Assessing the level of integration between coastal risk management and town and country planning on the coast

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Statement of Originality:

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Abstract

Previously, a fragmented, disjointed and piecemeal approach has been taken to coastal risk management. In the present day, it is now recognised that successful management requires a more comprehensive, fluid, coordinated and integrated approach. The inter-tidal zone, between the marine area and the land, is recognised as an area where integration has been slow to develop.

This study analyses the perceived level of collaboration between coastal and marine organisations and Local Authorities (LAs). Secondly, this study looks at the integration between the town and country planning policy and coastal management. This is done through the use of an online questionnaire survey carried out by 65 participants. This was followed by semi-structured interviews with 8 participants from coastal and marine organisations and one LA planner. This study looks at the effectiveness of the Coastal Concordat from the view of coastal organisations, and from LA planners from Chichester, Havant and Portsmouth.

The research studies integration using the Coastal Concordat as a lens. The Coastal Concordat was introduced in 2013 to streamline the process for development proposals on the inter-tidal zone. Despite being received well initially, a significant impact of the Coastal Concordat remains to be seen. In order to gain insight into the opportunities, challenges, successes and failures, it is vital that there is engagement with those tasked with implementing and supporting the Coastal Concordat. A SWOT analysis is conducted to identify the opportunities and limitations of the Coastal Concordat so far. The research concluded that generally, knowledge of the Coastal Concordat is limited.

A prominent theme from the results was the concerns in regards to lack of funding and staff, in turn causing “corporate memory loss.” However, there was appreciation of long term goals of the Coastal Concordat and other initiatives. This study concludes by identifying the opportunities to bridge cross-disciplinary and cross-sector collaboration at the coast and taking a place specific approach.

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CHAPTER 1: INTRODUCTION

1.1 Introduction

This dissertation will critically assess the degree of integration between Local Authority (LA) planners in the Solent and organisations managing coastal risk. In particular, the successes of initiatives such as the Coastal Concordat will be studied. The implementation of Shoreline Management Plans within Local Authority local plans will also be outlined.

This chapter introduces the focus and rationale of the study followed by the specific aims and objectives and then concludes with an outline of the dissertation structure.

1.2 Focus and rationale of the study

The vulnerability of coastal communities to coastal hazards is increasing due to population growth, housing pressures and a changing climate (Cantasano & Pellicone, 2014; Girard et al., 2014; Swathi, 2018). For that reason, coastal authority initiatives must be applied to lessen the vulnerability of coastal communities. To reduce the risk to coastal communities, risk mitigation and adaptation approaches need to be integrated into local planning practices. However, Local Authorities (LAs) operate within a intricate hierarchal governance framework which often promotes practices with a political agenda in order to boost their political party (McGuinness & Mawson, 2017). Hence, it is necessary to appreciate that local coastal planning practices are heavily impacted by national and international regulations and policies. Local Authorities are also faced with the challenge of expanding populations which require affordable housing and suitable infrastructure. This is particularly true for the south coast of England, where there is an increasing demand for new, affordable housing (Kollewe, 2017). As a consequence, there are conflicting user values, needs and interests which need to be addressed (Cicin-Sain and Knecht, 1998; Bowen and Riley, 2003). Effective, proactive coastal planning is therefore required to address these challenges.

It is crucial to recognise that coastal flooding and erosion risk impacts do not follow the same restrictions that Local Authority boundaries do (ECSP, n.d). It is therefore important that planners and organisations managing coastal risk have a shared agenda whereby there is a mutual vision for change and one that includes common understanding of the problem (Taussik, 2004). Therefore, a joined-up, integrated, coherent approach is necessary to mitigate the risks faced at the coast.

In the past, management has often taken a sectoral, piecemeal approach. However, in recent years, there has been a shift to focus on a more integrated, holistic and collaborative approach. At the forefront of this development, are the principles for Integrated Coastal Zone Management (ICZM) proposed by the EU (Pickaver et al., 2004; McKenna, 2008; Ballinger et al., 2010). Many new policies and legislation in English planning system have been developed based around ICZM. For example, the Coastal Concordat aims to encourage integration by having a single point of contact when dealing with coastal planning applications (Defra, 2013). Furthermore, Shoreline Management Plans (SMPs) have aimed to be more integrated into the statutory town and country planning system in England.

To date, there are few studies which directly study integration at the coast. Turner and Essex (2015) carried out a study on the effectiveness of Coastal Concordat two years after its implementation. It is now five years after its introduction and has been given prominence through it's mention in the 25 Year Environment Plan (2018). Taussik (2004a & 2004c) and Ballinger, Taussik and Potts (2004) also conducted studies surrounding the impacts of the planning system on coastal risk. With a greater emphasis and awareness of the issues facing the coast at present, this study aims to conduct a more up to date analysis of the challenge of integration on the inter-tidal zone.

1.3 Aims and objectives

The overarching aim of this research is to critically analyse the level of integration with between coastal and land planning in coastal organisations around the UK, and Local Authorities in the Solent. In order to achieve this, five research methods were identified which are depicted in Table 1.1.

Table 1.1: Core research objectives.

Objective no.	Objective
1	Undertake a review of the literature surrounding the topic of integration within marine, coastal and terrestrial planning in England
2	To find out what the perceived challenges are to ensuring integration
3	Examine the successes and shortfalls of the Coastal Concordat which aims to improve integration between coastal and terrestrial planning
4	Analyse to what extent Shoreline Management Plans are perceive to be integrated into land planning
5	Put a set of recommendations together for the future LA planners and organisations managing coastal risk

1.4 Dissertation structure

This research project consists of seven chapters. Chapter 1 has outlined the rationale for the project and the aims and objectives of the study. Chapter 2 will critically analyse the relevant literature in regards to the previously sectoral division between coastal managers and town planners and the steps which are being taken to improve integration. Specifically, the Coastal Concordat will be discussed. Chapter 3 will discuss relevant research methods for data collection in the context of the aims and objectives outlined in Chapter 1. Chapters 4 and 5 will present the interpretation and the analysis of the findings which will then be compared to the findings within the literature. Chapter 6 will provide a critical analysis of the study and suggest recommendations for coastal management, moving forward. Chapter 7 will present a final conclusion of the findings of this study.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Chapter 2 contemplates the existing literature surrounding the context for the study. Firstly, the nature of coastal conflict will be discussed, followed by how the planning system has developed over time. Within this section the differences between coastal and terrestrial planning will be highlighted, along with the differing approaches to planning. This is followed by an analysis of how integration fits within the global approaches to coastal management and in particular, within the EU principles of ICZM. Finally, the challenges to integration within coastal and terrestrial planning, such as economic cutbacks and political agendas within local authorities will be discussed. It is important to note that although this study will focus predominantly on terrestrial and coastal planning, there is an intrinsic link with the marine environment. Therefore, this literature review will include marine planning as well.

2.2 Marine and Coastal Management

2.2.1 The context for the study, coastal zone resources and multiple use

Coastal areas have long been recognised as a hub for economic and social development and it is now estimated that 40% of the global population live within 100 kilometres of the coast (Girard at al., 2014; Kummu, 2016). The world's population has grown exponentially over the last century and is projected to reach 9.7 billion by 2050 (Kay & Alder, 1999; The UN, 2015). Consequently, the ever-increasing dependency on the coast has resulted in the exhaustion of many of its resources, putting an increased pressure on the biotic and abiotic mechanisms of ecosystems (Defra, 2008; Cantasano and Pellicone, 2014). It is likely that coastal resources have been, and will continue to be placed under numerous, intense and often conflicting forces (Kay & Alder, 2004). Furthermore, the expanding population has meant that communities are forced to live on unstable areas of coast. This, combined with the added threat of climate change, has hence led to an increased dependency on coastal defences in order to protect residents and their properties from coastal flooding and erosion.

The best practice for coastal risk management has been defined as taking a holistic approach which promotes a shared responsibility among all relevant stakeholders (Ballinger, Taussik and Potts, 2004c). It is generally accepted in the literature that the past "development-defend cycle" of coastal management needs to be broken, in favour of a more adaptive, holistic, integrated approach. Studies by Carter *et al*. (1999), Ballinger et al. (2002a & 2000b) and Ballinger, Taussik and Potts (2004c) have stated that this can only be accomplished through a collective, collaborative approach to coastal risk management. This requires coordination of activities between planners and coastal managers and more collaboration in terms of the Local Plans.

Nicholls and Klein (2005) state that rising sea levels and increasing frequency and intensity of storms has put into question the cost implications and overall effectiveness of traditional coastal management such as groynes and sea walls. In addition, such defences are have been found to be unsustainable in the long term because they have a tendency to the problem rather than solving it. Furthermore, the combination of hard sea defences and rising sea levels has given rise to 'coastal squeeze,' whereby intertidal habitats are lost (Hildinger and Braun, 2016). Consequently, in recent years coastal ecosystems have been a more widely regarded method of mitigating the effects of climate change and preventing coastal squeeze. For example, saltmarsh dissipates the energy of waves and is regarded as a more sustainable approach to management (Elliot et al., 2007; SECD, 2012; Hildinger & Braun, 2016).

2.2.2 Concepts and principles of Integrated Coastal Zone Management (ICZM)

It has long been recognised that integration is a prerequisite for environmental policy-making (Lenschow, 2002; McKenna, 2008; Martino, 2016). The proposed Integrated Coastal Zone Management (ICZM) framework aims to inspire a more sustainable, long term approach when managing the necessity for development whilst maintaining, or improving, the quality of the natural environment (Cicn-Sain & Knecht, 1995). CEC (2000, p.25) defines ICZM as a mechanism to "balance environmental, economic, social, cultural and recreational objectives, all within the limits set by natural dynamics." However,

the definition of ICZM, and the guidance of it should be implemented, has evolved over time.

The European Community Council Recommendation (2000) states that there are three core components needed for a long-standing ICZM strategy. These are: a holistic approach to management; horizontal and vertical integration; and sustainable development (Martino, 2016). These are needed to underpin the definition and development of the eight EU principles of ICZM as stated in Table 2.1.

The European Community Council Recommendation (2000) states the key features for a long-standing ICZM strategy are: a holistic approach to management; horizontal and vertical integration; and sustainable development (Martino, 2016). These three concepts underpin the definition and development of the eight EU principles of ICZM as seen in Table 2.1.

Table 2.1: The EU Principles of ICZM

1. A broad overall perspective
2. A long-term perspective
3. Adaptive management
4. Local specificity
5. Working with natural processes and respecting the carrying capacity of ecosystems
6. Involving all the parties concerned
7. Support and involvement of relevant administrative bodies at national, regional and local level
8. Using a combination of instruments

(Source: The UN, 2002; Mckenna 2010)

Terrestrial planning should not be considered as independent from coastal planning (Kidd and Shaw, 2014; Kerr, 2014; Gazzola *et al*., 2015; Li *et al*., 2018). However, as acknowledged by Kidd and Shaw (2014) and Kerr (2014), there are significant differences in the organisation of management between terrestrial, coastal and marine planning which can challenge integration. Marine and land systems have different management priorities due to different

history, administrative context as well as contrasting institutional and legal frameworks.

Furthermore, Kerr (2014) states that integration is an inaccurate term for what should be more appropriately described as “coordination and balance” between the two planning forms. As of yet, no solution has been put forward for the most effective integration of marine, coastal and terrestrial management. The studies discussed suggest that there is no ‘one size fits all’ approach to coastal planning. Furthermore, they suggest that it is the specific characteristics of the local area, which should be carefully considered to ensure appropriate management. The studies previously discussed, acknowledge that there are significant challenges in coordinating management but none provide a solution that specifically addresses these challenges during decision- making process.

Whilst much of the literature highlights the importance of integration, it is crucial that “an integrated approach” must coexist with other of the principles of ICZM such as taking a “holistic approach” and “sustainable development.” Within the ocean environment there are no definite, physical boundaries, therefore management should reflect this through a continuous, iterative adaptive approach.

2.2.3 ICZM in Local Authority planning

Historically, planning in the UK has taken a compartmentalised, piecemeal approach which has lacked integration (Rupprecht Consult and International Ocean Institute, 2006; McKenna, 2010; Kerr, 2014). However, since the increase in awareness of ICZM, substantial effort has been applied to comply with the EU principles of ICZM. In 2006, the “Report from the United Kingdom” was written with contributions from “ICZM in the UK: A Stocktake” (Atkins, 2004) and “Safeguarding out seas- a strategy for the conservation and sustainable development of our marine environment” (Defra, 2002).

2.3 Overview of terrestrial and planning in England

2.3.1 The history and development of coastal management and planning

Studying past management provides a basis for understanding how current initiatives to planning of coastal resources have changed over time (Kay and

Alder, 2004). The projection of such trends can then provide insight into the possible future progress of coastal management and planning.

Informal approaches to resource planning date back to the seventh century AD (Frassetto, 1989). The industrial revolution changed the communities' understanding of its resources, resulting in them being viewed as tangible elements of nature or 'natural resources.' Furthermore, management and planning at the coast Little emphasis was given to the ecology, social demands or public opinion and it was perceived that all resources were infinite and there to be consumed (Goldin and Winters,1995; Grigalunas and Congar, 1995). However, in the late nineteenth century this began to change due to advances in economic theories on supply and demand and social reforms, which consequently led to the realisation that society had the ability to destroy the environment. As the application of land use planning grew and the concept of managing areas in 'zones' was introduced, this then transposed into coastal planning.

Table 2.2 sets out a brief timeline on how coastal management has evolved over the last sixty years. There has been a transition in the approach to management of the land, coastal and ocean environment. Zones are now used on and off shore in order to protect specific areas. Moreover, in recent years it has been recognised that a more integrated, holistic approach is required in order to achieve the main goal of sustainable environmental management.

Table 2.2 Phases in the development of coastal management

Phase	Period	Key features
1	1950-1970	• Sectoral, piecemeal approach • Man-against-nature ethos • Public participation low • Limited ecological considerations • Reactive focus
2	1970-1990	• Increase in environmental assessment • Greater integration and coordination between sectors • Increased public participation • Heightened ecological awareness

		• Maintenance of engineering dominance • Combined proactive and reactive focus
3	1990-2000	• Focus on sustainable development • Increased focus on comprehensive environmental management • Environmental restoration • Emphasis on public participation
4	2000-2010	• Focus on tangible implementation of sustainable development principles • Ecosystem-based management becoming embedded in national legislation • Shared governance emerging • Exploration of new coastal management approaches, including learning networks and adaptive management systems • Increased impact of globalisation and the internet on management approaches and impacts • Emerging re-analysis of the basic tenets of coastal management
5	Future	• Integrated suite of theories and tools applicable with confidence over all scales, timeframes, locations and issues • Comprehensive ecosystem-based management • Connected coastal management communities of practice • Verified set of governance models • Emphasis public participation

Adapted from O'Riodan and Vellinga (1993) and Kay and Alder (2004)

It is important to note that the timeline may be slightly outdated as it was originally created in 1993. However, the timeline is still valuable when combined with more recent key features.

2.3.2 The requirement for integration between coastal and terrestrial planning

Developments in the intertidal zone, which span over the land and sea, have been subject to a complex network of licensing controls making management difficult (Turner & Essex, 2016). The various different requirements for the coastal and marine area can be seen in Table 2.3.

Table 2.3: The rapidly increasing demand for maritime space for different purposes

- Installations for the production of energy from renewable sources
- Gas exploration and exploitation
- Maritime shipping and fishing activities
- Ecosystem and biodiversity conservation
- The extraction of raw materials
- Tourism
- Aquaculture installations
- Underwater cultural heritage

Adapted from EC (2004) and Tafon (2017)

There are currently terrestrial and marine institutions with overlapping spatial and sector-based priorities. It is vital that structures are implemented which are designed to anticipate potential conflicts amongst marine and coastal users whilst guaranteeing assets that are mutually owned can be sustained for future generations (Hull, 2013). Marine spatial planning across Europe is using and adapting existing terrestrial planning tools and sustainable development concepts to allow the "sustainable use of the sea" Hull (2013). Such strategies encourage integration.

Marine Spatial Planning, Integrated Coastal Zone Management and Strategic Environmental Assessment have all made attempts at achieving horizontal and vertical integration across and between sectors. However, an issue which has less adequately been addressed is the integration of marine and terrestrial planning (Scarff, Fitzsimmons & Gray, 2015).

2.3.3 The challenges surrounding the cohesion of terrestrial, coastal and marine planning

Integration between marine, coastal and terrestrial planning structures is necessary to assure the natural environment is managed sustainably. Since terrestrial planning has been acknowledged as a practice for a longer period, it is considered to be far more developed than marine and coastal planning (Turner & Essex, 2016). Terrestrial planning has evolved over the last 100 years where as coastal planning is more recent and marine planning even more so (Kerr et al., 2014; Kidd and Shaw, 2014; Gazzola et al., 2015; Li, 2018).

It is challenging to define the physical boundary between the coastal, terrestrial and intertidal zone. There are numerous interpretations of the definition of the ‘coastal zone’, which further obscures management (Defra, 2008). Figure 2.1 displays the complex assortment of stakeholders in the coastal zone and the areas where they operate. The Marine and Coastal Access Act (2009) intentionally created an overlay between terrestrial planning (applied landward from the mean low-water mark ordinary spring tides) and with the new marine licensing regulations (applied seaward from the high-water mark ordinary spring tides) (Turner and Essex, 2016). This was completed in an attempt to integrate the planning systems, however 5 years after the implementation of the Coastal Access Act, the TPCA (2014) described the condition of sub-planning in England “as one of fragmentation and contrast”. The challenge of integration in planning is therefore still apparent.

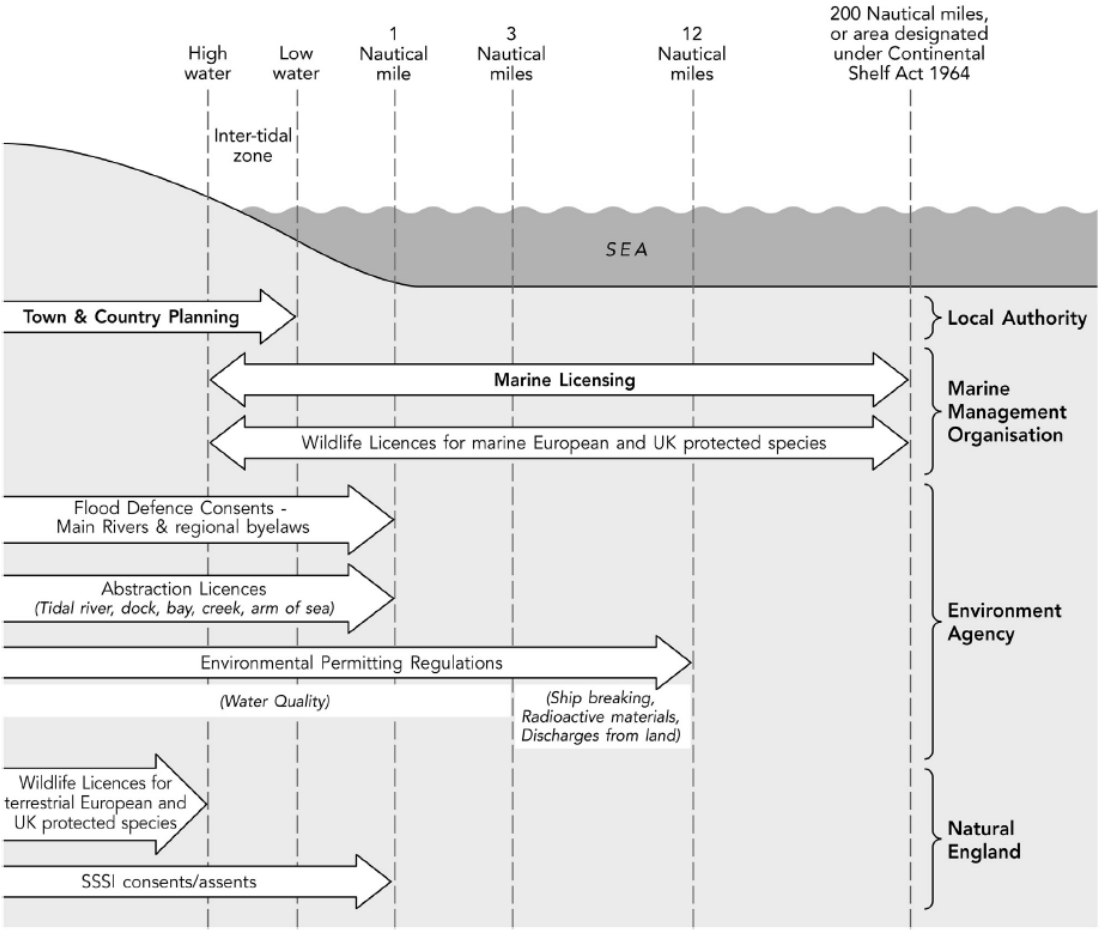

Figure 2.1 The marine and terrestrial planning consents required in the inter-tidal zone

(Defra, 2014)

The definition of the boundary between sea planning and land- use planning differs from country to country and therefore there remains a requirement to certify coherence across this artificial separation (Smith *et al*., 2011). The UK Government's policy paper accompanying the Marine Bill (HM Government, 2009) recognises the prerequisite for strong integration between terrestrial, coastal and land planning systems (HM Government, 2009). The challenge in integrating the two management plans is attributed to two specific differences. The first is the three-dimensional properties of ocean in comparison to the two-dimensional properties of the terrestrial environment (Smith et al., 2009; Taussik, 2007). Planning of the seabed is arguably simpler because most stakeholders have a fixed relationship with the seabed. However, the water column has a changing nature and is therefore more difficult to manage. The second difference between coastal and marine planning and terrestrial planning is that sea-use planning has maintained a close association with the ecosystems approach from the beginning (Mee at al., 2008; Bainbridge et al., 2011; van Leeuwen et al., in press). In contrast, coastal and marine planning developed after the post-1990s collapse of many fisheries across the world, leading to the realisation of the value of marine ecosystems management (Jay, 2010; Smith, 2011). Sea-use management has subsequently learnt from the errors and obstacles experienced by more established planning forms, so as to prepare for a more sustainable future (Dominguez-Tejo et al., 2016). Furthermore, environmental management now focuses on achieving a balance between an anthropogenic approach and an eco-centric approach.

The sole aim of terrestrial planning is to achieve what is perceived to be for the 'public good.' Marine planning however, aims to follow the precautionary principle- although this is often not true when put into practice (Turner & Essex, 2015).

It is widely accepted that coastal planning and management activities are often so strongly linked, that in successful coastal programs they are almost indistinguishable. The interweaving of planning and management to create a

single coastal program can help to break down institutional boundaries or possible professional rivalries between planners and managers (Kay and Alder, 2004). Consequently, in management and planning strategies cross-sector collaboration should be encouraged.

2.4 The integration of Shoreline Management Plans

A Shoreline Management Plan (SMP) is an expansive assessment of the hazards associated with coastal processes and provides a policy framework to mitigate the risks to people and the built, historic and natural environment in a sustainable way (Defra, 2001). Town and country planning and SMPs are intrinsically linked. Whilst shoreline managers have the ability to define what is and isn't a risk at the coast, it is the duty of the local planning authorities (LPAs) to control the amount of new developments in areas that are at risk of coastal erosion (Taussik, 2004a). It is important that there is communication and integration between these two sectors in order to Development control is therefore and important too in the implementation of SMPs. Planners and shoreline managers therefore have a shared agenda of safeguarding people and property from risk. Figure 2.2 highlights the intrinsic link between shoreline management plans and town and country planning.

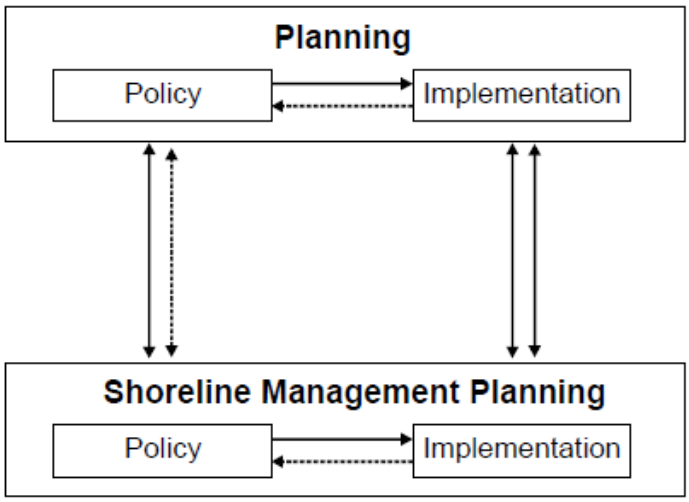

Figure 2.2 The integration between town and country planning and shoreline management plans

(Taussik, 2004a)

It should be noted that the diagram depicted in Figure 2.2 was created by Taussik in 2004, 14 years ago. Therefore, it could be argued that the diagram is outdated. Since 2004 many steps have been made in an attempt to move towards the creation of the 'shared objective.' For example, the introduction of the Coastal Concordat in 2013 is a framework which aims to coordinate the separate processes of consenting developments in England. The merits and shortfalls of the Coastal Concordat will be discussed in Chapters 4 and 5.

A study conducted by Li *et al* (2018) highlighted two implications of integrated consideration. The first was that land-sea integration is need and the second was the multiple plans need to operate in cohesion. In an attempt to aid interconnection, the cells of the Shoreline Management Plans (SMPs) were zoned so that the cells not only included sea, but also the land. This can be seen in Figure 2.3.

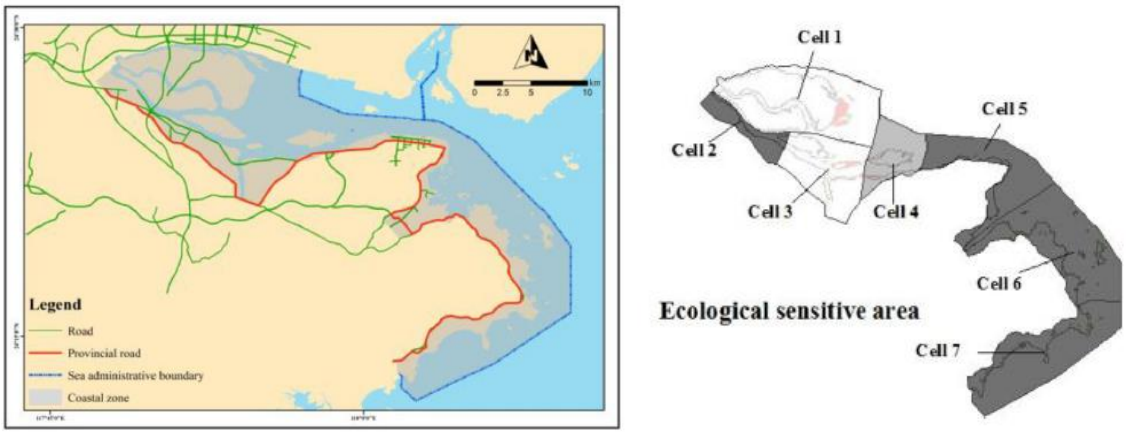

Figure 2.3 The identification of seven Shoreline Management Plan zones in Longhai, China (Li *et al.*, 2018)

2.5 The application of the Coastal Concordat

The Coastal Concordat is a voluntary framework which was introduced by the Department for Environment, Food and Rural Affairs (DEFRA) in November 2013. The aim was to better coordinate terrestrial and marine processes at the coast (Defra, 2013; Turner and Essex, 2016). The Coastal Concordat a non-standard example of an intervention which aims to directly integrate terrestrial and marine planning. It's implementation therefore proposes

openings to determine and explore the influences in the conception of a more holistic regulatory system (Turner & Essex, 2016). The defining aim of the Coastal Concordat is to encourage a more cohesive, efficient, coordinated regulation (Defra. 2013). The principles set out by the Coastal Concordat according to the regulatory and advisory bodies are set out in Table 2.4.

Table 2.4 The Coastal Concordat is based on five high level principles, as set out below:

1. Applicants seeking regulatory approval should be provided with a **single point of entry** into the regulatory system, guiding them to the organisations responsible for the range of consents, permissions and licences may be required for their development.
2. Regulators should agree a **single lead authority** for coordinating the requirements of the Environment Impact Assessment (EIA) Directive or Habitats Regulations Assessments (HRA).
3. Where opportunities for **dispensing of deferring regulatory** responsibilities are legally possible and appropriate, they should be taken.
4. Where possible, at the pre-application stage, competent authorities and statutory advisors should agree the likely environment assessment **evidence requirements** of all authorities at all stages of the consenting process
5. Where possible regulators and statutory advisors should each provide **coordinated advice** to applicants from across their respective organisations.

Adapted from (Defra, 2013)

A study which successfully examined the practicality of the integration and terrestrial, marine and coastal planning under the Coastal Concordat used the approach of a questionnaire followed by a follow-up interview (Turner and Essex, 2016). A questionnaire was used as a prompt, followed by a semi-structured interview. Organisations such as the MMO, Natural England, the Environment Agency and businesses from the marine sector were interviewed in order to gauge their opinion on the level of integration between terrestrial and marine planning systems. The use of semi-structured interviews in the Turner and Essex (2016) study meant that themes were brought up which had not been considered prior to the study. Although the study by Turner and Essex (2016) is considered to be a successful investigation to the integration between coastal, marine and terrestrial planning, the study focused on all

three types of planning. In contrast, this study will take a more specific view of the link between coastal and terrestrial plans, particular within Local Authorities and their Local Plans.

2.5.1. Integration within policy

The importance of the Coastal Concordat was recognised in the UK Governments 25 Year Environment Plan. The long-term management recognises the value of the Coastal Concordat all Local Authorities will be expected to have signed up to the Coastal Concordat by 2021 (Gov.uk). However, aside from the 25-year plan and the study conducted by Turner and Essex (2015), there is little reference of the Coastal Concordat in the literature.

2.5.2 Single point of entry

The five high level principles of the coastal concordat (see Figure []) emphasises the need for one lead authority. Having one lead authority streamlines the regulatory process by minimising the duplication of data requirements. Emphasis was also put on the need to reduce the duplication of effort of collecting data for the requirements of Habitat Regulation Assessments (HRA) and Environmental Impact Assessments (EIA). In addition, it was recommended that parallel tracking of assessments should be carried out where possible (Defra, 2013).

In an assessment of the effectiveness of the Coastal Concordat, Turner and Essex (2015) found that the Coastal Concordat aided improvement of communication between planning officers and the MMO assessors during the “screening opinion” part of the planning process. It was found that the system was more efficient when deciding whether the proposed development, negatively affected the environment and whether an EIA was required.

In regards to EIAs, despite the differences between the regulations for the MMO and terrestrial planning, eight LAs and four statutory bodies indicated that they had engaged in discussions at the pre-application stage with other statutory organisations to avoid the duplication of effort when contemplating the necessity for EIA assessments. Moreover, the “single point of contact” was found to be a more practical and efficient use of resources because the

cost of joint meetings could be shared between the MMO and the LA (Turner & Essex, 2016). Nevertheless, there were still concerns in regards to the cost implications, particularly in a time of cuts in the public budget.

The “single point of entry” strategy has been used in other sectors as well. The financial market previously had a complex financial institution in an attempt to reduce the turmoil occurring in the financial market, the Federal Deposit Insurance Corporation (FDIC) introduced a single point of entry in order to streamline the system (Kupiec & Wallison, 2015). This therefore strengthens the “single point of effort” as a strategy in itself.

2.6 Achieving the long-term goal of sustainable development

Sustainability has emerged as the dominant paradigm of global coastal management programs since the late twentieth century (Kay and Alder, 1999). Sustainability remains valid today, albeit with continued debate over how to produce tangible measures. Furthermore, there is much variety surrounding the interpretation of sustainable development.

One of the most widely used definitions for sustainable development is “development that meets the needs of the present without compromising the ability of the future generations to meet their own needs” (World Commission on Environment and Development, 1987.p8). The Brundtland report states the need for a progressive transformation of economy and society (Kay and Alder, 2004). Hull (2015) stated that sustainable development in the UK policy has a focus on economic development. Consequently, when applied to the coastal and marine environment, management aims to facilitate sustainable economic development (HM Government, 2011, p.3).

To conclude, achieving sustainable development in itself is challenging, but without proper planning it will be impossible. Planning helps governments to resolve the apparently conflicting aims of sustainable development: to promote the economic development of coastal resources while attempting to preserve their social, cultural and ecological applications.

2.7 Chapter summary

To summarise, there is literature which discusses the level of integration in coastal and land planning separately. However, few studies have explicitly studied how much integration there is between the two types of planning.

CHAPTER 3: METHODOLOGY

3.1 Introduction

Chapter 3 will discuss a range of appropriate research methodologies which are adopted to meet the overall aims and objectives of the study, as set out in Chapter 1. This will be followed by discussion of the advantages and disadvantages of the chosen research methodologies, concluding with the most appropriate techniques for this study to ensure the results best answer the research question.

3.2 The methodological approach

In order to adequately answer a research question, a sound methodological approach is necessary (Jamshed, 2014). Buckley and Chiang (1976, p.34) describe a research methodology as "strategy or architectural design by which the researcher maps out an approach to problem-finding or problem solving." A rational methodology is important in establishing the credibility and contribution of the research and verifying that ethical issues have been addressed. In addition, the research design must be reliable and replicable. Therefore, a study that does not have a sound methodological selection may lack validity. Validity may be compromised by whether or not the method is assessing what it intends to measure and by inaccuracies that arise from incorrect application of it (Morgan, 2010; Bryman, 2016).

Logistics such as limited time and money should be considered against the quality of the data produced. Frey and Oishi (1995) state that if such logistics limit the choice of the methodology, then the researcher must qualify their conclusions within that context. Furthermore, the views and values of the researcher have been taken into account as a cofounding variable, which may influence the results of the research (Bryman, 2016).

3.2 Study location

Initially, it was intended that the whole study would be solely based in the four LAs of Portsmouth Havant, Arun and Chichester (see Figure 3.1). This was due to their close proximity to the researcher's location and to keep the study size manageable. Furthermore, the study was also award by the Professor Mike Clark Award and one of the requirements was that the study was at least partly undertaken in the Solent (SolentForum.org., 2018). In addition, local contacts of the study supervisor were based primarily in these LAs and hence more easily accessible. However, the study was extended to all individuals working in Coastal Organisations across the coast in England due to the initial poor response rate of Coastal Organisations. The LA planners who participated in the questionnaire and interview were all from the four LAs listed above. An alternative method of sampling would have been to gain responses from all LAs in the UK but this was deemed too broad within the time restrictions of the study. Therefore, although main case study was based around the Solent, responses from organisations such as Natural England, Environment Agency, the MMO and the Solent Forum from across the country were collated too.

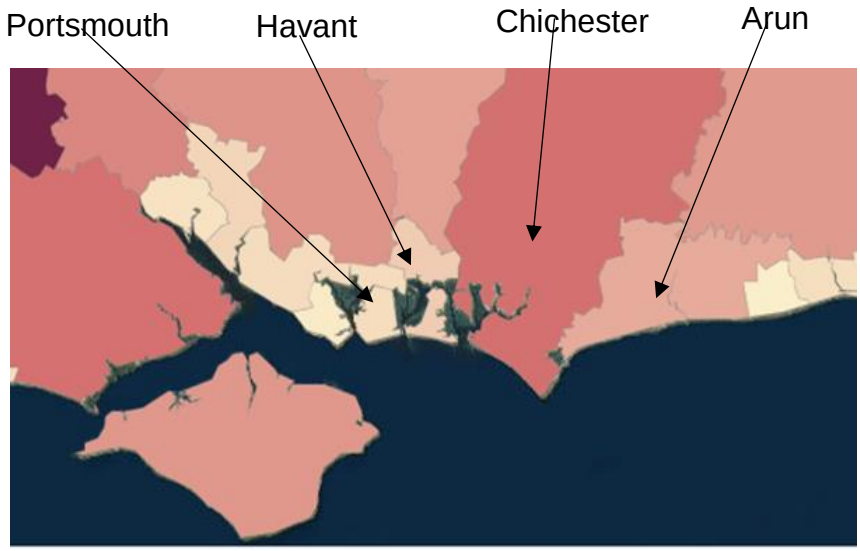

Figure 3.1: The four Local Authorities in the south of England
(ONS, 2015)

The four LAs in the study area are different in size, coastline to land ration and population size. They also differ in terms of management strategies at the coast. Portsmouth, for example is the only of the four LAs depicted in Figure 3.1 which has signed up to the Coastal Concordat at present (Defra, 2014). This makes a particularly interesting point of comparison. Whereas Portsmouth is renowned more for its built up areas, the rare wetlands of Chichester are of significant national and international importance and consequently has many important environmental regulations in place (Chichester Harbour Conservancy, 2018). Although the LAs are different geographically and demographically, they are all going to be exposed to similar threats in the future. Climate change will cause great challenges to the area due to accelerated sea level rise and more frequent storm surges (Nadarajah & Rankin, 2005). This is particularly true of the area of Portsmouth, where the threat of flooding is around the entire island. Furthermore, the population of all four LAs continues to grow putting further pressure on housing in the area. This combined with government budget cuts, means there is a great stress on the south of England as a whole (Valler, 2016).

3.3 Preliminary research considerations

To address the aim of the study, the following study questions were developed:

1. How aware are coastal Local Authorities and Coastal Organisations of issues facing the coast?
2. How well integrated is the documentation surrounding coastal and land planning- for example in Shoreline Management Plans (SMPs), Local Plans.
3. What are the perceived barriers to integration?
4. How are the departments between and within stakeholder organisations integrated to tackle coastal challenges? Is there currently enough perceived integration between the different stakeholders?
5. The Coastal Concordat has been a proposed solution to Question 3. How effectively has this been perceived to have been implemented?

These questions were addressed using the following data collection techniques:

- Questionnaires distributed to individuals currently working at coastal organisations and Local Authorities
- Conducting follow up interviews with willing participants

3.4 Quantitative and qualitative research

There are fundamental differences between quantitative and qualitative research. Whereas quantitative research is deductive and testing of theory, qualitative research is inductive and generates theory (Bryman, 2016). However, this does not mean they should be used independently from one another. The application of research has become increasingly varied and the combination of quantitative and qualitative data is accepted and encouraged (Guest, Namey & Mitchell, 2013). A mixed method approach can provide better understanding than if the different methods were practiced independently of each other. Furthermore, mixed methods can grant further depth and insight into the investigation (O'Leary, 2012; Guest *et al*., 2013).

Hammersley (1996) and Bryman (2008) proposed three styles of mixed methods research:

- *Triangulation* whereby the use of quantitative research is used to support qualitative research findings or vice versa (Yin, 2009).
- *Facilitation* where one research strategy is utilised to support another research strategy.
- *Complementarity* whereby two research strategies are used to investigate different parts of the research strategy.

A mixed method approach was taken to data collection in order to encourage triangulation of data, thus increasing the validity of the results. The chosen methods for data collection are an online questionnaire survey followed by semi-structured interviews. A mixed method approach will be adopted to reinforce the validity of the study.

3.5 Questionnaire design

3.5.1 Questionnaire advantages and disadvantages

All research methods have strengths and limitations. The advantages and limitations of questionnaires can be seen in Table 3.1.

Table 3.1 Advantages and disadvantage of self-complete questionnaires (Gillham, 2008; Bryman & Bell, 2011)

Evaluation of self-complete questionnaires	
Advantages	Disadvantages
• Inexpensive to administer • Time efficient • No interviewer bias • Respondents can complete the questionnaire in their own time • Less pressure for the participant for an immediate response • Standardisation of questions • Analysis of closed question answers is straight forward • Respondents remains anonymous	• Cannot prompt answers and ask follow up questions for clarity • Difficult to motivate respondents to fill out the whole survey • Completion and accuracy of the survey • Question wording can have an impact on answers • Misunderstandings cannot be corrected • Impossible to check honesty and reliability of answers • Greater risk of missing data • Typically, low response rates.

3.5.2 Questionnaire design

It is of paramount importance that the questionnaire is designed in a fashion which will a collate data conducive of the research goals. This requires several design elements to ensure the validity, dependability and continued commitment of the participant (Bird, 2009).

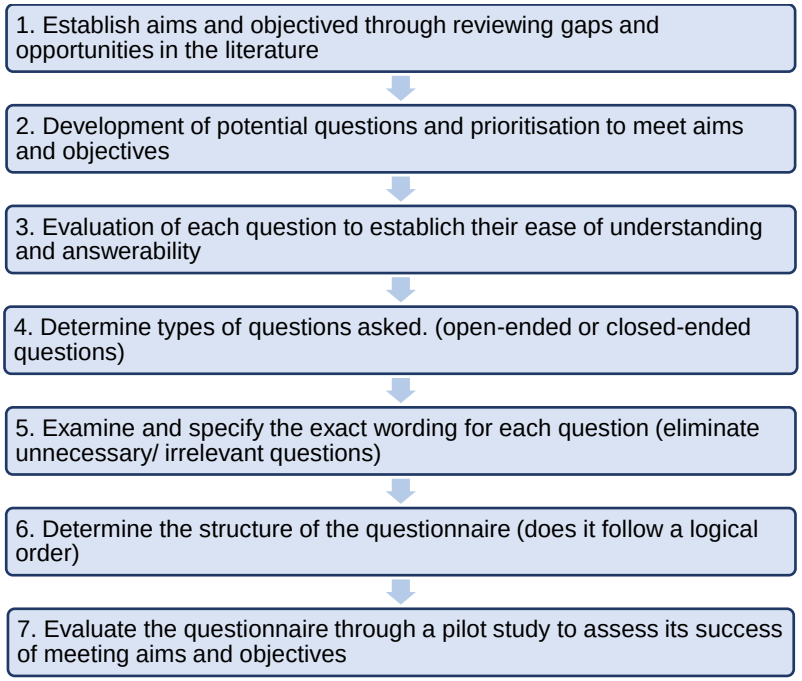

Figure 3.2 Steps in constructing a questionnaire

adapted from (Peterson, 2000: Lee, 2006; McAuliffe, 2011)

The aim of the questionnaire is to generate more quantitative data from a variety of people, whereas the idea of the interview is to gain more detailed opinions from a smaller number of individuals.

3.5.3 Questionnaire order

To ensure the order of questions was appropriate, a 'funnel approach' was implemented. Broader, general questions were filtered to more specific in depth questions. This method prevents biased responses to specific questions from more general questions (Grove & Vriens, 2006; Brace, 2008; McNabb, 2015).

3.5.4 Questionnaire style

The questionnaire was designed to be self-administered by the participant. It was therefore particularly vital that the presentation of the questionnaire was clear (Myatt *et al.*, 2003). Having logistically ordered groups of questions assists the flow of the questionnaire and lets the respondent know the area in which each set of questions are focused, thus preventing confusion between topics (Brace, 2013). The questionnaire was divided into seven short sections which were:

Section 1: Organisation and Person

Section 2: Planning in Coastal Local Authorities and organisations

Section 3: Integration between different departments within the same organization

Section 4: Integration between different organisations

Section 5: Integration with Shoreline Management Plan (SMP)

Section 6: The application of the Coastal Concordat

Section 7: Moving forward

The questionnaire concluded with a question about further participation where the participant had the opportunity to submit their email address if they were interested in taking part in a follow up interview.

The questionnaire was compiled of primarily multiple choice and ranked, closed questions to ensure that the questionnaire was quick to complete by the professionals who were likely to have limited spare time (Myatt *et al*., 2003). The more extensive, open-ended questions were reserved for the more detailed follow up interviews with the willing participants.

3.5.5 Distribution of the questionnaire

After the questionnaire had been designed it needs to be distributed appropriately. There are several ways of doing this, each with their advantages and limitations. Factors should be taken into consideration such as; time restraints, resource availability, type of question and research size of sample (Bird, 2009).

Table 3.2 Evaluation of questionnaire types

Method	Advantages	Disadvantages
Face-to-face	• Interviewer to provide clarification on questions. • Interview able to ask for clarity on answers • Visual aids can be used • Less likely that questions will be skipped because the investigater is present	• Costly • Time consuming • Interviewer could effects the results of the study – interviewer bias
Telephone	• No geographical boundary • More cost effective than face to face	• Time consuming • Visual aids cannot be used • Unpopular
Web-based	• Cost effective • Time to consider the responses • No geographical boundary constraints • No interviewer bias	• Low response rate due to the survey being viewed as junk mail • Not suitable for all people- only people with internet access. May alienate some demographic groups • Interviewer cannot ask for clarity on questions

(Bird, 2009; Phellas, Bloch & Seale, 2012)

3.5.6 Questionnaire response rate and bias

The University of Portsmouth logo was included on the top of each page of the online questionnaire because it has been found by Fox, Crask & Kim (1988) and Beebe et al. (2007) that this can improve response rate as it encourages participants trust into the survey. All of the people emailed were asked to forward on the email. In addition, contacts at Natural England, the Environment Agency and Arun Council were asked to forward on the email to colleagues and provide reminder emails to encourage more responses. This was particularly effective in Natural England, where there was a particularly high level of response.

A copy of the findings of the report was offered as an incentive for participation. No other incentives were offered due to the financial constraints of the study (Fairclough, 1977; Fox et al., 1988; Dillman, 2009).

3.5.7 Pilot questionnaires

To assess the feasibility, time, cost and appropriateness of the questions, a pilot study was conducted. (Teijlingen, 2001). This approach helps ensure the questions in the full survey will address the aim of the study. Hussey and Hussey (1997, p.20) describes a pilot study as "a list of carefully structured questions chosen after considerable testing with a view to eliciting a reliable response from a chosen sample." Pilot studies can also reduce any confusion in the phrasing of the question and identify if all participants are answering certain questions with the same response which may, in turn, make the research less valuable (Bryman, 2008).

A group consisting of individuals from the Environment Agency, Natural England, RHDHV and the Eastern Solent Coastal Partnership piloted the questionnaire. Feedback was given by the respondents and consequently lengthy, open ended questions which were perceived as being too long for the survey, were omitted. In addition, it was acknowledged that the Coastal Concordat section of the questionnaire was of particular interest to a couple of the respondents. Therefore, more questions were asked within this part of the section in order to attain more detail. Finally, a suggested topic area to cover was the level of integration between Shoreline Management Plans (SMP) and Local Authority Local Plans.

One comment made was that may be challenging to get a extensive enough sample size from individuals from Local Authorities only, and the suggestion was made to extend the questionnaire to coastal groups as well. Consequently, individuals from the EA, Natural England, and private consultancy firms were also asked. The participants from the pilot study also commented that some of the questions were directed at Local Authorities rather than the more significant organisations that operate on the coast. This comment was noted and the questions were rephrased so that they were more all-encompassing so as not to alienate the different participant groups.

3.5.8 Sample selection

The study included 65 participants who were professionally active within coastal organisations and local Authorities on the coast. Using the website "Survey Monkey, an online questionnaire was designed and used to collect the data. A link to this questionnaire was sent via email to potential participants. The questionnaire was online from the 25/07/2018 and ran until 26/09/18. The decision to close the survey was made due to time restraints. The list of the organisations that the questionnaire was sent to, can be seen in Table 3.3.

Table 3.3 Participants and the organisations they are from.

Organisation	Number of Participants
Havant Council	5
Arun Council	0
Chichester Council	2
Portsmouth Council	2
West Sussex District Council	1
Hampshire County Council	7
Environment Agency	1
Natural England	36
National Trust	1
Langstone Harbour Board	1
MMO	6
Private Consultancy	1
Chichester Harbour Conservancy	1

3.5.9 Data analysis

The data from the questionnaire will be processed in Excel in order to create appropriate graphs and charts to depict the results. Cross tabulation will be administered where relevant to mark associations between the responses, thus allowing a deeper depth of discussion. The analysis of the data is exploratory by nature and therefore a statistical significance test was not deemed to be necessary (Tukey, 1977).

3.6 Interview design

A key methodological approach for obtaining qualitative data is through interviews- of which there are many forms (Bryman, 2012). They are

acknowledged as a respected technique of data collection because they permit participants to express their opinions and to give insights of topics important to them (Belk, Fisher and Kozinets, 2013; Arsel, 2017).

3.6.1 Semi Structured interviews

In addition to the questionnaire, it was deemed appropriate to carry out follow up interviews with willing participants.

Semi-structured interviews are commonly implemented in qualitative research (Bryman, 2014). In order to advance insight into the responses of the questionnaire, it was deemed appropriate to conduct follow-up interviews with eight participants. Interviewees were selected on a volunteer basis. At the end of the questionnaire there was an option to participate in a follow up interview. Although it was seen as preferable to conduct face-to-face interviews, it was deemed to be inconvenient for the professionals who were under tight time restraints (Brace, 2013). Furthermore, some of the participants were based further away than expected such as the Humber Estuary and Newcastle. Interviews were therefore conducted over the phone instead.

Representatives from the following organisations agreed to be interviewed:

- Natural England
- The Marine Management Organisation
- The Solent Forum
- Chichester Harbour Conservancy
- Chichester District Council

The selection of participants needed to be considered carefully to give enough data and experiences to address the research questions an aid triangulation of data with the project documentation (Yin, 2009). Furthermore, the selection of interviewees should be kept to a manageable size (Perry, 1998).

3.6.2 Interview structure

Interviews allowed for more in depth study of the integration between coastal and terrestrial planning systems. A series of questions were written prior to the interview in order to direct the conversation towards the areas in which attitudes and information were required. The interview questions were split

into four subject areas followed by a section at end where the interviewee was able to add any additional thoughts. The three subject areas were:

1. Role in the coastal environment
2. Knowledge and opinions of the implementation of the Coastal Concordat
3. Knowledge and opinions of SMPs and how they have been implemented into policy.
4. Overall integration between coastal and terrestrial planning systems.

Due to the nature of the professional positions of the interviewees, the length of some of the questions varied considerably. In particular, one participant had no knowledge of the Coastal Concordat and consequently this section was missed.

The interviews took a semi-structured approach. The advantages and disadvantages of the different types of interview can be seen in Table 3.4.

Table 3.4 Characteristics of different types of interview (Zhang & Wildermuth, 2005; Bryman 2014)

Unstructured	Semi-structured	Structured
• Minimal structure - just a list of questions. • Significant time needed to collect information. • Highly individualised interview will result in longer length of interview. • Lengthy process to analyse data. • Very informal method of questioning.	• Interviewer develops an 'interview guide' including a mixture of open and closed questions. • Flexible structure. • Improvisation by interviewer of questions to ensure clarity of certain areas. • Ability to ask further questions in response to replies.	• Led by interviewer. • Use of pre-established questions in predetermined order. • Interview structure followed throughout. • Questions standardised and response recorded. • Increased accuracy and ease of data processing

3.6.3 Ethical consent

The project was reviewed for ethical approval before the data collection was carried out. The interviewees were given the right to withdraw their information at any point in the process.

3.6.4 Interview bias

Interviewer bias is noted as *"one of the largest sources of error in survey work of all kinds"* (Oppenheim, 2005, p.86). Sources of interviewer bias include poor maintenance of interviewee rapport, one-sided explanations of questions, directive wording of questions, careless prompting, biased probes, biased recording of answers and questions asked out of sequence (Oppenheim, 2005) (see Table 3.5). These challenges were mitigated by having a structured list of questions which were reviewed by a peer in order to ensure that they were not leading.

Table 3.5 The common sources of error in research using interviews:

1. A poorly worded question; 2. The way the question is asked by the interviewer; 3. Misunderstanding on the part of the interviewee 4. Memory problems on the part of the interviewee; 5. The way the information is recorded by the interviewer; 6. The way the information is processed, either when answers are coded or when data is entered into the computer.

(Bryman, 2012)

3.6.5 Data analysis

It was decided that the most appropriate way of presenting the data was through thematic analysis. Thematic analysis is a method for identifying, analysing, organising and reporting themes within qualitative research (Braun and Clarke, 2006; Nowell, 2017). Therefore, the discussion section will follow the format whereby each of the subject topics covered in the interview will be discussed, which will then be supported by the key points and quotes made by each participant on the relevant topic.

Similarly, to the analysis of the questionnaires, it was decided that a statistical analysis was not appropriate. However, for the assessment of the Coastal Concordat, a SWOT analysis was undertaken to evaluate the importance and

performance of its implementation so far, and in the future (Hill & Westbrook, 1997; Phadermrod, Crowder & Wills, 2016).

3.7 Chapter summary

Chapter 3 discusses a range of research approaches and methodologies appropriate to address the aims and objectives. The study will take a mixed method approach collecting quantitative and qualitative data through the medium of questionnaires and interviews. A questionnaire which is distributed and collected online was decided to be the most appropriate method of data collection due to the time restraints of the participants and the interviewer. In addition, the nature of their jobs mean they are mostly desk based and therefore it was more convenient for the participants to fill out the questionnaire online, at their desk. Similar time constraints were present when selecting the interview technique. Semi-structured interviews conducted over the phone were selected as the most suitable technique for gathering in-depth understanding of the experiences and opinions of the subject area.

CHAPTER 4: RESULTS, ANALYSIS AND DISCUSSION OF QUESIONNAIRE RESPONSES

4.1 Introduction

Chapter Four presents the results, analysis and discussion of the data collected from the online questionnaire. The chapter is divided into five sections based on the topics outlined in Chapter 3. Firstly, the demographic characteristics of the participants will be discussed, followed by a critical evaluation of the data based on four themes. Due to the exploratory nature of the research topic, it was not perceived as appropriate to conduct statistical analysis (Andrienko & Andrienko, 2006; Foster, 2013).

In total 65 participants participated in the questionnaire using the online web survey tool, Survey Monkey. Despite a small number of surveys being only partially completed, the computer programme was able to analyse the existing data. It was therefore considered acceptable to include all data from respondents despite the some of the data being incomplete. To aid the analysis of the results, in some sections the sample has been divided into two subsets to compare the responses of the Local Authority planners[1], to the responses of the coastal organisations[2]. This was to compare the opinions and perceptions of individuals who had a direct role in the coast, to those who were indirectly related.

4.2 Characteristics of respondents

4.2.1 Demographic profile of respondents

Figure 4.1 displays what organisation each participant was from. Over half of respondents (52%) were from Natural England. This high response rate is attributed to of one of the participant's ability to distribute the questionnaire to a mailing list of over 160 Natural England employees. In comparison, only 26.16% of participants were from Local Authority planning departments. This low response rate could be credited to planners being too busy to participate.

[1] The terms "planner" and "planning" in this paper refer to those involved in, and the process of town and country planning as established by the Town and Country Planning Acts in England.

[2] "Coastal organisation" is used to describe the participants from Natural England, the MMO, the Environment Agency, the Solent Forum, the Chichester Harbour Conservancy and private consultancy firms. All of who work in coastal protection and sea defence management in some form.

Similar challenges were experienced by the Commission for Architecture and the Built Environment (2003, p. 2) where a low number of Local Authorities participated in the study. The low response rate was attributed to a number of external factors such as heavy workload and the topic of the survey being a low priority for the Local Authority planners. It can be assumed that the low response rate from the planners is for the same reasons as the experienced by the Commission for Architecture and the Built Environment (2003).

Of the participants from Local Authorities sampled, only Portsmouth City Council was reported to have signed up to the Coastal Concordat (Defra, 2014). Therefore, only 11% of the Local Authorities who participated, had publicly adopted the Coastal Concordat. Turner and Essex (2015) also acknowledged challenges obtaining sufficient sample of marine businesses that had implemented the Coastal Concordat and consequently their study had to be extended to non-Coastal Concordat areas. However, both this study, and the Turner and Essex (2015) study had a variety of perspectives surrounding the awareness of the Coastal Concordat, the knowledge and opinions of SMPs and the overall perception of integration at the coast.

Organisation or Local Authority which participant is from

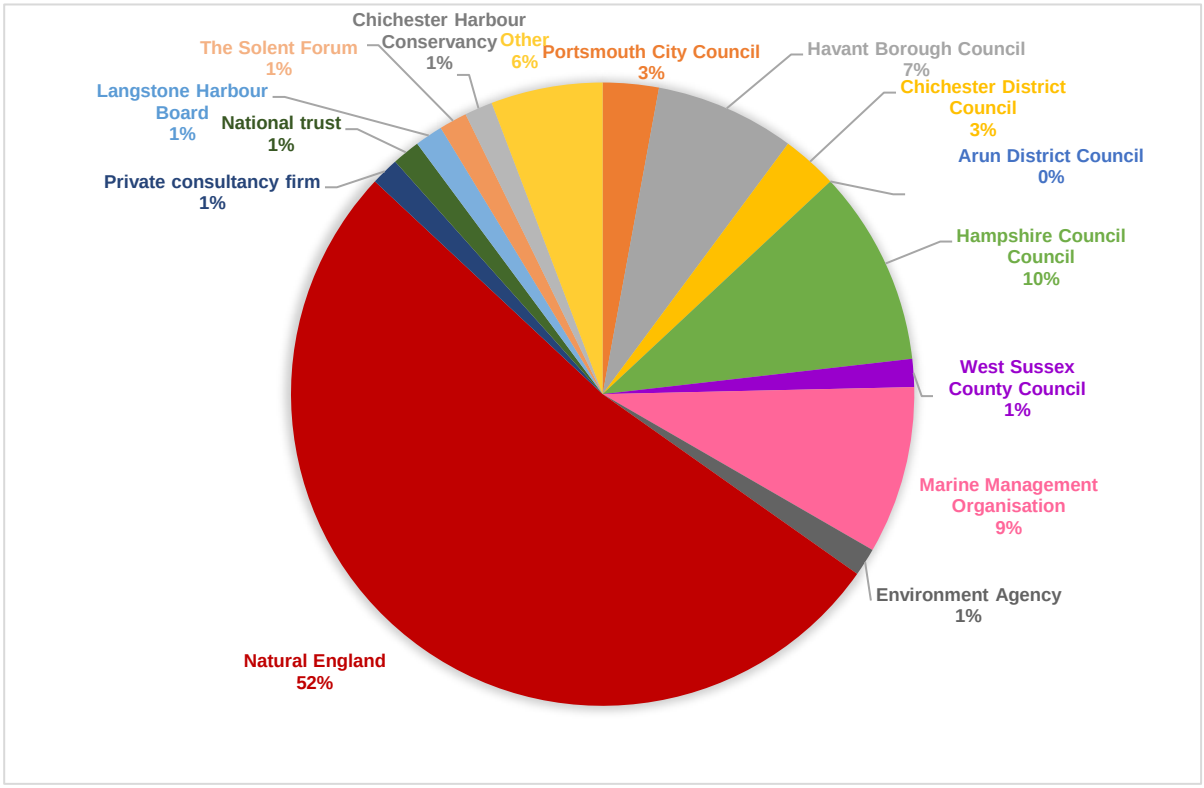

Figure 4.1 –Organisation or Local Authority where participant is from

The questionnaire was distributed to planners from four Local Authorities via email whereas for the other coastal organisations, responses were taken from across England. The location of participants from the coastal organisations (non-local authorities) can be seen in Figure 4.2. The location of the where the participants from the coastal organisations worked, varied.

Other responses:	No. of partici-pants
Nationally	5
National offshore windfarm projects	1
National marine plans	2
None	1

Figure 4.2: The approximate location where each of the participants is based from the coastal organisations

4.2.2 Perception of the importance of coastal planning

Participants were asked to rank a list of given challenges which were facing their organisation or Local Authority. Overall it was found that funding cuts were the greatest challenge followed by housing pressures and population growth. There was little disparity between the answers and the top three threats were consistent for both Local Authority planners and coastal organisations. However, it was found that Local Authority planners perceived housing pressures by the government as the greatest challenge which is to be expected as the drive for affordable housing is central to their job role (Kenny, 2017; Morphet & Clifford, 2017). Job role also influenced the risk perception

within the coastal organisations. The challenge of flooding was overall, perceived to be much higher compared to the local authority planners. This is likely to be due to the viewpoint of the coastal organisations meaning that they are more aware of coastal issues.

Two participants from Havant Council also identified that high staff turnover makes it difficult to maintain relationships.

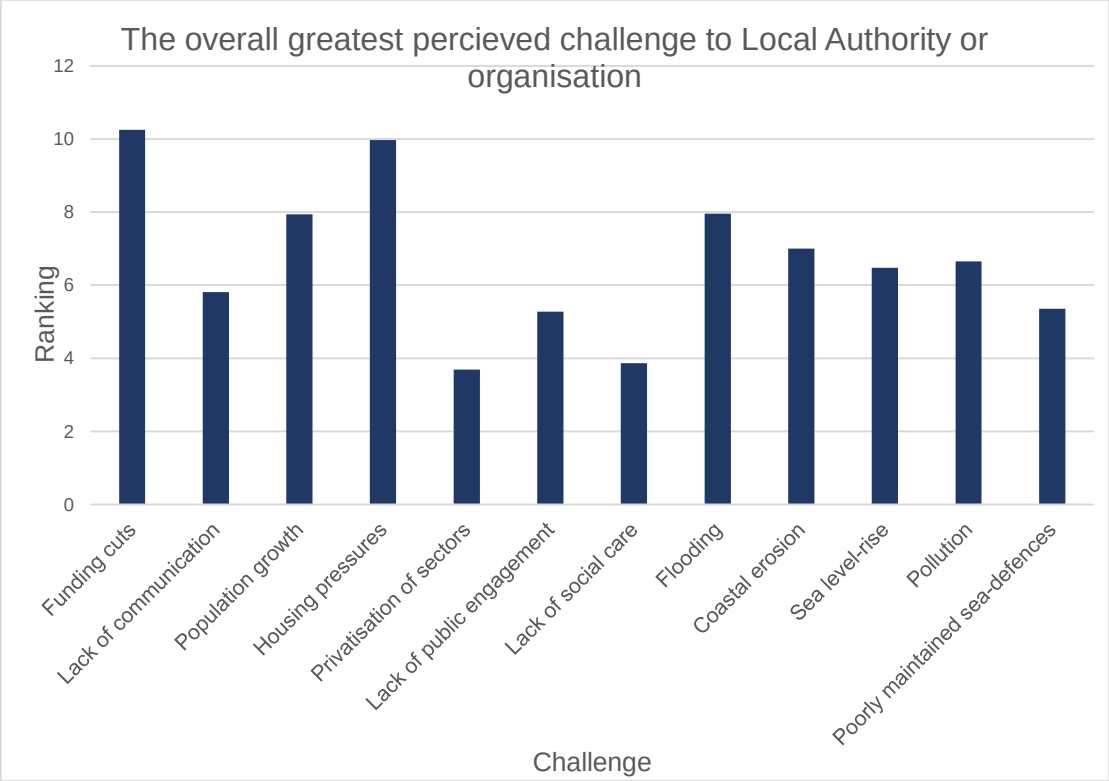

Figure 4.3 The perceived most significant challenge overall

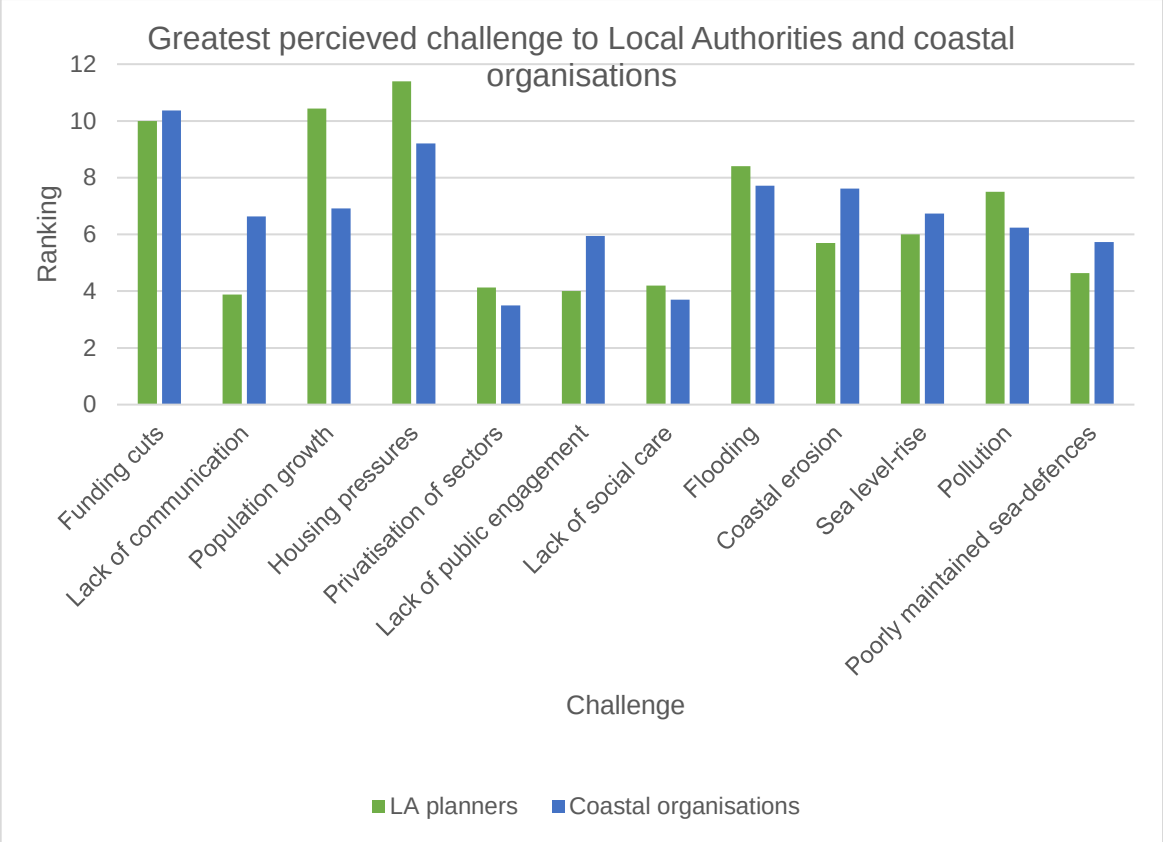

Figure 4.4 The perceived most significant challenges by Local Authority planners compared to coastal organisations

4.3 The Coastal Concordat

4.3.1 Awareness and degree of implementation of the Coastal Concordat

The understanding and purpose and direction of the Coastal Concordat was generally vague across the participants. Overall, there was minimal knowledge about the Coastal Concordat or its implementation. When asked how valuable the Coastal Concordat was, the majority of participants (34.88%) stated that they did not know. 30.23% stated that they thought the Coastal Concordat was important. However, this may be due them assuming that because it is a government led initiative, that it is valuable. Furthermore, in the following question when asked about the extent of the implementation of the Coastal Concordat since its' introduction in 2013, 52.5% of participants reported that they did not know. 15% of participants reported that they had not successfully implemented the Coastal Concordat.

4.3.2 Perceived usefulness

The existing matrix of accountabilities and current legislative structure on the coast of England is arguably unnecessarily complex (Hines, Hutchison,

Thompsett & Potts, 2011). The Coastal Concordat has the potential to simplify this. One participant said the Coastal Concordat had great potential to make things simpler for organisations and LAs (see Box 1). However, the lack of knowledge of the Coastal Concordat and how it is supposed to be utilized can be defined as a great barrier.

Box 1: Participant from Havant Borough Council

"Coastal Concordat has great potential, but often doesn't work in practice as LPA planning permission and MMO marine licence determination timescales are not aligned. Also, MMO does not have any local marine licencing case officers to attend meetings with LPA and statutory advisers."

4.4 Awareness of Shoreline Management Plans and their implementation

Awareness of the Shoreline Management Plans (SMPs) varied greatly. The participants were asked rate how informed they were of the SMP in their local area on a scale of 1 to 100 (with 1 being not informed to 100 being very informed). It was found that on average the coastal organisations (65) felt more informed than the Local Authority planners (41). It was also found that some of the planners answered 0 indicating they had no knowledge of the SMP in their area. This is supported by Taussik (2004a) who stated that the first round of Shoreline Management Plans were heavily criticised for the limited contribution made by planners. Furthermore, it was stated that early views of SMPs as limited technical documents rather than the public policy documents which they intend to be. However, it is important to note that the planners were all from the Solent where coastal erosion is only a moderate problem. In comparison, the responses from the coastal organisations were from across the country (such as Norfolk and the Holderness coastline) where SMPs are perhaps more heavily relied on due to the greater awareness of coastal issues.

4.5 The sharing of information and data

The participants were asked whether they had an internal database or equivalent where data regarding planning is stored to reduce the duplication of effort for data collection. 78% of participants responded that they do, 15% reported that they did not know and 3% confirmed that they did not have a shared database. It was found that participants from Local Authorities used

"Uniform," the Environment Agency used "Sharepoint", the MMO used "Marine Information Systems" and Natural England used a database called "Casework Tracker." In regards to Casework Tracker, one participant stated that *"The internal filing system can be extremely difficult to use and I suspect we duplicate effort all the time."* There was no reported database which combined all such data in one format. The Eastern Solent Coastal Partnership (ESCP) to a degree, aims to provide a platform for sharing information. ESCP aims to deliver a combined, efficient and comprehensive coastal management platform across the Local Authorities of Fareham, Gosport, Havant and Portsmouth (ESCP.org.uk, 2018). In the survey responses, one participant suggested contacting the ESCP however no employees were willing to participate in the study.

A study by Li (2018) also found that there was a confusing network of different plans in place which complicated management and resulted in duplication of effort. Furthermore, Syme (2012) proposed that a method is needed whereby vast, integrated research programmes can comprehensively and systematically organise and collate both internal and external data.

The participants were asked whether they thought any of the options below would make communication and coordination between organisations easier. In the 'Other' option, the answers in Local Authorities included *"none, all those listed in the previous question work well"* another participant stated that *"we deal with development on coasts like we would any other development."*

Overall, it appeared as if Local Authority planners preferred desk-based communication such as emails, databases, and phone calls. In contrast, coastal organisations chose face-to-face options such as focus groups. One of the most prominent things to note was the difference in attitude to shareholder workshops. 46.43% of coastal organisations selected workshops as a way of making communication and collaboration easier, whereas 0% of Local Authority planners did the same. This could be accredited to time restraints within local authorities or it could be due to the planners never having participated in stakeholder workshops before and therefore little knowledge of how they work or the benefits before.

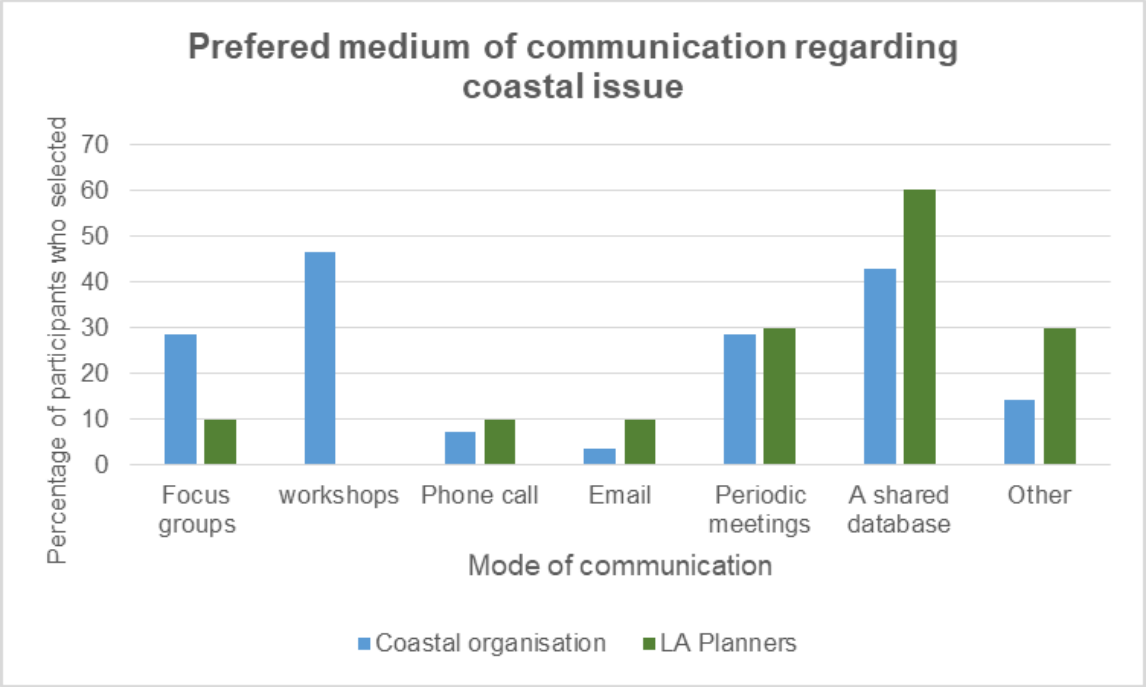

Figure 4.5 - The best mode of communication in regards to coastal issues moving forward

50% of coastal organisations interviewed recognised that this was an effective method of communication. In comparison, 0% of LAs thought it would be appropriate. This could be attributed to time restraints. Or it could be down to the fact they have never participated in workshops before and therefore don't know how they work or recognise the benefits. In contrast, 60% of LAs thought that a shared database would be a suitable method of improving duplication of effort.

4.6 Holistically encouraging integration

4.6.1 Barriers to ensuring integration

Most participants agreed that there needed to be more cohesion and integration between terrestrial, coastal and marine planning bodies. However, there was some confusion of the definition of the coast with one participant from West Sussex Country Council stating *"I had no idea that coastal planning exists as a separate entity."* Other participants with more understanding stated *"there must be improved join up between marine licensing and terrestrial planning processes."* One participant stated that *"Marine planning, like the*

South Marine Plan is entirely separate from LPA planning." Suggesting that integration was limited.

4.7 Summary and conclusion

The results from the questionnaires indicate that there are several barriers to integration. In particular, there is a confusion surrounding the definition of the intertidal zone. Furthermore, it was found that there was limited knowledge about the purpose or the benefits of the Coastal Concordat.

CHAPTER 5: RESULTS, ANALYSIS AND DISCUSSION OF INTERVIEWS

5.1 Introduction

Chapter 5 discusses and analyses the results of the semi-structured interviews which were conducted. In addition, the rationale for the interview selection, the methods of managing the interviews and the interview process is discussed. The suitability of interviews as a research technique was explored in Section 3.6. The data was divided into relevant themes which arose in the interviews. Quotes will be used to support the findings and more lengthy quotes will be displayed in textboxes.

5.2 Interview process

5.2.1 Rationale

The grounds for conducting the interviews was to gain further knowledge and detail about the topics raised in the questionnaire survey discussed in Chapter 4. The interviews followed a semi-structured format and the main topics of discussion were as follows:

- Awareness of the Coastal Concordat
- The Coastal Concordat, the challenges and success to date.
- Awareness of the Shoreline Management Plans implementation.
- The necessity for more integration between coastal and land-use planning.
- Obstacles for future integration between coastal and land-use planning.

5.2.2 Interviewee selection

It was only deemed necessary to interview a small group of individuals for this study due to the time restraints as previously mentioned. At the end of the questionnaire discussed in Chapter 5, a final question was included which invited the participants to participate in a follow-up interview. Eight individuals were interviewed from a variety of coastal organisations and one from Chichester LA who were all perceived to have experience of development on the coast. The interviews were conducted at the participants' convenience. Each interview lasted between 18 and 22 minutes. A list of the participants,

their job titles and their location can be seen in Table 5.1. Personal conversations from time spent at Bromley Council were used to support the points made.

Table 5.1: Participants' name, job title, organisation, and location

Participant no.	Name	Organisation/ local Authority	Position title	Location based
1	Tim Page	Natural England (NE)	Marine and coastal team lead advisor	Yorkshire and Northern Lincolnshire
2	Nick Williams	Natural England (NE)	Senior specialist for coastal geomorphology	South coast
3	Tom Charman	Natural England (NE)	Responsible officer for protected sites	River Tees
4	Russell Gadbury	Marine Management Organisation (MMO)	Marine planning manager	UK wide
5	Richard Austin	Chichester Harbour Conservancy	Area of Outstanding Natural Beauty (AONB) manager	Chichester
6	Mike Allgrove	Chichester District Council	Planning Policy Manager	Chichester
7	Carolyn Francis	The Solent Forum	Solent Forum Officer	The Solent
8	Kate Chesman	The Solent Forum	Solent Forum Officer	The Solent

5.2.3 Interview procedure

The design of the semi-structured interview, method of administration and potential bias were explored in Section 3.6.2. Recommendations made have been followed in the interview process.

5.2.4 Administration of Interviews

The interviews were carried out over a four-week period. The length of time of each interview varied, but the participants were informed the interview should take no longer than 20 minutes. The semi-structured nature of the interviews meant that the interviewer could ask follow up questions on specific issues and topics raised. In total seven interviews were carried out- six one to one telephone interviews and one telephone interview with two participants were carried out. Interviews were recorded on the participant's permission with supplementary notes.

5.3 Responses and analysis of interviews

5.3.1 Role within the coastal environment

Firstly, each participant was asked to give an outline on their job role to gain insight into the background of the position of each interviewee. The number of each participant relates to the numbers depicted in Table 5.1. Three of the participants were from Natural England but undertook different job roles and therefore their perspectives varied. Participant 1 operated around the Humber estuary where the advised on all planning applications that effected the estuary and undertook monitoring and habitat surveys, whilst working closely with the Environment Agency. Participant 2 from NE reported that if there was an example of best practice, it would be the Humber Estuary. A senior specialist for coastal geomorphology who gives advice on shoreline management and policy was also interviewed (Participant 2). Participant 3 from NE was an officer responsible for the protected site around the Teeside where the team are in the process of expanding, extending the sites and notifying nearby stakeholders. A Marine Planning Manager at the MMO was also interviewed who participated in the creation of the first marine plan in England (Participant 4). Participant 5 was the Area of Outstanding Natural Beauty (AONB) manager at Chichester Harbour Conservancy. His role was to look out for the best interests of the AONB through the planning process. It

was reported that Chichester Harbour Conservancy has a planner who deals specifically with coastal issues as well. Participant 6 was the Planning Policy Manager at Chichester District Council and had previously worked at Arun District Council and Portsmouth District Council and was therefore able to draw comparisons. Participants 7 and 8 were from the Solent Forum where they performed an administrative role, coordinating student bursary awards and acting as secretariat in the Annual Solent European Marine Sites meetings.

5.3.2 Pressure for new housing

The pressure of creating new affordable housing was highlighted by all participants as being a substantial stress to Local Authorities at the coast. Austin (Personal Communication, 31 August 2018)[3] stated that *"the Local Authorities are under a huge amount of pressure to identify land suitable for new housing developments."* Similarly, Allgrove[4] (Personal Communication, 4 September 2018) stated that in Chichester *"the pressure for development is huge. We've just adopted a local plan with 435 dwellings per annum in it."* The housing pressures are greatly documented both in the press and in the literature. This will be discussed in more detail in Section 5.3.7. In order to take a long-term view on coastal management, it is crucial that an approach to housing does not follow a develop-defend pattern whereby housing is created and then the threat of coastal flooding is thought of afterwards. This is why Shoreline Management Plans are of the utmost importance so as to take a long-term, sustainable approach to management (Taussik, 2004c; Ballinger, Taussik & Potts, 2004). This is particularly true of Portsmouth which is the second most densely populated city in the England after London and pressure for housing is high (ONS, 2012).

5.3.3 Awareness of the coast

One interview question revolved around general opinions about the integration between coastal and land-use planning. One of the most prominent themes which arose from this question was the lack of awareness of the definition of the coast. Williams (Personal Communication, 21 August

[3] Richard Austin – AONB manager. Chichester Harbour Conservancy. Chichester.
[4] Mike Allgrove – Planning Policy Manager. Chichester District Council. Chichester.

2018) stated *"it goes back to the point of the ultimate question of 'where's the coast?'"* Williams (Personal Communication, 21 August 2018) proposed that the lack of clarity was due to the small area which the 'coast' covers. *"I suppose there's only that small corridor between mean high water and mean low water where they're both dealing with the same issue."* This is furthered elaborated on in Box 5.1. The uncertainty as to the definition of the coast was also found in Chapter 4 where a participant reported that they did not know where the coast began and land ended.

Box 5.1: Williams (Personal Communication 21 August, 2018)

"if you has 100 people to shade in a map of where they thought the coast was.. you would probably get 100 different answers. Drawing lines on a boundary, that's the difficulty."

Gadbury (Personal Communication, 30 August 2018)[5] identified that this lack of awareness was particularly present in land planners. Gadbury (Personal Communication, 30 August 2018) stated *"I think currently many land based planners turn their back to the sea and focus on the land."* This was also found by Smith, Stojanovic and Ballinger (2011) who states that integration is difficult to achieve because of the administrative and institutional inertia whereby both sectors tend to address issues only within their defined remits. Consequently, they fail to address matters beyond their designated boundary. Furthermore, it has been found that that historically, there has been little opportunity for local terrestrial interests to provide input into the use of marine space, because it has been planned with little consultation, by national sectoral agencies (Shipman and Stojanovic, 2007). The findings of this study are in line with the conclusions made by Taussik (2004a) who found that planners are sometimes confused as to the relationship between land use planning policy and spatial policy. The complexity and confusion associated with the coastal and marine zone is also evident in the horrendogram mentioned in Chapter 2 which calls for a vertically and horizontally linked network to ensure the different key players are integrated within a geographical zone (Boyes and Elliott, 2014).

[5] Russell Gadbury – Marine Planning Manager. Marine Management Organisation. UK wide.

All the participants recognised that perception and awareness of coastal and marine issues was improving Gadbury (Personal Communication, 30 August 2018) attributed this to the popular programme Blue Planet II which was released the end of 2017. Blue Planet II had an emphasis on ocean litter and pollution and has created more awareness to the conservation of the seas. Allgrove (Personal Communication, 4 September, 2018) suggested that in recent years there has been more consultation. Allgrove (Personal Communication, 4 September, 2018) recalled the MMO providing a training day whereby the employees came into the planning office and gave talks about the work they do. The training contributed to the planners' Continued Professional Development and consequently a substantial number of planners attended. Allgrove (Personal Communication, 4 September, 2018) stated the local Authority planners found the day *"reassuring"* to know that there was contact there if needed.

However, even though coastal issues may be currently in the media, Protess and McCombs (1991) suggest that there is an issue-attention cycle which the interest in all *"crises"* go through where by interest is gained and then lost by the public (see Figure 5.1). It is therefore important that coastal issues do not lose interest.

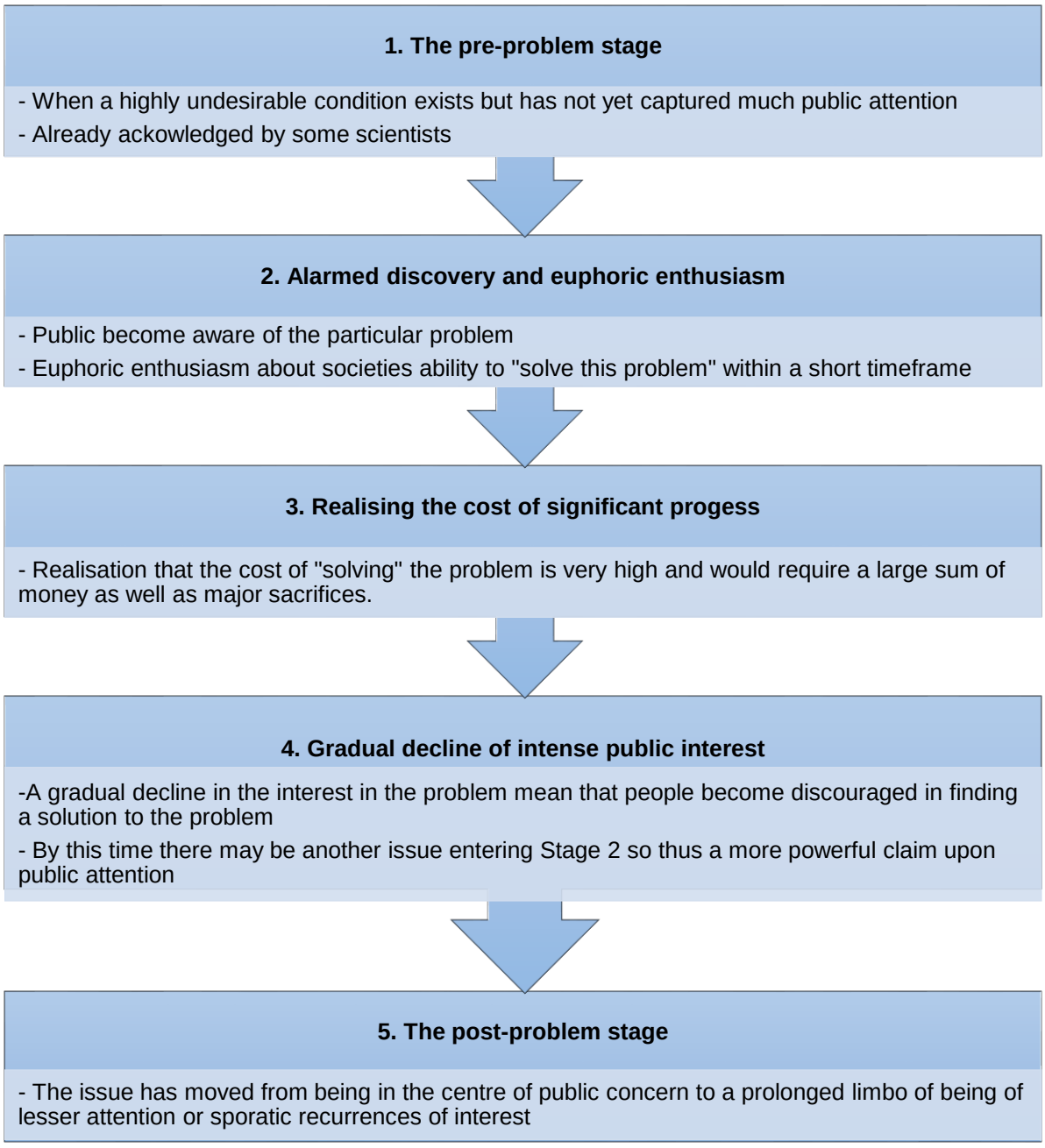

Figure 5.1- The issue attention cycle Adapted from Protess and McCombs (1991)

5.3.4 The Coastal Concordat

5.3.4.1 Awareness of the Coastal Concordat

The awareness of the Coastal Concordat varied between the participants although generally, little was known about the Coastal Concordat. As stated by Gadbury (Personal Statement *"the Coastal Concordat has a variable level of either; a) knowledge of its existence or b) its actual application and how we have championed this."* The three individuals from Natural England had all heard of the Coastal Concordat but none had first-hand experience of its

implementation. Williams (Personal Communication, 21 August, 2018) stated that that the *"Coastal Concordat would work if people used it."* In contrast, the AONB manager for Chichester Council and the Planning Policy manager had no knowledge of the Coastal Concordat and stated that it was not knowingly implemented in Chichester at present. The same lack of explicit implementation was also evident in the Chichester Local Plan. The two Solent Forum Officers had heard of the Coastal Concordat but did not know the details of how it was implemented, if at all. Francis (Personal Communication, 13 September 2018) stated that from what she had heard, it was a good idea but was not yet implemented. It can therefore be concluded that there is currently a lack in understanding or experience of the Coastal Concordat. It is consequently unlikely that the Coastal Concordat can be successful if so little is known about it.

5.3.4.2 The Coastal Concordat, the challenges and successes to date.

Due to the overall lack of specific knowledge of the implementation of the Coastal Concordat, few participants were able to give first-hand knowledge. However perceived issues and advantages were identified using the responses combined with the literature. *"Corporate memory loss"* was identified as a challenge facing the Coastal Concordat. Corporate memory is defined as explicit, disembodied, persistent representation of knowledge and information in an organisation (Mohamed, Abdelaziz and Ellis, 2011). When people move on from the organisation, it is accepted that some information and knowledge will be lost. Williams (Personal Communication, 21 August 2018) Chesham (Personal Communication, 21 August 2018)[6] and Francis (Personal Communication, 13 September 2018)[7] stated that the lack of knowledge of the Coastal Concordat could be attributed to corporate memory loss. Williams proposed the people involved in the in the early stages of development of the Coastal Concordat may have left, leaving the policy to be carried on by local authority planners who mainly deal with planning applications and *"just don't have the time to look at or appreciate these documents"* (Williams, Personal Communication, 21 August 2018).

[6] Kate Chesman – Solent Forum Officer, The Solent Forum.
[7] Carolyn Francis – Solent Forum Officer, The Solent Forum.

Consequently, some information was lost in the process. It was also proposed that the budget cuts in Local Authorities had heightened this, because there is now a higher turnover rate in Local Authority staff. This was also found to be true in Section 4.5.1 where it was reported that it was difficult to maintain working relationships due to the high turnover rate within Local Authorities.

When asked about the perceived challenges of the Coastal Concordat, Charman (Personal Communication, 30 August 2018) stated that from past experience, there had been difficulties in deciding who the single point of contact should be. Furthermore, it was indicated that there was some relief among the coastal organisations that the Coastal Concordat had not been implemented as it was perceived that it may add to workloads, particularly in the initial stages (see Box 5.2 and Box 5.3). Challenges particularly in the initial stages were also recognised also acknowledged that it would take a few examples of best practice *"to get it all ironed out and smoothed through."*

Box 5.2 Charman (Personal Communication, 30 August 2018)

"at the same time I suppose some people are happy that it hasn't been taken up because I suppose from our end, it dominates things in a way- not necessarily making it more complicated…but its takes extra time to coordinate things, especially if you're the single point of entry."

Box. 5.3 Charman (Personal Communication, 30 August 2018)

*"I think it's a combination of developers not knowing about it but then maybe also that if they're statutory consultation ends then it's like '*ergh, well if we push it then we'll probably be named as the lead authority' *so maybe a slight reluctance to kind of take it on cos it well I'm sure certainly that at least in the first few cases, it's certainly more work for everybody as it will be a lot more work for everybody because it's a bit unknown."*

The responses indicate that there is some scepticism about the effectiveness of the Coastal Concordat. The findings of this study contrast with Turner and Essex (2015) who reported that there had been evidence that the Coastal Concordat was beginning to generate positive outcomes for integration. However, it is important to note that the responses reported in this study are "outsider" perceptions of the Coastal Concordat because none of the participants had directly been involved in it. A SWOT analysis is used in

Figure 5.2 to compare the strengths, weaknesses, opportunities and threats of the Coastal Concordat.

Strengths	**Opportunities**
• Calls for greater interdisciplinary and collaboration between sectors and across different management scales. • Creation of common goals and objectives through new policies	• If used correctly, has the potential to save time and resources in the long term. • Being mentioned in the 25 Year Environment Plan gives the Coastal Concordat more publicity
Weaknesses	**Threats**
• Has reduced in momentum since its initial introduction in 2013. • There is limited depth and general awareness of the Coastal Concordat. • Needs better support for relevant stakeholders regarding implementation of acts and their goals. • There are uncertainties on how different actors need to react • Limited funding and staff shortages to carry out the Coastal Concordat. • Few examples of best practice. Organisations are	• Funding cuts within public bodies and government organisations • Staff cuts within public bodies and government organisations. • High staff turnover leading to “corporate memory loss“ • Difficulties in determining the “single point of contact”

Figure 5.2 SWOT analysis of the implications of the Coastal Concordat

5.3.5 Awareness of the Shoreline Management Plan implementation

Bridging the planning-shoreline management interface is considered a priority of coastal management (Taussik, 2004c). Aside from the participants from Natural England, none of the participants had knowledge of how Shoreline Management Plans are implemented within the Local Plans. Williams (Personal Communication, 21 August 2018) proposed that the lack of coordination was due to planning policy working on a different timeframe to shoreline management. In addition, Strategic shoreline management planning is a key approach to adapting to the changing coastline (Nicholls et al., 2013).

Box 5.4 Williams (Personal Communication, 21 August 2018)

"And then I think they could advocate it a lot more to local planning authorities and tell them that they should be doing them a lot more and embedding them into their local plan and I suppose the issue with that is that the local plans are reviewed every six years so if you miss that window of opportunity to get those coastal change management areas embedded."

5.3.6 The need to take a place-specific approach

Pressures for new housing to be built and the designation protected areas has resulted in a conflict of interest. This is particularly true in some areas more than others. The participants took the stance that some areas in the intertidal zone required more integration than others. Allgrove (Personal Communication, 31 August 2018) and Austin (Personal Communication, 4 September 2018) both reported that there was a "good" level of integration between the different planning bodies in Chichester. Allgrove (Personal Communication, 4 September 2018) had previously worked in Portsmouth Planning department and Arun Planning department prior to working at Chichester and therefore could make comparisons between the three departments.

Allgrove (Personal Communication, 4 September 2018) proposed that integration and cohesion was required in some areas more than others. For example, Portsmouth is more threatened by development and subsequently needs more close interaction between coastal and terrestrial planning due to the great conflict of uses. Allgrove (Personal Communication, 4 September 2018) stated that *"In Chichester you just don't build where the regulations won't let you"* compared to Portsmouth where there is a substantial demand for affordable housing which Allgrove (Personal Communication, 4 September 2018) claimed made regulations more flexible. If this is true, this is to say that an anthropogenic approach to management is being taken in some areas more than others. Allgrove (Personal Communication, 4 September 2018) detailed that areas immediately at risk from erosion such as Norfolk may require more collaboration due to the nature of the threats in the area. The Norfolk coast is characterised by low lying land, soft cliffs and sandy beaches which mean the coastline is eroding rapidly (Brooks & Spencer, 2010; Burningham & French, 2016).

Allgrove (Personal Communication, 4 September 2018) added that whereas development would not be permitted in Flood Zones 2 and 3 in Chichester, in Portsmouth a third of development is in Flood Zone 3. The EA flood risk plan for Portsmouth (see Figure 5.3) states that where possible, new development should be steered to Flood Zone 1 or 2. Furthermore, when considering potential development in Flood Zone 3, the flood risk vulnerability of land uses and the Exception Test should be applied if required (The Environment Agency, 2011). Figure 5.2 shows the flood risk zones of Portsmouth and Chichester.

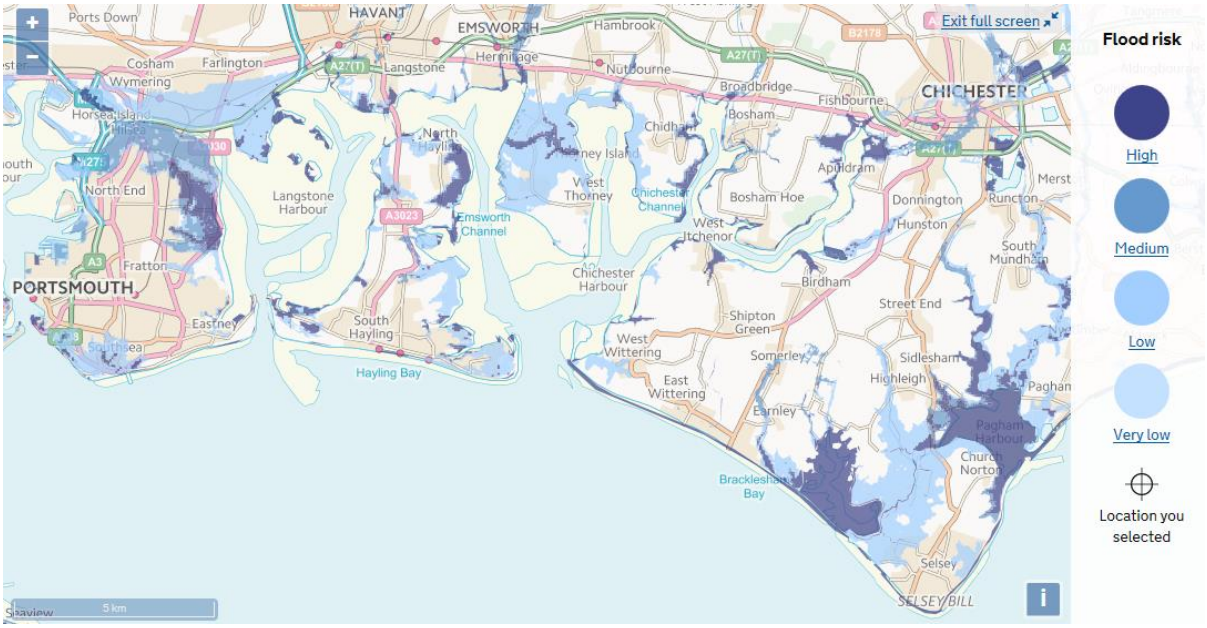

Figure 5.3 Flood Risk Zones in Portsmouth and Chichester (Gov.uk., 2018)

Furthermore, the councils which have signed up to the Coastal Concordat as depicted in Table 5.2 comprises mostly of coastal cities and areas where there are high rates of erosion. This could be interpreted as evidence of the existing attitude to the Coastal Concordat whereby the Coastal Concordat is only implemented where it is considered needed. This attitude is likely to change with the reference to the Coastal Concordat in the 25 Year Environment Plan published in 2018, which detailed that all Local Authorities with a coastal influence should be signed up to the Coastal Concordat (HM Government, 2018). In regards to the implementation of the Coastal Concordat it may be that the degree and the way that it is employed varies. Due to the great differences between the coastal communities, it is important

that a flexible approach is adopted when implementing the Coastal Concordat, in order to maximise its potential.

Table 5.2- Local Authorities who are adopters of the Coastal Concordat

Cornwall Council
Borough Council of Kings Lynn and West Norfolk
Durham County Council
Newcastle City Council
North Norfolk District Council
Purbeck District Council
Plymouth City Council
Portsmouth City Council
Scarborough District Council
Southampton City Council
Suffolk Coastal District Council
Tendring District Council
Waveney District Council

The EU principles of ICZM state that coastal management should be adaptive and acknowledge local specificity (The UN, 1992; Martino, 2016). The points made above highlight the claims made by the literature to take a more place-specific approach to coastal management which considers the shifting requirements and priorities of local communities over time (Reis, Stojonovic & Smith, 2004; Cicin-Sain & Belfiore, 2005; McKinley & Ballinger, 2018). McKenna (2010) also states that a “one size fits all” approach should be avoided, instead favouring strategies which recognise the specific human and physical characteristics of the coastal area.

5.3.7 The pressure of insufficient time and resources

All the participants attributed the challenge of ensuring integration to insufficient time and resources. Specifically, Local Authority budget cuts were

identified as having particularly substantial impacts on the productivity of LA planning. Austin (Personal Communication, 31 August 2018) stated *"we're operating on a shoestring."* As mentioned previously in Section 5.3.3.2, it is likely that this lack of funding may indirectly be causing a reluctance to adopt new initiatives.

Furthermore, it has been proposed that the Local Authorities have been forced to reduce the number of specialists they have in their team (Read, Personal Communication, 20 July 2018[8]). Ogilvie (Personal Communication, 13 April 2018)[9] supported this claim stating that *"all the specialist planners have left. We used to have planners who specialised in different types of planning. Now we just have planners who can do a bit of everything."* It is important to note however, that these individuals were from Local Authorities in a London Borough and their claims may not be entirely in line with other Local Authorities. Nevertheless, all Local authorities have still experienced budget cuts to some extent. The NAO (2018) discovered that 49.1% real-terms reduction in government funding for local authorities between 2010 and 2011 to 2017 and 2018. In addition, it was reported that within the service area of planning and development, community development and economic development reduced by 56.2% and 51.8% respectively. In the same time frame, the number of major, minor and other planning applications processed had increased by 19% thus putting excessive stress on the Local Authorities (NAO, 2018). This pressure is expected to grow with ministers warning that the *"worst is yet to come"* with many *"truly unpalatable"* cuts to be made to services (Richardson, 2018). It could therefore be said that Local Authorities may be unwilling to sign up to the Coastal Concordat if they believe it will increase their workload.

Gadbury (Personal Communication, September 2018) argued that in the long term, the Coastal Concordat could prove timesaving. Turner and Essex (2016) compared the former consenting regime with that of the Coastal Concordat. It was found that issues had been improved such as partial consultation, poor

[8] Penny Read – Parks Manager- London Borough of Bromley Council
[9] Douglas Ogilvie – Senior Planner – London Borough of Bromley Council

quality information and inconsistent decision making systems. In this instance, the Coastal Concordat had the “streamlining” effect as desired.

The pressure of budget cuts is supported in Section 4.2.2 of this study where it was also found that funding cuts were the greatest perceived threat to Local Authority planners. Furthermore, these findings are in line with those of McKinley and McKenna (2018) where one Local Council interviewee also reported that budget cuts are causing great challenges with many staff leaving, resulting in an increased workload for the remaining staff. The same study also found that there was concern that the introduction of a new piece of legislation may create a greater, unmanageable workload. The same apprehensions were experienced in this study.

Brown (2018) and Rogers (2018) state that local consultation, engagement and participation have a vital role in creating high-quality developments, but this depends on councils having well-resourced planning departments. Conversely, engagement and collaboration can help to make better use of limited resources.

5.4 Chapter summary and conclusion

The aim of Chapter Five was to support and further the findings from the questionnaire survey research analysed in Chapter 4.

The results from the interviews carried out show there are mixed levels of understanding surrounding the definition of the coast and the role coastal managers should play. The interviewees highlighted a number of challenges in ensuring integration between coastal planning and land use planning. Insufficient resources and time was highlighted by all interviewees as a significant challenge faced- particularly within Local Authorities. It was proposed that this could be the reason why so few LAs are implementing the Coastal Concordat.

It was recognised that collaboration between coastal managers and LAs is improving. However, some participants suggested that integration was required in areas with more contested issues such as areas with rapidly eroding cliffs or coastal areas with high population densities. Nevertheless, as suggested by Taussik (2004), there is a shared policy agenda between

shoreline management and planners and therefore collaboration should be ensured.

CHAPTER 6: LIMITATIONS AND RECOMMENDATIONS

6.1 Introduction

Chapter 6 brings together the discussion of the previous two chapters, reviewing and summarising the major findings of the project. This Chapter discusses the limitations of the approach used, and potential recommendations for implementation of the Concordat as well as opportunities for further research.

6.2 Limitations

To accurately gain an insight into the perceptions of the integration, interviewees would be required from a range of coastal Local Authorities in the Solent. Although the study sample for the study was initially targeted on the Solent alone, concerns over a limited sample size and variety in the answers received meant it was expanded to include coastal organisation representatives across the country. Consequently, the study was more expansive than initially intended. However, despite the interview invitation being distributed to all Local Authority planners, only one individual was willing to participate. This could be indicative of the strict time pressures and budget cuts which Local Authorities are under. It can therefore be said concluded that the results may have some bias as the participants were predominantly from a coastal and marine focused background.

Another is that land-use planners read the word “coastal” in the title of the questionnaire and assumed it was not relevant to them. The latter possibility suggests that land planners have limited integration with coastal issues, and hence limited knowledge in this area. As a consequence of the limited response rate, the results are likely to be biased towards placing “blame” on the LAs.

The response rate to the Coastal Concordat section of the questionnaires was lower than expected as participants were generally not aware that it existed. This was also true of the interviews with many participants having heard of the

Coastal Concordat but not knowing any details of its implementation or benefits. This lack of knowledge of the Coastal Concordat mean that it was difficult to ask about the specifics of the application of the Coastal Concordat because they were not fully informed.

Initially it was intended that the interviews would be carried out in person. However, because many of the participants were based across the country, it was deemed more practical to consistently carry out the interviews over the phone. This was more convenient for the participants who were under tight time restraints.

The pilot study for the survey was successful in identifying topic areas which had not been identified initially. In a similar manner, because the Solent Forum is sponsoring the project, they were sent an email detailing a brief overview of the project. The Solent Forum stated that there was concern over the small sample size as initially it was only LA planners which were intended to be participate. This comment was acted on and consequently the sample was extended to include coastal organisations as well. This proved to be particularly beneficial advice due to the limited number of LA planners willing to participate.

6.3 Recommendations

The final objective of the study was to establish recommendations for future best practice of integrating marine, coastal and terrestrial planning. Four key recommendations have been identified as a result of the questionnaires and interviews conducted in Chapters 4 and 5. A summary of these recommendations can be seen in Table 6.1.

Table 6.1 Summary of the recommendations

Recommendations
1) Improvement of cross-disciplinary and cross-sector collaboration at the coast
2) Greater education about the benefits of the Coastal Concordat
3) Collaboration of data to reduce duplication of effort
4) Taking a place specific approach

6.3.1 Improvement of cross-disciplinary and cross-sector collaboration at the coast

The EU principles of ICZM state that a holistic, cross-sectoral approach should be taken towards coastal management. Local Authorities tend to work up to a set boundary and Page (Personal Communication, 20 August 2018) stated that this boundary is a hindrance to integration. Page furthered this point by saying in terms of ecosystems *"in the real world there aren't set boundaries."* Therefore, although planners may be aware of their administrative boundaries, there appears to be a sense of neglect in regards to the intertidal zone. As concluded by Page (Personal Communication, 20 August 2018) there needs to be a *"…more expansive approach and more expansive thinking from the local authorities and from the MMO."*

Williams (Personal communication, 21 August 2018) argued that one obstacle hindering an integrated approach at the coast, was the lack of knowledge about what defines the coast (see Box 6.1). Therefore, more education is needed to educate stakeholders and LA planners on the definition and the importance of the coast and the management, which is there. Education was successfully achieved on a small scale in Chichester where LA planners were required to participate in training by the MMO as part of their Continuing Professional Development which is required as part of their jobs (Allgrove, Personal Communication, 4 September 2018).

Box 6.1: Williams (Personal communication, 21 August 2018)

"it goes back to the ultimate question of where do you draw the coast?"

"If you had 100 people to shade in a map of where they thought the coast was, where would they shade in the coast? If you had 100 people, you'd probably get 100 different answers."

Turner and Essex (2015) also state that the success of integration depends upon opportunities for mutual learning between LA departments and coastal developers on producing a system where stakeholders have confidence within the system.

The feasibility of meeting new requirements within the setting of reduced funding and staff resources, and a greater need for interdisciplinary collaboration are just some of the hurdles noted by interviewees. As noted in

Chapters 4 and 5, funding and resource constraints remain a very real challenge to many organisations. Nevertheless, the call for greater interdisciplinary and cross sector collaboration may result in increase in shared goals and thus, in the long term, shared workloads serving to ease the burden. This transition towards greater integration reflects earlier efforts made by the ICZM approach to managing coastal resources (CIcin-Sain. 1993; McKenna, Cooper & O'Hagen, 2008).

6.3.2 Greater education about the benefits of the Coastal Concordat

Analysis of the questionnaires and interviews highlighted that users generally do not have a good level of understanding and awareness of the application of the Coastal Concordat. It can therefore be concluded that the Coastal Concordat has not been implemented to the degree it was initially intended to. However, the Coastal Concordat, if implemented correctly, has the ability to provide an integrated, inclusive and forward thinking approach to some of the challenges faced at the coast. Furthermore, it could act as an opportunity to bridge sectoral gaps and instigate more effective dialogue between key players on the coast. Given the fragmented and sectoral approach to intertidal zone management in the past, it can be said that the Coastal Concordat has the potential to act as a springboard for improving collaboration, cooperation and coherence for future coastal management and policy development. However, a more clearly articulated and understood process is required (Turner and Essex, 2016). In support of this, Cicin-Sain (1993) stated that greater comprehension of the potential issues faced will help the long and medium term management of the coastal zone, assessing how best to response to challenges faced along the coastline.

There are three main requirements for effective coastal management which are shown in Table 6.2. The results of Chapter 4 and 5 state the Coastal Concordat is lacking in all three of these areas. Furthermore, this study found that there was a challenge in deciding who the lead point of contact was in the Coastal Concordat. However, Ostrom and Ahn (2003) stated that decision making structures allocate roles and authority to specific stakeholders and therefore can be used as an advantage to stakeholders. Therefore it should

be reinterpreted to the coastal organisations and LAs that being the lead point of contact can be advantageous for them.

Table 6.2 States that effective coastal management requires three components:

1. Clarity about responsibilities and required outcomes; 2. Financial resources aligned with policy goals; 3. Wide participation of stakeholders to give the decision-making process authority.

Vigar et al. (2000)

6.3.3 Encouraging the collaboration of data to reduce the duplication of effort

The results of this study outlined in Chapters 4 and 5 indicate that currently there are internal datasets for Natural England, the Environment Agency and LA planning departments. Nevertheless, there are currently no shared datasets which can be accessed by coastal managers, policy makers and planners alike. Bell *et al*. (2009), Chen *et al*. (2014), Merino *et al*. (2016), Wang *et al*. (2016) and Meaden *et al*. (2016) state that integrating and managing extensive datasets efficiently can help to contribute to meeting the objectives of sustainable development. The requirement of sharing datasets has been successfully addressed in the Europe in the Marine Strategy Framework Directive (MSFD) and the Water Framework Directive which share the same datasets for Descriptor 5 (eutrophication) and Descriptor 8 (contaminants). Similarly, “Bigtable” technology has also been proposed by Google for storing data for temperature, salinity, density and marine currents Wang *et al*., (2016).

One method of coordinating data would be the implementation of Triple Bottom Line dataset. ‘Triple bottom line’ data refers to the expansive quantity of data representing wide variety of environmental, social and economic subject matter (Rumson & Hallett, 2018). Much of this data is especially important to the development of environmental risk assessments at the coast. Decision-makers relying on different datasets can cause issues in management, particularly when there is insufficient awareness of the full range of datasets available (Rumson & Hallett, 2018; Li, 2018).

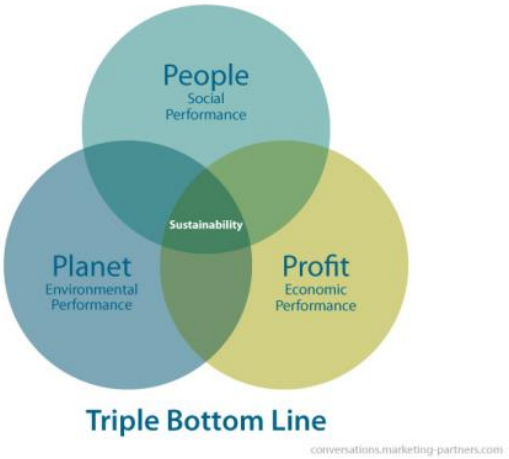

Figure 6.1 - The Triple Bottom line (The Economist, 2009)

However, one limitation of open source data, is the quality and availability of the data, although it is becoming more readily available (Rumson & Hallett, 2018). Furthermore, it is important that the precise coordinates are recorded accurately. The task of collecting extensive datasets should not be underestimated because datasets can often be expansive and may need updating regularly which may be expensive. Nevertheless, the Triple Bottom line dataset could further help to succeed in the "reduction of the duplication of effort" defined by the Coastal Concordat and could contribute to the long-term aims of ICZM.

6.3.4 Taking a place specific approach

Fuentes, Grandos and Marints (2018) found that low levels of public policy reduced the capacity for ensuring integration in coastal and marine policy. In addition, Collie (2013) stated that marine spatial plans *"are heterogenous- there are essential ingredients, but not single recipe of success."* The same can be said for coastal and terrestrial planning whereby a place specific, adaptive approach to management should be adopted as opposed to a "one-size-fits- all approach". This is because the relationship between the coastal zone, the intertidal zone and the marine area will vary considerably from place to place.

6.4 Suggested actions

A summary of the suggested actions as stated above, can be seen in Table 6.3.

Table 6.3 The recommendations and suggested actions

Recommendations and suggested actions	
Recommendation	**Action**
Improvement of cross-disciplinary and cross-sector collaboration	1. Workshops to encourage the interaction between LA planners and Coastal managers
Greater education of the benefits of the Coastal Concordat	2. Assistance particularly in the first few cases about best practice for the application of the Coastal Concordat 3. Explicitly educate planners about the benefits and limitations
Collaboration of data to reduce the duplication of effort	4. One dataset which all organisations can access 5. Provide better coordination of Environmental Impact Assessments
Taking a place specific approach	6. Recognise that each coastal area is different and approach as appropriate

6.3 Further research

There are several ways this study could be furthered. In a follow-up study, more LA planners could be interviewed. It would be especially beneficial to interview more LA planners who have actively implemented the Coastal Concordat- such as Portsmouth City Council and Southampton's City Council. Furthermore, in a more extensive study with access to greater time and resources, it may be valuable for the study to be extended to coasts across England. In addition, interviewing individuals who had been directly involved in the development stage of the Coastal Concordat would be beneficial. This study only provided an insight of the success and challenges of the Coastal Concordat, and the implementation and integration of SMPs within Local Plans and conducting follow up studies would aid understanding of how attitudes and perceptions are changing over time.

6.4 Conclusion

It can be concluded that there is no "quick fix" to ensuring integration between marine, coastal and terrestrial planning. There is a combination of tools

required to achieve this long-term aim. Steps should be taken to improve the cross-disciplinary and cross-sector collaboration at the coast through the use of better education. The findings from this study suggest that limited knowledge by LA planners surrounding the definition of the coast, is one of the leading hindrances to LA integration. Clarity is needed as stated by Charman (Personal Communication, 30 August 2018) *"It is quite a murky ground around the intertidal areas…and surrounding the different responsibilities."* In particular, education about the application of the Coastal Concordat and its benefits is necessary in order to further the voluntary framework.

CHAPTER 7: SUMMARY AND FINAL CONCLUSION

7.1 Summary of study

This study has set out to critically analyse the level of integration between town and country planning and coastal management. Within this, this study has looked at the Coastal Concordat. This was carried out through the use of 65 questionnaires, and eight interviews gaining insight into a range of perspectives surrounding the coast.

The findings of this study compared to Turner and Essex (2016), suggest that the Coastal Concordat has lost momentum since it was first implemented. This could be attributed to corporate memory loss. The reference to the 25 Year plan provides optimism that the Coastal Concordat will be implemented more often. It is of the utmost importance that examples of best practice of the Coastal Concordat are exemplified for future use. However, budget cuts, work pressures and staffing shortages remain an ever-present difficulty.

The research has contributed to previously identified gaps in the literature allowing for greater understanding about how integration could be achieved – if it is required at all. Furthermore, the perceptions of the Coastal Concordat were studied. Overall, barriers to integration were identified as being lack of education and awareness of planners of coastal issues, the pressure for affordable housing and above all, insufficient resources.

7.2 Recommendations for future management

Recommendations for future management highlighted the need for improved cross-disciplinary and cross-sector collaboration at the coast, greater education surrounding the benefits of the coast, and ensuring each approach to coastal management is place specific. Furthermore, it was identified that a shared dataset may reduce the duplication of effort in terms of the storage of information.

7.3 Final conclusion

This study makes some contribution to the previous research conducted by Taussik (2004c), Ballinger, Taussik and Potts (2004) and Turner and Essex

(2016). Whilst the nature of this form of qualitative investigation means the findings themselves are situation specific, the research itself highlights the benefits of this type of approach to understanding the implications of changing legislation. This exemplifies the need for a place-specific approach to coastal management.

Therefore, the aim should be to ensure sustainable development in a way which achieves a balance between ecocentrism and anthropocentrism in an iterative and adaptive manner. Land planning and marine planning at the coast are intrinsically linked. As stated by Gadbury (Personal Communication, 30 August 2018) *"the land based part is integral to our marine area and vice versa."*

The integrated and inclusive approach to the challenges faced by coastal legislation, represents an opportunity to bridge traditional sectoral gaps and instigate more effective communication between stakeholders, and specifically between LA planners and coastal managers. In addition, having a clear understanding of stakeholders' views on legislative reform can aid ongoing implementation and support to ensure success and acceptance of new strategies. Furthermore, the recommendations of this study can also be applied to the wider principles of ICZM outside the requirement for integration of coastal management and town and country planning.

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APPENDICES

APPENDIX A

UNIVERSITY OF PORTSMOUTH

Assessing the level of integration between coastal and land planning in Local Authorities and organisations in the Solent

Section 1: Organisation and person

1. What organisation/ department do you work for?

- Portsmouth City Council
- Havant Borough Council
- Chichester District Council
- Arun District Council
- Hampshire County Council
- West Sussex County Council
- Marine Management Organisation
- Environment Agency
- Natural England
- Private consultancy firm
- Other (please specify)

2. How long have you been in your current position for?

- Less than 6 months
- 6 – 12 months
- 13- 24 months
- 2-5 years
- 5-10 years
- 10+ years

3. Where are the projects you work on mainly based?

- Chichester
- Arun
- Havant
- Portsmouth
- All of the above
- Other (please specify)

4. Is your role more associated with:

- Land planning
- Coastal planning
- A combination of both
- Other (please specify)

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Assessing the level of integration between coastal and land planning in Local Authorities and organisations in the Solent

Section 2: Planning in Coastal Local Authorities and organisations

This section regards general questions in regards to coastal and land planning within your Local Authority/ organisation. If you feel the question does not apply to you please tick N/A.

5. On a scale of 1-5, how important do you think coastal and marine planning in Local Authorities on the coast is?

1 not important — 5 extremely important

6. Within your organisation/ Local Authority do you have a specific team for land/ terrestrial planning?

- Yes
- No
- Not sure

7. Within your organisation/ Local Authority do you have a specific team for coastal planning?

- Yes
- No
- Not sure

8. Within your organisation/ Local Authority do you have a specific team for marine planning?

- Yes
- No
- Not sure

9. What would you say is the most significant challenge facing the planning department in your Local Authority department (please rank from 1 (most important to 12 least important):

- Funding cuts
- Lack of communication between departments
- Population growth
- Housing pressures
- Privatisation of sectors
- Lack of public engagement
- Lack of social care
- Flooding
- Coastal erosion
- Sea level rise
- Pollution
- Number of poorly maintained sea defences

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Section 3: Integration between different departments within the same organisation

This section is to investigate how much integration there is within different departments within the same organisation/ Local Authority

10. On a scale of 1-5 how easy do you feel it is to contact a different department within your organisation to discuss coastal planning issue?

1 impossible — 5 very easy

11. Do you have a database or equivalent where data regarding planning is stored to reduce the duplication of effort for data collection?

- yes
- no
- I don't know
- if yes, please state what it is called

12. Further to Q.11, are coastal issues included on this database?

- yes
- no
- i don't know
- N/A

13. Further to Q.11, on a scale of 1-5 how successful has this database been?

1 unsuccessful — 5 very successful

14. 12. How much interaction does your department have with the following departments?

	No interaction	Limited interaction	Moderate interaction	High interaction	N/A
Development Control					
Highways					
Policy					
Strategic Development					

15. Do you think there is as much interaction with the coastal department/ representative as there is with other departments in the Local Authority/ organsation?

- yes
- no
- I don't know

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Section 4: Integration between different organisations

This section is designed to investigate how much integration there is between different organisations/ Local Authorities

16. On a scale of 1-5 how easy do you feel it is to contact a different organisation to discuss coastal planning issue?

0 very difficult — 5 very easy

17. What medium of communication do you generally use to contact the other organisations or share data regarding a coastal problem? Please tick all the appropriate options

- [ ] Focus groups
- [ ] Email
- [ ] Workshops
- [ ] Periodic meetings
- [ ] Phone call
- [ ] A shared database
- [ ] Other (please specify)

18. Do you think any of the options below would make communication and coordination between organisations easier?

- [ ] Focus groups
- [ ] Email
- [ ] Workshops
- [ ] Periodic meetings
- [ ] Phone call
- [ ] A shared database
- [ ] Other (please specify)

Section 5: Integration with Shoreline Management Plan (SMP)

This section regards the knowledge and perception of SMPs within organisations and Local Authorities in the Solent.

A SMP provides a large-scale assessment of the risks associated with coastal evolution and presents a policy framework to address these risks to people and the developed, historic and natural environment in a sustainable manner.

19. How informed do you think you are of the Shoreline Management Plan (SMP) implemented in your local area?

1 no knowledge — 5 very knowledgeable

20. How valuable do you think the tool of the Shoreline Management Plan (SMP) is?

1 not important — 5 very important

21. How well utilized do you think SMPs are into regular Planning tools such as Local Plans?

1 not at all — 5 very well utilized

22. How much input do coastal Local Authority planners have into their local SMP?

1 none at all — 5 a great deal

Section 6: The application of the Coastal Concordat

This section is about the Coastal Concordat which was introduced in November 2013.

The Coastal Concordat is an agreement which sets out principles according to which the regulatory and advisory bodies propose to work with local planning authorities to enable sustainable growth in the coastal zone.

23. How valuable do you think the Coastal Concordat is?

- [ ] Not important
- [ ] somewhat important
- [ ] fairly important
- [ ] very important
- [ ] I don't know

24. How successfully has your Local Authority/ Organisation implemented the Coastal Concordat since its introduction in November 2013?

- [ ] Not at all
- [ ] with limited success
- [ ] fairly successfully
- [ ] very successfully
- [ ] I don't know

25. As part of the Coastal Concordat there is a requirement to have a lead organisation as the 'single point of contact'. Does your Local Authority/ organisation have a single point of contact?

- ( ) yes
- ( ) no
- ( ) I don't know

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Section 7: Moving forward

Improvements which could be made to the planning system in order to improve cohesion between the coastal planning sector and the land planning sector

26. Who are the most important key drivers when improving integration between coastal and land planning? Please rank 1 as most important and 6 as least important

- The Coastal Concordat
- The Local Authority
- The Marine Management Organisation
- New government initiatives
- Private consultancy firms

27. Do you have anything else to add or any further comments in regards to the survey as a whole?

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Section 8: Further participation

28. Would you be interested in participating in a follow up interview at your convenience? For more information please tick yes and add your email address. OR please email me at up725302@myport.ac.uk

- [ ] No
- [ ] Yes my email address is:

APPENDIX B – Example of interview question structure

Questions for the Solent Forum

I'm at the University of Portsmouth studying a Masters in Coastal and Marine Resource Management.

I'm undertaking a dissertation is on assessing the level of integration between coastal and land planning systems.

1. Could you first start by telling me a bit about your role
2. Which local authorities do you work with?

Coastal Concordat

3. Have you implemented the Coastal Concordat? If not why not?
4. If you have- what benefits have there been?
5. What challenges?
6. Portsmouth City Council and Southampton City council are the only two Solent LAs signed up to the Coastal Concordat. From working with them have you seen any benefits of signing up to the Coastal Concordat?

Overall integration

7. a. What means do you have of insuring integration between land, marine and terrestrial planning organisations and stakeholders?
   b. Could you give me some examples please? How have they worked?
   c. Could you tell me about the "Coastal Consents" guide?
   d. What feedback have you had from that? Positive or negative? Is it useful to coastal organisations and stakeholders?
   e. Does the Coastal Consents Guide help encourage integration do you think?
8. Apart from your website how else do you coordinate the different sectors? For example, workshops.

Integration with Shoreline Management Plans?

9. How useful do you think Shoreline management plans are?
10. Do you give much consideration to SMPs? If not, why not?

Other questions to ask:

11. Do you think there needs to be more collaboration between coastal and terrestrial planning bodies?
12. Do you have any other questions you wish to raise?
13. Question 19. If yes, please make any other points you feel would be relevant to the research.

APPENDIX C- Sections from interviews

1. Tim Page- Natural England.

- "I mean I know there was a big fanfare and everybody talked about it for a while and then from my point of view it faded into the background but you've got to ask the question - why?"
- "So it's been a bit calling natural England into account whereas it should be more collaborative with everybody trying to seek a way through if there's a problem"
- "Their remit is clear to them and they tend to not think outside of it."
- "the different players aren't thinking holistically"
- "…more expansive approach and more expansive thinking from the local authorities and from the MMO"
- "single point of coordinating, overseeing group should being the Marine Site Management Scheme, assuming you have the European Marine Site. For me, thats the where all these people get together."

2. Nick Williams- Natural England

- "we're very conscious of not saying one thing to either the MMO or LPAs"
- "we also advise that they use the Coastal Concordat because it makes life easier for them and us"
- "in terms of the planning applications I've worked on I don't think CC has ever been used"
- "despite the CC being there to simplify and make things easier for them and I think the marine panning system and LPAs, I don't think they're particularly integrated. If they're not integrated at the start there's not much that a piece of legislation like the coastal concordat is going to do to force them"
- "I think the CC would work if people used it"
- "I suppose there's only that small corridor between mean high water and mean low water where they're both dealing with the same issue."
- Difffculties rooted in the definition of the coast. Where do you draw the line?
- it goes back to the point of the ultimate question of "where's the coast?'
- " If you had 100 people to shade in a map of where they thought the coast was, where would they shade in the coast? if you had 100 people youd probably get 100 different answers"
- "Drawing lines on a boundary, thats the difficulty."
- "Claims that whilst they aren't necessarily signed up to the coastal concordat, they may implement it unintentionally"
- "I think it's very much the basis for all our advice"
- "So I think the fact it is non-statutory, I think that's where it all comes crumbling down…the fact that people don't have to heed to it, but should do."
- "So the people who were working in local planning authorities have probably largely moved on and aren't in those roles anymore - and it's probably the same with the MMO the MMO was started in 2009."

- "I also think local planning authorities are being scaled down quite a lot. so the ability for somebody or a local councillor to have a specific person working on the coast or even to have a coastal engineer or something like that I thinks is being heavily reduced so that there's not that person with the expertise within the councils"
- "not said that a local Plan with totally adhere to shoreline management plan policy"
- "And then I think they could advocate it a lot more to local planning authorities and tell them that they should be doing them a lot more and embedding them into their local plan and I suppose the issue with that is that the local plans are reviewed every six years so if you miss that window of opportunity to get those coastal change management areas embedded"

3. Tom Charman - Natural England

- "So I've been quite surprised that people aren't taking it [the Coastal Concordat] up or seemingly aren't taking it up because it would simplify stuff for them."
- [Developers] "thoughts was 'oh no new protected sites that's going to stop everything that we're doing'…but that's not the case. So to relay that we need to clarify the understanding of that.".. which is where the coastal concordat comes in
- "at the same time I suppose some people are happy that it hasn't been taken up because I suppose from our end it dominates things in a way- not necessarily more complicated but its takes extra time to coordinate things, especially if you're the single point of entry."
- "if there's anything that can be done to simplify the process and speed stuff up then its welcomed."
- "I think it would take a few cases to get it all ironed out and smoothed through"
- "I think the first few things where it gets triggered you might have people running around saying 'ohhh what do we do here?.. what do we do now' and then if that's sorted, then I think it could be good"
- When asked about whats hindering integration- "I think it's a combination of developers not knowing about it but then maybe also that if they're statutory consultation ends then it's like 'ergh, well if we push it then we'll probably be named as the lead authority' so maybe a slight reluctance to kind of take it on cos it well I'm sure certainly that at least in the first few cases, it's certainly more work for everybody as it will be a lot more work for everybody because it's a bit unknown."
- "It is quite a murky ground the sort of intertidal areas, and the different responsibilities."
- "Uses the example of the MMO being slow in the Teeside. Not sure if the CC would have helped in this eg."

Russell Gadbury – Marine Management Organisation

- “The concordat has a variable level of either a) knowledge of its existence or b) its actual application and we have championed this”
- “are still applying the principles and there are also some signatories that are not applying principles so it’s very variable in the way in which it’s applied.”
- “i think the participation and the application of the concordat brings benefits in terms of time saving and resourcing elsewhere so i think i think it is advantageous for them to participate, so that's a good reason for them taking that approach.”
- “I say that as a former land based planner who joined the MMO from a coastal planning authority to be confronted with - 'you’re going to work where? who?'
- I think currently many land based planners turn their back to the sea and focus on the land”
- “i think we could, if we had an infinite pot of resources, we could do a lot more to champion our dependencies and importance of the marine and encourage people to consider it more”
- “the land based part is integral to our marine area and vice versa”
- “We're an island nation dependant on marine but the awareness of our dependencies and its value is very, very variable so i think the process of marine planning is actually the people, of its prominence, what it does for people economically and how important it is socially and culturally, so that process will continue as we continue to deliver marine plans all the way through to 2025(?)”
- “What we do is effective, it does work, face to face engagement particularly”
- “Appetite because some people are very interested in marine planning but don’t actually applies the plans through decisions they make or as responses to consultations they make”
- "The real value of planning is it directs the most acceptable activities to the most appropriate places"

Richard Austin – AONB manager at Chichester Harbour Conservancy

- You talk about coastal based planning, land based planning and marine based planning. In practice, I don’t know if it’s as clear cut as that
- The Local Authorities are under a huge amount of pressure to identify land suitable for new housing developments
- We're operating on a shoestring and I think Local Authorities are struggling to attract and retain good planners and inevitably things fall through the cracks.
- that every new building built they have to pay a Levy to help manage that recreate disturbance
- I wasn’t even aware of it before i did your survey I would need to talk to the harbour master to find out

- I don’t really see the three tiers, i see the land based, which goes up to mean high water springs and then marine based is anything below mean high water springs

Mike Allgrove – Planning policy manager at Chichester District Council (CDC)

- “The pressure for development is huge. We've just adopted a local plan with 435 dwellings per annum in it”
- “When asked about the need for integration – “I think Chichester’s got quite a history of looking at that aspect of planning.”
- “When we were looking at coastal defences at Portsmouth there needed to be compensatory habitats for the coastal zone which were going to be lost with coastal squeeze etc. because of sea level rise and coastal squeeze.”
- “I can imagine in Norfolk and in places like that, where those sea defences are much more of a critical issue, I would imagine it would be much more integrated - and much more necessary there.”
- “We got a really, really good turn out from all the planners because it was easy cheap or free CPD- Continuing Professional Development for them which they need to do as part of their jobs.”
- “The only real overlap was on the intertidal zone between the MMO as a marine based organisation. And as a terrestrial planning body and there’s very limited development there.”
- “Yes I think it was quite reassuring for us as local authority planners, to know what we were doing and that we didn’t have any significant issues and the contact was there if we needed it.”
- “We wouldn’t put any development in flood zones 2 and 3 which is designed for rivers but also designed for the coast. if you look at the maps of Portsmouth about a third of the development is in flood zone three. Whereas if you look at Chichester, then a much lower proportion of land is in those flood one so you wouldn’t allocate land within those flood zones so in a sense you don’t need to be as involved in the detail of planning and everything like that because you just don’t need to look at those areas.”

APPENDIX

SECTION E

University of Portsmouth

UNIVERSITY OF PORTSMOUTH
INDEPENDENT STUDY RISK ASSESSMENT FORM

FACULTY OF SCIENCE – DEPARTMENT OF GEOGRAPHY

Student name	EMILY HARRIS
Department/School/Other	**FACULTY OF SCIENCE - DEPARTMENT OF GEOGRAPHY**

Brief description of event/activity	Conduct a survey/questionnaire/interview/focus group with members of the public. Part of MSc dissertation.			
Location of event/activity	ONLINE / THE SOLENT			
Proposed date(s) of event/activity	**start**	20/7/18	**end**	12/9/18

Risk assessment declaration (Signed by student).	**Name** *(printed)*	EMILY HARRIS	**Signature**	EH	**Date**	17/7/18
My signature confirms that, at the time of signing and to the best of my knowledge, I have appropriately assessed the risk(s) involved in the field element of my independent study. I will implement and adhere to the control and action measures defined herein. I'm aware that should my proposed dissertation topic change I MUST complete and resubmit a revised risk assessment form for authorisation.						

Risk assessment authorisation (Signed by dissertation supervisor).	**Name** *(printed)*	~~DAVE~~ Dr. J. POTTS	**Signature**	JP	**Date**	17/7/18.
My signature confirms that, at the time of signing and to the best of my knowledge, the appropriate assessment of the risk(s) identified by the student in this form has taken place.						

This section is only to be completed when supervisors deem the student risk assessment requires further detail/information. In this instance the form will be referred to the Geography Department Health & Safety coordinator for additional authorisation.

Risk assessment authorisation (Signed by Health & Safety coordinator).	**Name** *(printed)*	Linley Hastewell	**Signature**	LH	**Date**	17/07/18

SECTION E

Severity → Probability ↓	minor injury ~ 1	lost time/ ill health ~ 2	major/ >7 days ~ 3	perm. disability/ sight loss ~ 4	fatality/ multiple fatalities ~ 5
Highly unlikely ~ 1	1	2	3	4	5
Unlikely ~ 2	2	4	6	8	10
Possible ~ 3	3	6	9	12	15
Probable ~ 4	4	8	12	16	20
Certain ~ 5	5	10	15	20	25

Severity explained	
minor injury	Injury requiring basic first aid, e.g. plaster or cold compress
lost time/ill health	Injury that requires medical treatment at hospital or GP
major/>7 days	An injury or illness resulting in more than 7 days off
permanent disability/sight loss	Likely permanent disability/acute/chronic health effects
fatality/multiple fatalities	An injury/ill health that results in a fatality or fatalities

Probability explained	
highly unlikely	Slight chance of an accident/incident happening; an unusual combination of factors would be required for this
unlikely	Slight chance of an accident/incident happening
possible	Unlikely to happen, but additional unforeseen factor(s) may result in an accident/incident happening
probable	Could possibly happen, but additional unforeseen factor(s) may result in an accident/incident happening
certain	A certainty of an accident/incident happening

NOTE	**Calculate the 'no control' and 'post-control' scores by multiplying probability by severity. For scores of 12 or more, contact your Course Leader or the Health and Safety Office for further advice.**

Low Risk (L) | **Medium Risk (M)** | **High Risk (H)**

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Ref. no. or task step	Identified hazards or injury causes (highlighting risks) (Injury focused – see check list)	People at risk (i.e. Staff, students, public, contractors etc)	Score – no controls (Probability x Severity = Calculation)	Controls/procedures/key behaviours (Existing controls, information, training etc)	Score – post-controls (Probability x Severity = Calculation)	Further action required?
5	Travelling to/from location	Student, assistant & general public	2x5=10	Driving/cycling/walking - abide by the rules of the road and be aware of your surroundings.	1x5=5	N/A

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4	Theft of personal belongings	Student & assistant.	3x1=3	Do not openly display items of value. If carrying a bag, keep it upon you at all times.	2x1=2	N/A

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Ref. no. or task step	Identified hazards or injury causes (highlighting risks) (Injury focused – see check list)	People at risk (i.e. Staff, students, public, contractors etc)	Score – no controls (Probability x Severity = Calculation)	Controls/procedures/key behaviours (Existing controls, information, training etc)	Score – post-controls (Probability x Severity = Calculation)	Further action required?
1	Slips, trips and/or falls	Student & assistant.	2x1=2	Take care to avoid any potential trip/slip hazards.	1x1=1	N/A
2	Personal safety (e.g. altercation with member of the public e.g. assault).	Student & general public	2x3=6	Conduct yourself in a professional manner at all times. If conducting work on private property ensure you have the landowner's permission prior to carrying out the exercise. Carry identification on you at all times and ensure a responsible person (e.g. parent) is aware of your whereabouts and expected return time. Avoid lone working. Where possible complete public questionnaires during daylight hours only.	1x3=3	Contact landowner
3	Personal safety (conducting private interviews with individuals and/or groups).	Student, assistant & general public	2x5=10	It is strongly recommended that any private interview should only take place with persons known to the student. Where possible avoid conducting interviews in a private place (e.g. participant's house, especially if the individual is not known to you). If the research requires this ensure a responsible adult/friend is present. Also ensure someone is aware of the name & address of the participant and the time & duration of the interview. It is recommended you arrange a telephone/text system with an assigned person and check in at a pre-determined time.	1x5=5	Ensure safety measures in place prior to interviews