compton Bay, (Source: Author)

Plate 4: Litter at Compton Bay, (Source: Author)

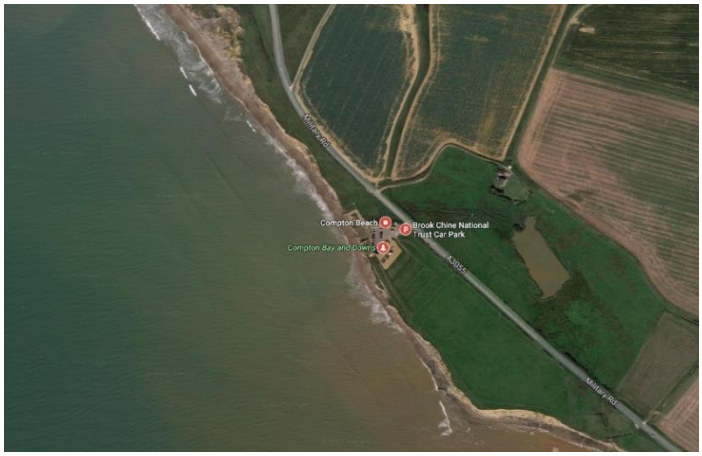

Figure 25: Aerial View of Compton Bay, (Google Maps, 2017)

Chapter 5- Discussion

5.1 Urban Beach Classification

Table 10: Urban Beach Classification

Site	Safety	Water Quality	Facilities	Hinterland Scenery	Litter	Star Rating
West Cowes	C	A	C	D	A	3*
Gurnard	C	A	C	D	A	3*
East Cowes	C	A	D	C	B	1*

Two of three urban beaches were awarded 3* for their quality, this was mostly decided by the facilities and safety parameter. They all received an 'A' for water quality. The main highlighted issues at these beaches were the lack of facilities out of season. This is caused East Cowes to be rated as a 1* beach. This meant that although facilities may have been present, they were unavailable. East Cowes was also brought down by safety and litter. To improve these beaches, the focus should be on the frequency of cleaning the beaches, and the facilities available at each site around the year, based on visitor needs.

5.2 Resort Beach Classification

Site	Safety	Water Quality	Facilities	Scenery	Litter	Star Rating
East Ryde	C	A	B	C	A	3*
Sandown	C	A	B	D	C	2*
Shanklin	C	A	C	D	B	2*
Ventnor	C	A	C	D	A	2*
Whitecliff Bay	C	A	D	C	A	2*

Table 11: Resort Beach Classification

Despite the scenery scores being low in the resort category, the facilities and litter were good overall. The beach safety in Shanklin, Ventnor and Whitecliff Bay needs to be further considered, as these beaches were graded a 'C'. The facilities at Ventnor and Whitecliff Bay also need to be assessed further out of season, as very few were available during the visit.

Scenery was an issue, as previously mentioned this can be improved through thoughtful design and the implementation of buffer zones in places where vehicles are on the beach front. Litter overall was good, but Sandown may need more frequent litter cleaning, as it was graded a 'C'.

5.3 Village Beach Classification

Site	Safety	Water Quality	Facilities	Scenery	Litter	Star Rating
Colwell Bay	C	A	B	C	B	3*
Bembridge	C	A	D	D	B	1*
Freshwater Bay	C	A	D	C	B	1*
Springvale	C	A	C	C	B	3*
Yaverland	C	A	C	C	A	3*
St. Helens	C	A	C	C	A	3*

Table 12: Village Beach Classification

The water quality in these beaches was excellent, rated an 'A'. The main areas for improvement are the amount of facilities both at sites, and the amount of facilities available in low season. Again, scenery was a low scorer, and this would be improved if buffer zones for traffic were introduced. Safety was another issue at the sites, with the lack of lifeguard supervision. Litter was present at Colwell Bay, Bembridge, Freshwater Bay and Springvale.

5.4 Rural Beach Classification

Site	Safety	Water Quality	Facilities	Scenery	Litter	Star Rating
Seagrove	n/a	A	n/a	C	A	2*
Totland Bay	n/a	A	n/a	C	A	2*

Table 13: Rural Beach Classification

These beaches were assessed on fewer criteria. The limiting factor was scenery at these sites. The removal of vegetation debris and the creation of a buffer zone would improve this.

5.6.5 Remote Beach Classification

Site	Safety	Water Quality	Facilities	Scenery	Litter	Star Rating
Compton Bay	n/a	A	n/a	D	B	2*

Table 14: Remote Beach Classification

Compton Bay also was not assessed on safety or facilities; therefore, the scenery and litter were the parameters that needed improvement. The scenery grade would be increased by the removal of vegetation debris from the shore.

5.7 Overall Beach Classification

The overall star rating results are detailed below in Table 7.

Beach Type	Site	Star Rating
Urban	West Cowes	3*
	Gurnard	3*
	East Cowes	1*
Resort	Ryde	3*
	Sandown	2*
	Shanklin	2*
	Ventnor	2*
	Whitecliff Bay	2*
Village	Bembridge	1*
	Colwell Bay	3*
	Freshwater Bay	1*
	Springvale	3*
	St Helens	3*
	Yaverland	3*
Rural	Seagrove Bay	2*
	Totland Bay	2*
Remote	Compton Bay	2*

Table 15: Beach Classification Overall Table

Overall, it can be seen from the results that all beaches achieved an 'A' grade in the water quality parameter. The remaining parameters differed from beach to beach.

Reviewing the BARE method, parameters that are outdated could be removed in favour for more appropriate ones. Areas in village or rural areas may not have the funding for more facilities. However, as found during this study, even commercialised beaches achieved the same star rating if not lower than those beaches, since facilities were not open. In remote locations, development may not be a viable option, however there is a need for improvements in these areas.

The BARE technique allowed for an organised assessment platform, however there were issues surrounding the analysis of beaches. There was a fluctuation in weather over the two days. Similarly, any change in conditions also affected factors such as sand colour and litter. Time also played a role in the primary research phase, as there was a 2 day period for data collection. If a beach was visited and it was high tide, there would be a secondary visit as litter, sand colour or vegetation debris cannot be determined accurately. This time constraint also meant that there was a tight schedule to adhere to, this was difficult in terms of filling out the sheets accurately. Low tide was also a problem when assessing beach quality, as this meant the beach width, water colour and debris in the water could not be assessed accurately.

The resources used were also an issue. For example, using paper sheets in the rain which then smudged. This could lead to loss of results if the project was repeated on a day with more rain. It would have been more effective to use and iPad to record data sets. Alongside this, if there was more funding for the project, staying on the Island longer would have meant a more adequate length of time for analysis to take place. The BARE method creates a snapshot of the beach on that specific day and specific time the survey was undertaken, therefore it would need to be repeated to create an overall data set.

This project has analysed the BARE system alongside other current award schemes and found that the BARE system assesses many beach quality factors. This creates a comprehensive and accurate beach classification. The use of fuzzy logic also helps to curb any subjective marks and allows for level analysis of data.

Due to the weather and season, facilities such as sun loungers, umbrellas and other activities were not available, but it seemed that even though these were not available, there were more of the 'necessary' facilities such as toilets or showers than the previous study. When assessing rural and remote beaches, the facilities and safety parameters do not count towards the class they achieve, this means that it is easier from them to achieve a good grade.

The BARE technique could be carried out every month. This would allow for greater comparison. Furthermore, this would allow for better management, as each month, the parameters would show which facilities or safety features were lacking.

5.6 Comparison to *Finch, 2007*

There are considerable differences in results between 2007 and 2016. The main improvement is the litter score. Finch found that litter was a prominent issue. Many sites that were previously rated a 'B' or below were observed to be an 'A' or 'B' grade. This may be for many reasons, out of season there are less people to create waste. Also the time differences between the studies, alongside better implementation of bin facilities. Most sites which achieved a B litter grade in this survey had large waste items, as opposed to many smaller items, unlike Finch. This suggests that the overall litter score on all beaches has increased.

Safety was significant as all beaches were rated a 'C' out of season. Many of the beaches were graded 'A' by Finch, including; Ryde, Sandown, Shanklin, Ventnor and Yaverland. In comparison, no beach assessed out of season achieved an 'A' or 'B' for safety. This was because there was a lack of safety parameters. This would suggest that safety is of more of a concern in season, as more people are visiting the beaches, however this could be a risk to public safety on busy days out of season.

During this study, it became apparent that many facilities were not available to the public. The beaches examined in season had higher grading for the facilities parameter. During the visit out of season, beaches which in summer would have many facilities had generally few, with only the 'important' facilities, such as toilets and a café open. This shows that there was indeed a difference between the level of facilities in and out of season.

The scenery scores out of season were lower than the in-season study. This may have been due to the conditions on the days in which the studies were carried out, as the weather was cloudy. This would have affected the water and sand colour identification. In the 2007 study, the scenery scores were higher overall and this could be due to the better weather and less development. The scenery score out of season was mainly affected not only by vehicular impact, but the presence of vegetation debris, which would have increased due to the weather at the time of study.

There was no difference between the two studies in terms of water quality at the observed sites. This may be due to the regular testing of water quality at these locations, which helps to maintain high levels. It also suggests that water quality is an important factor in terms of management.

Chapter 6- Recommendations

6.1 Improvements to Beach Facilities Out of Season

The main issue at the beaches was the availability of facilities out of season. Many beaches had few facilities, especially those in village, rural and remote locations. Facilities being open was not the only problem, as if there were facilities such as toilets open, they were not clean or fit for use. Some buildings also needed renovation or painting work. This meant that even though the BARE system identified the facility being there, the quality of said facility was not assessed. To improve the facilities out of season, visitor numbers should be assessed to determine which facilities are needed when. This could also include more out of season activities during school holidays, and encouraging beach use outside of summer season. Not only would this curb economic seasonality but provide better facilities for the public out of season. This could also extend to the accommodation and holiday sector within these areas, by promoting out of season offers, which would bring tourists to the area. For this to happen, there needs to be the adequate facilities available for visitors out of season.

6.2 Improvements to Beach Safety Out of Season

Safety was another major parameter that was lacking out of season. This was because lifeguards were absent at every site, along with zonation marking. There was also a lack of information at some rural and village beaches. It can be understood why there is no perceived need for lifeguards out of season, however, this could mean that accidents could happen, and does not promote safe bathing in these months. To improve safety out of season, lifeguard supervision could be arranged on weekends, or when beach visitors increase, such as school holidays. First aid posts and emergency phones could also be installed at all sites to give assistance. There is an argument that safety is less important in the low season, as there are substantially less visitors. However, the public do visit beaches out of season, and if even lifeguard supervision isn't available, other safety features should be present in case of an emergency.

6.3 Improvements to Scenery Out of Season

The improvements for scenery focus around vehicular impacts and vegetation debris at sites. To improve the scenery rating at the beaches evaluated, buffer zones could be created to separate cars from the beach environment. This could be done by increasing vegetation around car park and road areas, especially in locations where cars can drive along the front of the beach. In turn this would improve general aesthetics and possibly increase ecology in these areas. Another solution to low scenery ratings is the relocation of car parks away from the beach, this would improve the scenery at these locations. The cleaning and removal of vegetation debris would also improve the scenery parameter rating, as this was part of the coastal scenic evaluation.

6.4 Improvements to Litter Out of Season

The frequency of litter out of season was generally low. The biggest issue was isolated cases of gross litter at some sites. This meant that the litter score decreased the overall rating of the beach. Regular cleaning should be carried out during out of season months. Alongside this, the safe management of waste from projects on the beaches and infrastructure works as some waste was identifies to have come from this source. Lastly, to maintain good levels of beach cleanliness, there should be adequate bin facilities and cigarette receptacles on every beach observed. This would help lower litter levels on beaches who currently have poor facilities for waste disposal.

Chapter 7 Conclusion

To assess the success of the project, it is important to evaluate the aims and objectives, as follow:

Aim:

17 different bathing beaches around the Isle of Wight will be classified using parameters found in the BARE analysis method, the results will be compared with to determine whether there is a difference in beach quality in season and out of season.

Objectives:

1 To evaluate beach quality on 17 main bathing beaches around the Isle of Wight using the multi-faceted BARE system

2 To make recommendations based on the BARE findings, and address management issues, suggesting recommendations for improvement of Facilities, Safety and Litter at the Isle of Wight beach sites

3 To carry out a comparison of results with a previous study (*Finch 2007),* to evaluate differences and suggest changes to increase tourism out of season.

From observing the objectives, it can be seen that they have been met during this research, and therefore the aim has been achieved. The results from this study have created a comprehensive BARE dataset, including coastal scenic evaluation for 17 bathing beaches on the Isle of Wight during the out of season period. This has allowed for accurate grading of all beaches from resort to remote, meaning that recommendations could be made based on the results. The broad areas for improvement are as listed in Table 16.

Parameter	Recommendations
Safety	▪ Higher presence of lifeguards during busier times (weekends and school holidays) ▪ Fixed safety equipment to be present at most if not all beaches ▪ Marine activities zonation (if appropriate) ▪ Installation of First Aid Posts and Emergency Phone facilities
Facilities	▪ The improvement of 'necessary' facilities such as toilets and showers ▪ The opening of more facilities out of season, based on visitor needs and numbers ▪ Repairing old and worn/ broken facilities
Water Quality	▪ The overall water quality was excellent, to continue this regular testing should be continued
Litter	▪ More frequent cleaning on beaches out of season ▪ Careful management of works on beaches to reduce litter ▪ Implementation of adequate refuse and cigarette receptacles
Scenery	▪ The creation of buffer zones around car parks and roads ▪ Removing vegetation debris through regular beach cleaning

Table 16: General Recommendations for beaches (Source, Author)

Alongside the improvements to beach management that have been identified using the BARE method, the method itself could also be adapted to include a broader range of appropriate criteria. These suggestions include:

- Allocating a numeric value to beaches to allow for comparison between sites of the same star rating. The current criteria for rating star beaches allows for many beaches to be classed as a similar rating, even though they have different features
- The presence of dogs, and dog bans as this can affect the litter score
- A broader range of facilities, such as crazy golf, piers and arcades
- The level of management at a site, such as sea defences
- The cost of parking at sites,
- The availability of parking at a site

These recommendations would help to modernise the BARE analysis criteria, and include a broader range of aspects. From this out of season study, it became apparent that the beaches examined were of a lesser quality than in season, and had significantly less facilities, safety equipment and lower quality scenery. Therefore, I would like to reject my null hypothesis and accept my hypothesis.

If the recommendations stated in this report were implemented, then this would improve the quality of the bathing beaches out of season. The improvement of safety equipment at the sites would increase beach quality and beach user perception.

Overall, the BARE technique has allowed for the analysis of 17 bathing beaches around the Isle of Wight, and has aided suggesting recommendations to improve quality at these sites.

Chapter 8.0 Appendices

Appendix 8.1 *Williams et al. (2009) BARE Method*

BATHING AREA *REGISTRATION & EVALUATION FORM*

SECTION I: Background information

Name: ……. **Current classification:** ……..……

Type: Natural b*each* ☐ Nourished beach ☐ *Rocky shore* ☐

Resort ☐ *Urban* ☐ *Village* ☐ *Rural* ☐ *Remote* ☐

Length: …….*(m)* **Width**:…… …. *(m*) **Shape**:……**Slope**:…….

Rough sketch of bathing area

Table 1.1 Beach sediment characteristics*

Colour:		***Geological composition:***			
	% cover	***Size***		***% cover***	***Size***
Sand			*Cobble*		
Gravel			*Rocks*		
Pebble			*Other (e.g. concrete)*		

Sea floor: Sand……%; Stones…….%; Cobble/Pebble …….%; Rock…….%

*Shore type*****:** Sand beach …….. %; Gravel beach…..…% Pebble beach …….. %;

Cobble beach …….. % Rocky shore…..…% Concrete quay…… %

Backshore type: Wooded ….. ……% Cliff …… %; Other …..……. %

* *beach sediment characteristics* refers to the beach itself that either form a limited part

of the shore (e.g. in a pocket beach environment having boulder or rocky shore edges) or be representative of the entire / large part of shore (as in the case of long linear beaches).

** *shore type* in the same table refers to the entire shore visible to the beach user which may include boulder shore, concrete piers, shore platforms etc.

Responsible authority: …… **Municipality:** ……

Nº. of staff engaged with beach management: ☐

Date of initial registration: **Date of field survey:**

Accessibility:

***To site*:** Public beach: By road ☐ By walk ☐ Public transport ☐

Private beach: Ownership type ☐ Entrance fee: ☐

***To water environment*:** Gentle / steep underwater slope ☐

Beach erosion:

Are there obvious signs of erosion/deposition ? Yes ☐ No ☐

Is there present or has there been past monitoring of erosion? Yes ☐ No ☐

If so, by whom?
……

Are there known records or erosion maps available? Yes ☐ No ☐

If so, where?
…….

Table 1.2 Beach occupancy rates & Carrying capacity:

Time of year	Number of bathers (11.00 hrs) ***	Number of bathers (16.00 hrs) ***	% beach occupancy
Whole bathing season			
Bathing season week-day			
Bathing season week-ends			
Non-bathing season			

* ** beach users on beach and in water

Method for calculation of Beach Carrying Capacity:

For the beach concession area (where sun-lounger and umbrella facilities are provided), beach carrying capacity = beach area/3.5 (where $3.5m^2$ = beach area allocated per beach user).

For the non-concession beach area, where beach user density is higher, beach carrying capacity = beach area/3 (where $3m^2$ = beach area allocated per beach user in more crowded conditions). In either case, the adopted beach area per beach user includes an allowance for the provision of safety and access pathways to the sea and backshore area.

In the estimation of beach area per beach user, field trials and current literature citing acceptable beach area per beach user (Planning Services Division, 1990; Health Education Service, 1990; van der Salm & Unal, 2001) were considered.

Estimated beach carrying capacity: | |

Beach-use orientation:

Table 1.3: ***Main usage***:

Jet-skiing		Sailing		Motor boating	
Fishing (shore/boat)		(Wind) Surfing		Tourism yachting / day cruises	
Walking		Diving		Other (sporting activities)	
Sunbathing		Swimming		Picnicking	

Table 1.4: Designated sensitive area in the bathing area

	YES	**NO**
Resting place for water fowl / mammals		
Breeding place for rare birds / mammals		
Sanctuary		
Conservation area		
Potential conservation area		
Archaeological sites		
Other kind of protected area e.g. Heritage sites		

<u>SECTION II</u>: Rating parameters

Table 2.1 ***Safety parameters***

Safe bathing environment including: • a bathing environment slope < 1:10; • wave height < 0.5m for at least 80% of the bathing season • absence of rip currents outside storm conditions	

Lifeguards (inclusive of sea craft-based lifeguards).	
Bather/boating zonation markers	
Fixed safety equipment	
First aid posts	
Beach safety warning notices (on safe code of conduct, presence of rip currents, telephone number and location of nearest health centre, latest records for water quality monitoring, other).	
Emergency phone facilities	

Table 2.2: ***Water Quality***

National *bathing season* monitoring programme results **(*Year ……..... report*)**					
Barcelona Convention criteria		*Bathing Water Directive (76/160/EEC)*			
Passed		*Blue Quality*			
		Green Quality			
		Orange/Red Quality			
Failed		*Black Quality*			
Potential influences of poor water quality		Sewage outlet.			
		Sewage pipes.			
		River mouth.			
		Harbour areas.			
		Other e.g known absence of sewerage system.			
Visual observations along 100m of shoreline		**A**	**B**	**C**	**D**
Floating debris	Sewage related	0	1-5	6-14	> 14
	Other e.g. plastics, wood	0-10	11 -20	21 -30	> 30
Oil		0	1-5	6-14	> 14
Sea-bottom debris		0-10	11 -20	21 -30	> 30

Table 2.3: ***Beach facilities*** (tick where present and indicate number where possible)

Clean toilets	*Public*		*Regularly emptied litter bins*		*Clean showers*	*Public*	
	Restaurant					*Restaurant*	
Hotels / Star rating			*Secondary accommodation*		*Camping grounds*		
Apartment complexes							
Restaurants			*Snack bars*		*Freshwater tap*		
Adequate parking facilities (see beach carrying capacity)			*Information sources*		*Security boxes*		
Sun beds	*mattress*		*Legal / policy restrictions to water-based sport facilities*		*Speed boat towing activities (e.g. banana boat, tubing, skiing)*		
	nylon						
	Wood/plastic						
Sail boating			*Scuba-diving*		*Wind surfing*		
Pedaloes			*Para-sailing*		*Jet-skiing*		
Cigarette receptacles			*Wheel chair access*		*Tiki-huts / umbrellas*		

COASTAL SCENIC EVALUATION SYSTEM

Site Name:

No:	Physical Parameters		RATING 1	2	3	4	5
1	CLIFF	Height	Absent	>5m -<30m	30m - <60m	60m - 90m	>90m
2		Slope	Absent	Around 45°	Around 60°	Around 75°	*Circa* Vertical
3		Special Features*	Absent	1	2	3	Many >3
4	BEACH FACE	Type	Absent	Mud	Cobble / Boulder	Pebble / Gravel (±Sand)	Sand
5		Width	Absent	<5m - >100m	5m - <25m	25m - <50m	50m-100m
6		Colour	Absent	Dark	Dark Tan	Light Tan / Bleached	White/Gold
7	ROCKY SHORE	Slope	Absent	<5°	5°-10°	10°-20°	20°-45°
8		Extent	Absent	<5m	5m-<10m	10m-<20m	>20m
9		Roughness	Absent	Distinctly Jagged	Deeply Pitted and/or Irregular (uneven)	Shallow Pitted	Smooth
10	DUNES		Absent	Remnants	Fore-dune	Secondary Ridge	Several
11	VALLEY		Absent	Dry Valley	(<1m) Stream	(1m-4m) Stream	River/ Limestone gorge
12	SKYLINE LANDFORM		Not Visible	Flat	Undulating	Highly Undulating	Mountainous
13	TIDES		Macro (>4m)		Meso (2m-4m)		Micro (<2m)
14	COASTAL LANDSCAPE FEATURES **		None	1	2	3	>3
15	VISTAS		Open on one side	Open on two sides		Open on three sides	Open on four sides
16	WATER COLOUR & CLARITY		Muddy Brown / Grey	Milky Blue / Green; Opaque	Green / Grey Blue	Clear Blue / Dark blue	Very Clear Turquoise
17	NATURAL VEGETATION COVER		Bare (<10% vegetation only)	Scrub / Garigue (marram/gorse, bramble, etc)	Wetlands / Meadow	Coppices, Maquis (±Mature Trees)	Variety of Mature Trees / Mature Natural Cover
18	VEGETATION DEBRIS		Continuous >50cm high	Full Strand Line	Single Accumulation	Few Scatered Items	None
	Human Parameters		1	2	3	4	5
19	NOISE DISTURBANCE		Intolerable	Tolerable		Little	None
20	LITTER		Continuous Accumulations	Full Strand Line	Single Accumulation	Few Scattered Items	Virtually Absent
21	SEWAGE DISCHARGE EVIDENCE		Sewage Evidence		Some Evidence (1-3 items)		No Evidence of Sewage
22	NON-BUILT ENVIRONMENT		None		Hedgerow / Terracing / Monoculture		Field Mixed Cultivation ± Trees / Natural
23	BUILT ENVIRONMENT***		Heavy Industry	Heavy Tourism and/or Urban	Light Tourism and/or Urban and/or Sensitive Industry	Sensitive Tourism and/or Urban	Historic and/or None
24	Vehicular impact		No Buffer Zone Traffic, car park visible	No Buffer Zone / Light Traffic		Parking Lot Visible From Coastal Area	Parking Lot Not Visible From Coastal Area
25	SKYLINE		Very Unattractive	Unattractive	Sensitively Designed High / Low	Very Sensitively Designed	Natural / Historic Features
26	UTILITIES ****		>3	3	2	1	None

* Cliff Special Features: Indentation, banding, folding, screes, irregular profile

** Coastal Landscape Features: Peninsulas, rock ridges, irregular headlands, arches, windows, caves, waterfalls, deltas, lagoons, islands, stacks, estuaries, reefs, fauna., embayment, tombola, mud flats, attractive offshore breakwaters, groynes. etc

*** Built Environment: Caravans will come under Tourism, Grading 2 : Large intensive caravan site, Grading 3: Light, but still intensive caravan sites, Grading 4: Sensitively designed caravan sites.

**** Utilities: Power lines, pipelines, unattractive street lamps.

Table 2.4: Evaluation of ***Hinterland Scenery*** within walking distance and generally visible from the beach. In the context of bathing area quality evaluation, scenery is the only parameter that takes cognizance of a wider range of aspects outside the bathing area. To this end, a Coastal Scenic Evaluation technique is applied (A. Ergin, E. Karaesmen, A Micallef and A T Williams, 2004. A new methodology for evaluating coastal scenery: fuzzy logic systems. (In): *Area* (2004) 36. 4, 367 – 386).

Overall bathing area classification by Coastal Scenic Evaluation technique	**Class:**

Table 2.5: *Litter survey* (based on *EA*/*NALG* 2000 protocol) – *tick appropriate box*

		Rating (based on lowest scored litter category)			
Category	**Type**	**A**	**B**	**C**	**D**
Sewage Related Debris	General	0	1-5	6-14	15+
	Cotton buds	0-9	10-49	50-99	100+
Gross Litter		0	1-5	6-14	15+
General Litter		0-49	50-499	500-999	1000+
Harmful Litter	Broken glass	0	1-5	6-24	25+
	Other	0	1-4	5-9	10+
Accumulations	N^{o}.	0	1-4	5-9	10+
Oil		Absent	Trace	Nuisance	Objection-able
Faeces		0	1-5	6-24	25+

SECTION III :

EVALUATION & RATING SYSTEM
for Resort, Urban, Village, Rural, Remote bathing areas

Table 3.1a

BATHING AREA RATING BASED ON AVAILABILITY OF **SAFETY-RELATED PARAMETERS** *in Resort / Urban bathing areas*		
Presence of all 7 parameters	**Rating A**	- Safe bathing environment. - Lifeguards. - Bather/boating zonation buoys. - Fixed safety equipment. - First aid post. - Beach safety Warning notices. * - Emergency telephone services.
Presence of safe bathing environment , lifeguards and zonation buoys	**Rating B**	
Absence of either safe bathing environment, lifeguards and/or zonation buoys	**Rating C**	
Absence of safe bathing environment, lifeguards & zonation buoys	**Rating D**	

*** Beach safety warning notices**: Notices providing information on safe code of conduct, presence of rip currents, telephone number and location of nearest health centre, latest records for water quality monitoring, other.

Table 3.1b

BATHING AREA RATING BASED ON AVAILABILITY OF **SAFETY RELATED PARAMETERS** *in village-associated bathing areas*		
Presence of all 5 parameters	**Rating A**	- Safe bathing environment. - Bather/boating zonation buoys. - Fixed safety equipment. - Beach safety Warning notices. - Emergency telephone Services.
Presence of safe bathing environment, zonation buoys and fixed safety Equipment.	**Rating B**	
Absence of either, safe bathing environment, zonation buoys and/or fixed safety equipment.	**Rating C**	
An unsafe bathing environment.	**Rating D**	

Table 3.2

BATHING AREA RATING BASED ON **WATER QUALITY**			
For Resort, Urban & Village bathing waters			***For Remote & Rural bathing waters***
EU water quality Directive (76/160/EEC)		Barcelona Convention criteria for bathing waters	Visual observation
Rating	**Classification**	**Classification**	**Classification**
A	*Blue quality*	*Passed*	See Table 2.2
B	*Green quality*	-	
C	*Red/orange quality*	-	
D	*Black quality*	*Failed*	

Blue water quality is awarded to bathing waters in compliance with the *Imperative Values* and also conforming with the stricter *Guide Values* at a level of 80% for the *total & faecal coliforms* parameters and at 90% for other parameters as stipulated in Annex 1 of Directive 76/160/EEC (see Appendix V).

Green water quality is given to bathing waters where 95% of samples taken are in conformity with the Imperative Values stipulated in Annex 1 of Directive 76/160/EEC.

Red water quality is awarded to bathing waters where the samples taken are not in conformity with the parametric values of Directive (76/160/EEC).

Orange water quality is awarded to bathing waters in conformity with Directive (76/160/EEC) but where insufficient sampling has taken place.

Black water quality is awarded to bathing waters where bathing is temporarily prohibited because of a danger for the health of bathers but where water quality is still monitored and the necessary action to remedy the situation is taken.

Table 3.3a

BATHING AREA RATING BASED ON AVAILABILITY OF FACILITIES *on Resort beaches*			
A - Rating	***B - Rating***	***C - Rating***	***D - Rating***
5 Star hotel* accommodation	4 Star hotel* accommodation	3 Star hotel* accommodation	2 Star hotel* accommodation
Clean toilet facilities on beach or adjacent hotel* grounds (e.g. pool area)	Poorly managed toilet facilities on beach or adjacent hotel* grounds (e.g. pool area)	Clean toilet facilities limited to hotel *	Poorly managed toilet facilities limited to hotel *
Clean beach-based shower facilities	Poorly managed beach-based shower facilities	Shower facilities limited to hotel*	Poorly managed shower facilities limited to hotel*
Restaurant within beach-adjacent hotel* grounds and snack bar on beach	Restaurant within beach-adjacent hotel* grounds. No snack bar on beach	Limited to snack bar within beach-adjacent hotel* grounds	No restaurant / snack bar on beach or beach-adjacent hotel* grounds
Up to 6 water based sport-related facilities**	4 - 5	2 - 3	< 2
Regularly emptied litter bins and provision of receptacles for used cigarettes.	Poorly managed litter and receptacles for used cigarettes.	No receptacles for used cigarettes.	No litter bins
Provision of well-spaced (approx. 6m) mattress covered sun-loungers and umbrellas on beach	Provision of (approx. 4m) spaced nylon-net covered sun-loungers and umbrellas on beach	Provision of (approx. 4m) spaced plastic / wood sun-loungers and umbrellas on beach	Provision of (approx. 4m) spaced sun-loungers and umbrellas on beach-adjacent hotel* grounds.

Includes hotels, accommodation complexes and camping grounds
** Jet skis, para-sailing, wind surfing, pedaloes, speed boat towing activities (rings, banana boats, water skiing), boating, diving.
Poorly managed facilities: Facilities that are dirty, non-functioning, or not easily accessible.
Access: Refers to beach access from the land.

Table 3.3b

BATHING AREA RATING BASED ON AVAILABILITY OF FACILITIES *on Urban beaches*			
A - Rating	***B - Rating***	***C - Rating***	***D - Rating***
Accommodation facilities # include 4 - 5 Star hotels*	The highest grade of accommodation is limited to a 3 / 2 Star hotels*	The highest grade of accommodation is limited to a 1 Star hotel*	No hotel* accommodation available
Clean toilet facilities on beach or backshore	Clean toilet facilities limited to restaurants within walking distance#	Poorly managed toilet facilities on beach or backshore	Poorly managed toilet facilities limited to hotel *
Clean beach-based shower facilities every 50 – 100m	Clean beach-based shower facilities > 100m apart	Poorly managed beach-based shower facilities	Shower facilities absent
Beach-based restaurant	Restaurant within backshore	Limited to beach-based snack bar	No restaurant /snack bar on beach or backshore #
Up to 6 water based sport-related facilities**	4 - 5	2 - 3	< 2
Regularly emptied litter bins and provision of receptacles for used cigarettes.	Poorly managed litter and receptacles for used cigarettes.	Litter bins but absence of receptacles for used cigarettes.	No litter bins
Provision of mattress covered sun-loungers and umbrellas on beach	Provision of nylon netting covered sun-loungers and umbrellas on beach	Provision of plastic / wooden sun-loungers and umbrellas on beach	Sun-loungers and umbrellas not available on the beach

Within walking distance of the beach. This has been shown to fall within a broad definition of 200m.* Includes hotels, accommodation complexes ** Jet skis, para-sailing, wind surfing, pedaloes, speed boat towing activities (rings, banana boats, water skiing), boating, diving. *This aspect is not considered if there is a deliberate policy against or legal restriction on water-based sport facilities*.

Poorly managed facilities: Facilities that are dirty, non-functioning, or not easily accessible.
Access: Refers to beach access from the land.

Table, 3.3c

BATHING AREA RATING BASED ON **AVAILABILITY OF FACILITIES** ***Village associated bathing area***			
Rating A	**Rating B**	**Rating C**	**Rating D**
Clean public shower facilities	Clean shower facilities limited to restaurants	Absence or poorly managed shower facilities	Total absence of facilities.
Clean public toilet facilities	Clean restaurant-based toilet facilities	Poorly managed toilet facilities*	
Restaurant	Bar	-	
Adequate parking & good access **	Good access**	Poor access**	
Motel / B&B accommodation	Camping grounds	-	
Clean litter bins	Poorly managed litter bins	Insufficient litter bins	

Table 3.4

BATHING AREA RATING BASED ON **LITTER RELATED PARAMETERS (EA/NALG 2000)** ***see Table 2.5***	
Overall bathing area rating result for litter	

SECTION IV: CLASSIFICATION SYSTEM

Table 4.1

BATHING AREA CLASSIFICATION SYSTEM *for Resort areas*					
Site name:			**Type:**		
Parameter	**Safety**	**Water quality**	**Facilities**	**Hinterland scenery**	**Litter**
Rating					
Classification of bathing environment					
Five star	At least four parameter ratings awarded an 'A' rating for safety, water quality, facilities & either scenery or litter with the fifth parameter rating being not less than 'B'.				
Four star	Where 'B' is the lowest score allocated to safety, water quality and facilities and where the lowest score for scenery & litter is not less than 'C'.				
Three star	Where the lowest score awarded to any of the five parameters is 'C'.				
Two star	Where 'C' is the lowest score awarded to safety, water quality and facilities and where scenery or litter awarded a 'D' score.				
One star	Where either, safety, water quality or facilities parameter ratings awarded a 'D' score.				

Table 4.2

BATHING AREA CLASSIFICATION SYSTEM *for Urban and Village bathing areas*					
Site name:			**Type:**		
Parameter	**Safety**	**Water quality**	**Facilities**	**Litter**	**Hinterland scenery**
Rating					
Classification of bathing environment					
Five star	At least four parameter ratings awarded an 'A' rating for safety, water quality, facilities & either scenery or litter with the fifth parameter rating being not less than 'B'.				
Four star	Where 'B' is the lowest score allocated to safety, water quality and facilities and where the lowest score for scenery & litter is not less than 'C'.				
Three star	Where the lowest score awarded to safety, water quality, facilities and litter awarded is 'C'.				
Two star	Where 'C' is the lowest score awarded to safety, water quality and facilities and where litter awarded a 'D' score.				
One star	Where either, safety, water quality or facilities parameter ratings awarded a 'D' score.				

Table 4.3

BATHING AREA CLASSIFICATION SYSTEM *for Rural / Remote bathing areas*					
Site name: St. Helens			**Type: Rural**		
Parameter	**Safety**	**Water quality ***	**Facilities**	**Hinterland scenery**	**Litter**
Rating	*Not applicable*		*Not applicable*		
Classification of bathing environment					
Five star	*'A' score rating awarded to water quality, scenery and litter*				
Four star	*'A' score rating awarded to water quality & scenery and 'B' class to litter*				
Three star	*'B' is the lowest score rating awarded to water quality & scenery and not less than 'C' class to litter*				
Two star	*'C' score rating awarded to water quality, scenery and litter*				
One star	*Where any parameter is awarded a 'D' score rating*				

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