

Appendix 2 Anonymised Answers from Community Interviews

This section contains answers interviewees gave, which have been anonymised. The answers have also been paraphrased, to remove conversational interjections during the interview, to make the quotes more readable while retaining the original content. It is important to note that any opinions expressed by interviewees are the individuals own personal opinions and not of any organisation.

1. Orientation

What is it like living here in Orkney?

- It's absolutely wonderful. We're so lucky to have found here. It's just the most beautiful place I've ever been really. And living by the seas just absolutely amazing. And the people are really friendly. It's great and wonderful birds. It's perfect.
- It's great. Orkney is a great place to live. There's so much you can do outside here looking for wildlife and I love the shore and the sea.
- Kirkwall has been the place I've always lived. And all my working life has been in Kirkwall. It's been such an important part of my life, very important. When I was younger I used to go down to the pier. Fish for sillicks at the pier, going down to the pier was natural.
- I really love it here to be honest. I'm fairly new to Orkney as I say and I have just fallen in love with the place. It's a really amazing island.
- Well I think my relationship with Orkney is very good. There's nowhere else I would rather be. It's a great place to live!
- It's a completely different way of life to where I'm from, Orkney is quieter, a slower pace of life. Very different scenery as well. I'm used to a lot of trees and there's not many up here, but then also the oceans and the water is so clear and so beautiful which you don't necessarily get down South.
- It's great, it's the only place that I've lived in my life that I've kind of really felt like my home.
- Living here is just a fabulous thing. Sometimes it drives you mad trying to get off the island in the winter with the ferries, but most of the year round it's stunning scenery, reasonably good weather and just amazing community, which is what drew us here in the first place from further South in Scotland.
- Well I've never really lived anywhere else but Orkney and the longest I've been out of Orkney is three weeks at a time, only twice, and I really find if I go away and there's no sea to be watching or seeing occasionally that I'm so happy when I come back here and get back to the shoreline and the birds and sky and sea.
- It's a wonderful place to live, there is so much to do. The community is so vibrant. The nature is so attractive, the seasons are so changeable and every day is full to the brim and we're retired and I don't know how I ever got time to work.
- I decided to try to move to Orkney when I first came to visit a few years ago when I was doing shore surveys, looking at animals that live on the seaweed, and I really enjoyed my visit and I thought, wow, this is a really exciting place to do marine science.

- I find it very relaxing living in Orkney. I think North Ronaldsay is a very different place to be living compared to mainland Orkney. It almost all feels very busy when we go to Kirkwall. It seems to be almost a metropolis compared to North Ronaldsay, which is much quieter, and you'll feel like you've got a lot of space on North Ronaldsay and of course you're just constantly aware of the sea around here, so that's how it feels to me up here.
- Yeah, it's great. I mean it's a whole mixed bag of things, really. It's equally inspiring, mind-blowing, wonderful and at the same time challenging and tough. It's very much a test of endurance sometimes during the winter. But I think all those things make it worth it. I love the community here. It's a very tight community, a very welcoming place even from the first time I came here that you know, you're just welcomed in as if you've been here forever. And that's continued to this day really.
- It's just fantastic. It's just an amazing environment, amazing community. Somewhere I feel very safe and comfortable and I enjoy seeing the sea every day and seeing the birds that I work on every day. And it's just a great place to live.
- We love living here. It feels so different and you know there's a special feeling about it. And also we feel very privileged living where we do in the heart of Neolithic Orkney. That's one of the main attractions when we came here was to see the other neolithic sites and we quickly realized there was so much more to see.
- Magical really despite the weather, that's the only way I can describe it is a magical draw because I know when we leave the island, when we come back it just feels like it hugs you when you get home.
- It's great living here. I chose to live here. What is it like living here it's difficult to say. It's certainly the place I've decided to live, so there must be something good about it that makes me want to stay here.
- Awesome. It can be summed up as simple as that.
- It's very windy, a bit apprehensive about winter again with the night's drawing in and the weather, but in general it's just a really nice natural place to be, just huge open skies and being close to nature all the time.
- Well, of course it's a beautiful place to live. I enjoy the space and the ability to get around and living in a close community. I always think it takes you 3 hours to walk down the street because you meet so many people you know and you can talk to. I think we're very fortunate in the services we have. And the emphasis is put on community activities and the almost self contained nature of the islands. Those I all like and enjoy a enjoy my work here. I don't like the weather. And I don't like the cost of going anywhere.
- Orkney is a good place to live. It's quite easy going, it's a nice community. I'm living now in little seaside port town of Stromness, which is a lovely community and very active and very vibrant community. And very creative as well. So very at home here.
- I think we're very privileged to live here. I was born in Stromness. Brought up in Stromness. Went away to sea. Married and I think I was very lucky marrying an Orcadian and we set up a house in Stromness. We had two kids they were brought up in Stromness. So really Stromness to me is a fantastic place. Everything is in Stromness for a small place. So living in this environment I think I have been very lucky indeed. And The thing is, I don't think I would like to live any other where.
- It's alright living in Orkney except for the wind sometimes.

- It's very different because most of the time when I go to a city, it sounds like a weird holiday destination and then I come back to Orkney and I realise actually, you're the one living in the weird holiday destination, but when you've lived here for all your life it seems so normal and it's only when you leave it that you get to appreciate what an incredible place you live in. You get to live somewhere with so much open space and so many great people and so little kind of paranoia and crime. It's really, really nice and I don't think I truly appreciated the kind of freedom and expanse you have until I ended up going to cities.

How much do the seas and coasts influence Orkneys identity and culture?

- The sea has a huge impact on Orkney's culture. I think. In the really obvious way because of the little isolated units it forms that force people together because you're on this island surrounded by sea. I think there's less of a sea culture than there was. The light the sea gives you is amazing and you can always hear the sea as well. It's all. It's always with you. You can always smell it as well.
- I think it's very important in many people's lives. They say that in Shetland they are fishermen with crofts and in Orkney they are farmers with boats. There's a lot of people rely on the sea for part of their livelihood, and a lot of people either use the coastline for recreation and it's hugely valued in tourism as well. That makes it a very attractive place for people to come and enjoy.
- Tangles were an important thing for a long while. It made a lot of money for a lot of folk and was a very important thing for a long while burning kelp and sending it off to the chemical factories down in England.
- There's simple things like young folk going out for whelks. Winkles as they call them now. But there's big money in that so that's a great source of money for youngsters.
- I think the ocean around Orkney influences the community and everything going on here massively. You're never far from the ocean and so that really feeds into everyday life. It's a really nice atmosphere just to be so close to the ocean and be able to enjoy it in so many different ways.
- When you live on an island of course there's sea on every side and when you live in a group of islands the sea affects every part of your life whether you're a fisherman or not. To come and go you have to fly over the sea or go on a ship. On a small island like Papay everything comes by ferry apart from the post comes on the plane. But every good that comes to the shop, or you order a car or you go on holiday you usually go on the ferry. I'm a fisherman so everything I catch ends up going on a ferry to get off the Orkney mainland or get sold onto the mainland, the crab meat. But most of it ends up going away by ship as well. So my livelihood comes from the sea but my life revolves around the seas and coasts as well.
- I think they are really important because anywhere you go walking you're surrounded by sea basically. That's what gives Orkney its dramatic landscape. I think it is incredibly important for its identity just because it's so unique really. And then obviously with the culture and a lot of people depend on the sea for a lot of things, whether that be their jobs or their wellbeing or just their way of life as well.

- The ability to travel between islands has made quite a difference. You look at islands like Swona where they've gone into the buildings and found the diaries of people went to Kirkwall and then they just never came back. And so the ability to move between islands now you're not so contained anymore. I guess that's had quite a large impact and made places less insular.
- I think Orkney is all about the sea. It is the sea that makes Sanday and our coastlines here just stunning and beautiful and they attract new folk to live here and new folk to visit as well.
- It influences it completely. You're always going to see it wherever you go.
- Oh, I think it does. You almost can't be anywhere without seeing water, the sea or a loch, it's all round and it's in folks daily lives. Every day you hear on Radio Orkney what the tides are like, what the barriers are like crossing and so on. We've not got webbed feet, but we're very part of the sea.
- The coastline is very distinctive and it's part of our life, we build that into our day. And I think the outline of the Hoy hills is very iconic and a clear representation of Orkney. Things like the Old Man of Hoy these distinct landmarks stick in people's minds as a representation of Orkney.
- When you come here you feel like you are entering the land of maritime importance you are immediately aware that the sea is the main route of communication and that it's all around you, and that it is immensely powerful, and that humans just have to work with it and make the most of it.
- I think as the sea becomes less used and less part of daily life then we start to lose that connection. You know, it's obviously it's all around. You can see the Atlantic, you can see the North Sea, but it really is affecting the fabric of the island. Obviously the coastal erosion, rising sea levels are having a massive effect on the island. It's something that we do need to be connected to and aware of.
- There are plans at the moment to put Europe's biggest fish farm just outside an MPA around Papay and you know I think we're losing, not control of the seas but we're losing our care for them and we've almost handed over the kind of guardianship of the seas to other people. I think that's very worrying.
- There are places on the map that have old names which indicate where there used to be birds and other features. The old names are really good indicators of historic change as well. I think if we lose a connection to the old words and names we lose a bit of connection to the sea and the island's history as well.
- The sea is just part of what defines Orkney everyday it's, I mean, we're an island. So that little separation from the mainland gives us a special identity. Fishing is a crucial part of the identity and what makes Orkney successful so it wouldn't be Orkney without the sea. When you walk up the coast and you've got the big waves coming in. That's just in the background all the time. I can hear it from my house even though I can't see the sea from my house. It's just a constant presence in your life, challenging as well of course at times. But it's part of the attraction of being here.
- I think the sea is a cultural driver and I think it's also sustained a lot of the culture as well. I've been working in Stromness museum photographing their artifacts for a number of years now and it would be really hard to think of any of the artifacts in there that do not have a relationship with the sea or do not tell a particular story about the sea. It's embedded in almost every artifact that's there, and when I'm working there handling the artifacts, I get the sense of the importance of the sea

across time and just how deeply rooted the sea is in our culture here.

- I'd say quite a lot because people have always reached Orkney by the seas. You know originally they would have rowed boats here.
- I think like any island group, the sea is the most dominant factor. Even if you are a farm boy like me, I was still born next to the sea and I spent my entire childhood vaging round the shore as they would say.
- Even if you're not employed with the sea it still affects your life, if you work in an office in Kirkwall it still going to affect your life because ferries get cancelled and if there's a few days of stormy weather then the bread section in the supermarkets empties. The sea does kind of affect every aspect of life.
- The sea was the highway, you know, the sea was never seen as a barrier. You would travel by sea, you would take a boat and sail around to another part which was a shorter distance to go for whatever errand you were on, which included the spreading of news as well.
- A lot of the history of Orkney is orientated around the sea, going back in time to when folk left to work in Whaling or at Hudson Bay.
- As a youngster I mind I was what 6, 7 and everything I saw was the sea. We lived in a house near the pier and I would go down in the morning if the tide was out and play around the pier. And may I say it was a great way of life, and really set a strong foundation for going to sea to work. The sea some folks say it's in your blood.
- I think if you live on an island it's a fundamentally different experience from living somewhere landlocked. I think it gives you a kind of sense of scale for the place where you live and it definitely gives the place an identity.

What is the community like here?

- The community here in North Ronaldsay is very strong compared to where I lived in England. There's no way I would know this many people so well and the people at the other end of the island say 3 miles away so well that it becomes like family.
- There's a fairly small community here, but you know, people work together and you can have quite a nice social life, and there's lots of different things to do.
- Yeah, I found the community in Orkney to be brilliant. I moved here during lockdown so it was quite a strange time to move up to Orkney, but everyone who I met was just really welcoming, really friendly.
- I think when you live on a small island it's like being in a bubble almost. And our community I think is the ideal size we have about 80-85 folk on the island most who have moved here in the last 15-20 years and we all get on very good. We have to because of the size of the place and to survive there has to be a sort of diversity. I always liked growing up here and I always wanted to live here as long as I'm physically able. There's nothing that would attract me to leave this place and I think what makes a community is people obviously.
- There's that saying isn't there that you're always 5 handshakes away from anyone in the world but in Orkney it's like 1 handshake if that. Which I quite like!
- It's a very thriving and interesting community surrounding the archaeology up here.
- Its always been very close knit lots of activities going on. It's been a bit challenging over the last two years due to COVID but we all pulled together.

- I think folk are very caring about each other and very open and folk speak to you in the street and say “aye aye” even if they don't necessarily know you very well they might have seen you a few times and that's a pretty nice thing. If you need a hand with something you can just give somebody a shout.
- The community is lovely. It's not, as peaceful as it was but it's still close knit.
- I think when you move to a place like Orkney, one of the first things you notice is how friendly and welcoming local people are. I feel that's a real strength of living in Orkney.
- It's a close and supportive community and I feel there is an enormous amount goes on in a small community. A friend of mine described it as a big wee place and I think that's about right.
- I think the community here is very welcoming and very supporting and but not in a sort of suffocating way. I think the community is tolerant. I think you're allowed to be who you want to be in a certain way, but I think there's expectations, that the community have and those are to be responsible to the community and to contribute to the community as well.
- You're made welcome and you can get involved and stuff as much or as little as you want. It's not a one thing. It's millions of millions of different kind of micro communities really.
- Being island communities, people rely on each other. You have to because if something goes wrong you can't just ring an Uber or you know get a delivery of food or whatever. You just can't do that. You have to be that bit more resilient and rely on neighbors and community roundabout. I think you've kind of lost that sense of community in a lot of other places. But it's still like very present here.
- It's very active with a whole range of things from theater to drama to music to film. We have a load of festivals here. In fact, if you come up with a new festival, it's very difficult to find a slot to put it in, because of all the festivals going on.
- Stromness is such a vibrant and creative community and you know people say what you do in the winter, it must be boring. And it's like I can't decide what to go to there's so much on!
- I'd say the community is alright it's a lot changed from what it was.
- It's very supportive. Everybody knows everybody which is obviously a bit weird sometimes. Sometimes you'll see everybody's got a pair of binoculars on their window so they can see who's in a car that drives by, but at the same time it's so friendly whenever somebody's having a rough time. Everybody knows that they're having a rough time and everybody helps.

Orkney dialect words and phrases regarding the seas and coasts?

- An awful lot of the words are Norse, I mean placenames, in Orkney. There's Howe and there's Ness and it's all Hamanvoe ye ken it's all Norse influence that comes into it.
- A lot of the dialect and words have been influenced by the herring industry and folk moving up and down the country.
- Most of the placenames have a meaning and most of them could be traced back to the Vikings or the old Norse, that was a language that was spoken here maybe a 1000 years ago or less and gradually it's been more anglicized. But even my

grandparents, their speech would have been different from what we speak today because a lot of the old words can't be pronounced by somebody who comes here you almost, it's almost like an indigenous language and you have to shape and form your mouth into the words.

- Every rock, every inlet, within every hundred meters of the coast on almost every island right around Orkney and probably the coastline of Scotland would have names that were very significant, for fishing and that's why everybody knew them. A narrow bit where you might launch your small boat, livings came from the sea and that was part and parcel of living on an island was the sea and that is completely changed. Now you can work from home and never go outside at all and that's the biggest change that I see.
- The trouble is if you're an Orcadian and if you're not going to sea, you're not going to use as many as you would like to ken. And if you're not working with a boat or anything anymore, there's not that kind of knowledge for most of us as there used to be when everybody used to go to sea. All the folk from the town would have a boat or they would go in boats together to catch sillicks or cuithes.
- There's the swa of the sea, that's an old word that you used to hear older folks saying when I was peedie and the swa of the sea is just a general noise of the sea as it's happening. It's the kind of swell going and you can hear the sound of the sea from the distance, not just the crashing waves on the shore or anything, just a general motion to it, and that can be very comforting sound, unless maybe you had somebody at sea that you're worried about and it got coarse.
- I think there's still a lot of people speaking with an Orcadian accent but I think like everywhere else it has died out a lot because of television and because of distance being no object now. You used to be able to tell which parish people came from by their accent. There will be some people who still can do that, but it's not so common as it was.
- There was a visitor from South and he went into the fish shop here and looked at the fish and asked "is it fresh" and the seller said "oh aye its fairly fresh" and he said "oh I'll not take it". Because you see, fairly fresh South means it's not very fresh, but fairly fresh in Orcadian means it's absolutely fresh straight out the sea!
- When you first come into Orkney the dialect does take some getting used to. It's very different to other parts of Scotland. The different bird names are interesting to me. I really enjoy in particular the curlew which is the whaup and I just think that's a really cool name for an amazing bird.
- One of the phrases I hear quite a lot is "oh it's fairly blowing today" if it's a really wind day, that kind of phrase it just kind of makes you smile.
- Well, again for me again not being Orcadian I'm not familiar with all the words, but I do enjoy sort of hearing them and looking at them. And obviously a lot of the marine birds and things have different names. So that suggests a long tradition of the sea and people been aware very much of what's around them, and how things behave in different ways.
- There are a lot of dialect words to do with seaweed. A lot of names for seaweed and these names would be very specific to different islands and some with Faroese links. The fact that they exist also tells you about the different relationship with seaweed across time too. There was a word murkles for one of the seaweeds, one of the

dabberlock seaweeds that I like, some of the seaweed words are very rich and very poetic.

- Crabs are a lot of the time they're called partans. You've got selkie for seal, although that's kind of a mythological term, you've got bonxie. That's the name for a great skua, and it's a coastal bird that preys on other birds. Instead of cowrie shells, we say groatie buckies and spoots are what we call Razorfish. The little clams that dig into the sand.

Are there any traditions in your community that involve the coasts and seas?

- Well in North Ronaldsay in particular the coastline is important because that's where the sheep graze on seaweed. They've evolved from the original native sheep that were in Orkney hundreds of years ago so they can survive on the seaweed for a lot of the year and not just on grass for grazing. Different sheep belonging to different owners are together on the beach, but to gather them up for punding or clipping you are acutely aware of the tides, because to round them up it's much easier to do it at high tide when there's less beach. So we're very conscious of when the moon is and try and do punding on high tides, either the new Moon or the full moon to make it much easier.
- I see a huge change in Papa Westray. When I grew up most of my spare time as a child was with other kids on the beach playing in the sand or climbing the cliffs, throwing stones into the sea or whatever. And I knew pretty much most of the names of every inlet and sandy patch and everything around the coast of my own island and my two kids don't have a clue because they don't do what I did. And I think that is something that's been lost. Everybody had or most people had boats that they would fish in the summer and catch fish for their own use and to sell on. And that was just a huge part of Orkney life and I think all that has really changed. And I don't think it'll ever come back.
- Gathering the tangles used to be a really big thing on Sanday. That doesn't happen anymore. The market fell out of seaweed, so to speak, but the Sanday tangles used to go into making lipstick and things like that. That doesn't happen now, but there is a lot of development in the importance of seaweeds, macroalgae, and it may well be that in the future gathering tangles is something that becomes important again. However, in the meantime, it means that we've got a really rich environment for shoreline birds.
- I like the old saying in Norway which is the land divides and the sea unites and that means if you've got a boat you can get anywhere in the right conditions and with a bit of luck, whereas on land it's a bit more difficult I think.
- Obviously fishing is one big area, we see that on a day-to-day basis with the inshore vessels going out and back, bringing back the lobsters. The diving fisheries and obviously the scallop diving is quite a critical part of Orkney life and also the tourism aspects as well.
- Shopping Week in Stromness is a good example of activities involved with the sea like the swim across the harbour and the Daft raft race. You know it's traditional, but in a different sense. It's that getting the community together at that time of year and enjoying catching up with people, hearing about what people have been doing and

just seeing how things are changing and chatting about those things. So I think that's part of when you didn't come from Orkney originally and you come into it you can start getting involved in the sort of events that go on and becoming a part of that and starting to build your own memories almost, you know.

- Stromness Shopping Week is a week long celebration of the town and the seas just a very important part of that week. There's all sorts of things involving the sea, like the daft raft race and the crabbing competition, and people doing the swimming from the Holm, but also just the seas just such a big character in that whole week I would say.
- Activities that happen in and around the sea, thinking about South Ronaldsay's Festival of the Horse and the Ploughing match that goes on at the Sands of Wright. Other cultural activities revolving around the sea and thinking about the newly established North Ronaldsay Sheep Festival and the work on the dykes there.
- Seaweed foraging is becoming a lot more popular with workshops teaching folk all about it.
- Sea swimming, kayaking, diving, surfing here's lots of different ways that people can get involved in doing sports either in the water, under the water or on the water. You know, there's all sorts of opportunities.
- There are some customs relating to it. The ba game in Kirkwall, which is medieval, its first recorded about 1650 and it was said to be an ancient game then, but it does seem to have links with medieval mass football playing from Scandinavia and Northern Europe. And the tradition there was that if the ba went up, it would be a good year for harvests for crops. If it went down it would be a good year for the fishing.
- I'm sure there are plenty of other little sea customs and that used to be things which are now, you know. No longer exist. Regarding luck at sea, but there is still taboos about. You know, naming things on board a boat that still it's probably not that common, but it does still happen. I've heard of fishermen who wouldn't leave port on the Friday because its bad luck. I guess when your life depends on the sea and its moods then you use anything that you think gives you an advantage or keeps you safe.
- I think that there still is some customs but nothing like it would have been say if you could turn the clock back 150 years. It's kind of funny that among the list of things that were bad luck to mention were rats, pigs and the minister.
- Fish were never named. If you name a fish then you wouldn't catch it. Robert Rendall, the poet who spent many happy hours going out, visiting friends in Birsay remembers as a boy, going out on a boat and saying "oh hope we catch a haddock" and the old man fixed him with a glower that would have turned milk sour or turned you to stone and he said, "well, we'll no see one the day now". Because he'd named it you lost the power to be able to catch that fish.
- There were so many things that were bad luck. If you saw a redheaded female minister with her pet rat on her shoulder, and her Vietnamese potbelly pig on a lead when you were going to the boat you'd probably never go to sea again, you know.
- Even gathering bait for fish hooks when they were working with long lines so you had a line with 1000 hooks on it and all these had to be baited the night before and very carefully laid out in a box so that when you threw it over the side it didn't get tangled up. So a huge amount of preparation work when the person was gathering

the shellfish for the bait, which was an entire family thing. So you get kids doing this. You always took a little bunch of seaweed and you put it in the bucket so that you never looked at the bait because it was bad luck and you wouldn't catch anything. It was all about maybe making your chances of catching the fish or staying safe more likely.

- There was one thing that my mother used to do, she was born in Westray in 1922 and her father used to go out to the creels and in the summer when it was hot weather you would get the fog rolling in. When my grandfather was out fishing my mother would be sent to the shore to find a whistling Bucky, which is a flat periwinkle shell, and she would blow into the shell to produce a really loud, high pitched whistle and her father at sea would hear that shrill whistle and would whistle back to her. Then she would walk along the coast a wee bit whistling as she went and he would whistle to her and she would slowly make her way back to the boat noust and then her father's boat would come through the mist and be brought safely home, back to the family. It was lovely that the youngest member of the family would go and bring her father safely home from the sea. Always thought that was quite a beautiful kind of little metaphor.

What is your favourite or best aspect about living here?

- I really like the island of North Ronaldsay it's so nice to go out walking around it. Go down to the shore. Seeing birds and watching things in all sorts of weathers, whether it's winter or summer. The sea especially can be spectacular at anytime of year.
- Oh, there's so much to love about Orkney. It's difficult to pick something, but I just I really like the island life and how just quiet and laid back it is compared to a lot of the rest of the UK. It's just a really nice lifestyle up here.
- I think it's got to be heavily around the marine life because a lot of my hobbies involve that, so it's quite nice that I can just do that whenever I want to, here you can just step outside your door and get in the water. I think it's also in some respects the people in Orkney and how everyone does know everyone, it's a nice community as well.
- It's the coastline of Sanday that we totally adore, we fell in love with the beaches and then since then I've fallen in love with the wildlife!
- I think just the fresh air really and the social interaction. If you put it in that kind of way ye ken the fact that we have a good community spirit, lots of good friends. That's the best bits.
- I would say the best and the worst, it's really good people know you and people would miss you if you are not doing your regular things where they see you, so you would get help very quickly. The opposite side of that is that nearly everyone knows what you're doing anyway. But I think the good side outweighs the bad.
- I think it's the peace and the beauty of the place. Even when I was working I would stop the car sometimes because you could see the reflection of the houses and in the loch, so clean and so clear and so quiet and even today coming along this street when you see the wet pavement in the shadows it's a beautiful place, you would be blind not to see the beauty of it.

- So one of the best aspects of having moved to Orkney I think is the fact that you live with nature. I think that's a really important thing for my own personal quality of my life. I'm a really keen scuba diver, so the opportunity to get underwater on a frequent basis is very important to me. But I also really enjoy going for coastal walks.
- I love being surrounded by the sea and the wildlife and I have an emotional connection with them. And that's very important to me. We've got a lovely community here as well, I've sort of found this balanced place to live with my disability, where I'm very relaxed and happy.
- I suppose it would have to be the birds, really. I mean, that would be my top layer, especially when you've been here for an amount of time. When you do spend all year here and you can see the change in the seasons. That brings different birds to the island and just that whole, almost like a kind of seismograph of things arriving and departing.
- To me, it's the scenery, I love living on an island. It just has a special feel to it. And I'm still really entranced with the archaeology of everything, so I've done some community volunteering on that aspect as well. You have so many so many things to do.
- I think one of my favorite aspects of living in Orkney is being so close to the sea, I think having the sea running as a constant through your life is a really interesting feature and a really magnetic feature I think as well. I think living in Stromness the sea is almost like the tone and tune of the town and it just resonates through everything. I don't work on the sea, but my work is certainly informed by the sea in quite substantial ways I think.
- There's probably no one in Orkney who doesn't see the sea at some point during the day, so many people have to travel by sea just to get to school or get to work, or they have to do it weekly because they're having to come into mainland to go to school and then home at weekends or whatever. So there is no separation that is just part of who we are in Orkney.
- It's a very safe place to live, and I think that is something that draws people to it. I hope that everybody would be welcomed in and made to feel at home and contribute towards the community.
- Definitely the space you can just go somewhere and you're just on a hill in the middle of nowhere and you can look out at the sea and you can see the horizon. I think just the amount of space is incredible if you have it in your own head, you can just go to Yesnaby or you can go to Hoy or you can go to Brinkies Brae and then boom you're able to just be by yourself in a whole expanse.

What is it that made you stay or move here?

- Well, the beauty of the landscape. Actually the Bird Observatory was a huge factor in coming here because we said oh the world will come to visit us here and we don't have to travel people.
- It was through work that I decided to move here. But I've lived on other Scottish islands like the Isle of Arran and I just really loved the atmosphere that comes with them and the whole island life and just seemed to fit perfectly with them.

- I've been to Orkney a few times on holiday and I'd usually come up to the North Coast for Orca Week, which is in May, but it was actually a job that made me move up here.
- I don't really know how to put it into words. I think it's quite a special place and I think if you can find your little community or group it is very homely and it's very comfortable and it's very safe.
- I came here with a very specific purpose. I came on Christmas 2013 to see where the great auk had lived and I stayed for a week, stayed in the hostel. Nobody else was here apart from me. I only really came to see where this extinct bird had lived. I didn't really know anything about the island or about the people. Before you know it, you've discovered a whole different world, which is often kind of invisible from the outside. Looking on a map you would think it's a remote island with not a lot going on, but actually it's the complete opposite.
- Well, oh I've only been here about 10 years. I had a magical summer up here spending my days going around the Seabird Colonies, monitoring the numbers and breeding success of things like guillemots and kittiwakes and fulmars, and also had the chance on the odd day off to see a bit more of the islands as well. And something lodged in my mind and I always wanted to get back and I was lucky enough to get a job here.
- I think the thing that made us stay really was the warmth of the people and just the different pace of life as well.
- I came up here to do an artist residency for the Pier Arts Centre in Stromness and we decided to try and move here and make our life here and that worked out. I think I find it a very stimulating place to be. I think work wise it's really interesting. I think there's such a variety of work. I work in the arts obviously, and cultural heritage and there just seems to be such a vibrant community here.
- I came to work with the construction of the oil industry in the 1970s in Shetland and that established our links with the Northern Isles.
- Ah, complacency. I travel a lot. Everybody thinks that if you live in Orkney and you've always lived in Orkney that you've never moved more than about 10 miles from where you were born. But I've been through the Northwest Passage, to the South China Seas, Hong Kong and so I've been all over the place. But this is where my heart is and this is what always draws me back. I think it's just I'm very rooted to these islands. It's a bit of a magnet that always draws you back.
- I was just brought up in Orkney here, brought up with the fishing.

2. Personal Experience

How did you, or do you, use the marine environment?

- Walking and swimming and using our Canadian canoe.
- In terms of collecting data for the Bird Observatory, we do a census record of the birds and all the habitats in the island, and they're very much shaped by the sea.
- I just love being down at the beach just to clear my head. My work involves the marine environment so I spend my day time working in the marine environment and then my evening relaxing and enjoying the marine environment. I like to go snorkeling and scuba diving and I hope to do more kayaking this year as well so

there's so many ways that I enjoy the marine environment and I always try to make the most of it while I'm on Orkney.

- Well I come from a fishing family right back to the early 1800s, my father spent a lot of his young life fishing lobsters. I grew up in the 70s and my whole life revolved around fishing and the sea. It became part of me too. It's more than just a job, it's a vocation, it's who I am. If you look on the boat you'll see that's me I've put my character into the boat and the way I fish and I think every fisherman has that. Every boats different, they prefer certain things, how they work, the gear they work, how they fish and there sort of plans, the short term and the seasons. Everybody is slightly different because it's really a reflection of who you are.
- My hobbies all involve the outdoors basically and a lot of them are to do with the marine world as well. So whether that be going out looking for whales and dolphins or going free diving or snorkeling or just swimming it takes up quite a lot of my time and I'm so lucky that you can do that up here whenever you like. With work as well, I have been known to sort of focus a lot of my workshops with the kids around the marine environment. Just because it is so important to wildlife in Orkney and a lot of the species that we have on Orkney that depend on the marine world are really rare everywhere else.
- This year it was very much going to the beach for a nice walk. My masters dissertation was on exploitation of marine mollusks in the Iron Age, specifically in South Ronaldsay and so as part of that I had to build up my own reference collection of shells so I spent a lot of time on beaches collecting samples from each beach that I've been to, and they're all in many, many Tupper Ware boxes. But other than that, it's mostly just been leisure, it's just nice to go for a walk on the beach with your friends.
- On day to day basis I use the marine environment from an aspect of enjoyment. Walking the dog and enjoying the view. There's something very calming about the sound of waves. Less so in the storm, less calming at that point. Obviously I use it for travel for when I need to go to town or I need to go visit family further South. And that's quite important to me. But also in terms of carrying out research and doing surveys. I'm looking forward to getting my boat back in the water for this season and being able to go out and survey for cetaceans, for whales, dolphins and porpoises.
- As a family we would walk from Kirkwall to any of the beaches within walking distance.
- When I moved to the oil company I had to go from Stromness to Flotta everyday at 7:45 in the morning and back at 5 at night, winter and summer. I can tell you we crossed in all weathers – sometimes we came off the boat and couldn't walk up the pier! The visitors mostly see the flow and travel to Hoy or places on other islands on good days. But when you're working for an oil company, you go every day, any day and it was quite exciting.
- As a marine scientist there's lots of different aspects that I'm interested in about the environment such as looking at artificial structures that sit on the seabed and how they impact with the natural environment. I also like to make films as well and underwater photography which might be related to research but also sometimes I might be just doing it for personal pleasure.
- The marine environment is important for livelihoods and I'm interested in seeing how other people use the environment, how they can use it in a sustainable way so

that we can still have vibrant communities. It's okay to say people should do this or people shouldn't do this but you've got to be realistic. There's always this balance between having a quality environment and a vibrant community as well. It's not an easy balance to strike.

- I really love bird watching - I'm happy to spend many hours on the clifftop, you know, with a hot flask and a few cakes and a pair of binoculars.
- It's mainly walking along the shore enjoying the wildlife and the air and the smells and the and the things that you see as well and the whole feeling of it. I think I just get a lot of pleasure from just being down at the shore and there is an immense amount of energy there, and a great beauty too. And that's what I take from it.
- For humans, the sea is a huge resource, but it can also be a very hostile place, and yet seabirds manage to navigate their way across hundreds, thousands of miles. I really enjoy working with seabirds and studying them. It can be a bit sad looking at the cliffs in Orkney, when I first came up here many, many years ago sort of decades ago in the 1980s, and then seeing the cliffs now where those numbers of birds have declined so much especially things like kittiwakes. That's quite hard to see and epitomizes the challenges that we now face.
- Connection with the sea here in Orkney is a feature in my work as a photographic artist. I find the shore a particularly interesting space. The idea that the shore is not always there and sometimes it's sea. Sometimes it's land and sometimes it's neither. It's this kind of magical zone, and these sort of liminal places are the places where folklore happens, where folkloric creatures exist. But also this kind of hidden space that's revealed and then hidden. It's a very inspirational kind of space to use and to inhabit. A large part of my photographic work is about seaweed and shore plants and about the shore and a lot of it involves the sea itself, the water.
- When I come into work I'm crossing all four barriers and you cannot help but be amazed by sunrises, sunsets it's just such a stunning place. And as I say at home standing in the kitchen, it's like you're on the brig of a ship because the water is literally you know, lapping at the yard door off the slip way, so it is vital to me in every aspect. Both day job and sort of home life.
- I'm by the sea a lot because of my work, so I work on the sheep dyke which encircles the island and is naturally very close to the sea. It's still nice to go for a walk along the beach even though you might have been working at the beach all day. It's really nice to clear your head and to look at the sea and to hear the waves and spot the seals. And the birds that are on the shore.
- I think initially just the sheer enjoyment of being in a coastal environment. The lights, the colors, the movement, the weather, the horizon, the skies, the space. I think that more than anything. In terms of using it well, I use it for that. I walk, I study. I think I look at the seas around us. And as a connection, you can't help thinking of Canada. On the other side of the Atlantic or Norway on the other side of the North Sea. So in all those respects, I think it has a magical, romantic, lyrical sense, and that's, I think, is what is most important to me in terms of direct use. I enjoy sailing. I enjoy kayaking. I did enjoy diving.
- My interaction with the marine environment these days is mostly beachcombing. like I showed you downstairs got a cannonball off of the beach in Lamb Holm, which is a sort of treasured possession. But there are lots of other things that you find on the beach and you take home with you because it's just kind of cool. It's a bit of a

passion, I think especially when you were born and brought by the sea, you know. I used to go kayaking in Stromness harbour when I was young. And I'm increasingly working as a storyteller.

- I was excited if I was as a youngster, going out in the boat and learning all about the sea. I got a job with the Northern Lighthouse Service and I did 4 years on deck but at the same time I was learning for my tickets but that four years on deck when I look back was so valuable, so valuable in life because you were taught everything right. Then after I got my tickets I went to sea. So with me having the privilege of living near the sea and daily playing about it is what contributed an awful lot to what I did in life.
- Well we just worked pots for catching lobsters and crabs and that you know. And just a job we've done all were life. We used to catch a lot of fish but we don't bother much with them now. There's that much carry on selling your fish, it's all quotas and that.
- I went sailing quite a bit when I was younger, around the Holms, it was a really good place to learn how to sail because the conditions are quite nice, but then you can quite easily move out into more open water if you want more of a challenge. I actually learned how to kayak in the same day as I learned to sail and to power boat. So it's very, very versatile. But mostly I'd say the biggest experience I had in Orkneys marine sort of area was diving, learning to dive in Orkney was absolutely incredible.

As a resource that we live from?

- Because I'm a vegetarian I really don't feel at all in favour of taking fish from the sea. I'd seen this yesterday about 50% of marine waste being fishing related. That's absolutely terrible, I think if people are going to fish there has got to be a better way to do it. I do like foraging for seaweed, so that's the only resource I use from the sea.
- Well the marine environment is a huge resource. Not just in terms of providing food for the sheep, but in terms of fishing. Traditionally it was very important economic activities. At one time the herring industry employed so many people. And then probably in more recent years there's been more people doing creel fishing for lobster and crab. You can see from shell middens that in the past limpets particularly, must have been eaten or used as bait by many in Neolithic times.
- The big danger now is overfishing, considerable overfishing. I know when my father started to fish, in those days that was right at the back of the wartime, the Second World War, if you set a creel and you didn't get two lobsters in it, there was something wrong. That's how big the lobster situation was then, hundreds of lobsters you'd take in a week. Nothing like that now.
- Fish have a tremendous source for re-establishing themselves if you leave fish alone, give them two or three years and they'll be so much of that type of fish in that area that you can go and catch them no bother at all because they do reestablish themselves quite considerably. But you have to give them a chance and this is what they're not getting now to a great extent, they're getting hammered solidly.
- On overfishing it's not just the inshore fishermen but close in scallop diving is to a certain extent the same but as long as they keep hand diving they'll keep coming, it'll

be fine as it's a slow way of catching. You're getting top quality stuff and you're not taking peedie ones, you're taking only big ones. Whereas dredgers come in and they can just go scratching right along and pick up the whole lot. Bash up a lot of shells that are no use and destroy the grounds and leave it just like a ploughed field virtually...the dredgers can do a lot of damage. Whereas the hand picked ones by the divers are far better quality and far more sustainable. Everything was just hand dived and to start off with it was boys that were going out in the evening because... in Kirkwall Bay the amount of scallops that came out of Kirkwall bay is unbelievable - top grade scallops.

- Yeah, so there's a lot of benefits that the ocean provides, people depend on it for their livelihoods, whether it's taking tourists out or fishing. And then obviously people like to eat the fish. There's a lot of ecosystem services that it provides. It acts as a carbon sink, for example, and a lot of the ecosystems like seagrass that we have around Orkney take a lot of the power out of the waves and the storms to protect the coastline.
- My whole living comes from the sea so therefore I have to do the best I can. Crabs and lobsters, velvet crabs, green crabs, it's all shellfish. I'm very lucky I can get to good fishing grounds within minutes of leaving the mooring so I'm very fortunate that way. It's all creels and static gear and we just haul them not everyday but we do let them stand a few days with bait and hopefully have a good catch.
- In terms of like a resource for me it's more about like well being and fitness. I think there's nothing better than going out into the Cold Sea when you've had a tough day and just sort of forgetting about all of that. And you either forget, because if you go in swimming you're so cold you can't think about anything else, or if you dive in then you're looking at all the beauty under the water. So that takes your mind off things. And it's quite comforting to know that no matter how rubbish your day's been, the life under the water is still going on and it's still ticking over and it's still doing what it was doing the day before. So yeah, so it's quite reassuring to see you know all these little creatures under the water, whether it be like the blue limpets or the nudibranchs. Just getting on with life and despite, everything else that's going on in the world.
- There's development going on in the marine environment that perhaps I'm less enthusiastic about, whilst I'm keen to see some use of it as a resource, actually humans have done enough to the land and we perhaps need to be more thoughtful about how we use the marine environment as a resource.
- When we were small once again in my favorite place, Birsay the older lady that we stayed with...and she would go out and gather tangles. They would heap up the tangles on the shoreline above the watermark and it would get sold to Alginate Industries and I think she would have been some of the last of the ones doing that.
- Oh it's critical, without the fishing industry the place would just die I think.
- In Orkney we've got a very thriving local fishery, particularly on the inshore fisheries with the shellfish. I think it's also a resource of energy. And I think we're also very well known in Orkney for having both areas of strong tidal resource. And also strong wind resource. We're also using the marine environment in a slightly different way, but still as a resource to actually grow our own food in terms of thinking what we

can do about aquaculture. At the moment it's mainly concentrated around finfish farming. But possibly there are other areas as well that could be used in the future. So seaweed farming, for example, could be one thing and also shellfish farming. Maybe things like oysters could be another area that could be diversified going forward, and I think there are sort of opportunities to look at the feasibility of those aspects.

- Oh, I'm a vegetarian so I don't look at it as a food point of view, but then again there's a vast untapped wealth amongst the seaweeds that we could be actually eating much more of so. Another resource is energy, we have such power out there in the sea that we should be using.
- I have varying layers of connections with the marine environment. One is a very practical one that during the summer it's part of my job to be a skipper on the boat. In terms of any kind of other resource. I also use it in terms of kayaking and swimming.
- I think the closeness of the sea is important. I think particularly for I guess people who move here or live here. There is that kind of unquantifiable-ness of the sea that you don't really know why you love it or why you can sit looking at it for hours.
- It's a backdrop to my life and from a wellbeing aspect it's really important. I see it every day. I walk the dog along the shore because I love just being there seeing things, at the weekend I was walking on the shore and watching an otter swimming through the waves for half an hour. So I mean, that's just uplifting to see.
- We are a blue planet, we are here because the sea exists and we wouldn't be here without it. I just see it as a crucial part of life, but also a very inspiring part of life.
- The marine environment matters to me as a resource. In a few different ways, actually. If I'm thinking about being sustained by the sea, so I'm thinking about how I perhaps make a living, how I've managed to live in Orkney. The sea as a resource in that way because I make work, make photographic work about the sea and about seaweed. About the shore. So that sustains me. I also collect seaweed, I forage for seaweed, and that that sustains me in a different way as a food stuff. So that's a very real kind of sustenance. I suppose culturally there's sustenance from the sea if you look at the collection at Stromness museum, the folklore of the islands, the cultural identity of the islands, so it's important as a resource in that way.
- It's important, not to think of it as a pristine place. I think it's a working place. I think it's very important to see to see it on many levels. So it's supporting marine life and it's also supporting human life.
- I suppose that resource is a slightly loaded term. I mean, it provides lots and lots of ecosystem services. I'm not overly keen on the term resource, but at the same time so many people rely on the sea to make their living, so for them it's important. It's very much part of the local economy.
- Well, I do eat fish so I obviously enjoy that part as a resource, but I'm very aware that you know a lot of fishing is done unsustainably and damaging to the environment, which is a big cause of concern for me. As a resource for recreation I love swimming and kayaking, I've done a little bit of surfing and paddleboarding so yeah it's really important as a natural resource to enjoy recreationally as well.

- I love fish and I love shellfish and crabs and lobsters but it's got to be sustainably done. Dredging and all that it's just killing the seabed and it's killing the marine maerl out there. Little freshwater coral, as you know, can be destroyed very easily in Scapa Flow, and these are places that we need for the young fry of shellfish and crabs and lobsters to live among. So you're destroying the next generation for a quick profit. But then there's going to be nothing left for you in the future or for anyone coming after you. And unfortunately that is more and more a thing within human nature these days is the quick buck and just forgetting that we are an animal on a planet, we are part of the food chain.
- It's very important that we respect the seas, stop dumping crap in it and treat it as you would treat your own skin because it's an organism. You know it's not a big pile of water, it's an organism in its own right and it has huge effects on the climate and also the food that we take from it. We have to start respecting it more and stop hoovering everything up and turning it into fish meal or cheap fish fingers you know for 50p for a dozen.
- We walk the dog around the shore in the morning and it's absolutely fantastic on a summers day to see the flood tide rolling in. And in that you have seals, you have the wildlife there's otters there. What a marvelous resource to have.

As a space for nature that we live with?

- It's absolutely essential, we come from the sea, don't we? So much life is dependent upon the sea and it is so distressing to think of the loss of sea habitats and also the effect global warming has on the sea as well.
- Tourism is one of the bigger industries in Orkney, at least it has been and one of the things people come to see is lovely coastlines with its cliffs and beaches or rocky shores. People like islands, they seem to be attracted to them.
- I think it's very important to look after our coastline and I see all the time rubbish getting washed up often it's it seems to be stuff that's maybe come off of boats and we do periodically clean areas on the beach up. Wildlife gets caught up in rubbish and can swallow it and it's really insidious. I can't see an easy way to get to get rid of it. Plastic to me is a fantastic invention but it must be used and disposed of the proper way.
- I think that nature is hugely important and the ecosystem as a whole in the marine environment, and it's really important that we do everything we can to protect it. We like to spend time down at the ocean and part of the reason for that is because of the wildlife.
- I think I operate quite a conservative fishing operation. I'm very careful about the plastic I use, if I ever see anything floating I usually try to recover it. I have conservation at my heart some people might disagree but certainly over the years we've learnt unless you take care of the place you're fishing in it won't be there for future generations. So from that point of view that's why I try to take care of the place that I fish in.
- Around Orkney we've got some really important sites such as cliffs for nesting birds, or whether it be feeding areas as well. And obviously we've also got all the cetaceans that come down to Orkney. Some are around all year round, but then others like

orca that you know some of those come from Iceland down to Shetland and Orkney to feed.

- I think that the Orkney sort of marine environment needs protecting a lot more, and I know that I think it was a couple weeks back they came out and said that they they're going to try for these marine protected areas around Orkney. Which I think is a good start. It think it will highlight some of the issues that we have around here, I think we certainly need to do a lot better because although we do have some amazing wildlife, if we don't do anything then it will just eventually disappear and that'll be really, really sad. Not just for people who love wildlife, but for the people who depend on the ocean as well, you know.
- For me, that's what the marine environment should be about. It should be about wildlife. It should be about nature. Yes, humans are another form of wildlife. We need to coexist, but making sure that space is as safe as it can be for marine mammals and other wildlife that live in our oceans needs to be the utmost importance for us. They sustain all life on Earth. And if we don't get it right, it's just going to hurry the downfall of the whole place.
- I think some of the damage that's been done could never be undone, but I think we've learned a lot about the seabed and about the damage that can be done to scallop grounds and so on and. Taking care of it if not for their own immediate benefit, but for the next generation and the generation after that.
- When I look at the sea from the window I think it's been here millions of years, and it'll be here millions of years after you and I are gone. Everything that is thrown away, everything ends up somewhere in the sea and it soaks it up. And I have this fear that its getting closer and closer to the time when it can't soak up anymore.
- It is really important that we do make space and factor wildlife in, you know, because it's so easy to close areas off or change uses in areas which could actually be really important for certain species and just with having the knowledge there, you know we should be able to factor it in to work around that. So that we can still enjoy nature as well as you know, having our daily lives and our daily livelihoods.
- I think it matters immensely to me because I think that on planet Earth we should be giving more priority to nature because we've actually taken so much from nature as a species. I think we've taken far too much from it and I think we need to be trying to help repair the damage that we've done, so that's very important to me.
- It's essential - without the sea none of us would be here. There wouldn't be any life on planet Earth. And of course the variety of life that's involved in the sea is just absolutely incredible in Orkney. We have amazing undersea habitats that maybe we're not so aware of. I think we're aware of the kelp beds and things because they wash ashore but there's just so much else is under the sea. It really is an incredibly rich ecosystem, and one that we benefit from ourselves in terms of the food we get from it and other uses we make of it. But Its suffering real challenges at the moment and we really have to safeguard it now. For everyone's sake.
- The marine environment as a space for nature is incredibly important. My own interest is in seaweed. I'm very keen when I talk to people about foraging for seaweed that is done in a sustainable way and people cut the seaweed and leave enough growth so it can regrow an.
- Thinking about fish, I rely on the fisherman here to catch that fish and bring it in so I can eat it. So I guess I'm having a cross over there between nature and food.

- Its hugely important, I've studied seals and I've seen how they are affected by you know things that go wrong in the marine environment, such as plastic pollution and overfishing. In those sort of fringe environments on the shore where we meet the sea they also need to use that space for breeding, for resting. But when they get disturbed by people, I think a lot of people don't realize that it's having a negative impact on them. So I think it's really important to respect that space. And that we're sharing it with nature.
- The sea is a living thing in its own right. The amount of life that it supports is phenomenal. We don't fully understand it yet. We probably know more about the moon than we do about like the Mariana Trench in the Atlantic. You know, there's very deep water there that few people have ventured into, or been able to. Or would want to because we've got tons of weight above you that's going to squish you if something goes wrong you can't phone the AA. So we still don't fully understand the sea. The fact that there is so many things that that it drives ocean currents, warm water from the Gulf Stream, you know which affects the climate here.
- Going down to rock pools when I was a kid, there was lots of hermit crabs and starfish you'd find in rock pools, and sea anemones and of course crabs loads and loads them. And it was always endlessly fascinating for me to be able to go down and just look at them and appreciate them for the beauty that was there. And of course, the different seasons when different birds were coming and going and of course.
- Put it like this - without the seas we would be dead. No two ways about it. It's crucial to life on this planet. And we disrespect at our peril.
- There are far less birds than what they used to be. Puffins and guillemots and razorbills and that. Used to be thousands of puffins out there and thousands of guillemots. But now if you see maybe 20 in a row it's a lot.
- We've got a really, really good source of biodiversity in Orkney. There are so many unique species here, especially marine species up by Eynhallow. For example, there is a pretty considerable sea grass field and that is really, really good for trapping CO2. Great for the planet, great for the environment, and it's also an environment for fish to live in. In addition to that, we have a pretty healthy population of skate which are quite critically endangered in other parts of the world.

Is there anything you dislike about the marine environment?

- What I dislike about the marine environment is not the marine environment itself, left to its own devices, it's what it's what we've done to the marine environment. Whenever I go for walks, I try to pick up rubbish and invariably it's plastics, so there's lot of pop bottles come in. And there's an awful lot of fishing paraphernalia. There's buoys and there's nets. And those nets upset me very much because they're still out in the sea catching fish, ghost nets.
- I don't know but can't say I can dislike any of it to be quite honest because it is what it is.
- Sometimes you find things floating or on the beach that you think well somebody must have gotten rid of that without thinking. That annoys me. When flotsam or whatever comes ashore or you can see it floating in the sea its clearly by carelessness or sometimes the weather can break things up and you end up with

things in the sea that aren't actually meant to be there but I think there's a lot of careless people about still. I know the mentality here when I was young was you threw all your rubbish on the beach and it floated away. Your old cars, any old thing. Go to the beach and that's where it went but now I think completely differently, nobody does that anymore because we value the coasts that we have.

- Scallop dredgers because I think they do a lot of damage on the seabed especially the big dredgers, they churn up the seabed, that's the one thing that annoys me I think is really big scallop dredgers towing...and black smoke pouring out as they're doing it. Yes they're making a lot of money but at what cost. I think most are very good and will call you up and ask where your gear is. But I think it's a combination of the damage they do to the seabed and they tow away static gear at great cost to the guy who owns it.
- Rubbish that shouldn't be there. We all know about that nowadays folk dumping stuff in the sea and polluting it and so on. I think you can't be too careful with it.
- I dislike clam dredging. The boys have seen what it does to the seabed, and I've seen the machinery is just like a rotovator going across the seabed. I love scallops and hand diving is the way to do it. Go down, find them, pick the big ones and leave the rest.
- I don't think there's anything I particularly dislike about the marine environment itself, what I do get very upset about sometimes is the lack of respect. I see for the marine environment by other people. I don't like to see you know rubbish going into the sea, for example, I don't like to see purposeful pollution of the sea. And I don't like to see disrespect for marine animals. I find that very hard to cope with.
- Well, well there's only one thing about marine environment that I dislike, and of course that's the that's the big P, which is plastic, but that shouldn't really be in marine environment.
- The only thing I dislike about it is the misuse of it by big companies, by multinational companies. They seem to think that people on islands don't really care about the sea and should have no say in what goes on around the coastline. At the moment a group of us on the island are trying to stop the siting of Europe's biggest fish farm just outside an MPA which includes the holm of Papay as well and that was set up maybe 10 years ago for black guillemots and for the type of seabed which is encompassed in the MPA. It's made a lot of people on the island quite depressed about it. We're still fighting. And, you know, we hope that we can get that change. But as far as we're concerned, it's not. It's not a way to go. It's not a sustainable way of looking at the island.
- Obviously you have to respect it hugely, and the power of it at times can cause enormous problems for us. So again, I think you have to have that respect. And obviously at times there are tragedies associated with marine environment that hits any community hard. But especially a small community people really feel it. But it's also essential to our community and wellbeing.
- I think we have to be careful with fish farms because there can be a lot of waste generated from uneaten fish food and from obviously the feces from fish that are being farmed. I'm not pointing fingers at fish farmers and a lot of people are very conscious about what they do. I know that there are a lot of controls in place but we do have to be respectful of what's going on within the wild creatures in the sea as well.

- There was that one time that I went to the Brough of Birsay and the tide came in and I had to wade back shin deep in water and I thought damn you sea with your tides up and down nonsense but no, I don't have any negativity against the marine environment. I think it might be a bit too much to say you'd have to be stupid to have a grudge against it for anything because it's all part of us. It's an interesting thought that if you cut us, we bleed and the blood is salty and the sea is also salty. I don't know where I'm going with that one, but it's an interesting thought. Isn't that? You know we have salt fluid in our veins, and if we didn't have that we would be dead and it is salt fluid around the islands. And so I guess it's like the blood of the islands, and there's always the old saying about salt in the blood, meaning that you're drawn to go to sea go on sailing ship or whatever because you have salt in your blood. Never seen a freshwater or fresh blooded human yet.
- What I don't like about it is people that's got jobs, making a lot of money and they've got that much time off they're out beside us fishing and I would say there's no need for it ye ken. I would say if you want to make a living out of the fishing go to the fishing. A lot of them are working more creels than the fisherman are doing.
- I think sometimes it's quite limiting for travel. If I want to go to any urban environment at all and I think it's very difficult to access services that aren't on Orkney, since the only way off is essentially just two or three ferries. It's quite difficult and you'd have to plan quite well in advance. To get here or to leave. And I think that is quite frustrating sometimes, especially if you want to go to an event that's down South or if you have family who aren't in Orkney or if or if you want to study outside of Orkney.

In terms of place and as a setting to live, work and recreate in?

- There is something really energizing about the sea, and it's always doing something different as well, and the colours are always changing in it so it's a very important place for me.
- I don't think there's anything else quite like it for just clearing your mind and unwinding after a stressful day. And then of course all the other things you can enjoy getting out on the water and the recreational activities as part of it. The possibility is just endless for the activities you can do and the benefits it brings just everyday.
- Not being able to see the sea feels really claustrophobic to me. I'm able to breathe more when I can see the sea.
- The thought of not being able to see the sea anymore actually made me feel a little slightly sick in the tummy. So for me, just having it there as a constant in the background it just helps me be settled as a person.
- Terribly important, we wouldn't be here if it wasn't for the sea.
- It affects our lives and I think it affects your emotions, affects my view on living. When you go South for and the road cuts in and you can't see the sea it's a funny feeling and when you see it again on the way back it feels like coming home.
- Climate change is a topic that I feel extremely passionate about and I think we really need to raise awareness of the importance of the sea particularly in terms of carbon and the cycling of carbon. Blue Carbon is the carbon that is stored and cycled in our habitats in the coastal zone. They are absorbing the energy from the waves from storm events, so it's protecting against coastal erosion, which is really important. It's

also providing habitat for a wide range of marine animals to live, and some of those would include the juvenile stages of some of our commercially fished species so providing juvenile sort of nursery areas. I think that's a really important way of the community being involved, in generating the data because there's something very powerful about that. People tend to feel something strongly about information that they've gathered themselves, and I think the sea search programs are really good example of how people have been empowered. So I would really recommend you know people getting involved in these kind of things. And actually, for some of the shallow habitats, you don't have to dive. Snorkeling is perfectly adequate. You know there is really nice seagrass beds around Orkney, which you can literally just walk in from the beach. Snorkel around and you know, enjoy those habitats and just fill in the quick sea Search form.

- Well, as I said earlier on, I think it's just it's I'm not actually earning any money from the marine environment, but I'm getting a lot of physical and mental well being from the marine environment and it gives me a lift in spirits everyday whether it's a beautiful day and the seas as calm as a duck pond or it's a really rough old stormy winters day, it's always inspiring and it always gives you a lift.
- It certainly wouldn't be Orkney without the sea constantly there. And I love the variety you can get here with the shape of the island. There's an incredible variety that it offers and the way the light plays with the sea as well. So the relationship between the light the sea and the land. I think it just gives you that constant stimulation, and it's just an incredible backdrop.
- The marine environment here in Stromness as a place to live it's a very important setting for me. It shapes the whole town, shapes the way the town looks, shapes the way the town was built. You don't look so much on a landscape but rather on a seascape. The sea is everything about the setting in Stromness I think.
- Its everything. I can't really see more than that because my whole job is around the sea and so many different aspects of the marine environment and my home life too. It is everything really can't say more than that.
- Yeah, it's really important to me. I don't think I can imagine living that far away from the sea. We're all part of the world which is connected by the oceans. When you're standing on the beach and there's this huge, expanse of ocean it can kind of put things into perspective for you. But it can also make you realize that we're all connected because you know the fish use the ocean to migrate and it also brings it home when you see like litter from foreign places that you know we're all part of this one system and we're all connected, and it's important to look after it.
- Me and the sea have had a very close relationship since I was old enough to be able to toddle down to it. When something has happened and you are at a particularly low ebb I always head to the sea. Just the sound of it or sitting watching just the waves coming in that is balm for the soul for me. And that is how I get through problems in life. It doesn't have to listen because I'm not saying anything, I'm just sitting there looking at it, but it does calm you down beautifully and it kind of reconnects you with the world around you as well.

In what ways do you feel part of the sea?

- I suppose it's the bounding aspect of the sea that we're bound on this island by the sea and contained by it. So I suppose that that sort of pulls our community together because of that and affects all our transport.
- Well I think because we live on an island we are completely surrounded by sea like I said before and that affects a lot of the life here meaning a big ship has to come to take the goods here, weather can stop it, there can be other things as well. Sea conditions etc. so that can upset every plan that you have but as people live here the longer they quickly realise that you have to think ahead because you're not in control of the wind or the sea and you just embrace that lifestyle I think just slow down and don't expect things to arrive on your doorstep tomorrow morning because of where we live you have to get over that sea.
- Within our community of archaeologists the sea plays such a huge part in all of these different societies that have gone before us and so we spend a lot of time studying the sea, how people have interacted with it and how that has affected their societies.
- I think it is just a constant presence, so I think maybe you don't really notice until you go somewhere else and it's not there, it's just a sort of comforting constant presence.
- I like to be able to see it. I like to be able to hear it. I love being on the sea in good weather. And being able to share that with other people is really important. In terms of how our community connects with the sea, I would say that that's changed quite a lot over the years. In the times when there was more boats going out from Sanday, that connection would have been stronger.
- Well I think about it quite a lot it's just constantly in my mind to be honest. If I'm driving anywhere in the town say I've been to hospital in the other end of the town if I have any chance at all, I'll be driving down past the shoreline at the northside here at the beach or past the pier. I have to be there, I have to see it, I don't feel happy if I haven't. It doesn't worry me if I don't but ye ken you're all that bit happier about going past the shoreline. It's just an absolute must for me. Born and brought up with it, it's an all consuming interest...the wind and the sea and the weather shapes your life.
- When I go into the sea. When I'm heading off on a dive. It brings into me a sense of calm. And it's for me like going into a different world, and I find that tremendously relaxing and therapeutic. And every time I go in, it's always different. I see something different, something's changed. Sometimes I know if I go to a certain place, I'm going to likely to see a certain thing, but then on the other hand, there's always some surprise that comes along.
- There's an aesthetic beauty to it, but also obviously in Orkney huge numbers of people make their living from the sea as well. So it's enormously important to the continued prosperity of the islands, so fishing, for recreation, other uses, that we're making of the sea. So I just see it as absolutely crucial to the continued sort of prosperity of the islands. And maintaining the richness of the birds and other animals

and plants that we have here. We have to look after it, it's an essential part of the prosperity and future of the islands.

- I feel part of the community that's part of the sea in lots of different ways. I feel a lot of it in the heritage work that I do and that's very community based, it's very, very much informed by the sea.
- I guess I most feel part of the sea when I go swimming and it's a really nice thing to do with other people you know it does bring people together and people might go sea swimming for different reasons. You know it might be a matter of wanting to increase your endurance or for fitness. If you're properly swimming. Or it might just be to clear your mind and to get a different perspective and kind of wash away, your stresses. So yeah I think I feel most part of the sea when I'm actually in it, just swimming.
- As part of the history of Orkney. The culture, the heritage is so rooted with the sea. I have done displays on everything from shipwrecks in Scapa Flow to lifeboats, the loss of the Longhope lifeboat in 1969, which I remember as a small child. Just what I remember most, is the gloom within the home but also when I went to Kirkwall it was like there was a grey cloud over everything because of this sadness. The tragedy of the loss of those men and how their families were coping with losing two generations of a family. So yeah, within my working experience as well the sea is never far away.
- I think the marine environments very closely tied to the community. As I mentioned before, that being able to see the sea, it gives you a sort of sense of the place that you live, the shape of the place you live. You're on an island. And you can tell that pretty easily. But also, I think the community very much relies on the sea. A lot of our traditions are based around the sea. A lot of our employment is based around the sea. We have fishing, we have renewables and electrical research and development. We have yacht racing here and it's very much tied to the seas and to the coast. We've got a ton of history here, so I think it's really integral to the community.

Are there any places you feel you have a personal connection with?

- The sea at Yesnaby is just so wild and interesting to watch even in all weathers.
- Kirkwall Harbour because I see it at my window every morning.
- All the shores around about Kirkwall for sure. In the summertime the whole family would hire a bus and go to a beach maybe Birsay, which is a very special place. I have a couple of things in fact about Birsay here that mean a lot to me one of them being a poem that we learned when we were young. It's by Robert Rendall and he was a great man here - he was a conchologist, Britain's foremost conchologist and wrote a book about the shells here. Another favourite person who like the shores around here. And so it's a poem called Birsay:

*Here on this rocky coast I roved,
And here beside the sea in happy boyhood played,
Ere I had felt the bonds of ruthless trade or mourned times lost through many a
wasteful year,
Along these cliffs where summer skies were clear,
I watched the waves with thunder long delayed break on the shore,*

*Or saw the colours fade from evening clouds and knew that night was near,
Here once again where grow the wild sea pinks with idle steps I go, and mind at ease
from lifes mad haste, oh look the red sun sinks in golden floods of light, and with the
breeze comes faintly now across the grassy links the ageless...music of the rolling
sea...*

- I guess the other place I really like is the Warbeth beach. Just because that's my nearest beach and I love just going there with my dog and my husband and just throwing the ball and enjoying the waves. The scenic change after there's been a big storm. I really like it when the big piles of kelp wash up and then watching it in the next few days. As all the piles of kelp just disperse and disappeared again and just that process, I'm fascinated by that process of. You know life, nature and all that.
- The Marwick cliffs are an internationally amazing seabird colony. You can't really beat being up there on a day in May or June when the colonies fully alive and just the sound and the smell and the activity of the birds, watching them having their lives up there and you can see people enjoying it as well.
- The Holms hold fantastic memories because school Holidays there maybe even eight or 10 flatties in the whole harbour and the whole lot of us would go over there and it was really fantastic. But again, as one gets older and my father bought a wee cabin cruiser. And he said, don't you dare go out of the harbour, well saying that you want to go.

Does it matter to you in any other ways?

- If I talked about the aesthetics of the sea, I love taking photographs of the sea, love sort of looking for the colors in the sea and how the sea is different colors in different places around the island. The wider industries as well who rely on it. So wind farms, for example are a bigger and bigger aspects and they have potential to impact in a positive way the whole country. So there's everything from wind farms, right down to locals getting out and enjoying it on a personal level.
- It's just important that people care about it really. It's mistreated in so many different ways when we don't even know that much about it as well. It does sort of get you down quite a bit that it's so mistreated because it's so difficult to police what people are doing in the marine environment. I just see it as like the sort of like bloodline of the earth. It's so important for everything on the planet. Not just our bellies or whatever we want from it.
- Yeah, I think for me the marine environment is all around nature and it is all around wildlife and the importance and a lot of the work that I do is involved in conservation efforts and so making sure that those conservation efforts are well targeted so that we're balancing the needs of the human community with our wildlife community so that everybody can live and rub along together in harmony as much as possible.
- I don't want to separated from it for too long.
- It's hard because it's just so fundamental. It's very hard to sort of encapsulate it all into one thing I think, yeah, it's just. A critical part of life in every way. Sustaining life. Giving people opportunities to live here. Maintaining a huge diversity of other life

forms that are here is just essential. It's so essential, is quite hard to encapsulate it so I'm struggling a bit.

- I've mentioned how it shaped the town, but also how it makes the light behave because round huge body of reflective water like that it really influences how the light is and it really extends the light that we have in winter as well. So I notice that a lot when I'm out taking photographs and how much the sea is reflecting back, its sometimes softening and sometimes hardening the light. So I think those kind of qualities that the sea can have for just altering the atmosphere, what the water is like and the air that can have a big influence as well. And you know if I'm taking a picture I'm considering that too.
- I guess it feels like there are a lot of unknowns about the ocean, so I guess it's important. Like in it's mystery as well. We know more about the moon surface then we do the bottom of the ocean. And I find that really intriguing.
- Well, I mean, the sea is just so crucial to everything on this planet. To our very existence as a species.
- You know you'll never stop plastic from going into the sea, but you can at least try to do your best to make sure that it doesn't, and you gather it up when you can pick up your 3 bits when you go to the beach. Better still, pick up a lot more. Better still, obsess and get bags.

Do your friends or family share your interest in the marine environment?

- Oh yes, definitely. I mean my dad when we went for a family walk if there was anytime at all we would have to go past the pier in Kirkwall and see what was happening along the shorefront. But when you were peedie you always took a look by the pier or if there's more time you go down the pier and look at it. See what boats was in and I still like to do that. So all round the family folk would be going to the shore and picking whelks and spoots at the right time. One or two maybe had lobsters of off creels, go fishing, they were all involved...in the shore one way or another. Or swimming.
- Any sort of nice days we tend to go to the beach just for a picnic and the kids they certainly like going to the beach and of course going in the sea if they can't swim they can at least paddle.
- Yeah, definitely when we have friends and family visiting they are certainly blown away by some of the things that they can see here and on that presence of the sea and the birds that you can see. The marine mammals that you can see. I think a lot of people come here and are really amazed by just what's here, and I think sometimes it's maybe more difficult for folks who've been here all their lives to just appreciate just how special is.
- My friends and family share my interest in the sea particularly seaweed, I've turned a lot of folk onto how much fun it is to forage for seaweed. A lot of my friends are archaeologists and they're very, very much involved in the sea and the marine environment and the coast in particular. And a lot of the sites are of concern around coastal erosion, so the seas a topic of conversation quite a lot I find.
- Yeah, I think most of my friends and family you know enjoy walking on the beach. And my mum's got a dog. He loves the beach. So she goes there quite a lot. But

probably not in love with it as much as I am. I've always lived by the sea, and, you know, I studied at a university in marine biology. And so it's really special to me.

- If anything they've got more of an interest than I do a ton of my friends they do fishing either part time or full time. A huge source of youth employment here is going out to work on the boats. That could be the fishing boats or the passenger boats like the Hamanvoe ferry. In addition to that, you've got a lot of competitive rowing and sailing teams. You've got a thriving maritime education community that does dozens and dozens of courses, all pertaining to getting work experience at sea. And that's really impressive A ton of my friends have taken those. They've gotten jobs, they've gotten really good work experience. It's a really, really good source of employment.

3. Key issues and current state of the marine environment

Do you think Orkneys marine environment is in a healthy condition currently?

- It's hard looking from the outside to know what's going on. Apart from what we see washing up on the shore, which of course is all the plastics.
- I think Orkney's Marine environment is probably fairly healthy at the moment, but we do need to be careful in the future about pressure from fishing and probably the effects of fish farming. It could be too many nutrients going into the sea in places. It needs to be managed. You can't just have an infinite number of these. Though it's good for the economy and it's good for local jobs. But there needs to be a balance. There has to be a limit on how many places like that the environment can sustain.
- I think it's pretty good actually we had a big problem with our effluents from Kirkwall but they eventually improved this and they got a pumping station down by Haston slip. Orkney as an environment is a good place to be, it's healthy, its bright, its clean, its airy. It blows away all the rubbish. I think it's a fine place to be.
- I think Orkney has very good marine environment. I think it appears to be healthy and doing well of course, there is always more we can do to improve it. But compared to a lot of the world we're quite far ahead really, it's doing well.
- I think it's healthier than a lot of other places. But I can see it going the other way because we don't look after it as much as we should, the marine protected areas don't even necessarily stop them from doing anything that they're already doing. It's just a bit more of a way to keep an eye on what people are doing or like. Even if you look at it in terms of money, if they you know dredge all the seabed and if they overfished the area or there's a horrific oil spill then they're not going to get any of that money. But then also there's money within tourism. And you know, people coming to Orkney because it is so special and because it is so beautiful. So yeah, so I think Orkney is healthier than a lot of other places. But it could also do it a darn sight better.
- Even though Orkney is quite good at being environmentally friendly and things like that we're just as bad as everywhere else with having plastics in the sea. I mean it's healthy in terms of I think in comparison with other places. I think that we're quite good at looking after our nature, our marine animals and our marine plants and things like that. But I think it's not perfect. There are things I think that are quite dangerous to the marine environment and will continue to be until someone does something about it or we do something about it I guess.

- I think it is in a fairly good condition. It could be better and we are very lucky with the water that flows through here. Or it could be substantially worse. We have a lot of usage going on, industrial usage and without those strong currents that Orkney is famous for washing that away effectively into the wider ocean where at least it can be diluted things would be much worse. So I would say a reasonably good condition. Perhaps if you look at things in detail, it's not as good as it would appear because you look out and it's lovely and blue. And then we know about the fast currents and it all looks good, but it's perhaps not when you look closer.
- I think I might be more optimist than pessimist, I do believe it's never too late. I think saying it's too late now it is an easy cop out and we can't change what damage has been done but we can stop more damage. I think just looking at our grandchildren, all children in this area growing up, you want them to have the good times and the good things. And I don't mean the good things of that you can buy in shops. I mean the good way of living. I think it's still pretty good in Orkney, I would like to think there was some way of keeping that.
- I think, generally speaking Orkneys coastal areas, are in a pretty good condition. However, that said, you know there are some things that we need to bear in mind. For example, you know the temperature of the sea is increasing and that will have a general impact on everything that lives in the sea. We might not notice it quite so much here in Orkney because we're in a cold water environment, but in other parts of the world people are really feeling the effects. Even though some of these impacts might feel a little bit distance for us here in Orkney, you know it will come if we don't take the time to, you know, check our habits and make some changes and we need to do that quite soon.
- Well I only know what I see from the shore around in North Ronaldsay, I just see lots and lots of plastic, lots of discarded, not discarded but lost fishing gear. There is the macro plastic, so I find that deeply upsetting and I really wish that we could do something about it to make that better.
- I'd say it looks beautiful, but if you start analyzing it, it's probably not very healthy at all. And I think there's probably quite a high depletion of the actual creatures that are out there, and but I'm no expert on that, so I think if I was somebody that went out to the sea everyday on a small boat and did some sort of fishing I'd be in a better position to talk about that because I think they're the ones that really do notice the changes that goes on out there.
- I think if you came here if you've not lived in Orkney or you're a visitor looking from the outside I think you'd probably say yes. The whole kind of image of Orkney that is portrayed of this fantastically rich environment, which it is with lots of puffins, guillemots, curlew. I think from the outside it looks like a paradise and to some extent it is. But I think that also kind of glosses over the reality of the situation and like things that I was just talking about before that actually the state of the seas and the bird life, and I'm guessing the things in the sea as well, is not that great. I'm always aware that that there is an outside view of what Orkney is, but I think in reality I think it's quite different. And I often wonder whether sometimes the impression that people get lulls people into a false sense of security that actually people think oh it's fine. We don't need to do anything about it. We don't need to campaign for things or disagree with things because everything's OK. But it isn't. The marine protected areas that are being created aren't worth the paper they are

written on. You know they don't do anything. They're not enforceable, so people can dredge in them or put fish farms in them, you know. So there's a whole underlying layer to what's going on, which I think needs to be looked at more, I think.

- I think Orkneys environment is facing many of the same challenges that the marine environment across the world is facing at the moment. I think it's good that those are coming more to public attention to give us time to think about how we want to address them, to encourage people to engage with that. Climate change can have various impacts on marine environments, some of which may be less visible to people. So there are changes already happening in distributions of different animals, particularly some of the supporting animals within the sea plankton communities. And that's having knock on effects. On other things that we do see a bit more. Maybe like the seabirds. But it's very complex because it's linked with how we're using the environment, how we are fishing, what species were taking, what intensity we're doing that at.
- There is also ocean acidification as part of climate change which is having an effect on things like coral reefs and other seabed habitats.
- You've got lots of sort of big pressures like climate change and then there's lots of little things that add up and are continuing to put more and more pressure on the environment as a whole, how it functions and on the creatures that are dependent on that. And ultimately of course then on humans as well. So it's a time of big challenge. I think if you go out on a day to day basis and you can still see wonderful things in the Orkney marine environment people are very engaged with it but we're also aware of the challenges.
- I think it's a mixed story so it can look very healthy on the surface and many things are still very good here, but there are increasing complex challenges which are starting to bear on what's happening and we are seeing losses and we need to be working to try and address those and maintain a healthy environment for the decades and centuries to come, and we've got a limited time period in which to achieve that.
- Fairly healthy as a whole. We've got problems with marine environments worldwide. But round Orkney I think it's such an important part of life here that there's probably more understanding of it and more effort made to actually keep it healthy.
- I'm also thinking about the health of the inhabitants and concern about sea level rises and how that might impact on where people live and how it might impact on some of the low lying islands.
- I think when you're talking about the health of the marine environment it makes you realize that actually it is all connected.
- By any standards it is pretty good still I think so much of the threat to the environment is well outside Orkney Waters, so that's true of any marine environment. Everything is mobile, everything is transboundary. Everything is coming into our area of influence. So climate change is making this big difference, which I suppose we worry about most. I'm very sad that the increase in sea temperature is probably to blame for most of the reduction in sand eels and hence bird life. And the loss of bird life over the last 20 to 40 years even has been dramatic and extremely sad, and these are things resulting from circumstances well outside Orkney.
- Within Orkney I guess the main threat of the moment or the main change is the

aquaculture or the fish farm industry and the use of pesticides and the problems of sea lice, which I know everyone is trying very hard to contain, but nonetheless they have been dramatic and there is this economic pressure and Scottish Government policy to expand fish farming. And then as I think I mentioned before, the runoff from the land. Both in terms of litter from within Orkney and outside Orkney. The runoff of pesticides and chemicals which transfer to Orkney waters, either from within Orkney or outside Orkney.

- The seas around here are still fairly clean, but not as clean as they were when I was a kid because we didn't see all that plastics on the beach. And that is something that has been markedly increased in volume over the last 20-30 years. There needs to be a global thing stop dumping in the sea try to clean it up and you know face the responsibility of having to do it and some of the polluters should have to pick up some of the costs of that as well.
- I think the health of the marine environment at the present time is pretty good. I do often think on Scapa Flow. Now Scapa Flow has more and more and more fish farms there. I think it'd be very interesting just to see what like the bottom is where that fish farms are. I've asked about it and they say oh well we shift them every now and then? But I mean if the bottom is polluted, and nothing grows what is the point in shifting it. Really to me its mans greed. OK, I'm retired. I'm sitting back and well enough off and I have a pension but young people have to have work. So how do we manage that? And the fish farms are creating a lot of work. So anyway, could I say watch this space and see what happens? Some disease or something will come that will decimate the whole thing? But again it's creating work for folk, it's keeping that family going, and that family going.
- Well I don't know about that because since they started that salmon farming in Orkney there used to be a lot of sea trout about. The longer that salmon farming gone on the less and less sea trout is about. They used to put stuff in the cages to kill the sea lice and I think it killed a lot of the larvae of the small lobsters and all that, I'm no sure but I think that was what was happening. That's certainly made a difference to it, that's something you could notice each year.
- I think it could be in a healthier condition but overall I think it's doing fairly well. A lot of species are thriving. There's definitely more that we could do, and there is definitely more that we should do. But I think currently at least we're doing mostly OK.

If you could change anything about how we manage or use Orkneys marine environment what would it be?

- Well, I would stop all fishing. And perhaps we can be doing more power generation from the sea because I think that's such an interesting obviously sustainable resource isn't it.
- We could be using tidal or wave power but we also need to be careful about what effect that might have on marine life, whether it's birds diving in the sea that could get caught up in turbines or be affected by them in some way. But if we could look to using less fossil fuels in the future, natural renewable sources like tidal and wave power and wind power which can be very successful in Orkney.

- If you think about salmon farms for one thing. Salmon is very important to Orkney and they say they are doing it safely so there's no amounts of effluents below salmon cages that folk think. Well I don't believe that, there has to be an enormous amount of effluents under these salmon cages and that's bound to be blinding out a certain amount of wildlife and it worries me. Because it is such an important industry now and it's a very high quality product that they're turning out and the Orkney salmon is reckoned to be some of the best salmon in Scotland. It's a tremendously important business so I can't even think it would be a good idea to stop it but it's just a danger with the effluents that's coming out of those cages. It's as simple as that.
- Overfishing as I said before if it stops it will reestablish itself enormously quickly and a perfect example of that is the fact that after WW2 there was virtually no fishing then everyone was either away at the war or they were involved in doing other things like building barriers and there was very little fishing of any consequence at all during the war time and there was so much stuff available right after the war. Like I said lobsters everywhere.
- So I would like to see Orkney reach the United Nations target for protecting 30% of the ocean. I think that's something that is achievable and would allow fish stocks to recover so that we can carry on fishing outside that. So that's one thing that I'd like to change locally.
- I would honestly say and I know that not all fishing is bad. I know that, but I would just say no fishing for 10 years. Let's see what happens, no, no boats doing anything in the water. 10 years let's see if they recover. And then let's start again so. Just giving the ocean that break so that it can recover. And then starting again with new rules so you know only certain fishing methods that can be used. But I know that that would never happen ever, because it would impact on people's livelihoods. It would have a massive impact on people's livelihoods, and obviously all those people that are in the fishing business would have to find other jobs to do so it would never be practical but I think it would be a really interesting experiment to just give it a break and let it recover and then start again.
- I guess it would boil down to the plastics if they could magically make it so there's no plastic on the beach.
- So speaking from a personal point of view only, the thing that I would change would be aquaculture. I understand the appeal for it being in Orkney, I understand why it suits the firms that run these organizations. I understand that there is demand. But I don't think it's the right thing for Orkney to have large numbers of fish farms. That's quite a controversial point of view. They frustrate me because they talk about how they provide employment, and they do provide employment, but it's very little employment and the impact that they can be having on some of the sites that they are in, it's really not ideal.
- Well I think probably the rubbish that gets dumped in it. Probably that because that could be deadly in the long run, any kind of pollution is for me probably the worst thing. Or overfishing. Imprudent use.
- I think transport would be the big thing that I would probably try and make even better than it is.
- I would just like everybody, in Orkney, to think about the sea and about the land and about everything - about trying to leave it better than you got it. And we're not doing that.

- If I could change something there are some areas where some of our habitats have become a little bit degraded and I would really be interested in, trying to get some of those areas restored to their former glory, and I think in the future there is going to be quite a big role for what we call restoration ecology. So understanding how to do restoration in an effective way. But also in the way that can easily be applied.
- People being heard when it comes to matters of the marine environment, I sometimes feel either people don't come forward enough, you know to point out issues or we don't necessarily discuss them in a way that we should discuss them fully and openly, and I think that is a bit of a sticking point. Sometimes that could be, you know, improved upon in the future. How can you expect people to care about something if they don't really see it. They don't really understand it. I think there is a lot of work to be done in that area in bringing that to life in the way that people can understand the condition, the way things work, you know, and then bringing that into fruitful discussions about how these resources should be looked after and how they interact with other types of activities.
- I'd have all the boats not running on diesel and I'd just be trying to get all the plastics out of it. And I wouldn't be fishing it either. But I know a lot of people do like fish and seafood. I'd be trying to conserve it as a vibrant, ecological system rather than actually plunder it.
- On Marine Protected areas if at the end of the day we really do genuinely want to protect things, then let's genuinely protect them. You know we can find ways of dealing with people needing to fish or needing to make a living from that. Once these things have gone, they're gone. Why not just leave the MPAs alone and give the things that live in them at least a little bit of a chance?
- I think there an awful lot of planning that happens piece meal, so it's development by development – can we do things in a more strategic way?
- It would be good if we could have boats that are running on different fuel, that would be really interesting.
- This formal statutory process of marine planning it won't be a magic bullet, but it will be a really good start to bring different interests around the table to discuss ideas, acting as a kind of a catalyst between different agencies, bring them together.
- I think I would magic away all the plastic and I would stop, you know, dredging. So kind of like scouring the sea floor so when we're fishing and that's just a really damaging process and unnecessary. I guess going back to more traditional fishing methods that are more sustainable and less damaging to the environment. I would perhaps go back in time and warn people about overfishing before it was too late.
- Well speaking personally I'd like them as they were 50 years ago or even 100 years ago with perhaps a well managed fishery and some interesting sea transport. But the industrial use for energy and for aquaculture I would like to see not there, but of course it is there.
- I really would like to see a lot of research and a lot of money spent by government as well into producing functioning and viable hydrogen engine's for things like the ferries here. So we really need to be focusing on green energy, I hope that Orkney can carry on at the forefront of green energy research, but also be able to produce something that can be used Internationally.
- Well I think id curb the number of creels any boat can use to a fair number. We used to use, first I started fishing we were using 70 creels maybe. And on a good day you'd

get 60 or 70 lobsters, on a bad day you'd get about 20 one out of three. And on a medium day you'd catch about 40. Now you need hundreds of creels to catch that many. So I think if they restricted the number of creels then long ago it would have helped it now. The size of the boats you've got now it would never do cause you need thousands to work, to make it pay.

- I think the number of cruise ships could be reduced, and I also think investing into protection against coastal erosion, I think that there are a lot of really good coasts in Orkney and there are a lot of incredibly important sites that are very, very close to the coast in Orkney that could be threatened if they erode any further, so if I'd a magic wand I'd just fix those.

Do you feel that Orkneys marine environment is being well managed or used?

- I think currently the marine environment in Orkney is probably well managed though I've not really looked into it myself. I've noticed in the past there used to be warnings come out about algal blooms, it's just something that's got to be monitored but I've not heard much about that for many years.
- How do you manage it? You ken boats have licenses now you're not allowed to fish unless you have a license. So therefore possibly the number of creels that you're allowed to have per license might be a way of doing that. But the idea of trying to manage it is very difficult to say how you could manage it better than what it is.
- Dredging could be a problem. I've heard the boys saying when they come to a place where they knew there were scallops but a dredger had been over it the seabed looks like a ploughed field. Dredging I would say is something that could be more controlled. But you can't stop things, you can't just stop an industry working. You can't just say no more dredging all that ships go and tie up at the pier. You can't do that, it's a balance thing really. Live and let live that's the thing. There's no easy answer to that.
- I think Orkneys marine environment is being well managed, it's a busy place. There's a lot of different stakeholders who operate on it from fishermen to wind farms to scuba divers and everything in between. But I think Orkney is doing a fairly good job of making sure it's done sustainably. There's always further you can go and there's more you can do, but I think that the ocean is fairly healthy around Orkney, and it's really a sort of a shining light. For the rest of the country of what can be achieved.
- I would like to think that Orkneys marine environment is managed quite good. All the fishermen I know, and I know quite a few, they would certainly be in favour of looking after the resource and the things that you don't catch, it's not just the things that you do catch. The sea is full of life, the seabed especially and I don't want that to change. Papay has a marine protected area around it and I work with it. I've been in touch with different people when I was asked to go to a seminar in Kirkwall just before it was going to be enabled and I was completely for it, I think it was a good idea. And I can say I wouldn't even object to it being a greater a stricter marine protected area where they could actually limit the fishing in a place in order to preserve and conserve the creatures that's in the seabed.
- Yes I think it's well managed. The crown estate and I think the Orkney islands council grant permits for various operations around Orkney and anything that's very bad for the environment they wouldn't give permits. Or planning permission or whatever is

required. And I think any fishermen that I know or any person living on the islands here would probably take action to stop somebody if they were causing a lot of pollution or anything like that. It's just the way we are now, I wouldn't like someone making a mess if they could do it in a far better manner whether it's on the land on the coast or at sea.

- I mean, my experience isn't particularly vast, but I mean it seems to be thriving from what I can see. I think it's well managed from what little I know.
- I think there is a lot of interest within Orkney Islands Council and other bodies to ensure that Orkney's marine environment is well managed and that they have a scientist on the team, which is really unusual. So Orkney is very lucky in that respect. Whether folk are as knowledgeable as they should be in order to make those decisions, I would say it's very difficult to tell. And in terms of engagement and consultation, there has been historically a habit of lip service probably isn't the right word. How much influence does the community have if we feel that there's something wrong that there isn't really an opportunity to feed into that in a constructive way or in a way that gives you a really valid voice? I think there are efforts being made to ensure the environment is being managed correctly, but we have a long way to go as a community and as a country to get that right.
- Probably, need to be careful of everything. I mean, apart from the few things I've mentioned where I don't like overfishing and all the rest. I think there's a lot of traffic now with bigger ships coming in to do with our renewable energy which has been trialed in many parts. Some of the things that have been trialed is just absolutely stupid.
- I don't know how well it's being managed. I don't really see much to say that it's being managed much at all, but somebody must be doing some work somewhere, so apologies to them. I haven't seen any evidence of what goes on at all with it, so I suppose that's me saying that if there is marine environment management going on, it's not filtering down to the public very well.
- I suppose like everything, it's kind of a mixed bag of all kinds of things. There will always be lots of issues around the way we use the sea and the way that people use the sea.
- The economics of living on islands is quite tough, it's not an easy place to live in terms of making money, and that's you know potentially, always going to be the driver behind things. I would slightly worry when that that making money kind of turns into making profit, which I think are two very different things. I think there's a limit to things, and it's not always great to say we'll do more. We'll do more. We'll do more because that's just more profit. Orkney would have the same challenge with things like cruise ships as well. The drive to have more and more and more. It will only go one way and I do think Orkney much like the seas can't sustain. Like the more and more overfishing. Or you know the more and more pollution put into it then the land will suffer.
- I find lots of things about Orkney quite contradictory, sometimes that there is on numerous kind of avenues an outer face which bears no relation to reality. I think Orkney's whole model of being this kind of energy creating island whether it be wind energy, solar energy or wave power. That it is this kind of paradise of you know, people living off their own energy. But when it gets down to the bottom on the on the ground, things are very different, with high levels of fuel poverty. And so I find

that slightly disingenuous sometimes actually because you know we need a reality check because also it gives the wrong impression for people coming here to live. You have people saying "I didn't realize that was happening or this is happening". Or you know," actually it's going to cost me this much money to heat my house for the year". "I can't sustain that", you know? And so I'd be wary of that. Kind of, you know, giving that false impression.

- I've just been saying. I think it's a mix. So I think things have been done piece meal and by different interests, and there's not a sort of overview of it. So I think the damage that's potentially being done and the risks that are there are a lot about this. It's not seeing the whole, so it's lots of different initiatives and sectors are doing things which are quite legitimate within their own aspirations. But we're not seeing the whole and sort of working out what that means cumulatively for what's happening in the marine environment, how the ecosystems functioning. What it means for some of the other creatures that depend on that environment, so I think it's back to that thing of we really need to look at it as a whole.
- We have to look at the big picture to actually see how we fit it all in maybe what things is beyond what can be sustained and workout how we manage that so that people aren't losing out on opportunities. I think it is about planning at a strategic level, but in a way which isn't just imposed from top down. It's got to be about the community coming together and really discussing that understanding. What is sustainable but looking also beyond our own boundaries, because Orkney although we might be a very special island group we are connected to the rest of the planet as well, and we need to understand how that works and what we can do to improve well being for ourselves and everyone else. That should be the ultimate objective. And having a really beautiful and healthy natural environment is essential to that, so it's got to be one of the aspirations in there.
- It would actually be nice to know if there was active management and how to get in touch with people.
- Perhaps competing pressure for space which regional marine planning will help because it will show what there is at the moment. Maybe what capacities are there? Some capacity to study work on biological carrying capacity is being done on various things which will bring all that information together in one place so people have a better idea of what is happening and maybe hopefully have a better understanding of how it can actually be managed.
- I could be wrong, but I think that a lot of the fishing vessel vessels are small, so you know that still is quite a traditional practice and a sustainable one, which is really nice to see.
- I think it is reasonably managed. Given all the conflicts that exist and will always exist between the various activities and the desire to preserve and conserve the best of the environment. Managing that conflict and mitigating it is the main task. But at the moment, I think that the Orkney Marine Area, as it is, is reasonably managed under the circumstances. I think the local inshore fishery is reasonably managed. The energy industry has come in. With a great deal of now, perhaps not at the start, but now a lot of sympathetic understanding of the needs of the local community and the environment. I have more worries about aquaculture. I know the companies are trying very hard to respond to the concerns about the industry. But sea lice in particular, and the use of pesticides, remains an intractable problem. It's very

difficult to find the right balance. But at the moment I'd say it's reasonably managed. The new marine planning provisions which have come in give more institutional capacity for participation and for taking people's views and accommodating those views and plans.

- It's a difficult question. I do feel that it is quite well managed. I guess there's always improvement, but I do think it is quite well managed with a move away from things like dredging for scallops or prawns. We have to respect the seabed.
- I would like to see fishing organisations working closely with the government to protect areas. Fishing organisations, environmentalists, governments really have got to sit around the table and talk about it and not just do a kind of a universal ban on everything but say well what's actually going to be damaging? What can we get off with using in this area? Is this a knee jerk reaction saying right "nothing allowed there". I think there has to be a certain degree of common sense and also mutual cooperation.
- No, I think they've been overexploited to tell you the truth. I think they've been fished too hard. Years and years ago when I was first fishing we fished for lobsters for maybe 3 months of the year and then we fished for haddock and cod and that. But after the war when all the trawlers and seine netters started they cleaned up all the fish so we just fish for lobsters and crabs the whole time. And well they never really got a chance after that.

In your opinion what are the key issues facing Orkneys marine environment?

- Plastic pollution is a global problem, and just because we're a relatively sparsely populated area doesn't mean to say that it doesn't get polluted with it. In the past we've had messages in bottles washed up here from Faroes and from Iceland, so if you get that then there's movement in ocean currents could come from anywhere in the world. It's just a matter of time before things reach here.
- I think it's important that we have a sustainable fishery and look at how that is measured. I don't know how it's going to work out with us leaving Europe. There's lots of issues there, and people can get very emotive about it all. But whatever fishing people do, it has to be sustainable for future generations.
- I think there's two main issues in the marine environment that we're seeing at the moment. One of them is easier to address. One of them is more difficult, but I think that more immediately overfishing is an issue. A lot of the fishing locally around Orkney is done in a sustainable way, but it's the largest scale commercial fishing such as bottom trawlers that I think can be an issue. And I think that global warming and climate change is an issue, and the acidification of the oceans that comes with that because that's affecting huge ecosystems. But that's a longer-term issue that there's no easy protection for.
- As a fisherman I think crab numbers have decreased over the last 6-7 years. I see it and everybody else says the same. Nobody really knows what's going on, is it climate change, is it overfishing or is it something else that's going on with the lifecycle of the crab I don't know. But that's the biggest change that I see. We can still catch enough to survive over the year but it's almost like the life cycle of the crab has changed. And whether it's water temperature or I really don't know what it is but that's one big difference I see. I think the viability of fishing it reaches a point where

the costs of running your boat, paying your crew, and everything else. I question the viability some days and then suddenly you're doing okay again and it's been like that for quite a few years. I don't really know what else to say about it, that's just my experience.

- That's a difficult one too because obviously with the ocean a lot of it depends on things that are happening globally as well. You know climate change. Massive issue, especially for things like puffins and little terns where they're not getting enough sand eels to survive. There's only so much you can do at a local level. Locally I don't know whether it would be just people in a place of authority standing up for the marine environment. You know it is OK to tell people that they can't do certain things, there can be compromises that can be met rather than just having free range to do whatever you want and sod the consequences. Because without the natural world, without marine life we will be in a really sorry state in the you know, just even 50 years' time and we've got to look after it because it looks after us.
- Erosion is a big one at places like Skara brae, I guess it comes down to things like global warming and the increased numbers of storms and things like that.
- The key issues are very much human development. There are quite major plans in the pipeline, so ensuring that we get those right is really key. The other thing to just consider from an aspect of marine mammals is that following the end of whaling, which was some time ago now, whale stocks across the world are slowly increasing. As a general rule, we are therefore likely to see more large cetaceans coming through Orkneys waters and just thinking about how that's managed, and so that they're not overly impacted, and we don't start developing issues with strike. For example, where a boat bumps into a whale, which happens unfortunately very commonly in busy parts of the world. So just trying to keep all those things in balance.
- Well, I think anything polluting it or overusing it I think all that's more or less what I've said. That's my main worries about it I would say...if we look into it the right way and go about it the right way and forget about money and try to make less and think about the environment more. If you think about the way folk used to live compared to now it is a more wasteful society. The things that are important are your family and your folk round you, looking after everything you've got, trying to make it last, patching it up, being proud of the fact you can do it in some kind of artistic way if you put your mind to it. If you have a hole in your jersey mend it with something interesting and make it a feature.
- I think I think one of the good things now is that because of television and the availability of newspapers and so on we are all much more aware than we were. We can't undo what's done in the past, but we can certainly improve things in the future.
- I think there are several key issues affecting Orkneys marine environment. Some of these are local issues and some of these are more global issues. And I think locally there is the traffic. The increase in traffic and how that interacts with the natural traffic if you like. And finding the balance for that. And then on the global scale, I'd say more water quality. For me is quite an important thing because we do eat things that come from the sea. We do enter the water physically. At the same time, we are growing fish in the same water, but we're also using therapeutic treatments for some of these fish that were growing. We just need to be careful what we're doing

because everything is linked through the food chain. So whatever contaminants we as human beings put into the food chain, it will come back to bite us on the bum.

- One of the things that's coming up a lot now is the issue about the plastics, and it's not just plastic that's coming from what we do here. It's plastic that's actually arriving here from elsewhere from a variety of different sources. But then getting mashed up into microscopic particles and then entering into the food chain. There's information coming out now about how much plastic we're actually ingesting in our meals. How much plastic particles there are in the air we breathe. How much plastic there is in the water we drink? We caused that, we invented the plastic, we use the plastic we dispose of the plastic so it's entirely within our power to stop that cycle. And we have to do it.
- I think the key issue is having an understanding of marine ecology and what damage we have done to the sea and putting right some of those activities that have damaged the marine environment as much as we possibly can do.
- I mean as a small community, I think that the problem is that when things get taken out of your hands. When the marine environment is portrayed on a map it's blank. We can't really see what's going on underneath that, then it becomes almost out of sight, out of mind and. That's troubling, I think. I think that for me community buy outs of areas of seabed would be a positive, future way of doing things,
- Thinking about Papaya 100 years ago there probably would have been 80 boats on the island where everyone would be out fishing, you know, just as an extra bit of income or extra food on the table. But that has changed quite a lot and we can't bring that back, and I think it's wrong to be kind of nostalgic about it. Things have changed and the people we have here are very different people. But why not make the use of the people we've got and get them interested in doing something that really does look after the sea. I think for future generations as well and bringing back a connection with the sea that we have maybe lost.
- Sometimes it's hard to have that kind of long term view of things, because some changes are happening imperceptibly. With aquaculture you don't see them, but they are going on and I think that we need to build in as an island a longer term way of looking at how we live with the sea around us. We all need jobs. We all need to make money. We all need to earn money. There's a long history, particularly here of people from outside, if we go back to the 1600s coming in, taking over the island, employing the Islanders in a job that paid them a wage but was a pretty hard job. You know collecting kelp and then when that boom ended, they were just left to hang out to dry and that virtually caused this massive depopulation of this island from 280 down to in 1988 it was like 53. So you know, there's a history of Islanders being exploited for gain by people from the outside who, once they've got their gain, they go.
- We've got increasing pressure for development, sometimes in relatively restricted areas, so that create concerns around perhaps disturbance and displacement, of some of the wintering birds that come here. I think we have to be mindful as humans about what we're doing, what the impacts we have are, and manage how we do things in a way which minimize those impacts and make sure we sustain the environment in the long term.
- Changes in the weather conditions with the storms and thinking about erosion of the shoreline. That's what comes to mind for me.

- I'm not sure about I'm the right person to talk about key issues but I think about the people who work on the sea, the creelmen, and thinking about how we can support them.
- Well, I think again we were kind of quite forward thinking with a lot of the things that Orkney does they are always keen to be the first to try things out.
- The plastic pollution I'd say is probably the most important issue that Orkney is facing. Perhaps that linked to tourism and education. So I think perhaps if there was more education, especially to tourists who are visiting who perhaps don't have a local marine environment themselves and understand you know what's happening in the marine environment that might help people A) to stop littering and B) perhaps you know pick up litter that they didn't even drop themselves.
- When it was small boats working away lovely but human greed, they go bigger and bigger and bigger, and now there's big creel boats fishing for partans. I think it's sustainable at this time, but if you get more in, it's going to be unsustainable and what happens then? You don't have the crabs coming in and that's 6 or 8 livelihoods. That's the thing I think that would need really to be policed more. Is the fishing like partans, because they are away out now off the continental shelf and it's I think it goes from the sublime to the ridiculous. That's one thing, but I think the rest of it is I mentioned fish farms. That really is a big issue. That I don't think is being addressed at the present time. They're saying money money, money, money, jobs, jobs, jobs but that is going to have a very big detrimental effect.
- Well all I can say is that the amount of fishing that's going on west of here in the deep water it's ruining the inside ground ye ken. Definitely it's a big difference in the crabs along the shore than what used to be.
- I think it's hard to say, but if I'd point out one it might be over tourism. Every year we get quite a sudden influx of very large cruise ships the problem with that is it's quite a sudden change to the ecosystem, which it's not normally designed to sustain. Common places like Skara Brae and other coastal locations that might not have the most solid foundations they suddenly go from having maybe like a hundred 150 people treading on them in one day to 500 or 1000 or even 2000 per day, and then of course you got the fumes from all of the cruise ships. You've got a lot of stuff going o that's very, very sudden and very, very kind of abrasive and I think that will cause some quite significant damage in the long run.

Do you think these issues could be tackled at a local Orkney scale or national scale?

- I think we can all do our bit. I mean what I can do locally is I can collect rubbish from the sea. It's hard to know where the problem is coming from I think it's probably a global solution.
- I think issues could be tackled locally and nationally, though obviously locally there will be some measures that can be taken by the Council in terms of planning, in terms of things like licenses or where fish farms can be situated, but nationally there would have to be some plan that can give direction into what should be allowed or what's possible or what is sustainable.
- Some issues like overfishing it's complex, but there are schemes that can be put in place to protect fish stocks. Whether it's marine protected areas or catch quotas or just limiting the size of the vessel. Normally we have a lot smaller vessels. But

nationally and internationally there's a lot of very large trawlers that can be very damaging to the environment, so we can address a lot of it on a local scale, but there's a lot of issues that do require an international effort. And that's the same with global warming as well as you know, there's not too much can be done on a local scale to stop the oceans warming up, so that's something that needs to be tackled then between countries internationally.

- I don't think it would ever happen if it was left to a local level. Fishermen can't agree on causes, reasons or the best thing to do. So I guess it would come down to legislation and that wouldn't make them happy either but at least you can enforce and police laws and rules and regulations better than just hoping everyone is doing the right thing but I think when it comes to fishing viability is what will change it. If it gets to a point that people can't earn a living they'll stop immediately. And it'll never be to the extinction of a species I don't think that would ever happen. [ASKED ABOUT CULTURAL IMPACT ON ORKNEY IF FISHING ENDED] I think it would be very sad to see it because we enjoy, the Orkney brand is quality, sustainability is always a sort of watch word as well. I would like to see that continue and well I hope it does as far as the fishing goes. It's been part of Orkney for perhaps 100s if not thousands of years where you could export and make money and be good at something that you grew up with. I think it's a sense of belonging when it comes to the marine environment and the sea and it is its just in your DNA living in Orkney.
- I think globally governments need to get harder on companies that are just not sustainable because you can give consumers choice, but the sustainable option or the environmentally friendly option because it's quite fashionable is always well generally going to be more expensive not all the time, but generally. Not letting governments back out of promises that they've made to decrease carbon output or to put funding into more renewable and energy streams. But then again, renewable energies is a is another sort of flip of the coin. Obviously we want renewable energies, but then there can also be quite damaging when they're built. It can disturb a lot of cetaceans and stuff like that. We should have more social enterprises that are promoting the renewable way, and then hopefully the Council and the government will listen and fund those things and make them bigger and better.
- I think it would definitely need to be a mix of both. It's great like Orkney with our renewables and things like that we are pretty exemplary in that fact, though we're one small island. And I mean we're not going to be able to combat climate change, just us.
- I think one of the issues that Orkney could tackle very well, at a local scale, which then could be rolled out at national scale is looking at an issue of entanglement. We have some of the fastest flowing waters in the world. Hence you know the EMEC tidal work that is done and looking at things such as ropeless gear which can prevent entanglement and trialing them in Orkney would be an amazing for Orkney fishermen but also amazing for wildlife as well and then having proven that the concept works here, it could then comfortably be rolled out to the rest of Scotland and the wider UK.
- In other aspects, such as the harbours plan, yes there is national guidelines in place, but I think ensuring folk locally have sufficient knowledge. Sometimes reports are prepared, but reports are a snapshot and so whilst they can be of guidance to those who are making the decisions It's not necessarily giving them the fullest information.

So making sure that data gaps are filled, for example. Whether it's through the organization such as OMMRI, going out and surveying, whether it's bringing in marine mammal observers to do more surveying from ships and vessels of opportunity, we need to fill that data because without data, everything is built on false premise effectively. So yes, there's national guidance, but there needs to be local impetus to see that delivered.

- At a local scale the seafood industry are working hard on the sustainability issue.
- I'm still a great believer in the power of the people. And I think one of the benefits that a place like Orkney has is that it's easy to find your councillor. There are plenty of them, and they're doing, or trying to do a good job. They don't always get it right. We don't always get it right either, but we can always speak to our councillors, and I would encourage people to do more of that.
- They can all be tackled at a variety of different levels, and they need to be. I think it's the responsibility of every individual to look at the way they operate on the daily basis and to just say actually I could do this better?
- I think it needs, I hate to use the word war, but it's almost like when you're at war and that you have to put everything you've got into it. From national government and locally and everybody trying to work together in a common sense approach to a large problem and we need to get on with it and do something about it. I'd really like a better way of actually disposing plastics, we were quite surprised to find that plastics recycling was actually behind in Orkney what the rest of the country is doing.
- We tackle it [plastic] locally here with Bag the Bruck and things like that, but on a larger scale we need to stop it from going into the sea.
- For functioning ecosystems scale is absolutely essential to everything on its multiple interlocking scales that you have to tackle these things at. I think at a very basic level, local engagement anywhere is essential because if you don't have public support and understanding what some of the issues are and concern about it then politically you're not going to get action to address it. So even just at that level, local feeds up to national and international, and we've seen that in some of the examples we've talked about, where if people get engaged then they really want to push forward things and try and address some of the issues, but at a sort of local scale within Orkney.
- I think the marine planning initiative is important as it gives a chance for communities to engage and more important to think about what you actually want your environment to look like in the future. So you're balancing up the economic and commercial opportunities against what you want your society to look like. What's important to people here about the sea. And, of course, crucially, the environment as well.
- Yeah, I mean certainly the plastics as I mentioned earlier. You know the stuff isn't coming from Orkney, it's coming to Orkney. It's coming from somewhere else. Orkney can only on its own clear up so much of it. And if it's a constant influx then obviously the source needs to be addressed. And I know that a lot more places are stopping using single use plastics, which is a great thing.
- Well, I think it's the old adage which is think global but act local. It sounds a bit cheesy, but actually it does work because the vast majority of people around Orkney are proud of Orkney and they don't want to be wading through a lot of litter on the beach and that sort of thing so. They are going to get involved and do something

about it and I think it just needs that bit of coordination again, regional marine planning isn't a magic bullet, but it can help kind of coordinate and bring people together to talk about the different issues. Then we can start tackling the source of it rather than just kind of addressing the symptoms. We can actually start looking at the cause.

- I think it's a lot easier to tackle things at local scale and to feel like you are making a difference, but of course I think it would make the most difference by tackling it at the national scale. By producing less plastic wrapping and you know other plastic products and through education. A lot of people are so passionate about, you know, beach cleaning and wanting to keep our marine environment nice looking and better for wildlife. I think if you had an initiative that made people felt like what they were doing was then going on to actually be reused or recycled rather than incinerated, it would be a lot more motivating.
- The problem is a global one that has to be tackled, globally. But it has also got to be done to a local level because you're not going to sit back and wait for governments to send in people to sort out the problem for you, because it's never going to happen. So things like the Bag the Bruck projects that's been going for years now in Orkney where people go down the beach and gather all the rubbish off, you know, a stretch of beach at that time on that day and it's a wonderful thing you have done your bit to help tackle a huge problem.
- There was a lovely little story I heard from a friend of mine about Saint Columba, and when St. Columba was a young man, he was walking by this sort of the loch and he heard this splish, splish splash and he looked down and there was a little red squirrel, and it was scooping up water in it's hand from the loch and throwing it out going splish splish and St. Columba said what are you doing and the squirrel said I'm emptying the loch. And Columba said but you're a very small squirrel, and it's a very big loch and you'll never be able to empty it, no matter you know you won't live long enough to be able to make any impression on it. And the Squirrel said, yeah, I think you're probably right there. And St Columba turns and walks away. And hears splish, splash, splish, and he turns round and the squirrel is still doing it. And so St Columba says I thought I said that it's not going to make any difference you doing this. And the squirrel says yes, but it'll be less for the next squirrel that comes along. And it's the same with cleaning up the environment. Don't leave it for somebody else to do it, everybody can make their contribution, even if it's just picking up your 3 bits of rubbish off the beach. If we all do that, then it will help. I mean it won't solve it all coming ashore. But it's reducing it. It's just a step in the right direction.
- Well I don't think you can change it now, they've spoken about reducing the pots for each boat but I think it's too late for that now.
- Over tourism is a problem that happens in a lot of places. I do think that Orkneys over tourism problem could be corrected at an Orkney Islands Council level because the amount of cruise ships that we are able to let in that entirely depends on the Council's opinion. I think the opinion that a lot of Orcadians have, and more are growing to have, is that the cruise ships don't have much of a positive impact on Orkneys economy and not enough to justify the ecological damage that they cause. Typically cruise ship passengers they'll eat on the ship, they'll do all of their activities on the ship, and they're mostly just go to the popular tourist destinations so there isn't a ton being contributed to small businesses.

Has the way we use Orkneys marine environment changed in your lifetime?

- There's been an improvement in the North Isles there were more boats for passenger transport and freight from the early 90s when ro-ro came into most of the islands. We don't have ro-ro here [North Ronaldsay] and nor does Papay but it made a big difference for the other islands going from conventional lift on lift off shipping to having ro-ro it made a big difference to the economy there I think. Increased frequency has been very well used. I don't know when we'll get the next improved ships as these ones reach the end of their lifetime. But it's something to think about in the future to have ships that are maybe more sustainable, maybe not all just using diesel but partly electric. Or even using hydrogen fuel to charge batteries up. We need to look for a more sustainable future that way.
- Well being a fisherman for 40 years I know what the sea is capable of. If you could control that and turn it into energy, electricity or whatever. I know they're trying to do it and there's lots of experimentation to try and find tidal resources and of course there's the wind as well. But I think the sea, if you could harness the power that's in the sea and come up with a great idea that the actual machine could survive the strength of the tides if you could harness that power I think you would solve all your CO2 issues and so on. And I would like an electric boat as well.
- Overuse of fishing is not a good thing I don't think and I don't know a huge amount about the practicality of the rules to do with catches and quotas but I do hear folk commenting on it. And they are not just awful fond of that. Plus the fact one of the reasons I was quite keen to come out of the EU was to do with the loss of our fishing grounds you know.
- I think one good thing is because of communications now you are more aware of what's happening not only in your own corner but throughout the world, and I think that's a good thing.
- There's been quite significant change in the way we use the marine environment in Orkney. Obviously before my time of being in Orkney, you know I visited the heritage center over in the island of Sanday. And there's this really nice exhibition there about how people used to farm the kelp. And make products from it. And obviously we're not really doing that now. But we're doing other things instead. You know, we're farming fish. We are hand collecting scallops instead. We are, you know, creeling for lobsters, so you know, uses of the sea do change. And often that's because of different types of machinery that become available. Or we can try to make processes more efficient. I would suggest some of the traditional ways might come back. In terms of the agenda changing from being, economic driven to being sustainability driven. So it could be that some of the technology that was abandoned because of economic problems we might actually drift back to because it's seen as being more sustainable and small scale and can work well in in, you know, small island communities. These sorts of things can sometimes work better.
- I mean, throughout the world and clearly in Orkney the intensity with which we used the environment has changed. You know, even fishing practices. You also see industries come and go. Like the kelp industry that used to be in Orkney that's changed as well, so something that was really important economically for awhile.

- When I first came here, there was a lot of expectation that marine renewables, tidal and or wave would be developing commercially pretty quickly but we've still got the testing going on.
- I think because of Covid and the travel restrictions people were keen to get back to the beach and the coast once the restrictions lifted and maybe they respected it more and enjoyed them again.
- The economic activity in the seas both here and anywhere else, has advanced dramatically. I came up to Shetland initially and worked in Orkney in the 70s as part of the oil industry. So that was a dramatic change in the use of the seas. And the imports of offshore oil into the two island archipelagos. That economic interest has continued, especially now with aquaculture, and with marine energy in the form of offshore wind, perhaps offshore wave and tide. So yeah, big changes and we're only at the beginning. So more change to come.
- I mean when I was young there was more fishing boats than there are now, white fish boats, you know. That has certainly gone into decline. I guess there are probably fewer fish, but you know quotas have been brought in. Controversial with a lot of fishermen, I know, but then again, a lot of quotas have been sold. Fishermen have been here for as long as there's been people here. There are fish bones found at Skara Brae, people going on skin boats with out of sight of land to fish, so fishing and Orkney is something that always happened and I'm all for keeping that small sustainable fishing. It's when you have massive trawlers that kind of suck everything out and grind it up and turn it into fishmeal which we then feed to animals. That's where quite a lot of the problems are coming from. I think we need to go back to small coastal fishing again as well. Which might not make me popular but they're going to run out at some point. They did say that during the World Wars that the fish stocks increased because it was dangerous to fish because there was U boats that were attacking fishing boats.
- We used to gather tangles, the kelp to be exported to be used in things like cosmetics and jelly. And things like that. We still gather up some dried seaweed and put in the garden just for the for the flowers and trees and such like. So yeah, I guess it's the way that it's been used has changed.
- You start seeing things like the you know, scallops that are hand caught rather than dredged, there's much greater awareness from the public now I think as well so that you see on menus hand caught scallops, from a sustainable source.
- I suppose there is, we used to fish in Scapa Flow. We used to catch 80-90 lobsters some days. And now if you haul round there if you haul 300 creels and you get 6 or 7 you think you're lucky. Well when they started fishing for velvets, maybe 15, maybe 18 year ago they started fishing for velvets and eh when you're fishing for velvets you catch a few lobsters too. Instead of being in there working 4 month of the year you're in there for the whole of the year now. And you just pick up the lobsters as they're coming in. They never get a chance to really gather? It never gets a rest. But if it wasn't for the velvets it wouldn't be worth fishing. But you're fishing the velvets and picking up lobsters as well. The way we used to work it years ago we used to fish west for about 9 months and fish in there (Scapa Flow) for about 3 month.

Has the health of Orkneys marine environment changed in your lifetime?

- I'm not sure if the health of the marine environment has changed or not, cause I don't have any specific way of measuring it other than maybe how much rubbish gets washed ashore but the sea here still looks quite blue clear. Lovely clear waters above the sandy beaches. So it looks a lot healthier maybe than in other places. And there's no big industry here putting pollutants into it. We've been very lucky there's been no marine oil spills that could have affected here.
- Oh very much, there was no such thing as MPAs. There are far more offices now with people who speak like that, that want to preserve and conserve and I have no problem with any of that. Because ultimately unless things are controlled within reason, we have the ability now to completely annihilate a species or damage other species by methods of fishing that we have at our disposal. We have big boats and we have lots of gear that we can catch everything and so I would welcome any sort of limitations maybe even on fishing gear and things like that to preserve the environment obviously but also to preserve the fishing for generations to come.
- I wouldn't say that I've noticed much change over the last eight years. I would say that I've noticed more interest in the state of our seas in the last eight years, so whether that's folk who are wanting to see wildlife or folk that are concerned about litter. And just generally what's happening in our oceans in terms of aquaculture and infrastructure development as well. So there's definitely more interest there. Some of the plans that are coming up are quite major.
- We have seen a lot of these visits from the cruise ships. We are seeing a lot more applications for fish farms now in Scapa Flow. We're getting the vessels coming in. to Flotta and also doing the transfers at sea. We're also starting to see structures being brought into Scapa Flow for decommissioning, and that's on top of Orkneys already quite busy fishing activities.
- The only thing that I've personally noticed is that from my observations there's a decrease in seals, but they may have just moved off somewhere else. They may have moved up to the Northern Isles and they moved down Scotland somewhere, but, I have noticed that there are less, but that could just be my personal observation.
- Again, I've been here that long so I'm not aware of massive great big changes and things. Like everywhere else there's been a growth of some sectors. It's been world leading, obviously in renewables, energy tests, and that sort of thing that's still ongoing. It's seen a growth of different people competing for space. The growth of cruise liner ships they bring a lot into the economy over the summer months. There are mixed opinions around local people. Many people make quite a nice living out of selling crafts so there's that side of it. Some people seem to be blaming cruise ships for everything, whereas they only make up 50% of the visitors to Orkney. So again, there's different kind of pressures and how they're perceived. But ultimately everybody needs to eat. Needs to pay the rent, pay their mortgage, that sort of thing. So if it's generating income without damaging resource then we just need to again walk that tightrope of literally sustainable development but respecting the environment and making sure it's got the capacity for future things that we don't even know exist yet.

- I think when I was younger everything seemed a little more expansive. I think that fishing was a slightly more integral part of the community. I think now it's changed a little bit more from fishing focus to renewables and electric engineering focused since I was really young, everybody was all about fishing and it's definitely still a big thing. But now we've got the Herriot Watt campus opened for all of the engineering, and we've got EMEC partnerships all over the place.

Do you feel local people have a sense of pride in the marine environment?

- I definitely think that local people have pride in the marine environment. It's a source of identity in Orkney, the island life and the island culture and living so close to the sea. I've noticed a lot of people do definitely take pride in the ocean.
- I think local folk do care and have pride in their environment. You'll often see people just as they're walking they'll pick litter up and pop it in their pockets, or I know quite a few people who carry a bag or rucksack and they'll just pop their rubbish in as they go. But also there's a lot of very good photographers around Orkney. A lot of very knowledgeable naturalists, and it's a really engaged community we have across Orkney, who take pride, have stewardship of the local seas.
- I think they do, I don't know if some folk think as much about it as they used to. I wonder if more folk think about it more from an artistic point of view.
- Yeah there will definitely be a strata or a difference in opinion, I mean, you know some people look at the sea as very much an economic thing. There's lots of people who have seen the bird life disappear, and they're very aware of that as well. And then there'll be a gang of people who are very keen to keep things alive and keep things going and use the sea for lots of, I guess, more recreational things or like myself it's part of what I do as a Ranger that attracts people to come here. Lots of salmon farms talk about economics of places, but there's also a detrimental effect to the economy of a place when everything disappears.
- I could say for a fact that if there was no sea birds on fowl Craig next year our tourism would drop like a stone. People come here for that. They come here to see arctic terns. They come here to see Selkies, to see puffins, to see razorbills, guillemots. You know that is all part of being here and that would be the end of my job. The hostel would obviously be affected because there's less visitors, so that would be two other jobs. The hostel basically keeps the shop going in the summer, so that's potentially two other jobs and we lose the shop so you know. The wildlife here is definitely a benefit to the economy without actually having to destroy it at the same time. So yeah, different opinions and I think it's good to look at what people are thinking about things. I think the island survives on having that kind of mixture. That kind of layers of people, and I think that's what makes it work.
- I feel local people have a real sense of pride in the marine environment. I feel that's a very tangible kind of even if you are just visiting for a few days, you would be able to pick that up from the community that there's a strong pride and strong cultural identity rooted in the sea.
- The marine environment is quite integral to Orkneys community identity I think people take quite a lot of pride in being able to say, we have a really thriving ecosystem. We have all of these amazing things. It's something to be proud of because we're able to take care of it and we have so much of it.

Is this different between different generations?

- Yeah, as with anything, there will be some people who are particularly interested in the marine environment for one reason or another, and there'll be other people who are really committed to helping protect it. It does vary between people between generations, there's differences, but it's just completely depends. I've found a whole range of opinions but generally everyone does care for the ocean and thinks that it's important to protect it.
- Yes I think there is quite a few difference of opinion. Everybody loves the sea and there's no question everyone enjoys going onto the beach and they're always interested in how I get on and what the fishing is like and I have yet to meet anyone who will refuse a fish or a crab or a lobster. But I think each person has there own idea, more conservation and they want to keep it in a certain way and I understand that but the job I have you have to sort of change to suit and the fishing has changed tremendously over the years and so people might have issues with the amount of plastic rope I have and stuff like that. But they're very polite about it.
- I think there is. The main difference I would say I've noticed though is around animal welfare and sentient beings more that we shouldn't be fishing and we shouldn't be doing this. The idea that animals aren't just these things that don't think and I suppose that's come with research as well, so you know for their grandparents the research wasn't around to tell us how incredibly intelligent dolphins are. Kids are obviously a lot more aware of climate change and stuff like that than their grandparents and parents. Which I think is great because kids get away with saying a lot more than adults do.
- I suspect there will be yes, any field of human thought or that there will be different views. But fundamentally, nobody wants a certain pollutant in the environment or something where there's no space left for nature and things. There's just differences about your priorities within that in the shorter term. The issues are quite complex, but if you get people together in a room and give them the space and time to talk through these things and understand what other perspectives are and bring different knowledge and information to bear, people are good at working out solutions. That's why we've been quite successful species for quite a period of time, so we ought to be able to solve the problems that are coming out now, but we need to create space to do it.

4. Management of the marine environment

Do you think that establishing a formal plan on how to manage the marine environment is something that would be useful?

- Oh yes, I of course I think it's important to have a management plan every ecosystem needs a management plan. We've got to look at what we're taking from the sea with fishing and with energy and that all needs to be managed appropriately.

- Yes, I think it would be useful in Orkney to have a marine plan to help inform opinion and decide what's needed. What's sustainable. What needs to be protected. I think it is important.
- Well I think they need to do something but it needs to be something they can control. Legally. So that someone can't say well you're not allowed to do that or this or this but then they just go out and do it anyway. It has to be something that can be controlled properly, legally so if somebody goes over that line they can stop them and say go back over that line.
- I think a formal plan is something that would be extremely useful for Orkney and it's such a unique environment around a set of islands like Orkney, that national guidelines and a national approach doesn't always work at the local level, so by establishing a local plan, it means that we can really bring the control into the local people of Orkney. I think that's important and it will allow us to tailor the approach specifically to Orkney and the issues that we face here.
- I have no idea. Yes I think somebody has to be in charge of the marine environment for whatever whether it's for fishing or for commercial benefit. Or for sea farms, anything like that. Because otherwise there's nobody stopping people using the resources and perhaps damaging everything, short term for a quick gain. And if there's a sort of government approved planning control or committee that have at their heart real values for the long term future I think that's probably a good thing.
- I think it would if you had lots of experts and have a representative from the conservation side of things and the fishing side of things, tourism side of things. Everything, renewable energies just so that everyone's voice is heard. To have an outcome that everyone is happy with. I think it would be good as long as yeah enough people from a wide range of expertise were involved.
- Making sure we talk to the community, not just necessarily national bodies that they're legally obliged to consult with. But talking to those groups on the ground who are in the marine environment and know the detail of the marine environment locally. But it's a really big step in the right direction. It's just making sure we get that basic one right at the beginning and then building on it from there on in.
- It might be, hadn't thought about it at all. But depends whose putting it into practice and what they think. A plan is only a good plan if it's going to do good for the place and it depends on the folk doing it so it's a very tricky thing. You can take that from lots of land things from around Orkney from the land point of view that there's so many different arguments and view points about that, they'll be that about the sea as well. And now we've got other interferences from governments who don't live here who sometimes don't understand an area and they don't understand the people who live here so it just depends on the people, plans are okay if they work for the good of the place.
- Can you get everyone to agree? I don't know, and I think it's very difficult to get people to change any practices that they have at the moment that are maybe not as good as they could be takes a lot of persuasion. I think that a lot of tact and probably some money too is needed.
- Yes I do. I do think it's important to develop a formal plan for Orkney, we need to have the right kind of information on the table for people so that when they're making a planning decision in the marine environment that they fully understand all the different aspects of it. And this is sometimes where I think we could get into

some problems. Because it's not as easy to get the information we want as it is on land. So we're going to have to work quite hard to make sure that we do get the right information, so that sensible decisions can be made.

- Yes, I do, everybody's got to be working towards looking after the marine environment better, so having Orkneys own Marine Development Plan will be very good. It could also be just generating a lot of business that's actually using the marine environment. I'd like to see a marine development plan that puts the actual protection of the marine environment as its primary reason for being. But whilst also helping to develop any economic and business activities that actually don't do too much damage to the marine environment.
- Yes and no. Yes with caveats. It's a tricky issue I think because there are lots of factors that do impact on that plan, whether it be economical or leisure. You know they don't often work together very well and are quite clash.
- There needs to be a level of engagement with the people that actually live near and work on the sea.
- I think that it will be the case that, as with most things, that these things will be dropped in from the outside and there will be very little consultation with people about what plan should look like because all islands have their own specific needs and they are all quite unique in their own way. There has to be a kind of broad marine plan, but actually could that be broken down into smaller bits that do relate very specifically to specific communities or islands? I think that would potentially be one way of doing it because if there's guaranteed to be one thing that upsets people here is that when things are dropped in from the outside and nobody really has any say in it.
- I think a marine plan would be useful if it's consulted on properly at a local level. And you know consultations can take many forms. Often just going around every island setting up one night in the community centre and expecting everyone to come is a very old way of doing it and I don't think really works because often nobody comes. It can feel very top down or like a box ticking exercise. People in the islands don't have real input into what's being said, so it's an all round waste of time. It takes a bit more time and thought, and perhaps imaginative thinking to engage communities in what they think should happen with their sea.
- If it was a plan to protect and it was actually enforceable. Communities taking control of areas of the sea and creating their own marine protected areas probably is the way that things could and should go.
- I think we've got to if we're going to make the best use of our seas in the future and safeguard them and give ourselves a prosperous future.
- I mean the obvious difference between land management and marine management is the fact that the marine environment is changing constantly, waters moving in and out species are moving in and out. You can't control that, somebody could be doing something down the coast from us which attracts stuff away from us or drives species towards us. It's incredibly difficult to manage. Maybe managing the use of it in terms of salmon farms, you know licenses. I can imagine that sort of thing is, is what you would have to focus on more than having a vision of a sparkly clear seas and dolphins leaping out of the water everywhere.
- I think building on the previous work in the Pentland Firth we're not starting from blank sheet of paper this time, getting that balance between sustainable

development but also protecting the kind of intrinsic value that brings people here in the first place.

- I think it's really important to think about what you're doing when you're building structures in the marine environment or developing a new fishing practice or taking some other resource. Seaweed is hot on people's minds at the moment in terms of you know, being beneficial to humans as a dry product, but also potentially in livestock feed as an additive. I also think if you're building structures in the ocean, it can be done in a way that enhances biodiversity that kelp and soft corals can colonize that will host a community in the sea rather than just decimating what was there before. So I guess it's important to look long-term about what we can do for the environment and whenever we're you know, taking resources or building on it.
- We do need marine planning in Orkney. In its broadest sense it is taking a degree of control for the public good to assess what we have. What is at risk? And how it can be managed? At the same time, making use of the economic activities where they can be justified in terms of their overall effects on the marine environment.
- You would need to have a very broad consultation and balance all these factors out because there's no point in turning people hostile. I think that it has to involve everyone from the fishermen to green energy and environmentalists, and government. And everybody you know, local and national.
- My gut instinct says yes, but I don't think I'm super qualified to elaborate on that.
- Well I don't think so because I don't think it'd make any difference, no.

What would be your priorities for managing Orkneys future marine environment?

- I think looking to the future and managing Orkneys marine environment, it's important to have a balance with activities and marine traffic. You don't want too much of it, but it's important for the people who live here to have good connections and important for tourism. Orkney gets many visits from cruise liners and it's important for the economy but they also have a big carbon footprint so looking at reducing or using alternative renewable fuels instead of fossil fuels. And it's important to sustain fisheries, it's an important economic activity locally.
- Obviously jobs are extremely important I mean that's why we have fishing and why we have oil, why we have wind the sustainable development as far as power, energy is concerned it's all so important. Things that control who fishes where and renewable energy. We must have jobs or there'll be no body living on the island. Jobs are very important.
- I think the most important thing for managing the environment is making sure that development happens in a sustainable way. Of course we want to develop the marine region around Orkney, but we want to do it in a way that's not going to impact the natural world and the wildlife that's already here, so I think that's the most important approach to take, and that will mean that there needs to be compromises between the different stakeholders and the different developments that are planned, and that we that we want to go ahead. But yeah, I think. That we need to take an ecosystem based approach to as they call it to make sure nature is protected.
- I'm a big believer in creating jobs and making small communities sustainable. Everybody needs money to live but not at any cost it has to be I think within reason.

If you're destroying the environment in order to make money to have sort of a livelihood I think that needs to be questioned. But if you can create good employment and make it sustainable you know for the seabed and everything associated with it then I think that's a good thing. But yes there needs to be a balance, you need to look back to look forward.

- I suppose my priorities would be to manage the sea in a way that promotes it for wildlife and then in turn that would help things like the fishing industry as well. And so my priorities would be things like no take seasons, no take areas and areas to minimize disturbance. So if we have a database that shows us where it's most likely that cetaceans are breeding or feeding then you know try and minimize that disturbance there as much as possible. Give the ocean a bit of a head start really, and hopefully that would help into the future with fishing and tourism obviously and recreation as well because people love wildlife and so many people come to Orkney for the wildlife.
- Definitely the wildlife, I think and coastal erosion.
- A healthy sustainable sea it's obviously the way to go and I think most folks would probably agree with that. For me, my interest is cetaceans and using them as an indicator species for how those seas are is. So that's where my interest lies. So for me in terms of marine planning, it's ensuring that any human development is taking that into consideration. So it's scientific advocacy. It's making decisions based on data, and sometimes that data is formal, like official surveys that have been carried out, and sometimes that's again going back to folks that live in the community and talking to them, it could be someone, for example, who regularly dives off the barriers. It could be someone who's got creel pots and is out on the water umpteen days of the year, so listening to those people and building on that data to make sure that the right decisions are made for the wider marine environment, but especially those bigger species. Because if we get it right for them then it will be right for the other species that use those habitats as well.
- The sea is a valuable source of employment for the economy and having those jobs can't be underestimated, you know. Orkneys Islands suffered from depopulation for a very long time, especially the outer isles. So six jobs here. 7 jobs there actually makes a big difference at those community levels. On the other hand, they need to be the right jobs that ensure our seas remain healthy, remain sustainable.
- Fishermen and working with them to try out ropeless gear, for example, would be a really big step forward to put Orkneys fishermen on the world map and which obviously then improves the reputation of their catch even further. It's already in high regard. So all these things are linked together, and although circular economy is something that's used a lot less in terminology these days, its making sure that that whole circle is there, and then everybody does really well out of it, including the environment.
- Well just once again the pollution side of it. You know making sure that folk are safe in their work which I'm sure that most folk try to do fairly well nowadays. think just managing the fact they mustn't pollute the area. Or overuse to its detriment.
- Well, I quite like the mission statement of the Scottish Government, the one about the clean, healthy biodiverse seas. And I mean I can't remember the full thing off the top of my head. Well, I think that statement itself for me, it encapsulates you know where we need to be looking to.

- Protecting the environment is my number one priority and then I think after that it will be nice for people to actually have businesses that's earning them money as well. And that's very important as well but not to the detriment of the actual protection of the marine environment.
- In terms of who manages that. I think that's I mean that's a big one. I would definitely say that again, much like a kind of triangle that there's a scale of. How much agencies are involved? I think perhaps Scottish Government in some way. Whatever kind of more strategic way of looking at a kind of overview. Of how things are done, but also they would provide the kind of legal background. You know schemes in place to manage the environment that they were enforceable. I think that would come from that level. Perhaps the local council is a more of a kind of middleman between the government so they would be the way of getting that information through. And perhaps looking at things on slightly smaller scale, but then definitely an involvement of some bodies on each of the island too, so that. So that people are involved in it.
- If there was a pyramid of importance the environment would be the pinnacle. Or if you look at it another way it would be the base of the pyramid, it would be the foundation from which all the other things could happen. I think without that foundation the rest of it is either affected negatively or can't happen at all. If the fish are not there then that affects the economy. If the environment is diminishing in any way then that affects tourism or leisure.
- There's also a wealth of knowledge around all of the islands and the mainland as well. You know whether it be scientific knowledge, conservation knowledge, archaeologists you know is a real great knowledge source there. That could be really used to kind of protect and look after what we have.
- As I've said before it's about being genuinely sustainable in how we use them. The sea is providing us with so many things people are familiar with some of that, food is one thing, but I don't think we're sort of aware of, to use the jargon term, the ecosystem services it provides. I've said before without the oceans there would be no life on earth so it drives climate, it drives lots of different things, it's a carbon sink so we've really got to manage how that system functions and not tip that into something that's not sustainable in the long term. Of course my professional life and interests are in nature conservation so for me maintaining the wildlife populations the seas sustain are a crucially important aspect but it is its genuinely about sustainability where we're giving space for our own activities but also for these other populations of important wildlife.
- To me the most important thing is plastics in the sea, and you can't plan that out of existence, but you know on a local basis the only thing I would like to see would be careful management of the ships and the rigs in Scapa Flow. You know obviously concerned about spillage and that kind of business.
- I think if there's considerations of management, it's got to be about balance and it's got to be about balancing all the different aspects, so whether it's the natural environment and whether it's economic use of the sea or whether it's to do with pollution and environmental conditions, I think all of these things have to be in balance. We really have to think about the economic use of the sea and how people are sustained by it. The motto for Stromness per mare it means by the sea, but it can also mean sustained by the sea, and I think the idea of sustained by is really

important and we must see this is not just a natural environment but also working environment. So I think there's balance when thinking about management.

- Most important is using resources sustainably so not outstripping a resource, preserving them so they can be there for the future generations. If you're building a structure, then making it one that can enhance biodiversity once it's finished, rather than creating something that would destroy a community. If you're drilling in the ocean beds, then there are different mitigation activities that you can do to reduce the impact on marine mammals. I guess you know it's important to assess what's there before you do anything. Because, you know, once you started doing something, you don't know what you've lost already.
- The most important thing to me is having a process whereby we can judge what is reasonable and what is not reasonable on both environmental and social and economic grounds. Then we have the ability to make the right decisions about the balance that we draw.
- I think sustainability has got to be the most important thing in the lot as well as clean water. South Ronaldsay has got seagrass which is massively important as a breeding ground for fish and shellfish, that's you're kind of kindergarten, you know and playground and everything and creche its where all your future lobster Thermidors are growing up, and that is very, very important. But seagrass is extremely sensitive to things like climate change.
- I think that's what it comes down to mostly is sustainability but also things like you know, impact from farming on the marine environment as well, which is not the first thing that springs to mind. Everybody just thinks of discarded fishing gear or plastic dumped in the sea or pollution from things being discharged into the oceans, but farming has its impact on the environment as well. And I'm a farm boy you know I'm not having a go at farmers but it is just a simple fact.
- Well I think the most important part for me would be leave the fishing to the fishermen and let the part timers have their work give them 20 creels and let them work with that. I would say that would cure a lot of things.
- I'd say mainly ecological and species conservation. We've got so much life and we've got so much variation in life. Not just the ecosystem and life, but also some of our sites. Of course Skara Brae, the old man of Hoy, the Yesnaby cliffs these are all vulnerable to things like coastal erosion and I think that protecting them is incredibly important for Orkney. It's always a balancing act. You've got to try and make sure that we can maintain a good amount of jobs, especially sea related jobs, which is a pretty huge sector in Orkney, especially with things like fishing, especially with things like engineering. I think it's really, really important that we can maintain that and we can keep that going, but I don't think we should ever push that to the point where it comes at the expense of preserving our ecosystem. I think that that's really the core of why we do all the fishing and why we do all the tourism. Why we do all of the engineering because we have such a great environment to do that in, and I think we should continue to do it. But we should continue to do it in a way that allows us to do it in a preserved ecosystem. It's important that we do the things, but you know, it's mostly important that we do the things while making sure we could still do it without everything turning black.

Who do you think should be responsible for managing the future of our marine environment?

- I would've thought some government appointed organization people that can have the sort of the authority and it should be public money that's being spent to do it as well.
- I think different stakeholders, people whose livelihood depends on it. But also you know people who are trying to look after it and those who are elected. To scrutinize things you know, like councillors and so on, should have some, you know, have some input into it as well.
- Well I suppose the government comes into a great extent. But government should be able to put power into certain folk that say right your responsibility is that make sure it happens. And we'll back you up so the legal side has to be backed up. So that folk when they're doing things that are not right they're breaking the law and they can be hauled up for it or punished in some way for doing the wrong thing...it has to be made into something. Its not simple...but that's what should be done the legal side of it but jobs are very important but also control to a certain extent.
- I think managing the marine environment is something that should involve a wide range of stakeholders from different industries as well as just locals to make sure that everybody can have an input and have their say because everybody specializes in slightly different areas. Obviously you do need a body to take it forward, so I think the Council is a good organization to do that, but it should absolutely include very detailed work, very close, work with stakeholders and businesses, communities a whole range of different people.
- I think at a local level everybody has an opinion and nobody's the boss that's my opinion any way and the problem is the further away you go if you go to government level they have the expertise, they can talk in front of a camera, they've got degrees they've gone to uni done all this but they probably don't know what a wave looks like. Or they have the expertise on the seabed, I don't have that but I think it needs experience and knowledge at the same time, working together so I think the people that earn a living at sea taking stuff from the seabed they have experience that no person in government has so I think they need to get together and listen to each other. That's what I think.
- It'd be a mixture of government, local authority and then also organisations like Nature Scot. I think if they were just left alone to do it without any pressure from the smaller charities and conservation groups a lot of the progress that we've made wouldn't have happened. I think the smaller charities, the smaller organizations, the grassroots projects are the ones that are putting pressure on these agencies.
- Oh yes, I guess the people who use it the most. I mean, I think if you're the one exploiting an environment, you should be the one that's also protecting it. I know it barely ever works out that way, but I think everybody has a responsibility as well. Because I mean, we all enjoy the beaches and the coasts and the marine environment. So I think every person who lives on Orkney has a responsibility to make sure that that it's kept in a sort of healthy state.
- It's really difficult to say who is the best organization to manage Orkneys marine environment. Everybody has a vested interest and it's trying to ensure that all those vested interest are represented. So is it an industry lead? For me? It wouldn't be

because industry is generally very commercial and often to the detriment of other things. Not always, but quite often. Is it the Council? Again, the Council is very community based so that can ensure that these industries help to be represented and the communities' interests help to be represented. Are they the most skilled scientists in terms of knowing what's right for the marine environment? Possibly not? Do they have that support on hand to help them make the decisions? Yes they do. To a certain extent. They've got national organizations. They need to consult. Do those national organizations now Orkney and Orkneys waters. Probably not as well as they ought to, so I think there's very much a blended role. Orkney council, community groups. The only way a marine plan will be good is if it's Orkney that has driven it forward. There is no point making a plan that doesn't consider everybody who has to play a role in delivering it.

- There should be plenty of folk with good practical knowledge...that's all I can say. And they should be listened to because that's what needs to happen in the land as well. And you can have as many folk dreaming up ideas as you want. But if they haven't a clue what they're speaking about then it's a waste of time and it's detrimental as well. So once again it boils down to who is actually doing it and what they know and how it actually works. And also trying to have people discuss things with each other and not losing the head.
- Has to be the council. When you think we've got the transport department and the cleansing department, housing department, planning department, harbors department. I don't know if there is a seabed department, but there should be. With people devoting their energies to that kind of thing.
- People, generally they're not good at being told what to do. And on the other hand, you know people also have their own ideas about how things should be managed. And so it's coming to a system of management that people feel that they've been able to have a say. That they understand why a decision's been made, and then that they're happy to go along with those decisions. So whatever the system is, it definitely needs to incorporate those aspects to it. If it's to be a successful one.
- I think it's got to be a mix. There needs to be a lot of bottom up engagement so on one level it's got to be community and ultimately it's always communities who arrange things but it's at what level you do that. So I think within Orkney we do have a sort of identity and a single entity in a council that should be representative of the people then I think perhaps that but with a lot of on the ground engagement but also you need to look at the wider picture so we do have this big picture. There are a lot of challenges that are global international in nature that are facing the seas and mechanisms that are in there to address those. So I think a lot of the international conventions that are signed up to. So I think the actual planning process has to be a local process but it also has to understand the drivers and requirements across international and globally to do this so it's got to pull together and try to integrate the different drivers at community level and globally to address how we manage the seas sustainability in the future.
- You know in all honesty; I actually wouldn't want to put it in with the Scottish Government. Because I don't think that they actually pay much attention to Orkney. I think sometimes were one of the neglected islands. I just say that in terms of the fact that I know the difficulties we have just negotiating things like ferry fares. Whereas some of the western isles are much more subsidised. And so I think in order for it to

work, it's got to be devolved down to a local level is my opinion. They've obviously got to work in conjunction with industry and the Scottish Government. And any global organizations that exist, but I think the responsibility for Orkney should lie locally.

- I think if you leave it up to industry with the best will in the world when it comes to money they'll only go so far and then think oh that's enough. It has to be coordinated, right the way as I said down from the global level. Now I'm not aware of any global organisations who would be responsible for that.
- You don't want stuff imposed from outside. The organisations don't have the understanding of local conditions. It's no good imposing something from the top down and saying right this is what you'll do because that may not be in the least bit appropriate for Orkney.
- All of us? I mean, it seems fairly trite but at the end of the day it is all of us.
- Well it has to be a consortium of interests and partners. I think I've already said in terms of managing the marine environment and who should be responsible. I've already said I'd like to see more powers devolved locally, so there is a clear authority in the area which has the responsibility for it overall, but they should conduct it through a partnership of the various interests. Most importantly community, then government, industry and academia and the science as a partnership, but with the community at its heart.
- I think it's got to have to be team work. I don't think that any one body should be responsible for it. I don't think it should be the council, I don't think it should be SEPA, I don't think it should be Orkneys fisheries association. I think it should be all of them. You've got to have a body that has representatives from all these different places. You have to make sure that people don't feel like they're being picked on or vilified. You know, because that isn't going to help anyone. And it's not a case of, you know, good guy, bad guy. It's not that straightforward. So yeah, I think that there needs to be some independent body with the representatives from all these different places. Should be the people that actually make the decisions and try to implement them.
- If I said Scottish Government that that would sound a bit authoritarian. Then if I said local government, that would be underfunded. And then if I said communities that would be really underfunded and if we said corporations that would be in their own interests and not the communities interests. So I don't think I know enough about any of those.

If an Orkney marine plan were to be developed would you like to be involved?

- I think if an Orkney marine plan were to be developed I would certainly like to have a look at it. My livelihood is not dependent on it, but a lot of peoples is so you know that it would be good if it was available to look at online or to have some form of consultation.
- It's the younger generation that's going to make the decisions it's not me. It's those folk that are going to get the responsibility that have to know what's to be done. It's no the old folk it's the young folk that must get involved in this completely.
- Yeah, I mean, I suppose I would. I'd like to learn more about it. I don't know whether I would be qualified enough to be involved with it because I think it should be people

that have expertise. The fishermen that have been fishermen since they were 15, have seen changes. And those are really valid things that people need to consider. Obviously data is really important and management should be focused on what the data is saying. But it is really important to get these stories from local people for the changes that they've personally seen and because it can add a lot of value to these things. And then, as I say, not only that they feel valued because they're being listened to. So these management plans are more likely to succeed because they have the backing of the community. I think it's essential to involve the community, definitely.

- I wouldn't want to be involved in it except to be able to have the chance as the public ought to be able to put forward ideas and have plenty time. And when they say something pay attention to it. And also many times the folk that live here have gotten so fed up of being asked their views about certain things and feeling like they are being ignored that they get weary of opposing anything. And it can get very demanding physically and time wise because I've taken part in lots of things in the past some which have come out in a sensible way and one or two we felt didn't of course that could be called a matter of opinion. But certainly...I wouldn't ken enough about the sea apart from a general feeling of protecting it and not damaging it.
- There is a forum for developing of Stromness and its future. There's a forum for that kind of development in Kirkwall. The planning and the scenery and the future of the town, and so on. And there should be the same for the environment round about it in the seabed, on the shores, and so on. There should be because that's as important as where you put shops and houses and things like that.
- I would, but I'd only be able to contribute what I know about, which is just my appreciation of living next to the sea and what I see but I would be happy to be involved in it.
- Very much so yeah I'd like to do that both as a member of the community and professionally have an input into that so we can offer information and some expertise on the challenges and approaches to management for some of the natural interests of the seas so yep very much so keen to be involved.
- From personal point of view yes, but I wouldn't feel very confident about doing that, and I just haven't got the knowledge for that. All I could do is say what's important to us, and what we've seen in our time here.
- I'd be happy to contribute and to go to consultations and to respond to any requests from the people drawing up the plan to give my opinions and views on what should be done.
- I think that it's the sort of thing that, right at the very beginning, could be kind of thrown open to anybody that wants to just express an opinion. Personally, I don't need to be involved because I don't make my living from the sea, and I'm not going to dictate to somebody that does what they can or can't do, cause why the hell would they listen to me? But I do think that people should have the opportunity to express their opinion at very early stages. I think if you don't consider peoples opinions then it's doomed. If they feel that they're not being listened to or taken seriously, then you've already, you have one of the most important sectors there, hostile, and you don't want that. You want to bring everybody together and work together. I know I'm a bit of an idealist, and so you know, it's all this kind of unity and

peace and love, man. Doesn't always work, doesn't mean to say you shouldn't try. Just because something is difficult doesn't mean to say you shouldn't do it.

How important is it for local people's values to be considered?

- Local people's values are really important in a marine plan. People have so much expertise, especially if you can get hold of the ones that really do know the sea so much better than I know it, they know when the tides are going to be, you know that they can tell by the wind where things are going to be.
- I think it is important for local people's values to be considered and that they've got a voice, or you know at least they can have their opinion heard.
- I think local people should definitely be included in the development of something like a marine plan, people may not have the sort of expertise and the knowledge to necessarily go in in depth into specific policies. But people should be consulted and worked with quite closely to make sure we hear a wide range of opinions because everybody will have different opinions on what should and shouldn't be done. So I think all along the way we should involve local people. And update local people on what's happening.
- I think it's very important that local people are asked but in my past experience it's never listened to. Whether it's building piers or any big project on an island like this very rarely, or they have public meetings and various things and it looks like they're interested but from past experience it doesn't count for anything and I can't see that changing.
- I think it is important because I think well, local people are the people who use it most I think. Places that are important to the locals need to be protected just as much as places that are important to natural wildlife and things like that because there's so much tradition surrounding the seas and sort of, myths, legends, whatever you want to call it, cultural places need to be protected just as much as anywhere else.
- I think the marine plan, the way that that consultation is approached has to be on a level of importance and seriousness, just to reflect how important things are or else it becomes just something that people are not interested in because they don't think it's that important. You know, the more the more weight you put, more thought you put behind, the more imagination you put into it has to reflect on how important it is. I think that's quite important. I think anything that brings in other kind of agencies to consultations that that have different ways of looking at things that you can do to engage well with people you know whether it's artists, whether it's scientists, whether it's stories, whether it's, people, folklore, you know, we've definitely done that before with events.
- On one hand I would say that everyone's voice is important, but at the very same time I'm thinking that I've come into this place. I don't really have the right almost to say how I think things should be managed. So I feel kind of I feel strange about it. I feel kind of conflicted about it because I think it's, I think it's really always important to hear an artist voice on things, and I think it's important to definitely have the cultural significance of the sea reflected in any management decisions. Because all that speaks of is the ongoing importance of the Seas. So I think kind of a multi

layered approach to things, a nuanced approach to things is important. So in that way my voice is important but another way I'm glad I'm not on some committee.

- It is really important because local people have that local knowledge. They can straight away tell you something will work, won't work and say well that was done 20 years ago and it didn't work. There is maybe a danger of consultation fatigue, but at the same time you've just got to try.
- The people that use the sea for whatever, it is paramount that everybody has to have a say. Some folk might come with a lot of nonsense some other folk might come with a bit of knowledge. Out of 100 folk it doesn't matter if you have 3 or 4 that come with something that is worthwhile then that's it. So anyway in answer to your question yes everyone should have a big say in it.
- Well we've got a place in Kirkwall, Orkney fisherman's association, they look after most of our stuff. And they're pretty good. It's important, definitely. The government sets the sizes of what you can catch and they (OFA) make sure you adhere to it.
- I think it's incredibly important to consider all of the community and the locals' views because they're so involved with it. Typically the people who live there and who want to have opinions are going to be the people who are most affected by the changes. And all of the marine planning. So their voices are integral.

Have you heard about any proposals or projects like this in Orkney?

- I'm afraid so I haven't heard anything about this, but that's not necessarily anyone's fault it's me not reading the Orcadian and me not listening to Radio Orkney so I can't complain about not knowing anything when I make no effort to find anything out.
- I haven't heard any proposals or projects like this so far.
- Maybe I've been a bit out of touch.
- No I haven't.
- No, not really. The only things that I've heard a little tiny bit about which I've not really looked into properly.
- Nothing that sort of springs to mind really. It tends to be if it's not related to archaeological field work, then I probably haven't paid much attention to it.
- Yeah, so I'm aware of the proposals to develop a marine plan and the consultation so far has been fairly limited. It's really great to see that Orkney Islands Council are coming out to talk to the Isles communities. What's really important is that those voices are treated with the respect that they deserve. These are local people who know the environment. They may not have a degree to their name. But they know the seas around them and they are very knowledgeable about those, and that's sometimes forgotten in terms of thinking about official planning, so making sure that those voices are heard, and that where necessary they're given the support to amplify them when they've got something that's valid that needs to be considered rather than it just being considered as one person, it needs to be treated with respect.
- One thing I am aware of is the state of the environment report. So I know that's a process that Orkney Islands Council marine planning team are going through at the moment. And I understand that some of what comes out through that report may be, you know, useful in the process of getting together the marine plan.

- I would have thought that if anything like that is happening that big that people will be coming out to each island and talking about it. And getting everybody involved in getting their views.
- No we hadn't heard of anything like that previously but I would imagine that we would pick up on it if the if the Council put it out to the public.
- I haven't. Actually, I don't think it's as widely publicized as some of the other Orkney issues. I think it should be. I think it's really important that we know what's going to be planned and how we're going to be managing project development, especially in our seas, because that's a big part of the culture, you know. But overall, I haven't heard of very much.

What should be considered when making a management plan for Orkney?

- Coastal management is really important. Fishing, of course, is important for Orkney. Renewables. I haven't talked about tourism and the sea because surely there's more we could be doing with that as well. Some sort of ecological sort of solar powered little ferries bobbing between the islands. So using some of our energy to sort of improve our ferry service in a way and make it greener as well maybe as a better option for flying. So, could we have smaller, faster ferries?
- Everything, I think. To take into consideration for a marine plan, you need to look at a bit of everything - fisheries, tourism and renewable energies, technologies, transport. There's so many aspects that would possibly need to be included. I think when you're writing marine plan, there's a lot of different aspects to consider because you want to make sure that you can have economic development and economic growth, which is very important and a lot of people depend on the ocean for their income and their livelihood. But you also need to consider the environment and the natural world and make sure you're protecting that. Then there's also the social aspects that you want to make sure that it's protected. Just as somewhere people can go and enjoy and spend time in the environment so there's a lot of different aspects that you need to consider. You've got to reach a bit of a compromise. That means that all different parties are happy. And yeah, find something that everybody agrees with going forward.
- I think you need to have the people who know what they're talking about whether it's at grassroots level or people who know what's possible and of course science can back up a lot of things. But you can't beat decades of experience with a hands on job, I think that's an angle that's quite often missing from big decisions that are made.
- I'm slightly concerned that the plan isn't forward thinking enough and doesn't truly have a grip of the state of our marine environment. I think there's more research required. Ghost gear is an issue in Orkneys waters that I think has been underrepresented. There is a lot of data deficient species in the current plan and whether addressing those data gaps has been fully acknowledged and a plan put in place so that as the next plan is delivered, that that's right. And when I mentioned ghost gear, I'm not talking about, you know such and such fishermen. Ghost gear is a fact of life while we fish our seas, so it's not pointing a finger. It's finding a way to deal with it and find solutions. I think there are bits that really need strengthening in

order for a marine plan to deliver for people and for wildlife and that needs to be a focus going forward.

- Making a management plan for Orkney you've got to consider what the state of the marine environment is and the use of it by the community.
- I think coming back to sustainability so you need to be looking at the environment and ecosystem services and wildlife. You need to be looking at the future economy of Orkney but making that a sustainable economy so you're using resources wisely so that they are still there for future generations and I think you also need to be looking at societal and cultural aspirations. It's very easy to sort of perhaps go for growth but then you lose something that defines what makes Orkney a special place to live so it's back to what's important to people and getting that right. There's just so many individual things that are important in the marine environment in Orkney that it would take all day to list them all. Say kelp beds being really important for maintaining protection from rising sea levels and increased storms and that kind of thing. And there's a number of commercial sectors that have an interest and want to do things in Orkneys waters so you need to bring people together to start. One of the first processes in any plan should be bringing people together to say what they think is important. And I think you'll find it's a massively long list of going right down to particular things and places that are important to people. Seabirds and marine birds would be of particular interest to me but there are many different aspects that would need to feed into a marine plan.
- Where are we going to get the funding from, you know, is that going to take away from other areas? It is a fine balancing act, isn't it? The government keep cutting funding to local authorities. And yet they're being asked to do more and more. But that's the only thing that I can that springs to mind for me, is the difficulties that it might face financially.

5. Wrap up

What 3 words would you use to describe Orkneys marine environment?

- Health. The animals and plants that live in the sea and selfishly for me, the beauty of the sea.
- It is relatively clean. There's plenty wildlife using it and that's a good indicator that it's in good health. To be able to enjoy it. I think it's also important for local people to be able to enjoy it and enjoy the landscape we live in.
- OK, so I'd say the environment, recreation and sustainability. Yes, so the environment will be one of my key points. I think it's really important that we protect the natural world as we look to develop the environment around Orkney. Recreation would be another topic that is really important. And just for the sort of social wellbeing of the area. We do want to develop the region, but we want to do it in a way that means future generations can experience an environment that's as nice as the one that we're getting to experience, if not better.
- Make it Sustainable.
- Well maybe 3 words first and then I don't know if this counts but orca. I just love them and you get quite a lot of sightings around Orkney. They're just very, very

special to me. I suppose it would come back to how we have so many rare species on Orkney that seem to be doing quite well. With that link to the marine world. So, you know, puffins are red listed and they're in decline pretty much everywhere in the UK. But you know if you go to Westray, you can have a puffin sat on your knee, which is just fantastic. So yes, so things like that we kind of take for granted up in Orkney and even things like bonxies. Bonxies are quite a controversial bird on Orkney. Quite a lot of people hate them. I think they're great but I understand why people can have these emotions for these birds because all they see is these big great brown birds stealing fish from other species or eating a really rare little tern chick. But you know, it's not the bonxies fault that they're rare, and they're just trying to survive. The sea is also a lifeline for me because so many of my hobbies revolve around it. Without it I'd probably be pretty miserable because that is where you go to escape from all the other stuff you know, because when you're in the water and you're looking for little beasties, or you've got a seal in front of you that's checking you out. You do just forget about everything else, which is just is great. So yeah, I suppose it is a bit of a lifeline for me as well.

- OK. Nature/wildlife. I'm trying to think of the best words to describe them. I guess culture. And then probably archaeology would be another one as well. Culture and archaeology is probably the same thing, but I mean culture in terms of people and how people use it for like their leisure time and things like that and then culture in terms of archaeology.
- So yeah, I'm going to go with awe inspiring hyphenated to make it one word. Just the sheer expanse of sea out there is just mind blowingly amazing. Diverse in terms of the species that come through it, but also in terms of how we're using it as a resource. And beautiful, which is kind of like a bit weak as of #3, but actually it is just so beautiful. And oh. Should I go for changing who knows? It's always changing. Yeah I love that element of it so that's what makes it beautiful to me would go for changing constantly it's so interesting and beautiful in different ways. A stormy sea is as beautiful as a calm blue sea.
- Well the kind of freshness of the fact that it's a fairly clean pure environment compared to many others and that it feels fairly free of any serious encumbrances that are unnecessary I think, there might be some I don't ken about of course. And just really the fact that you can go where you want as long as you're being respectful of it. And that's important to.
- The first word is biodiversity. I think a biodiverse marine environment is a healthy one and it sustains lots of other activities around it. I want to say ecosystem services and functions. Obviously that's a bit technical jargon but having a biodiverse environment enables those processes to happen. Those natural process that should happen. And they underpin our use and our interaction with the marine environment. I think those are my key words.
- I just want it to be a vibrant natural system that works that humans aren't doing too much damage to, and if there's a lot of damage that can be repaired, to repair it. But whilst letting people go about what they want to go about doing as well. But some activities actually do cause a lot of damage, so there might be some things that you have to limit.

- I could say marine protected Area couldn't I, I suppose? That could be 3 words. Marine protected area. Look after it. That's three words as well. Save our seas is always a good one and we've used that one quite a bit. Because their SOS and the urgency of things is the bit that does worry me at the moment. I think that it is time for people to either act or not. And whether this has been felt in generations before, but it definitely feels like to me like there is a turning point now where we either do something or the effects of what we don't do will be felt for a long time. I think that's, and I'm sure there've been times like that in history where people have thought oh, you know, we need to do something about this, because this feels like we're on a slip that's not a good one. But definitely I think, particularly with all the kind of you know, the publicity behind things like COP 26 and things like that. And young people are much more aware of the environment now than perhaps they've ever been. So it is a good time to do something so time to act might be a good one. Marine protected areas, save our seas, time to act. Look after it.
- Well I suppose it's sort of defining of the place, the sea defines what Orkney is. I think it's well I'm trying to think of a word that encompasses, the jargon term would be biodiversity but it's about sort of just the natural abundance of things and the variety of life that's there. And also then I think it's the aesthetics of it, that is an important aspect of it. I suppose if you want it in 3 words – defining, sustaining and beautiful.
- Accessible. And healthy. That to me, just sums it up. It's got to be accessible. You've got to get to it and it has to be a healthy environment. Now that includes all the topics we talked about. It talks about, you know it's economic development, its environmental development, it's species maintenance and care and conservation so that that to me, is what I would call, you know, healthy environment. Taking all aspects of it into consideration.
- I would definitely have social. Cultural. And I'm going to have. I'm swithering between emotional or artistic. I'm going to for artistic knowing that for me it wraps that up as well. So those are my themes social, cultural and artistic.
- I'd say biodiversity, quality and variety and those three things kind of encapsulate what makes Orkney special, makes its marine environment special, and by maintaining those and retaining them, it will allow future generations to enjoy the marine environment as much as we do now.
- Pollution. Biodiversity. Em seals.
- Space, clean and free.
- Health would be the first one. Sustainability. Well, highway as I said before, it is the way that we used to move around. So yeah, the health of the sea, hugely important, the sustainability of people who work the sea for a living, massively important, but also for me from a personal point of view, it's my road.
- I don't know. I'd like to see a few sea trout coming back again. And I'd like to see a wee bit more fish going to the smaller boats. But that's about all.
- Biodiversity, history, employment. Well biodiversity, because it's we've got such an incredible ecosystem here with such a huge variation in the species that are supported here, I think that's really, really important. But Orkney also sustains a huge amount of history. We've got dozens of sunken World War One era wrecks in Scapa Flow, which are really, really important historically. We've also got a ton of Neolithic sites we've got Skara Brae. We've got the Knap of Howar we've got

different archaeological dig sites. We've got Maes Howe, of course, but a lot of these places are coastal, and so they're quite tied closely to the marine environment, and they're incredibly important to history. And employment because so much about these industries are tied to the ocean. We've got so many fishermen and we've got so many renewables engineers, we've got so many tourism workers and experts. We've got so many people working on the ferries that take people to and from Orkney. I think that the employment of everyone here is really, really important.

Is there anything else you'd like to add?

- It's an interesting process, just how we deal with and how we manage things and I saw someone say why can't we just leave it alone? Which would be the ultimate marine plan you know to just to leave the sea alone and let it get on with what it does and it will be fine. But unfortunately we're too far down the not leaving it alone path to ever get there, but that would be the ultimate thing.
- I think regarding Orkneys marine environment the other thing that's important is that everything changes over time. Things can come and go. Bird populations go up and down, and with global warming it's hard to see what exactly is going to happen, but it could have all sorts of knock on effects, on different groups of animals. Birds are a good indicator because they are so visible and you can see them, but there's a lot of wildlife in the ocean. It's not so visible we can't see it so easily, so it's important to keep monitoring things. To do an intertidal survey. That's the best we can do I think to keep looking out for changes.
- Just really look after it because it is so important. It's got so much to give, really so much to give. I mean who 50 years ago would have thought there'd be a whole industry of oil coming out the North Sea. Who would have ever thought that?
- Yes, so I think that there's a lot of different industries and a lot of different people who want to develop and use the ocean and exploit the resources that it provides. And that's a good thing. But it's just important that we find the compromise and do it in a way that's sustainable and manageable for the future generations and for the children who are growing up today. So I just think protecting the environment is really important.
- Hydrogen is a big thing at the moment and has been for a few years. I'm not sure if that's a future energy but if you could use the power of the sea or the tides to create or produce hydrogen that sounds fantastic whether its fuel cells or liquid to put into your engine, a hydrogen boat would be fine I would test it happily for maybe 5 years and then retire.
- I don't know about you, but whenever you learned about the environment and stuff like that it's always focused on what we can get out of the environment in terms of money, so even when you're trying to convince people not to go and wreck the sea bed, they're saying don't do that, because if you leave it and you let things grow, it's a more sustainable future where you can get more money for these things that you can fish, leave the fish to grow older so they're bigger, you get more money for the fish. And I think sometimes we tend to just forget that we can just like something because it's nice and we want to protect it. Because it's nice and it's beautiful. and it doesn't owe us anything. But that doesn't really go down well in meetings when people are making decisions about money and funding. And all this sort of stuff. But I

think sometimes yeah, we can forget that it's just nice to protect something because we love it. Yeah, that's my hippie speech for the day done.

- We as the public maybe need to take more care cleaning the beaches, even if just whenever we go to the beach. Taking a plastic bag and picking up some plastic. Something like maybe in the grand scheme of things, it's not going to have a massive effect, but I mean doing the little things that we can I think it's important. And just because we use them so much, I think it's like I've said earlier, it's our duty to care for the environment that we use so much.
- I guess for me, Orkneys waters are very unique. In terms of the North Sea and the North Atlantic they are meeting literally on our doorsteps. In terms of the animals that are using it, in terms of the opportunities that it provides for us. As time has gone by and the fishing industry has changed we've lost some of our connection to the sea. Although we all appreciate it being on our doorstep I think there's work to be done to help us all fall in love with the marine environment again and so that we truly understand how unique Orkney and its waters are.
- I guess the last thing I would say is that it's really important for us to build on our connection with the seas, so I you know, we've changed away from plastic straws. We're trying to reduce our plastic cutlery. These things are small but come together they build up but there are so many ways to be involved in Orkneys marine environment and you could be involved with some of the organizations I'm involved with in terms of marine mammal strandings or collecting data. And through a citizen science scheme such as stewards of the sea, you can be out doing litter picks. There's opportunities to go out and dive, you know diving at the barriers is a really great opportunity. There's science to learn from in terms of the tidal turbines that are going out. All these are really good ways to get involved with your environment and the more involved we get with it, the better the decisions that are made about it, and the more stewardship we feel of our oceans. And again, that just helps them make sure they stay healthy. They stay sustainable and that we end up with an ocean around us that supports the community rather than the community just using the ocean.
- I think one thing to think about Orkneys marine environment maybe we can turn things on its head and think well what would it be like if it didn't have a healthy, productive, clean, safe marine environment. What would that mean for the future of the community in Orkney. So I think we have to think about what we don't want to make sure that we make the right decisions about what we do want and how we want things to be for the future generations.
- It still looks lovely to me because apart from all bits of plastic I pull out of it. But I just I just know that there's issues out there that I can't see, so that is the most important thing is that I want to really be able to feel like we put less bad stuff out there and are doing our best to actually look after it. And that's the most important thing to me because you like to look at it as this natural wonder. Once you've actually lived in Orkney for a few years, you do realize how much plastic is out there, and then you wonder what else there is that's going to come back to bite everybody at some stage. First of all it's the animals and then it'll be us in the end. So I just like to think that we're doing the best that we can around Orkney to preserve and improve the natural environment for all of us and for generations to come. Because they deserve to see it as a natural wonder as well.

- I really think we're at a sort of crucial point, a turning point so we've got to get management right for the sea and for the land as well so we have to start thinking about how we use resources, what's important to us and we need to do that as a community through planning at the community level and we've got to be doing it globally as well. So, I guess there's opportunities, big challenges that can feel a bit depressing when you read about the scale of the changes and realise we're in an era now in earth history where human activity is starting to have such huge scale impacts on the natural environment and ones that are dangerous for ourselves and everything else on earth. We've got to face up to that challenge but there's opportunities to do that, so I hope address the challenges and come out the other end maintaining what does make Orkney special and its marine environment special. We just got to work at it.
- Just that it's beautiful, the joy of it, it's mentally stimulating and physically rewarding. Getting out to it. It's just, it creates Orkney.
- It's good for your mental health, everything, it's just good to be out in the marine environment.
- It makes you feel alive just to see the forces of nature as well as all the marine life.
- I think that going forward in terms of renewable power and wind turbines they could be done with nature in mind. So, I think as long as you know, we think about what we're doing before we do it. It could be a really good place to make more renewable energy for the islands, but also enhance biodiversity in the ocean.
- The only thing that I can add to that is the folk tales which are so based on the sea and there was an old belief that the sea was ruled by a female spirit during the summer. The mother of the sea and she gave life to all of the creatures in the sea and she calmed the storms. And that was a time of plenty and of safety. And then during the year, as it wore on, she lost her power and there was a male spirit called Terran who was chained at the bottom of the sea and he would break his chains and the two of them would fight. And that's when you got the gales at the equinox. And then the mother of the sea would be defeated in the winter and she would be driven ashore and she lived on the land as an invisible spirit. But then Terran would rule the sea and it would be, you know, he would unleash the storms and that was the dangerous time for Orkney's fishermen and people. But then the mother of the sea would regain her strength and she'd go back in the spring and they would fight again. And that's when you got the equinox gales again and she would defeat him and chain him up at the bottom of the sea and then she would calm the storms and give life to all the creatures in it. So it's just you know, the story of the Seasons and the life force of the sea, as in Orkney a life force, but taker of lives as well as the giver of life. The amount of you know the folktales of the sea there is so many of them and they are so important because the sea was so important to everyone.