



# **Cynulliad Cenedlaethol Cymru** **The National Assembly for Wales**

## **Y Pwyllgor Menter a Busnes** **The Enterprise and Business Committee**

**Dydd Iau, 9 Gorffennaf 2015**  
**Thursday, 9 July 2015**

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Cofnodir y trafodion hyn yn yr iaith y llefarwyd hwy ynndi yn y pwyllgor. Yn ogystal, cynhwysir trawsgrifiad o'r cyfieithu ar y pryd.

These proceedings are reported in the language in which they were spoken in the committee.  
In addition, a transcription of the simultaneous interpretation is included.

### **Aelodau'r pwyllgor yn bresennol** **Committee members in attendance**

Rhun ap Iorwerth

Plaid Cymru  
The Party of Wales

Jeff Cuthbert

Llafur

	Labour
Keith Davies	Llafur Labour
William Graham	Ceidwadwyr Cymreig (Cadeirydd y Pwyllgor) Welsh Conservatives (Committee Chair)
Joyce Watson	Llafur Labour

**Eraill yn bresennol**  
**Others in attendance**

Capten/Captain Ian Davies	Rheolwr Llwybrau ar gyfer Stena Line, De Môr Iwerddon Route Manager for Stena Line, Irish Sea South
Alec Don	Prif Weithredwr, Porthladd Aberdaugleddau Chief Executive, Milford Haven Port
Yr Athro/Professor Colin Jago	Deon y Coleg, Ysgol Gwyddorau Eigion, Prifysgol Bangor Dean of College, School of Ocean Sciences, Bangor University
Ieuan Wyn Jones	Cyfarwyddwr Gweithredol, Parc Gwyddoniaeth Menai Executive Director, Menai Science Park
Jim O'Toole	Rheolwr Gyfarwyddwr, Porthladd Mostyn Managing Director, Port of Mostyn
Paddy Walsh	Rheolwr Porthladdoedd y DU, Irish Ferries UK Ports Manager, Irish Ferries

**Swyddogion Cynulliad Cenedlaethol Cymru yn bresennol**  
**National Assembly for Wales officials in attendance**

Rachel Jones	Dirprwy Glerc Deputy Clerk
Andrew Minnis	Gwasanaeth Ymchwil Research Service
Gareth Price	Clerc Clerk

*Cynhaliwyd y cyfarfod ym Mhrifysgol Bangor, Bangor.*  
*The meeting was held in Bangor University, Bangor.*

*Dechreuodd y cyfarfod am 10:30.*  
*The meeting began at 10:30.*

**Cyflwyniadau, Ymddiheuriadau a Dirprwyon**  
**Introductions, Apologies and Substitutions**

[1] **William Graham:** Good morning ladies and gentlemen, and welcome to this session of the Enterprise and Business Committee. We're very happy to be here in north Wales. I have apologies from Gwenda Thomas, Dafydd Elis-Thomas, Mick Antoniw, Eluned Parrott and Mohammad Asghar. The meeting is bilingual, and headphones can be used for simultaneous translation from Welsh to English on channel 1 or for amplification on channel 2. There's no need to touch the microphones; they should come on automatically.

10:31

**Ymchwiliad i Botensial yr Economi Forol yng Nghymru  
Inquiry into the Potential of the Maritime Economy in Wales**

[2] **William Graham:** Our inquiry continues into the potential of the maritime economy. Could I just ask if the witnesses would be kind enough to give their names and titles for the record?

[3] **Mr Don:** Alec Don, chief executive of the Port of Milford Haven, and also chairman of the Welsh ports group.

[4] **Mr Walsh:** I'm Paddy Walsh from Irish Ferries; I'm the UK ports manager, with responsibility for the ports at Pembroke Dock and Holyhead.

[5] **William Graham:** Thank you.

[6] **Mr Davies:** Good morning. Ian Davies—I'm the route manager for Irish Sea South for Stena Ports.

[7] **William Graham:** Thank you very much for your submissions; they're most helpful. So, we'll go to the first question, which, if I just find my papers, is from me—that's a good one. [*Laughter.*] I want to ask you particularly about the devolution of ports policy and to help the committee to understand the implications of the planned devolution of ports policy, which will include how the devolution of ports policy can support economic development and transport integration. Can we start with that and see your reaction?

[8] **Mr Don:** Yes, sure. So, we obviously operate currently under a framework of policy written by the Department of Transport, UK Government, and, for us, I think, as a ports group, and indeed, as Milford Haven Port, that policy is very orientated around the fact that there is a mixture of ports—private and other sorts of ports. What they need to do they fund privately and they compete with each other, and policy is about maintaining a level playing field and about supporting ports investment plans, as and when they come forward. And I think that is the environment that we thrive best in and would like to see continue. I think that where we have plans, in every port, in every part of the UK, the objective is to integrate those plans with what else is going on in the regional economy in terms of transport links, in terms of other pieces of supporting infrastructure and legislation. So, it is important that those are co-ordinated and I think if we are working more closely with a Welsh Government that's close at hand, there is scope to do that faster and better. So, I think that there is an up side to it and that's what we'd like to work on.

[9] **Mr Walsh:** I've not much to add to what my colleague Alec has said, other than just to pick up on the point of equal status, which I've reported on in the report submitted to you, in terms of border controls and checks to ensure that, when that devolution is fully in place, the levels of checks at all ports throughout the UK and Northern Irish land boundaries are consistent with what happens in Welsh ports, because it's very easy for displacement of traffic to occur given the volume of sailings between the island of Ireland and the British mainland, where there are up to 80 sailings a day in the peak. So, customers have a lot of choice, both from a passenger and a freight perspective. It's quite a sensitive and fragile market. It's quite reactive to pricing, as my colleague from Stena Line would know also, but it's about service and it's about just-in-time deliveries and commitments and speed of transit, so, if anything happens to disrupt that flow, it can quickly displace business to other routes and that would be of concern if that happened and affected the Welsh ports.

[10] **Mr Davies:** I've nothing really to add to Alec's statement. I think, as a Welsh port group, we all sing off the same hymn sheet, so to speak. Just adding on to what Paddy said,

what we want is consistency, and any disruption to these traffic flows—once traffic flows are lost, to regain those traffic flows is very, very difficult. So, a consistency of approach is quite key to us.

[11] **William Graham:** Welcome, Mr O’Toole. Just to say, just for your information, the microphone will come on automatically. You don’t need to press the button. We’re just taking questions—we’ve just started. Rhun.

[12] **Rhun ap Iorwerth:** Just to expand a little bit on that, where do you think the pressure might come from that could hamper traffic flow under a new policy framework?

[13] **Mr Walsh:** Yes, certainly. There’s already been an increase in regulatory checks at the ports. The UK Government introduced exit checks from April of this year, primarily to ensure that, not only do they know who’s entering the country, but who is leaving. The Irish sea ports enjoy a concession, known as the common travel area, the CTA, which means that British and Irish citizens are free to travel between the two countries without passport controls. They have to be able to prove who they are, for obvious reasons, but they’re allowed to freely travel. So, if the UK Government was, say, to introduce exit checks at the Welsh ports, and at other sea ports, that could cause displacement of traffic to the Northern Irish land boundary routes. The issue, of course, is that, if you’re crossing, say, from Stranraer to Larne, you’re travelling from one part of the UK to another, so you could effectively be just going down the M6 motorway, and there aren’t regulatory checks at those points. So, it’s a question of, if there were difficulties at the Welsh ports, traffic could easily be displaced to those routes, where the checks, perhaps, were less stringent. For obvious reasons, at the land boundary, we understand the complications, but that shouldn’t be criterion to allow it to disrupt and lose trade to the Welsh ports.

[14] **William Graham:** Do you identify any potential risks, do you think, coming from devolution?

[15] **Mr Walsh:** In terms of risks to the ferry industry?

[16] **William Graham:** Yes.

[17] **Mr Walsh:** No, I don’t see any. We’re self-sufficient, in terms of any investment that we make. We do the cost-benefit analysis, and, if it stacks up, we go for it. There may be more risks that my colleagues, from the port perspective, might want to comment on, in terms of planning, and other environmental issues that may arise.

[18] **William Graham:** Thank you. Any thoughts?

[19] **Mr O’Toole:** I certainly have. [*Laughter.*] I’m sure most of you will know the history of the development that we’ve carried out at Mostyn. If I tell you that—if I give a comparison, shall we say, with building a motorway, or, even, a dual carriageway, such as the A55—it took us three months to get permission to capital dredge the channel, and it took us eight years and a month to get permission to be able to keep it dredged, that had a huge effect. So, one message that I would put across, certainly, would be: to assist the ports industry, lift the shackles of regulation. We are being absolutely crucified with legislation after legislation, which is really now grinding the industry down. To try and get something done can take years to get an application through, and the uncertainty that gives makes it almost impossible to secure business.

[20] **Rhun ap Iorwerth:** I can imagine, then, that you would approach the devolution of ports policy with a certain amount of excitement, at least about what the potential could be in terms of streamlining those kinds of processes. Because we have a defined number of Welsh

ports, we could define a policy that works much quicker for you.

[21] **Mr O'Toole:** Indeed, and, as I've said in the written statement, we welcome the devolution, in as much that, at the moment, on certain high-level matters, such as harbour revision orders, and harbour empowerment orders, which, basically, allow us to operate, we have to go to London, still. If we can contain that within the Welsh borders, where you can be more specific, more focused, with the Welsh economy in mind only, well, then, that's why we would support it.

[22] **Mr Don:** Obviously, I want to support Jim's comments. I think it is an opportunity and a threat, isn't it? If you are starting to develop regional port policies, the risk is that the other regions—just around Bristol, or just around Southampton—do it better than Wales does it. I think Wales has got to be very cognisant of the sort of competitive issue that it's embarking on. Speed of getting consents or speed of getting through regulatory processes is something that the market recognises, and it can either deter or encourage investment. At Milford Haven, we have refineries in the port. We now have one refinery in the port and there are huge differences in the regulatory environment for those refineries as against refineries in other countries, never mind just in England. We lost one last year, so that is an example of the competitive threat that is out there, and I think that if policy is developed that basically does exactly what you said, Rhun, then that would be great. I think that there is an opportunity, but it does require willpower to make that actually come through. We would strongly encourage the development, as quickly as possible, of a clear Welsh ports policy that supports rapid development, when opportunities arise, of ports.

[23] **William Graham:** Keith.

[24] **Keith Davies:** Thank you, Chair. Obviously, infrastructure is the responsibility of the Welsh Government, and what is going to happen now is we'll be in charge of highways and transport in terms of rail. So, what I want to know—in the report from Milford Haven, you're saying it is south Wales's largest ferry port:

[25] 'last year handling 70,000 freight units and 350,000 passenger movements.'

[26] Now, if I go to Ireland, I don't go through Milford Haven and Pembroke Dock; I actually go to Fishguard, or I go to Holyhead. I just wondered, in terms of the Welsh ports, which is the biggest in terms of passengers and which is the biggest in terms of freight? Is it Port Talbot, for example? In the end, we will have to make a decision: do we have a dual carriageway all the way on the A40 or do we spend more money on the A55? My question to you in terms of ports is: which is the largest in terms of passengers, and which is the largest in terms of freight?

[27] **Mr Walsh:** Perhaps I could answer that question.

[28] **Keith Davies:** Yes, fine.

[29] **Mr Walsh:** If we look at the southern corridor, as we refer to it, which encompasses the port of Fishguard, which is a Stena Line port and Pembroke Dock, which Irish Ferries utilise, the passenger traffic is split at approximately 50/50. We enjoy a 50 per cent share of the business. The freight traffic, because we've got a larger vessel and greater capacity, we enjoy the larger share of the freight capacity currently, but that mark-up could easily change if either operator was to change the vessel size, for example. Currently, we enjoy about 60 per cent of the freight market, and about 40 per cent of it through Fishguard.

[30] If we move up to Holyhead and look at Holyhead, which is a port owned by Stena Line but with shared services between Irish Ferries and Stena Line, the business is roughly

50/50 in both respects. We're running a competitive number of sailings per day, the only difference being that we're currently operating a fast craft operation. In fast craft, you're halving the journey time, so it's as close to—this isn't a publicity pitch, by the way—an airline, if you like, as you can do by sea, currently. When we invested in fast craft back in 2001, we did market research, and 25 per cent of the people said they would always take a shorter sea option. So, that was the investment plan made for us, and we've had the ship on since 2001 and it works quite successfully. But the passenger and freight business is approximately 50/50 in the port of Holyhead.

[31] **Mr Davies:** If you're looking at overall port sizes, Holyhead is considerably bigger than even combined in south Wales, and what drives that is Dublin. Dublin is the hinterland of the Irish economy. So, for example, it's 1.5 million passengers who go through Holyhead, compared to roughly 700,000. With freight units, 380,000 freight units go through Holyhead as opposed to roughly 100,000 between Fishguard and Pembroke combined. So, Holyhead is the economic driver. Okay, a big part of that is Dublin, but probably the biggest key element of the driver has been the development of the A55. From our point of view, that was the key change, really, for the development of Holyhead port: the improvement of the A55.

10:45

[32] **Keith Davies:** Another reason for asking the question is that we were actually in Brussels and Luxembourg—was it last week or the week before?—researching the TEN-T corridors. We were very upset that there isn't one of the main corridor through Wales. I find that unbelievable when you're giving me those figures now for linking to Dublin. I suppose I shouldn't criticise the Welsh Government, but I don't think—

[33] **William Graham:** Carry on. [*Laughter.*]

[34] **Keith Davies:** But when we've talked to people from Brussels, it seems to me we're getting better support than when the Welsh Government speaks to the Department for Transport in London, you know? So, I think there's a fight for us on the TEN-T corridors, right?

[35] **Mr Don:** [*Inaudible.*]

[36] **William Graham:** Yes, please. Answers, please.

[37] **Mr Don:** Milford Haven, obviously, is a TEN-T port within that network. I think, in terms of investment in roads, you're going to find differences of opinion about which roads should be supported. The point that I would particularly make is that the economy of Pembrokeshire, which isn't just about the ferries—actually, the biggest part of the economy, probably, is the oil industry and the engineering industry—is very orientated towards the south coast of Pembrokeshire, which is, indeed, where you will find over 55 per cent of Pembrokeshire's holiday accommodation. So, I think that there is some work to be done to actually investigate the merits of both of those routes, to be frank, and that's what we would strongly encourage. However, for ports and for ports generally, with my Welsh ports hat on, all investment in roads is a good thing.

[38] **Mr Walsh:** To pick up on a couple of points Mr Davies mentioned in terms of the infrastructure and throughput of the port, Holyhead also enjoys 20 sailings a day. If you take that in the overall context of 80 sailings a day up and down the coast, it's a huge slice of the market. Frequency of service brings additional business, because you get the bus service mentality that there's a sailing coming along every five or six hours. If you come down to south Wales, we have one every 12 hours and Stena have one every 12 hours, so if you miss a ship, you've got to wait 12 hours. May I also add just one other point?

[39] **William Graham:** Please.

[40] **Mr Walsh:** In terms of infrastructure, I've mentioned in the report the cost of the Severn bridge toll, and that has a significant impact. It has an impact on where hauliers set up their own distribution hubs and whether or not they try and avoid it. If you take the road levy costs of £10 a day that were introduced for all vehicles from April 2014, and you've got £19.60 a day for an articulated lorry to use the Severn bridge, you know, it's a huge impact and a huge cost. If anything could be done to address that, it should attract further inward investment into the general area, I would hope.

[41] **Keith Davies:** Thank you, Chair.

[42] **Mr Don:** Just in a very little, local Pembrokeshire context, I'd like to advocate for removing the tolls on the Cleddau bridge, which would lead to greater integration within Pembrokeshire. [*Laughter.*]

[43] **William Graham:** Quite. Jeff?

[44] **Jeff Cuthbert:** Yes, I wonder, shall I combine my supplementary with my main questions?

[45] **William Graham:** Please do, yes.

[46] **Jeff Cuthbert:** Just about the issue you mentioned of dredging in Mostyn. Clearly, you'll be aware that we now have the Well-being of Future Generations (Wales) Act 2015, which would require all public bodies, clearly including local authorities for planning purposes and the Welsh Government, to ensure that any developments do not impact negatively on other matters. Now, that's there, on the statue book, but, clearly, that doesn't mean that we would want to do things that could in any way hinder jobs, so it is about streamlining the process—and you might have further comments to make on that as to how it can best be resolved. Then, in terms of the ports and the general maritime economy, how do you, all of you, view your role in terms of being big players within the maritime economy and with key partners, like city regions and local authorities? You've mentioned the transport network. On the development of skills, are there particular skills gaps in your industries that we need to address?

[47] **Mr O'Toole:** Could I maybe start on that? I don't think it's a matter of size. If you take Mostyn, for instance, we used to do general cargo, where we were all things to all men and all shippers. We've now specialised, pretty much, in the offshore renewables sector, and if we take that as a market in itself within the Welsh economy, we would certainly be the market leaders by a long shot. We've actually built the first two windfarms offshore in the UK. We've now reached our eighth. So, whilst we all have our own niche, and, for instance, Milford Haven is very much the liquids, oil and chemical industry, we wouldn't touch that. Every one has its own benefits. For instance, we wouldn't look at cruise markets. It's what sector you're in and how big you are actually in that. Is it more important to me, as a port operator, because there are certain cargoes and certain traffics that you probably just wouldn't get into for a number of reasons?

[48] So, to answer your question on that, where does it leave us with skills, we see the offshore industry, the renewables, as our future, rather than in general cargo handling operations—that very much is a niche. That brings with it a requirement for very new skills, bearing in mind that the industry's only about 12 years old. To give you an example, when we did the first windfarms in 2003, everything and everybody came from Denmark—all the components and all the people, including the tea boy. It took us a couple of weeks to get rid of

the tea boy and replace him. We are now at a level where we have our own people in a subsidiary company, where we developed these skills actually from scratch, because they weren't available. There were no training facilities. They simply weren't available. So, you really do have to grow your own in some circumstances. You can't do it in a college or in a classroom. You can't put a turbine out there and get people to train on it. You actually have to do on-the-job training or, as we would call it, sitting with Nellie. That's the only way you can actually do it. There is a certain amount in the classroom, but you have to grow your own in certain circumstances.

[49] With pilots, for instance, we used to get our pilots and harbour masters as ex-ship captains who wanted to come ashore. Well, of course, the apprenticeship schemes dried up as ships were flagged out, so we didn't have people to draw on. So, in effect, we've also, at the top level, had to grow our own. We've had to bring in people and gradually let them sit with other people, go out and have 18 months' training before they're qualified as a pilot. So, in some areas, there's not much that you can actually do, other than doing it actually on the job. But we do have a skill shortage now because of the number of, say, windfarms around the UK coast. Technicians, for instance—turbine technicians and small boats handling people—are at a premium.

[50] **Jeff Cuthbert:** Just on that point, and certainly I'd welcome the view from Milford Haven as well, marine energy, as part of the overall push for greater renewables, is something that we would, I think, want to develop in Wales—tidal energy as well as offshore windfarms. So, really, in terms of the skills that you need, you've had to do it by yourself through experience—is that a fair comment?

[51] **Mr O'Toole:** It is.

[52] **Jeff Cuthbert:** Do you get much support now in terms of the future from the higher education sector in terms of research and development? Do they work with you?

[53] **Mr O'Toole:** Well, we're not in the R&D side, as it were, but certainly as far as the skills side goes, the colleges are now beginning to be aware of the need and are putting courses on pretty much for the technical side of it and the maintenance side of offshore wind turbines. That is actually happening. It needs to speed up but, again, it's early days yet, as it were, considering how young the industry is.

[54] **Jeff Cuthbert:** Thank you.

[55] **Mr Don:** From the point of view of Milford Haven, I think that we are very much targeting that marine energy/wave/tidal-type energy business. And the reason that the companies in that space are interested in what Pembroke has to offer is because of the cluster of our infrastructure and the proximity to a number of sites, but also because of the cluster of businesses, with the skills that they need, around Pembroke Dock. That cluster, where you have businesses and people in those businesses who, if the work isn't in business A, they can go and work on a contract in business B, is very, very productive and attractive. So, those businesses, I hope, will develop more intellectual property. They will start to work more closely with the universities to have intellectual property that allows them to not just be dependent on getting fabrication contracts but actually more participating in the design and production of their own products. But I think that that ethos of working very closely with universities in a particular cluster and encouraging industries to be in the same location and work very much together is entirely to be applauded and we very strongly support it.

[56] **Mr Walsh:** I didn't want to pick up on the training issue particularly. There aren't any issues currently in the ferry industry for us in terms of training requirements, but I think where there is a possibility for economic growth is in tourism. We've got 1.6 million people



passing through on Irish Ferries services alone, passing through ports. Unfortunately, quite a lot of that is transitory in its nature: that Wales is just a stopping off point to get to Ireland and vice versa. These people have already made their holiday plans before they've left home. Looking at population spread and the information I've submitted in my report, it's clear that most of the people are domiciled in the UK. I think that one of the things that Irish tourism has done quite well over the last year is that they've helped people to discover west Ireland and not just to go to Dublin and the major catchment areas, and encouraged holidays by car. I think that a closer tie between Welsh tourism and Irish tourism could help to foster journeys that perhaps include a one or two-night stay in Wales. Because, if you look at the geography of Wales and what it's got to offer in terms of beaches, coastline, mountains, countryside, it's got excellent facilities, very similar to the west of Ireland. We've increased tourism in those areas by closer ties with the Irish tourism industry. I think that there are opportunities there that should be taken up to encourage it. It's been tried before; it's been tried on more of a parochial, local basis with, say, Wexford County Council and Wicklow County Council to encourage people coming over on a ferry just to stop there. But I think, you know, there's a much wider perspective there that could be, perhaps, targeted and to try and get people to make part of their holiday in Wales if they're coming from Ireland to the UK or from the UK to Ireland. I think that's an opportunity there.

[57] **Jeff Cuthbert:** Presumably, when you say that training isn't an issue for us, you obviously train your staff—

[58] **Mr Walsh:** Yes.

[59] **Jeff Cuthbert:** But what do you mean? Is it that there isn't a skills gap?

[60] **Mr Walsh:** There isn't a skills gap.

[61] **Jeff Cuthbert:** You're able to address that.

[62] **Mr Walsh:** No, what we do currently is that people go to the maritime colleges. Before they can work on a ship, they have, basically, to comply with the standards of training, certification and watchkeeping. They need a minimum of approximately six certificates in life-saving, first aid, lifeboat evacuation procedures, et cetera. There are a number of requirements that they have. We currently do that through management companies in areas of greater population and catchment, where you've got a bigger target market.

[63] **Jeff Cuthbert:** Right. Okay.

[64] **Mr Davies:** Two things. On the ports, we generally train in-house. That's something we've always done. You touched on the renewable energy sector. I think we've got a good example in Holyhead. Currently, there is a Swedish company—there happened to be a Swedish company; it's nothing to do with Stena group—that works with Bangor University, and through the research from Bangor University, they are now looking to deploy tidal energy kites, based in Holyhead. So, there are links—and I think that's where ports see ourselves as facilitators—between universities and between these companies with R&D. We don't have the expertise and the knowledge, but what we do have is that we can facilitate these developments. So, that, I think, is a key role for the ports: it's to be a facilitator in some of these things.

[65] Going on to training, training in ports not an issue. I wear two hats: on the ferry side, we employ UK seafarers. We're the only ferry operator on the Irish sea that does that. So, we have 400 local employees, and we generally train those in-house. Then, on the officer side, as part of our parent group, we do a lot of training. So, training is a big cost to us, but we see it as an investment for the future, so to speak. But, generally within the maritime industry, there

is a shortage of UK seafarers. There always has been, and I think Jim has seen some of the effects of a shortage of skilled pilots and so forth. It's something that we deal with in-house, but it's very difficult to retain because it's a global market in which we're competing for these skills.

11:00

[66] **Jeff Cuthbert:** Finally, on engagement with local authorities, city regions and those sorts of developments, are there links now? Do you have good co-operation with relevant local authorities, for example?

[67] **Mr O'Toole:** We have, in Mostyn, in Flintshire. We certainly do, and they have a very good Flintshire business week, where they showcase most of the industry. We participate in that quite regularly. They are very good at keeping in touch, in fairness to them. I can't say the same about the Welsh Government, but—

[68] **Jeff Cuthbert:** Well, you just have. [*Laughter.*]

[69] **William Graham:** Rhun.

[70] **Rhun ap Iorwerth:** Just to pick up on a point that you made, Mr Walsh, you say that where you have shortages of skills, what you tend to do is look elsewhere to bring people in, which is worrying because, obviously, we prefer to see the local workforce being trained up. Ports can be an economic driver in many ways in terms of bringing taxation in, in terms of being hubs of economic growth, but also as a local employer. If you were able to identify a local workforce that was ready to be trained up, would you consider going back to that form of employing, rather than going abroad in many cases, or to larger urban areas to find staff?

[71] **Mr Walsh:** To answer that question for you, I would need a very long time, so I'll try and give you the abbreviated version of it. I don't mean that in a rude way. As a ferry company, we've been in business since 1860-something, so we've been around a long time. Traditionally, we employed Irish seafarers, and they were heavily unionised, and we were semi-state-owned by the Irish Government back in the 1970s and 1980s. As a result of that, because they didn't have cheap air fares, it was a question of keeping the ferries going at any cost, because it was the only way that Irish and UK people could travel backwards and forwards. So, it was cheque-book management where we bought our way out of trouble. That created a huge problem for us over a period of time, to the extent where it was going to have a significant impact on the long-term future of the company.

[72] So, in 2005, we outsourced the crewing of the ships. We own the ships and we employ a management company to operate the ships for us, and have done since 2005. We've done that quite successfully and we have a strong future, going forward, but it was necessary to do that to overcome very serious union difficulties. As a result of that, because we're employing a management company to operate the ships, they are currently responsible for the recruitment, so we don't directly do that.

[73] If there was a facility, locally, through Coleg Menai or whatever, where they were able to provide the necessary training for STCW, they could compete equally along with any other operator to provide that training. Where we do have an issue is where the training certificates that are required need renewing when a crew member is on-board. If there is a facility locally, it could certainly be used to renew certificates as well as to issue new certificates to new applicants. So, there's potential there, but it depends on the level of support for that, because Irish Ferries' business alone wouldn't be a key driver to establish those courses locally

[74] **Rhun ap Iorwerth:** And very briefly, I understand that you outsource the staffing of your ships, but do you set in any way an ethical threshold that you would like your management company to meet in terms of where you can employ locally, be it locally in Dublin or locally in Holyhead?

[75] **Mr Walsh:** We employ a mixture of people. We employ a lot of eastern European staff, but we also employ people from western Europe—Scottish, Irish, Welsh, English. If people have the right skill sets and apply for jobs, then certainly we'll take them on; that's not an issue for us.

[76] **William Graham:** Why do you think the Welsh Government, then, doesn't engage?

[77] **Mr O'Toole:** My personal experience, particularly here in north Wales, is that there is that gap, shall we say. For instance, coming back to the renewable energy sector, it has been really the driver of our business for the past 12 years, but we get very little correspondence or communication from the Welsh Government, despite them having people responsible solely for renewable energy, or even an energy department. A classic example is Wylfa. If I want to try and find somebody who I know has responsibility solely for Wylfa, it's almost impossible to find them. It stems from, I have to say, the north Wales office.

[78] **William Graham:** Interesting. Thank you very much. Joyce.

[79] **Joyce Watson:** I'm going to talk about hinterland connectivity and how that assists your businesses, or doesn't. So, I want to know, in your opinion, how far the current road and rail networks provide effective links to ports.

[80] **Mr Don:** Most ports, obviously, have been at the hearts of their cities or towns for hundreds of years, and those links have grown up and I don't think any port could exist if it didn't have links. We, as the port of Milford Haven, are dependent on not only roads and railways, but also pipeline and electricity grid links, and I think it's always important to remember that that is a very important part of the infrastructure. I think that good links are critical. In terms of the time to get to business in this just-in-time world, both for cargoes and, indeed, for employees and businesses based in Pembroke seeking contracts further afield in the Swansea region and going out to get work, those links are very important. I don't think the roads in Pembrokeshire are massively congested at this point in time, but links are important. I think the one point I would just add to that is that, when it comes to any development proposal in a port, the current structure and approach to seeking to impose section 106 obligations in terms of the improvement of road networks at the expense of a port is a policy that is just going to completely discourage investment. I think the Government needs to invest in the road and rail network. I think it needs to ask ports, 'What do you need to be more successful as a business and attract investment?' and to set about delivering that.

[81] **William Graham:** Paddy.

[82] **Mr Walsh:** Just on the passenger side first, in relation to transport, the train transport has largely dwindled in terms of access to ports—we don't currently have train connections to our ferry services in Pembroke Dock. We have very good train service connections from London all the way up to Holyhead. They're excellent connections, and foot passengers use them, but as a percentage of the travelling public, the market, rail passengers have been in decline for some years. People prefer to have some degree of autonomy and take their own car, and they're masters of their own destiny when they get off. Not only that, we're feeding through Pembroke into Rosslare into another semi-rural area, so transport links aren't great there, either. So, that doesn't encourage transport by train. In terms of freight by train, that, unfortunately, isn't something that connects to roll-on, roll-off ports, and I can't see them connecting to roll-on, roll-off ports in Wales for the foreseeable future. Again, I submitted

this in evidence to the Enterprise and Business Committee—so I'm conscious of repeating myself—about 12 months ago, or 18 months ago, but the roll-on, roll-off freight that we have currently doesn't lend itself to transfer onto trains. That's done on what we call piggy-back trains from Scotland, right the way down to the south coast of England, because the train networks allow those connections. For us to make connections from Holyhead, or from Pembroke Dock, to the west coast main line would require many tens of millions to alter train platforms, railway stations et cetera. So it requires significant investment, and I don't think the money's there to make that investment, because there's a question mark on the rate of return in terms of the business users. If you put roll-on, roll-off vehicles onto freight trains—if you were able to do that and spend the money on making the connections—unless the infrastructure was there at rail depots throughout the UK, as it is in other ports of Europe, the trailer would go into a depot and be lost for a period of time, for want of a better expression, whereas if it was going by road, it could be down at the south-coast cross-channel port in a shorter space of time.

[83] **William Graham:** If that investment was made, is there sufficient demand to justify it?

[84] **Mr Walsh:** It would have to be publicly fully researched, because the freight market would see rail freight, potentially, as a threat to business, because obviously their drivers wouldn't be employed. There would just be shunters at depots. It's worked quite successfully through the rail freight consortium, as I say, from Scotland down to the south coast. There are major hauliers that use that, and then they link in on the channel tunnel, and they go through on to Europe, and that's quite an expedient way of moving cargo. But we don't have the links, and I think that, going back to 1994/5, which was when Stena and Irish Ferries were both involved with the rail freight consortium, you were talking of many tens of millions just to connect Holyhead. I think, off the top of my head, there was a figure of £140 million to connect Holyhead to the west coast main line.

[85] **William Graham:** But I'm right in thinking that a lot of the European countries have actually invested heavily in that, and it seems to be quite successful?

[86] **Mr Walsh:** Yes, it has been successful in some parts of Europe, certainly. The difficulty we've got, as we were saying before, is about the road links and the road networks needing upgrading to TEN-T status. The rail links are so far behind that that it doesn't bear thinking about, really, in terms of the level of investment required.

[87] **Rhun ap Iorwerth:** And very briefly, in terms of the competition between Holyhead and Liverpool, and the fact that Liverpool is a core freight port and Holyhead is only comprehensive, does that make it even less likely that that investment will be made? Because Liverpool surely will accelerate with the help of its status as a core port.

[88] **Mr Walsh:** The difficulty that Liverpool's got by comparison is the crossing time. Even if you're on a river berth in Liverpool you're still talking about six hours, whereas Holyhead to Dublin, you can do it in three and a half hours. The fuel costs are significant. On our Pembroke-Rosslare run we burn about 12.5 tonnes a trip, so we're burning 50 tonnes of heavy fuel oil a day, and on the Ulysses, which is a bigger ship, from Holyhead, we're burning about 14 tonnes of fuel on a crossing, even on a shorter crossing, because it's a bigger ship with greater capacity. So, the short-sea aspect of Holyhead being that much further out into the Irish sea gives it a huge advantage. In my report, I mention fuel costs. We've seen a significant decrease in the sulphur content of fuel in the English channel and the North sea because of International Maritime Organization legislation from January this year that hasn't affected the Irish sea, but could potentially affect the Irish sea from 2020, when there's an EU fuel restriction coming in. We currently operate on about 1.5 per cent sulphur content; it will be going down to 0.5 per cent. So, our fuel costs will go up significantly, and so will those of

ferry operators from Liverpool. So, they'll be on a longer crossing with significantly higher fuel costs.

[89] **Rhun ap Iorwerth:** So, you would agree with what I would say—and, as the local Member, I would, wouldn't I?—and the committee agrees, that this highlights the error in that TEN-T map of having Liverpool as the core Irish sea freight port, rather than Holyhead?

[90] **Mr Walsh:** It's been done on population catchment, I think, because it's at the end of that major arterial network of the M62 and the M6. So, people who don't know the history of the industry or the current practices in the industry would see that as a focal point. I can quite see why it's been done, yet in my view, it's a mistake. Holyhead has got a great future as a roll-on, roll-off freight port. Thank you.

[91] **Mr Davies:** I'd just like to make one comment about the A55. I would say it's 90 per cent completed; the last 500 yd is a big gap. I think that's quite key, and we mustn't forget that. Also, I think we need some forward thinking about the crossing over the Menai. We get winter times when that bridge is closed and it causes huge disruption. So, forward thinking on that crossing is vital, I think.

[92] **Rhun ap Iorwerth:** And on that last 500 yd, I think we're almost there, aren't we?

[93] **Mr Davies:** We seem to be back in good dialogue now, yes.

[94] **Rhun ap Iorwerth:** And, importantly, it's good to hear you making the case for the other crossing across the Menai, because lots of people still wonder why go to that expense when we have only a 10 or 15-minute queue. It's not about that; it's about resilience, isn't it?

[95] **Mr Davies:** Yes, absolutely.

[96] **Mr Don:** I was going to add that I felt that conversation was getting a little roll-on, roll-off dominated. [*Laughter.*] The point about Liverpool particularly is that it is a vastly diverse port with a huge container terminal and vast ranges of other types of cargoes that go through it, which need to get product to and from inland manufacturing locations. So, I guess it's quite a judgment about TEN-T designations. I just keep coming back to the point that I think investment in roads needs to drive lots of different parts of the economy—it can't just be focused on one particular sector—and, where you have an opportunity to put in a road or a road improvement that serves many parts of the economy, it actually drives growth. That's what I would look for—I would look for where you've got a mixture of uses, a mixture of opportunities, and to push down that path or that road.

[97] **Joyce Watson:** Do you think, on that note, that the current Welsh Government policy does address the needs of ports—and you are talking about ports—here, particularly? If it doesn't, what are the shortcomings, if there are any, and what are, in your view, some of the solutions?

[98] **Mr Don:** Just from the Welsh ports point of view, I think that there is a constant positive dialogue about the role that ports play in the economy and their ability to drive economic growth. When I think about big cities like Liverpool, I think the city came into existence because of the port, rather than the port because of the city. That's a personal prejudice of mine. But I think there is a positive dialogue. What there is not, I think, as far as the Welsh ports group is concerned, is a clear, publicly stated policy, like we have for UK ports policy.

11:15

[99] We would like to see that, and we would like to be involved in helping to put that together and we would like that to be a fairly good reflection of the broader UK policy, because we're not just competing as ports with the next port down the road, we are competing with UK ports and European ports, and we need a level playing field. So, the principles of that are that policy should be about saying ports are businesses that are essentially investing private money in the development of businesses on a market-led basis, and I think that is a very good starting point for the development of a ports policy.

[100] **Joyce Watson:** And in terms of timing, and possible devolution, obviously the timing would be right, now.

[101] **Mr Don:** Yes, I think it would be right. I've been saying it's been right for a long period of time. We'd like to see that engagement and get on with it.

[102] **Mr Davies:** I'd just like to back up what Alec said. I fully agree with Alec, as I said, but in addition, not only are we competing with other ports but, for me, I'm competing for investment within other European ports because we have a European base. So, what we want is consistency and transparency, because as Jim touched on, these projects quite often take two or three years to deliver, so what we want is a clear pathway forward so that when we take these investments in front of our boards, we get this forward view that's needed for these big investments.

[103] **Joyce Watson:** So, what are the blocks, then? You've talked about it, and Jim has experienced it, it seems to me. What prevents or what can we unblock from the system that is taking such time, if we were going to make a recommendation? Perhaps Jim has the—

[104] **Mr O'Toole:** Yes, it is a bit of a hobby-horse of mine, I'm afraid, but that's only from experience. As I said at the outset, we're being strangled by regulation. If somebody was to actually put a map of Wales—to keep it within Wales—and say, 'How much of the country and how much of the adjoining coastline and offshore has a conservation designation of some sort or another?', you'd be absolutely amazed. And just to give you a statistic, in the UK, 70 per cent of our ports are on estuaries. Invariably, those estuaries will have one or several conservation designations. And it's not so much actually the designations themselves, as I said in my written evidence—it's the way they're interpreted. In Wales it seems to be interpreted much, much more stringently than even in the rest of the UK. It's the old gold-plating argument that we have, and I would add the platinum-plating for good measure that we give it in Wales, and that's the problem. It's the way these regulations are interpreted. For instance, I've got an application that's been in now for two and a half years for a development. If the Rhiannon offshore windfarm had come off, we would have lost that because we're still waiting on our consent.

[105] **Joyce Watson:** Okay. So, we have asked what we can do. Do you want to tell us what you can do, because it's got to be two-way? And have you recognised anything where you could—as ports, that is—help yourselves to improve connections and, perhaps, in terms of supporting? We've talked a little bit about intermodal transfers, but are there any other things, because I know Alec in Milford Haven might not be so keen to talk about that? Are there issues and positive engagement that you can bring to the table and support us to support you, which I suppose is what I'm asking?

[106] **Mr Walsh:** I think from Irish Ferries' perspective, because we're an Irish company we can help on the tourism connections. We have the right contacts and we can encourage better communications to look at what I was saying before—to have journeys including time spent in Wales, instead of using Wales as a transit point. I think that's something certainly we can offer because we have the contacts and the expertise in Ireland, and we'd be glad to help to facilitate that.

[107] In terms of other help, we're bringing additional business to the port—incremental revenue—by making a cost-benefit analysis on what's the right thing to do, and we do that independently, really. We've done that recently with the introduction of the Epsilon onto Holyhead, which has increased employment in Holyhead, albeit marginally directly with Irish Ferries, but Stena Line are the port authority and they provide the stevedoring facilities. So, there's incremental employment as a result of Irish Ferries increasing the number of ships on the route. That also brings an element of additional business through in terms of spend in local shops, spend at petrol stations et cetera, because the freight market has increased to the extent that, obviously, there's now a truck stop in Holyhead as well where a private investor or a team of investors have seen fit to invest money in a truck stop facility as well. But, in terms of bringing a ferry to the route, that's something that we would independently, but if the business continues to grow we will continue to invest to try and attract additional business.

[108] **William Graham:** Thank you. Rhun.

[109] **Rhun ap Iorwerth:** I had a series of questions on diversification, but I think we've touched a lot on some of the issues already, so maybe I'll ask you each to comment in turn. You have specialisms as ports and operators, and general freight and railroad freight and passengers and petrochemicals and renewables, but how easy is it for you to diversify into other sectors, and how driven are you to diversify into other sectors, or do you, in general, just try to develop your current specialisms?

[110] **Mr O'Toole:** Shall I start? I've already answered some of those questions, but, in effect, let me give you an example of the question of what can the ports do for Wales, as it were, and coming back to how can we diversify. We've actually had the experience. As I mentioned earlier, when we first started in the offshore renewables, it was in its infancy; it's now maturing. We took on people for basic labour jobs; we're now into semi mid-management jobs. We took a local labour force; we trained them on site and we now have a subsidiary company called Mostech Energy Services Ltd, where we supply turbine technicians, not just for the Irish sea, but we work throughout Europe—Ireland, Scotland, and indeed in Poland, believe it or not. So, that's the way we've developed our skills and most of the people that we employ are local Flintshire people—Flintshire/Denbighshire people. So, we've taken the basic skills, developed them, and now we're exporting them. So, whilst it's not just—I've got a different view about the ports, I'm afraid, than some of my colleagues, because we're so narrowly focused. To give you an example, 90 per cent of the traffic that we do comes in and out of the port by sea. That's why I'm not bothered about roads, frankly; I'm being perfectly honest. But we are unusual in the ports industry in that respect.

[111] **Rhun ap Iorwerth:** Both Airbus and—

[112] **Mr O'Toole:** In Airbus and offshore renewables, we're in that very fortunate position; as long as our people can get to work and the small deliveries can be made, then we're happy. So, the road network, frankly, is not a big consideration for us. But on the diversification, we've just got an application approved for a small energy-from-waste project, actually on the site. That will then be trialled for a year, and then we'll be building a much larger energy-from-waste scheme, utilising the port infrastructure. We have the land and we obviously have the cargo handling expertise and facilities. So, marrying those together, that's how we're diversifying.

[113] **Mr Don:** So, to answer both of those questions, I think that ports are market facing. We find our opportunities by, essentially, talking to potential customers and building up enough interest from a group of customers to say, 'We're going to start this activity in the port and we're satisfied that we've got customers for it'. I think that's a very important contribution that ports make, just as on the other side you hope that when you then have those

customers and want to do a development, the Welsh Government, and the local council, and all of these other bodies are right behind it saying, 'How quickly can I give you a consent for it?' The environmental issues that Jim mentions are absolutely critical. Ports do need to be designated as port zones. The system is not balanced at the moment and it needs to be more balanced to enable ports to be able to get on with development, and when they've done a development, know that the consent is very, very robust, which is not the case at the moment.

[114] And in terms of diversification, by its nature, the word 'diversification' means going into new markets and it's never easy to do, and it brings risks, but what we need to have is entrepreneurial management, who can engage with those markets and develop the relationships and bring the business to the port concerned. So, it's not easy, but it is very much what we are seeking to do. And, in the case of Milford Haven, we are an oil port. Like Jim, a lot of our cargo goes in and out by sea—crude in, finished products out. But we're also in ferries, we're also in fishing, we're also in property, we're also in tourism, we're also in marinas. And those parts of the business are the ones that we are seeking to grow and develop, and I'm sure that there is a policy framework that could be put in place to help support that.

[115] **Rhun ap Iorwerth:** Thanks.

[116] **Mr Walsh:** I'm afraid our diversification is limited to ferry and ship operations primarily, but Irish Ferries are part of the Irish Continental Group, which is a publicly floated company on the Irish stock exchange. So, in addition to operating ferries, we also operate container ships, from Dublin and Belfast to other parts of Europe. We also act as stevedores and provide terminal facilities, and we're also involved in ship chartering—purchasing the ships and chartering them out to third parties. An example of that: we've got one ship on charter down in New Zealand at the moment, and that brings a good rate of return. That's really the big centre of our diversification at the moment.

[117] **Rhun ap Iorwerth:** And they'd be Irish based, rather than based in Wales anyway, I guess.

[118] **Mr Walsh:** Primarily. But, you know, we've got the long-term association. We've been in Pembroke since 1979, in one shape or another, and hope to continue to be there for a long time to come, and in Holyhead since 1982. So, we've got a long association, and an intention to make long-term commitments, going forward, to stay where we are.

[119] **Mr Davies:** From Stena Line, of course, we're a ferry port, and I think we've been very much rooted as a ferry port, historically. I think the attitude has changed, from my board's point of view, over the last few years; we're probably starting to understand the value of ports. And that first step was creating a master plan for Holyhead port, because we're only using part of the asset, and we kind of recognise that. Obviously, still our core business is roll-on, roll-off, but with the advent of the master plan, we are starting to broaden our horizon, so to speak. So, with things like offshore renewables, no, we will not drive those, but we see ourselves as a facilitator. I think the mindset has changed, at least in Holyhead port, that we have land and we need to find better uses for that land.

[120] **Rhun ap Iorwerth:** Just to stop you for a second, you say you don't see yourselves as a driver, but a facilitator, but is there a mix of the two? Are you a sort of proactive facilitator? Do you go out of your way to persuade people, 'Listen, we can play a key part, and these are the assets that we have, these are the facilities that we have'?

[121] **Mr Davies:** Yes, very much so, and it's trying to get those business cases. You have to have a sound business case to take some of those points forward. Cruise has been an element in Holyhead, and we've talked a lot about cruise. I think the problem we have with



cruise is, from a port's point of view, the revenue generated is not great, but we understand the benefit for the wider community—absolutely—and that's quite evident. But, from a pure business case, trying to make sound investments purely on the port income is quite difficult, but using the assets we already have, can we take those further—I think there's leverage there, absolutely.

[122] **Rhun ap Iorwerth:** As it happens, I raised an issue in the Assembly this week on the possible development of a dedicated cruise facility. It would need an element of public funding, it would need, certainly, political backing, and it seems that it is there. That's something that you in Stena would be keen to look at.

[123] **Mr Davies:** Yes, absolutely. I know there's some frustration with some of the problems we've had in Holyhead with cruise, but cruise is growing. There's an underlying growing market, we've worked a lot with the Welsh Government, with their support, to grow that. Likewise, in south Wales, in Fishguard, there is an element of cruise, but it's very small, using the existing facilities that we have.

[124] **Rhun ap Iorwerth:** To what extent are the difficulties that have been experienced with the cruise industry recently due to the fact that there's a clash between two different types of diversification? We have a jetty that was an industrial jetty, which did a good job in bringing bauxite into Anglesey Aluminium and will now, hopefully, bring materials into a new biomass plant, but you're trying also to diversify at the same time into the cruise market. Is it sometimes problematic when you try to diversify in two different directions, using the same asset?

[125] **Mr Davies:** Very much so. You then have a conflict of interest that, sometimes, these things just don't sit next to each other. But we've also looked at other areas of the ports. Unfortunately, the third-phase renewables didn't come off. The master plan is a good starting point for Holyhead port, which we as a company now need to take forward, and we are proactive, but we're not quite there yet.

11.30

[126] **William Graham:** Slightly contrary view, is it?

[127] **Mr Walsh:** Please. Just to pick up on the issue on cruise ships, I have to state our position is neutral—that we don't own or operate any cruise ships. But, obviously, our experience, we've been involved in a number of ports, including Dublin, where cruise ships operate. I think one of the things is that everybody sees cruise ships as attractive, because of what they produce, around the world, in terms of revenue. But I think that what Wales needs to do is to drill down to what's the real benefit to Wales, apart from the pictures in the paper of cruise ships alongside in the port. What's the real spend per head, and what's the cost of bringing them in?

[128] I've got some information through quite late, which I wasn't able to submit in advance, but I'll certainly e-mail it on to Rachel. I have a report from CLIA Europe, which is the Cruise Lines International Association. It actually gives you an economic report on the benefits of cruise to the UK as a whole and it's broken down into port sectors, et cetera. So, I think it would be quite helpful for the committee to read that. Also, we're part of the UK Chamber of Shipping, and they've recently submitted a report to the UK Government on cruise traffic, what are the obstacles and what are the potentials. Whilst that's the UK as a total, I think that report would be helpful for you to consider.

[129] **William Graham:** Most certainly, thank you very much.

[130] **Mr Walsh:** Just an example; in terms of spend per head, which is one of the drivers that people look at, in that report it's shown currently at about £71 per head, which sounds quite exciting when you think that's the revenue you're going to get from them, but what you have to take out of that is that, say it was going alongside in Fishguard, for argument's sake, and they'd got organised charters up to St David's by coach, those trips are sold on board, so the operator of the cruise ship takes a huge slice out of that and he pays for the coaches and the driver and perhaps pays entrance fees. So, the actual real benefit to the local economy is perhaps relatively small. I don't have in-depth knowledge of that industry, but I'm just flagging it up to say that, if we're looking at further investment in Wales, it should be done in a measured way.

[131] If you take Liverpool as an example that we've mentioned before, they've invested in a cruise terminal right at the pier head, which can take ships up to 350m long, 10m draught, which are huge ships. What they're currently applying for is a turnaround facility. At the moment, in Wales, these are all ports of call, which means the port gets some revenue from the port dues and you get the incremental revenue from visits to local facilities. But where a lot of ports make their money from is if the ship comes in to be refitted out for the next cruise, so you're supplying catering facilities, you're doing repairs to equipment on board that need doing. There's a huge potential revenue earner for the local community. So, you need an alongside berth and you need adequate facilities to be able to supply that.

[132] **William Graham:** Alec.

[133] **Mr Don:** That cruise terminal in Liverpool was actually built by Liverpool City Council. It was essentially funded by them using public grant money. When they started to apply to use it as a turnaround facility, as Paddy described, there was a huge outcry from other ports, who basically saw it as a massive distortion of the market. The original grant was just about visits—it was incremental or additive, whatever the terminology is—and using public money to create that sort of facility caused a problem for Tyne, Southampton and Dover. There was a big fuss about it. The ability to do that depends a bit on the links for passengers who are joining that cruise ship in terms of airports, other routes and so on that are serving it. The point I also wanted to make was that what ports do is try and find multiple uses for single berth structures. When you've got a schedule of ships coming in, being able to manage those ships in vacant slots from another service that's more or less using the same berth is where port productivity comes from. When a customer who wants to do a certain thing in a port recognises he needs the port facilities and the access to the water, and has an idea about how that happens, it's the port's role with its engineers to say, 'Well, don't do it quite that way, do it this way, and this way we can actually do it more competitively for you'. That is where ports add value and it's very important that they continue to do that as that is their bread and butter.

[134] **William Graham:** Jeff on ferry markets.

[135] **Jeff Cuthbert:** I'll start off by asking about—I'll say this very carefully—short sea shipping. Could you start by telling us whether any work that you've instigated—or, indeed, others—has been undertaken to assess whether opportunities exist to develop short sea shipping services to and from Welsh ports? We know that the Minister has written to you asking if you're undertaking any work.

[136] **Mr Don:** Yes. The Welsh ports group is seeking to gather some data from amongst its ports in order to be able to answer that particular question. I think it would not be true to say that it doesn't already happen—it does. If I take an example from our refineries, crude comes in and the finished product is then transmitted by the pipelines that go inland, but most of it actually goes out by product tankers to other ports around the UK, to Ireland and to other locations. So, it does happen and I'm sure that is true for a lot of the other activities that go on

in ports. I think that it happens where, in market terms, it's sensible for it to happen and in terms of seeking to artificially stimulate that to happen to a greater extent, where product flows actually find—. For example, in ferries, the trucks are going inland and, because they're a single truck, they can readily find a return cargo from a slightly different location. That's the sort of opportunity that arises on the road network, which is quite hard to replicate in shipping terms, in terms of getting enough utilisation and the product moving fast enough for the market. So, it happens; it happens to the extent that the market believes that there's an advantage for it to happen. Can it be made to happen more? Possibly—you know, let's find out.

[137] **Mr O'Toole:** We, actually, were approached about eight years ago for a service to Santander, as I recall, for roll-on, roll-off traffic to avoid weekend travelling on the continental roads. In the event, that didn't come off, because there's just not sufficient traffic when people can go overland, down to the south-coast ports, nip across and be there in a lot less time. My understanding is—. The service actually started from Liverpool about five years ago; it lasted two months and then folded. There's simply not enough traffic that'll support that service. So, I would see certainly north Wales as being out of the picture for it; possibly in south Wales, because you've got a shorter hop, as it were, maybe to a northern French port. It's one of those that keeps coming around every five years, but it's never actually happened. Personally, I doubt that it ever will, certainly as far as roll-on, roll-off traffic. As Alec says, if you're doing product, yes, I can see that being very beneficial, but, for general cargo, no.

[138] **Jeff Cuthbert:** So, as you say, for processing material, chemicals or whatever, it could well be a factor for the future. Does your research so far indicate that there could be a future?

[139] **Mr Don:** Just thinking about the UK as a whole, there is quite a lot of break bulk activity that, I think, happens in Liverpool. This is a very long-established industry of having a big ship come in, breaking its cargo it into small parcels and sending it up the Manchester ship canal or around the coast to other locations. I just think that the transport market, practically its sole activity and mission, is to find cheaper, better and more effective ways to move product around, and, if they haven't found it by now, you know, it's not because they haven't been looking for opportunities. So, that's my view, and I think that what will drive it will be things like the shift in fuel prices on ships with low sulphur; it'll be things like the cost of taxation and other things on road transport. Those sorts of things will suddenly lead people to say, 'I could do this a bit cheaper in a different way'. The market will shift for 50p a tonne, you know—it is a very, very competitive environment.

[140] **Jeff Cuthbert:** As little as that?

[141] **Mr Don:** Yes.

[142] **William Graham:** Paddy.

[143] **Mr Walsh:** Just in terms of roll-on, roll-off ships and opportunities, I've mentioned in my report about the emission control areas that I touched on briefly. There is an opportunity for the Irish sea to get involved in other routes, which, potentially, could have huge fuel savings in comparison to ships running up through the channel. If you take a notional line, it's actually east of 5 degrees west, so, if you come from Falmouth directly south onto the north French coastline, that's the line at which the emission control area ends, so all ships to the west of that—sorry, to the east of that—using the English channel and the North sea have to run on 0.1 per cent sulphur content, which you couldn't even run your car on, and there are quite significant costs associated with that. On the Irish sea, it's currently 1.5 per cent, and will only go down to 0.5 per cent in 2020, so there's an opportunity now, between 2015 and 2020, but that opportunity requires dialogue with potential operators of lift-

on, lift-off or roll-on, roll-off services. Irish Ferries certainly don't intend to expand any further currently, but, picking up on something that Jim said in terms of routes through to the continent, what we actually do with the Epsilon, which we operate from Dublin-Holyhead, is that it does Dublin-Holyhead five days a week, and, at the weekend, we do Dublin-Cherbourg, Cherbourg-Dublin. That's been very popular of late, particularly with the problems in Calais recently; everybody wants to go on that to avoid Calais, so that is quite popular. So, there's an opportunity there, but it really requires somebody with knowledge of the industry outside—I'm not recommending anybody sat at the table, myself included—to perhaps assist the Welsh Government in looking at opportunities there, because it's a short-term opportunity.

[144] **William Graham:** Right, okay. I want to move on just to our last question, if I may. Tell the committee a bit about motorways of the sea, particularly as the European Commission identified this as a priority. Any thoughts?

[145] **Mr Don:** I think, apocryphally, where routes have started between two ports, supported by the motorways of the sea programme, they've lasted for as long as the funding has been around and then they tend to sort of disappear again. The hope is always that you stimulate into existence a route that is going to be successful in the market. I think, as Jim said, if the freight volumes aren't dense enough, both to and fro, you haven't really got a viable route, and that's the issue. I've always thought the motorways of the sea constituted a great opportunity, but you've still got to get market operators prepared to take the risk of starting a service to exploit it, and that's really the challenge.

[146] **Mr O'Toole:** I think it's true to say that ship operators are a canny lot, and any opportunity that even begins to rear its head, they're in there looking at it. And there are some brave souls, like those in Liverpool, who actually take a punt. But, if there was real commercial benefit to be had, they would be having it.

[147] **William Graham:** Okay. That's good.

[148] **Mr Davies:** I'd just say that we've looked at it as a company and, as Alec said, every example we can see fails once the subsidy stops, and I think it's going to get harder because, looking at the tonnage market for these vessels, the tonnage market now is going up. The price of them is going up. If somebody couldn't make the case 12 months ago, they won't be making the case in two years' time. So, a) it's the tonnage costs, and it's getting these balances of flows. You need a two-way flow. We looked at it five or six years ago, and we couldn't get a balance of flow of traffic, and therefore the economics just don't stack up.

[149] **William Graham:** Right, well, on that note, thank you very much for your attendance today. Your evidence has been very much appreciated by the committee. Thank you very much.

[150] **Mr O'Toole:** Apologies for being late; I was in the wrong building.

[151] **William Graham:** We fully sympathise today, I think.

[152] **Mr Don:** Chairman, just on behalf of all of us, many thanks indeed. It's been a real pleasure.

[153] **William Graham:** Shall we recess for five minutes?

*Gohiriwyd y cyfarfod rhwng 11:44 a 11:50.  
The meeting adjourned between 11:44 and 11:50.*

**Ymchwiliad i Botensial yr Economi Forol yng Nghymru**  
**Inquiry into the Potential of the Maritime Economy in Wales**

[154] **William Graham:** We'll go on to item 3, our inquiry into the potential of the maritime economy. We welcome Professor Jago and Ieuan Wyn Jones. On behalf of the committee, may I thank you for your attendance today? I ask you, if you wouldn't mind, to give your name and title for the record.

[155] **Professor Jago:** So, I'm Professor Colin Jago. I'm dean of the College of Natural Sciences at Bangor University.

[156] **William Graham:** Thank you.

[157] **Mr Jones:** Ieuan Wyn Jones, **Mr Jones:** Ieuan Wyn Jones, the executive cyfarwyddwr gweithredol Parc director of Menai Science Park. Gwyddoniaeth Menai.

[158] **William Graham:** Splendid. Thank you very much. Thank you for your papers. We'll go to the first question, which is from Rhun.

[159] **Rhun ap Iorwerth:** Bore da i'r ddau ohonoch. Os gwnaf i ofyn i chi yn gyntaf, Ieuan Wyn Jones—rwy'n gwybod sbel, digwydd bod, am beth sy'n digwydd efo'r parc gwyddoniaeth, ond, os yw'n bosib, a gaf ofyn i chi roi cyflwyniad bach ar y cefndir a sut yr ydym wedi dod at y pwynt presennol efo'r parc gwyddoniaeth?

**Rhun ap Iorwerth:** Good morning to both of you. If I ask you first, Ieuan Wyn Jones—I know quite a bit, as it happens, about what is going on in the science park, but could you give a brief introduction to the background and how we've reached the current point with the science park?

[160] **Mr Jones:** Diolch yn fawr iawn, yn y lle cyntaf, am y gwahoddiad i ddod yma i roi tystiolaeth. A gaf i ymddiheuro na chefais gyfle i anfon papur ysgrifenedig atoch? Mi daeth y cais pan oeddwn i ffwrdd yn cerdded llwybr pererinion gogledd Cymru. Felly, nid oeddwn i mewn sefyllfa i anfon papur, ond rwy'n gobeithio y byddwch chi yn cael y dystiolaeth lafar yn ddigonol ar eich cyfer chi. Os bydd yna gwestiynau wedyn, rwy'n ddigon hapus i geisio eu hateb.

**Mr Jones:** Thank you very much, in the first instance, for the invitation to come here to give evidence. May I apologise that I did not have an opportunity to send you a written paper? The request came when I was away walking the north Wales pilgrim's way. So, I've not been able to provide a paper, but I hope that you will find the oral evidence sufficient. If there are further questions later, I'm quite happy to try to answer them.

[161] Wel, mae hanes y parc gwyddoniaeth yn un difyr, oherwydd fe gyhoeddodd y Llywodraeth yn ôl ym mis Tachwedd 2012 bod yna £10 miliwn yn cael ei neilltuo i sefydlu parc gwyddoniaeth ym Mangor. Ac yn dilyn hynny, fe sefydlwyd cwmni ym mherchnogaeth lwyr y brifysgol, ym Mehefin 2013 i symud y gwaith yna yn ei flaen. Yna, fe'm penodwyd i fel staff cyntaf y parc, ddwy flynedd yn union yn ôl i ddoe, ac ers hynny, rydym ni wedi bod yn datblygu'r cynllun. Rydym ni wedi penderfynu ar safle'r parc bellach, yn y Gaerwen ar Ynys Môn, safle o

Well, the history of the science park is an interesting one, because the Government announced in November 2012 that £10 million was going to be invested in the science park in Bangor. And following that, a company was established under the full ownership of the university in June 2013 to move forward with that work. Then, I was appointed as the first member of staff two years ago yesterday, and since then, we've been developing this scheme. We've decided on the site of the park on Anglesey, in Gaerwen on Anglesey, a site of some 20

ryw 20 acer, ac rydym ni wedi cael caniatâd amlinellol i'r safle. Yn ychwanegol i'r £10 miliwn, mae angen £10 miliwn arall, ac rydym ni yn y broses o wneud cais i'r gronfa strwythurol am y £10 miliwn yna. Rydym ni wedi llwyddo yn y cam cyntaf o'r cais i Swyddfa Cyllid Ewropeaidd Cymru, ac rydym ni rŵan yn anfon y cynllun busnes i mewn; mae'r rhan gyntaf wedi mynd i mewn iddyn nhw o fewn y pythefnos diwethaf, ac rydym ni'n gobeithio y bydd yna ateb ar y cais hwnnw ddiwedd yr haf neu ddechrau'r hydref. Bydd hynny'n caniatáu inni wedyn fod ar y safle cyn diwedd y flwyddyn, ac rydym ni'n gobeithio y bydd yr adeilad cyntaf yn barod ymhen rhyw ddwy flynedd. Y bwriad ydy ei fod o'n gartref, wedyn, i gwmnïau arloesol sy'n seiliedig ar wybodaeth. Wrth gwrs, mae'r teitl yn awgrymu bod eisiau cysylltiad efo gwyddoniaeth, ac wrth gwrs mi fydd yna brosiectau ymchwil gwyddonol ar y safle. Mi rydym ni'n edrych ar dri math o gwmni, sef prosiectau sy'n cael eu naddu allan o'r brifysgol—*spin-outs*; cwmnïau sydd efo cysylltiadau efo'r brifysgol, ond nad ydynt eu hunain wedi cael eu naddu allan o'r brifysgol, sef cwmnïau bach, micro, bychain a chanolig; ac mi rydym ni hefyd, wrth gwrs, yn edrych ar gwmnïau angor—yr *anchor companies*—a fydd yn gyfle, rwy'n meddwl, i gael clystyru o gwmpas y rheini, ac efo'r gadwyn gyflenwi y bydd hynny'n digwydd yn aml iawn. Rydym ni yn gobeithio, felly, y bydd y parc gwyddoniaeth yn gyfle inni symud ymlaen.

[162] Mae yna reswm, gyda llaw, pam yr ydym wedi lleoli ar Ynys Môn, a hynny ydy ein bod ni mewn perthynas, wrth gwrs, efo ynys ynni a'r parth menter ar Ynys Môn sydd hefyd yn gysylltiedig efo ynni. Rydym ni'n gweld bod potensial i ddatblygu'r berthynas efo cwmnïau sydd yn trafod ynni, ac wrth gwrs, mae ynni'r môr, fel yr ydym ni'n mynd i drafod nes ymlaen gobeithio, yn rhan allweddol o'r cynllun.

[163] **Rhun ap Iorwerth:** Rydych chi wedi sôn am yr egwyddorion ac am y mathau o gwmnïau a busnesau y byddech chi'n dymuno eu gweld yn datblygu yno. A allwch chi ein diweddarau ni am gysylltiadau penodol sydd wedi cael eu gwneud, un ai drwy enwi cwmnïau, neu fel arall drwy gadarnhau bod yna'n sicr gleientiaid neu fusnesau sydd yn

acres, and we have received outline permission for that site. In addition to the £10 million, another £10 million will be required, and we are in the process of making an application for the structural fund for that £10 million. We have succeeded in the first step of the application to the Welsh European Funding Office, and we're now sending in a business plan; the first part was submitted in the last fortnight and we hope there will be a response for that application at the end of the summer or the beginning of autumn. That will then allow us to be on site by the end of the year, and we hope that we will be ready to operate within two years. The intention is that it's a home for innovative information-based companies. The title suggests we want a connection with science, and of course there will be scientific research project on the site. We will be looking at three types of company, which are projects that stem from the university—spin-outs; companies with links to the university, but haven't themselves stemmed from the university, so microbusinesses and small and medium-sized companies; and we are looking at those anchor companies, which will be an opportunity, I think, to have some clustering around them, and that will very often happen with the supply chain. We do very much hope, therefore, that the science park will be an opportunity to continue on from that.

There's a reason why we've decided on Anglesey, and that is that we have a relationship, of course, with the energy island and the enterprise zone on Anglesey, which is also related to energy. We see that there's potential to develop a relationship with the companies that are related to energy, and of course, marine energy, as we will hopefully discuss later on, is a crucial part of the plan.

**Rhun ap Iorwerth:** You've talked about the principles and about the kinds of companies and businesses that you'd like to see being developed there. Could you give us an update now about specific links that have been made, either by naming companies, or by confirming that there are clients that are likely to be part of this park?

debygol iawn o fod yn rhan o'r parc?

[164] **Mr Jones:** Mae'n anodd iawn i mi enwi cwmnïau oherwydd nid ydym ni wedi arwyddo cytundebau ffurfiol, ac wrth gwrs mae nifer—. Rydym ni wedi gorfod arwyddo cytundebau cyfrinachedd efo nifer o'r cwmnïau, yn enwedig y cwmnïau angor. Ond mi fedraf i eich sicrhau chi, er enghraifft, bod gennym ni ddau brosiect sydd wedi cael eu naddu allan o'r brifysgol sy'n edrych ar leoli, efo thri photensial arall—dyna ydy'r rhan leiaf, fel y mae'n digwydd, o'n rhaglen ni. Mae yna o gwmpas 10 i 12 o gwmnïau wedyn sydd yn gwmnïau micro, cwmnïau bach, cwmnïau canolig. Mae rhai ohonyn nhw yn dechrau—*start-ups*—a rhai ohonyn nhw yn gwmnïau sydd wedi dechrau ond yn edrych am le i ddatblygu, ac wrth gwrs, nid yw hynny'n rhan o'r system eco ar hyn o bryd, ac rydym ni hefyd yn trafod efo pump o gwmnïau angor, fel y byddai rhywun yn eu disgrifio nhw. Felly, mae rychwant eang o denantiaid yr ydym ni'n trafod efo nhw.

[165] Rhan o'n problem ni, wrth gwrs, ydy nad oes gennym ni adeilad ar hyn o bryd, ac mae hwnnw ddwy flynedd i ffwrdd, ac mae'n anodd iawn cael cwmnïau, yn naturiol, i arwyddo'n sicr i ddod nes eu bod nhw'n gwybod bod yr adeilad ar gael. Ond mae'r trafodaethau, medraf eich sicrhau chi, efo nifer o'r cwmnïau angor yno mewn lle ac rydym ni wedi symud ymlaen yn eithaf pell o ran ein trafodaethau.

[166] **Rhun ap Iorwerth:** Rydych chi wedi crybwyll y ffynonellau o gyllid Ewropeaidd, y cronfeydd strwythurol yr ydych chi'n gobeithio eu tynnu i lawr ar ben y rhai sydd wedi'u sicrhau yn barod. Mae gan y pwyllgor yma ddiddordeb arbennig yn y cysylltiadau y gallech chi fod wedi'u cael efo Banc Buddsoddi Ewrop, gan ein bod ni fel pwyllgor wedi bod yn Lwcsembwrg yn cyfarfod swyddogion o'r banc yn ddiweddar. Pa gysylltiadau sydd wedi bod, a pha sgôp sydd yna i gyllid y banc buddsoddi yn benodol eich helpu chi efo cynllun y parc?

[167] **Mr Jones:** Rydym wedi cael cyfarfodydd efo swyddogion y banc, ym Mrwsel ac yn Lwcsembwrg. Nid oeddem yn edrych am arian cyfalaf i sefydlu'r parc, fel y cyfryw, ond roeddem yn edrych am gyfle,

**Mr Jones:** It's very difficult for me to name companies because we haven't formally signed contracts yet, and of course there are many—. We've had to sign a number of confidentiality agreements with companies, particularly the anchor companies. But I can assure you that we have two projects that are being spun out from the universities looking to locate, and three potential projects—and that's the smallest part, as it happens. There are around 10 to 12 companies, then, that are microcompanies, small companies and medium-sized companies, some of which are start-ups, some of which are companies that have started up but are looking for room to develop, and of course, they're not part of the ecosystem at present, and we're also in discussion with five anchor companies, as one would describe them. So, there's a broad range of tenants that we're in discussions with.

Part of our problem, of course, is that we don't have a building at present, and it's two years until that, and it's difficult to get companies to sign up, naturally, to formally say that they will come until they know the building is available. But the discussions, I can assure you, with a number of the anchor companies are taking place and we have moved forward significantly in our discussions.

**Rhun ap Iorwerth:** You've mentioned the sources of European funding, the structural funds that you're hoping to draw down on top of those that you've secured already. This committee is interested, particularly, in the links that you could have made with the European Investment Bank, given that we've been as a committee to Luxembourg recently, to meet bank officials. What contact has there been, and what scope is there for investment bank finance specifically to help you with the plan for the park?

**Mr Jones:** We've had meetings with officials at the bank, in Brussels and in Luxembourg. We weren't looking for capital funding to set up the park, as such, but we were looking for an opportunity, perhaps, to set up an

efallai, i sefydlu cronfa fuddsoddi. Beth rydym wedi ei sylweddoli, wrth gwrs, efo'r cwmnïau bach yma'n arbennig, yw bod cyfalaf risg yn rhywbeth anodd iawn i gael gafael arno fo. Nid yw banciau yn hapus iawn i fuddsoddi mewn cwmni newydd, yn aml iawn, oherwydd yr elfen o risg. Felly, mae angen cael arian buddsoddi eithaf sylweddol. Buom yn trafod efo'r banc a oedd modd sefydlu cronfa ar gyfer buddsoddi, ond ers hynny, mae pethau wedi symud yn eu blaenau, oherwydd rydym yn ymwybodol bod Cyllid Cymru yn gwneud cais i'r gronfa strwythurol am gronfa a fydd yn ychwanegu at gronfa JEREMIE ar hyn o bryd. Y tebygrwydd wedyn ydy mai o'r gronfa, o'r ffynhonnell honno, y byddwn yn cael rhyw gymaint o gyfalaf risg. Ochr yn ochr â hynny, wrth gwrs, rydym yn edrych ar sefydlu rhwydwaith o angylion busnes a fydd hefyd yn fodlon buddsoddi symiau bach yn llai ynddo fo. Rydym wedi bod yn trafod, ond ar hyn o bryd, nid ydym yn meddwl y bydd yna gronfa risg drwy'r Banc Buddsoddi Ewropeaidd.

investment fund. What we've realised, of course, with these small companies in particular, is that risk capital is very difficult to obtain. Banks aren't happy to invest in a new company, very often, because of the element of risk. So, we need significant investment funds. We've been discussing with the bank whether it would be possible to set up a fund for investment, but since then, things have moved forward, because we're aware that Finance Wales is currently making a bid to the structural funds for a fund that will add to the JEREMIE fund. The likelihood, then, is that it will be from that fund, from that source, that we will have some risk capital. Alongside that, of course, we're looking to set up a network of business angels who would also be willing to invest smaller amounts in that. We've been in discussions, but we don't think at present that there will be a risk fund through the European Investment Bank.

[168] **Rhun ap Iorwerth:** A gaf fi ofyn un cwestiwn i chi? Pa mor bwysig ydy'r parc gwyddoniaeth i Brifysgol Bangor?

**Rhun ap Iorwerth:** May I ask you one question? How important is the science park to Bangor University?

[169] **Professor Jago:** I think the science park offers some great potential to the university. So, for example, when a project that I might talk about later, which is sustainable expansion of the applied coastal and marine sectors project—

[170] **William Graham:** That's our next question.

[171] **Professor Jago:** Okay. When that was being formulated, one of our concerns was where we might spin out companies that we were involved in collaborative projects with. At that time—and I'm talking about five or six years ago—there was a prospect of developing something on the outskirts of Menai Bridge on Anglesey. Anglesey council were very keen, but that didn't actually materialise. But, the science park now steps into that role and provides potential for companies that we are working with, particularly companies that presently aren't in Wales, to relocate.

12:00

[172] So, for example, there are two companies that we are working a lot with in SEACAMS, Minesto and Tidal Lagoon Power. Minesto is a Swedish company, and they are operating in north Wales, and once they start developing their system, they will assuredly require a base in Wales, in north Wales—partly to be close to where they're working, and partly to be close to the centre of expertise, which is in Bangor, in the university. Tidal Lagoon Power, which are in Gloucester, are now working extensively with us on the potential of tidal lagoons along the north Wales coast. I'm sure that they will be very keen to relocate at least some of their operation to the science park. So, I think it provides real potential.



[173] **Joyce Watson:** That leads me on—and you’ve already started the question, but could you give a little bit more detail about exactly what SEACAMS is, and what you’ve achieved over the last five years?

[174] **Professor Jago:** Okay. SEACAMS was conceived maybe six or seven years ago at Bangor University. In the School of Ocean Sciences at Bangor, we have had an applied marine science unit since the late 1970s. That’s now called the Centre for Applied Marine Sciences. It started in the late 1970s, literally as one person, and then progressively expanded over the following decades. It has always been somewhat different from the mainstream activity in the School of Ocean Sciences, in that’s it a self-funded unit and it works exclusively in the applied marine science area, collaborating with businesses, industry, agencies, Government and research councils. But it’s always been a research-led unit, not a contract research unit.

[175] When I was head of the School of Ocean Sciences, we were reaching something of a crisis in CAMS in that we could see there was great potential for expansion, particularly relating to marine renewable energy, but we were extremely limited in terms of growth, we were limited by space and we were limited by funding. So, when the opportunity for funding via structural funds came along, I thought it was a golden opportunity to actually take CAMS up a level and, moreover, to expand its operation across Wales as it was then an exclusively Bangor University operation.

[176] So, I developed the SEACAMS project in collaboration with Swansea University and initially with Aberystwyth, but Aberystwyth dropped out, really to expand our capacity and capability in the applied marine science area, and specifically to forge much closer links with the commercial sector, with businesses. We had good links, but I just thought there was huge potential for growth, in particular with relation to marine renewable energy.

[177] So, SEACAMS, after a lot of negotiation, was funded by WEFO, and it ended a week or so ago. So, it’s been a five-year project. Its specific remit has been to develop collaborative research with the commercial sector, largely with SMEs but not exclusively with SMEs, but it has been largely with SMEs, and that reflects the nature of the commercial sector in marine science; it tends to be lots of really very small companies, rather than big multinationals.

[178] So, we have engaged in collaborative research with a lot of companies. By the end of the project, I think we had done 121 collaborative projects with companies. Those have been very varied. About 60 per cent of them have been in the marine renewable energy area, so they’ve been with companies like Minesto and Tidal Lagoon Power. That’s been collaborative research to answer questions usually posed by the businesses—at least, initially posed by the businesses—but then sometimes developing into questions posed by the researchers that the businesses hadn’t thought of which are of importance to the development of those businesses. So, they have been very collaborative projects, and I think one of the great achievements of SEACAMS has been that we have forged very good personal links between researchers and businesses. That is really important.

[179] But we’ve done projects across a whole range of activity—some of them quite trivial, actually—because initially when SEACAMS started, we collaborated with almost anybody who came along with a request, and it was only as the project developed and the demand grew and exceeded our capability that we became much more selective, and also the projects became bigger, particularly with marine renewable energy.

[180] **Joyce Watson:** So, have you worked at any time with any ports?

[181] **Professor Jago:** Milford Haven, Holyhead, yes.

[182] **Joyce Watson:** You've just said that your funding's just come to an end—the Welsh European Funding Office funding, that is—so what is your status now?

[183] **Professor Jago:** At the moment, we are, like Ieuan, heavily engaged in negotiations with WEFO on SEACAMS 2. WEFO seems to be very keen on SEACAMS 2, although I think we have some differences about the size of the project. SEACAMS 2 is going to be different from SEACAMS, in that SEACAMS 2 is going to be much more focused on marine renewable energy, and it's going to be entirely focused on collaborations that are going to produce an economic impact, which wasn't necessarily always the case with some of the projects we did, particularly in the early days, with SEACAMS. Where we are at the moment is in limbo, in that SEACAMS has finished and SEACAMS 2 has not begun, and, at the present rate of progress with WEFO, it's going to be some months before SEACAMS 2 comes along. For the moment, all our research teams are being employed by the universities, Swansea and Bangor.

[184] **Joyce Watson:** So, have you got any idea of a time frame, or a hopeful time frame anyway, with that WEFO decision?

[185] **Professor Jago:** No.

[186] **Joyce Watson:** If you did get a positive outcome, how do you see linkages with Horizon 2020?

[187] **Professor Jago:** Right. On the time frame, I don't know, because one never knows with WEFO. In fact, the last communication I had from them, which was two or three days ago, was that they were so overwhelmed by stuff that it was going to take them some time to progress the business plan for SEACAMS 2, which is very disappointing, but there we are. The original idea, which was endorsed by WEFO, was that SEACAMS 2 might start the day after SEACAMS finished, but that has not materialised, and we have found the process very slow and very hard going.

[188] SEACAMS 2 will differ from SEACAMS in a very fundamental way. What we have found in SEACAMS is that although we have dealt with a huge breadth of companies and activities, by and large, what they want is pretty much the same thing. They want data, which we usually do not have. They want very specific high-resolution data related to locations, which we generally do not have. They want predictions of environmental impacts, on timescales that really stretch our numerical models to their limits. So, if you take tidal lagoon power, their tidal lagoons are intended to run for maybe a century. Predicting environmental impacts on that kind of timescale is presently very, very difficult. In fact, it's really not feasible, because we just do not have big enough computers to run the numerical models that we have to encompass those kinds of timescales. You just need very big computing power and you need new kinds of models, which we don't have.

[189] So, given all that, in SEACAMS 2, what we intend to do is to radically upgrade our data-gathering capacity in Wales. So, the intention is to set up a linked system of coastal observatories around the Welsh coastline—in places that are of commercial interest, I should add. These would be instrumented platforms, giving us very high-resolution data, minute by minute, on processes. Those instrumented platforms would be located in places where businesses really want data. Then, the data from those coastal observatories will be directed back to a central database/data centre, which will be developed in such a way that it will be accessible to practitioners, so not just the businesses that we are working with, but any other. The data will be accessible, we will be developing user-friendly tools, analysis, visualisation, et cetera, which will be of real value to businesses. Then, that big data set is going to be used to generate a whole new generation of numerical models, using high-performance computing, cloud computing networks, to develop the kind of models that will provide those very long-

term predictions of effects. This would revolutionise our offer, if I can put it that way, to the commercial sector.

[190] One of the big drawbacks of the way that we have worked in the past—and as I mentioned earlier, with CAMS, we started with the commercial sector decades ago. But, generally, that is for specific projects. Data is collected—or are collected—and they're put away in a, well, in the old days, in a filing cabinet somewhere. Commercial operators find it very difficult to access information, they don't know where that information is, and they don't know who to go to. So, with our new proposal, the idea is to develop, if you like, a one-stop shop: a portal for Wales, whereby practitioners in the marine sector will be able to access the data that they require, and they will get a service, in terms of data presentation, data analysis, et cetera, which they presently don't get.

[191] **Joyce Watson:** And how will that fit with Horizon 2020?

[192] **Professor Jago:** Right, so, what this will do is generate a hitherto-unknown data set, in the coastal zone. This will be a fantastic resource for scientific research. So—before I get to Horizon 2020—we will be interfacing our activities with the activities of the national research networks in the marine area. They will be able to use our data for their scientific research. We will also be using that resource as an entry point for extending our networks across Europe, via Horizon 2020 projects. We haven't done this yet, as this is in SEACAMS 2, but we're already getting expressions of interest from potential partners in Europe, who are really interested in this development. So, I think there would be really good potential for Horizon 2020 funding. What will be absolutely essential is that the network that we are developing in Wales is integrated with larger networks that are developing across Europe.

12:15

[193] **Joyce Watson:** If you could, very briefly, can you explain to us why the current partnership, or the proposed partnership would be different from what it was previously? You said Aberystwyth is no longer involved, but the Centre for Ecology and Hydrology is now involved, or being added, so if you can briefly say—

[194] **Professor Jago:** Okay. CEH, the Centre for Ecology and Hydrology, is the Natural Environment Research Council's only unit institution in Wales, and it's based in Bangor. As a result of some very innovative thinking a few years ago, they are embedded within the university. So, CEH is in the same building as many of the researchers in the college of natural sciences. So, we have developed very close research links with CEH, and one of the reasons for setting up CEH in Bangor in the university was to develop links between the kind of research that CEH does and the research that, in particular in the marine field, we do here in Bangor. So, we have developed some very big research collaborations and projects, which bridge the land/ocean interface, because CEH is largely a terrestrial science interest.

[195] The reason we're bringing them into SEACAMS 2 is that, actually, many of the issues that are raised by businesses in the marine sector require science from the land. So, for example, if we go back to coastal lagoons, a big issue with coastal lagoons is water quality—a big potential environmental impact is water quality. Therefore, they really have to take into account what is running off the land via rivers and streams into their lagoons. Being able to predict that requires expertise, which CEH has.

[196] Another example, which again is with tidal lagoons, is that one potential added value of building a tidal lagoon is that you, potentially, might be able to control or at least moderate coastal flooding. So, take the north Wales coast, which, every winter, appears to be impacted by one storm or another—so it is an issue. During a big storm, two things happen: one, there's a lot more sea water, because you get big waves and you get a storm surge; and, two, there's

probably a lot more fresh water because it's raining a lot and so there's a lot more water coming down the rivers. So, there's just an awful lot of water in the coastal zone. Hence, you get flooding. A tidal lagoon actually holds an enormous amount of water. So, potentially, you can use that as a holding tank to actually ameliorate the potential effects of coastal flooding. And that's a really interesting added value to your coastal lagoon. But, in order to do that, you really need to know how the water that's coming off the land is interacting with the water that's being generated in the sea. CEH are world leaders in numerical modelling of catchment processes and flooding potential. So, again, working with CEH in order to link terrestrial processes with marine processes is just a very logical thing to do.

[197] **William Graham:** We've got some short questions. So, Rhun and then Jeff.

[198] **Rhun ap Iorwerth:** It's a very short question. How damaging do you think the delay between SEACAMS and SEACAMS 2 will be? And how long before it really starts causing damage in terms of losing expertise and that kind of thing?

[199] **Professor Jago:** It needn't be damaging at all if we're talking about a few months, because WEFO has indicated that, once SEACAMS 2 is funded, they will retrospectively fund the researchers, so long as they've been working on SEACAMS 2 projects. So, we are in the somewhat odd position at the moment that our SEACAMS team is no longer working on SEACAMS because it's ended. We are only a week into this, but we are now engaged with companies working on SEACAMS 2 projects, but we have no WEFO funding. Our research team—and I have to say that your question is very apt, because we now have, both at Swansea and at Bangor, really excellent research teams that we do not want to lose—are quite happy with the situation, because it looks like there's light at the end of the tunnel. If it were to drag on, I think some of our younger staff would begin to get a bit twitchy and might, inevitably, look elsewhere.

[200] **William Graham:** Jeff.

[201] **Jeff Cuthbert:** What Rhun has asked was more or less what I was going to ask, so there's no point.

[202] **William Graham:** Okay, thanks very much. Keith.

[203] **Keith Davies:** Diolch, Gadeirydd. Rwyf i eisiau sôn am weithgareddau rhyngwladol, mewn ffordd. Y peth cyntaf, wrth i mi ddarllen y papurau hyn, yw bod y Comisiwn Ewropeaidd wedi sefydlu fforwm ynni'r cefnforoedd, ac, wrth i mi ddarllen amdano, nid oeddwn i'n gweld unrhyw beth am SEACAMS, SEACAMS 2 na Prifysgol Bangor, ond gwelais fod Prifysgol Abertawe yn fanna. So, a yw SEACAMS, SEACAMS 2 a Bangor ynghlwm â'r system newydd hon—y fforwm yma?

**Keith Davies:** Thank you, Chair. I want to talk about international activities, in a way. The first thing, as I look at these papers, is that the European Commission has established the ocean energy forum, and, as I read about that, I saw nothing about SEACAMS, SEACAMS 2 or Bangor University, but I saw that Swansea University is included. So, is SEACAMS, SEACAMS 2 or Bangor involved in this new system—this forum?

[204] **Professor Jago:** I'm sorry, I pressed the wrong button on my headphones, so I missed the first bit of your question.

[205] **Keith Davies:** Well, the first bit, really, was on international activities and then this forum that's been set up.

[206] **Professor Jago:** Okay, yes. So, we are involved in that. At the moment, it is focused

more on Swansea than it is in Bangor.

[207] **Keith Davies:** Why is that, because when I read the papers, I thought—? You know, you're so closely tied with Swansea, is it something to do with whoever set the forum up rather than—

[208] **Professor Jago:** It's just the way that it happened. Our colleagues at Swansea and SEACAMS are very closely linked to Marine Energy Pembrokeshire, and I think that the initiative came via Marine Energy Pembrokeshire. So, what we do in SEACAMS is, we have expertise in Bangor that is different from the expertise in Swansea, and Swansea or Bangor takes the initiative, according to the area that we're in.

[209] **Keith Davies:** So, what about being involved with both of you, really, with territorial co-operation with either universities or companies within and outside the UK that can get European funding?

[210] **Professor Jago:** We are now, again, in negotiation with WEFO on an INTERREG project—a Wales-Ireland INTERREG project. In ocean sciences, we've had a lot of INTERREG projects with the Irish for obvious reasons, almost entirely focused on the Irish sea. We're now developing a project in parallel with SEACAMS 2 via INTERREG, which is a project called ISP, which is Irish sea portal, and the intention there is to set up a centre—it could be a virtual centre—that involves marine interests in Wales with marine interests in Ireland, with a particular focus on the Irish sea and the coasts around the Irish sea. As I've said, we've had a lot of projects with the Irish, but they tend to be projects that begin and end, and when the funding ends, that's it. So, we've had a lot of projects that are just not joined up.

[211] The idea of the Irish sea portal is to go on from there, so that we actually develop an integrated portal, such that Irish sea science is funnelled through the same portal. ISP is not entirely but rather more focused on the science rather than the business interface. That's not entirely true, but we see that as an excellent partner to SEACAMS 2, because we provide the interface with business. So, ISP is not even as far advanced as SEACAMS 2 at the moment, because, again, WEFO seems to be quite slow. But I think the exciting thing about ISP and SEACAMS 2 is the way that they are pan-Wales projects, and we really are quite joined up in Wales now, in the marine sector, but this is then extending it across the Irish sea to Ireland. There are several centres in Ireland that are involved and are really interested in this. So, I think that has big potential.

[212] **Keith Davies:** Ieuan, a gaf i ofyn i chi hefyd, a ydy Parc Gwyddoniaeth Menai yn mynd i fod ynghlwm â'r pethau Ewropeaidd hyn nawr, yn y dyfodol?

**Keith Davies:** Ieuan, may I ask you as well, is the Menai Science Park going to be involved with these European projects, in the future?

[213] **Mr Jones:** Wrth gwrs, mae'n hanfodol ein bod ni'n ehangu'n gorwelion yn y maes yma. Rwy'n meddwl bod Joyce wedi gofyn cwestiwn gynnu ynglŷn â Horizon 2020, felly, ac, er mwyn sicrhau ein bod ni'n cael y gwerth gorau allan o hwnnw, mae'n rhaid i ni fod yn gwneud y cysylltiadau yma efo mudiadau a chyrff ymchwil y tu allan i Brydain, mewn gwirionedd, yn ogystal ag y tu allan i Gymru.

**Mr Jones:** Of course, it is vital that we expand our horizons in this area. I think that Joyce asked a question earlier about Horizon 2020, and, in order to ensure that we get the best value from that, we need to be making these links with research organisations and bodies outside the UK, as well as outside Wales.

[214] Rŵan, yr hyn rydym ni wedi bod yn ei wneud ydy trafod efo'r Comisiwn

Now, what we've been doing is discussing with the European Commission what kind of

Ewropeaidd pa fath o barciau gwyddoniaeth Ewropeaidd y gallem ni gysylltu efo nhw, ac fe roddon nhw dri i ni. Roedd un yng ngogledd Sweden, ac rydym wedi bod yn y fan honno—a fanna, gyda llaw, mae pencadlys Ewropeaidd Facebook, yn digwydd bod. Mi aethom ni i un arall yn Bilbao, ac mi roedd ganddyn nhw ddiddordeb mawr. Mae yna gorff ymchwil yn Bilbao o'r enw Tecnalia, ac mae ganddyn nhw ddiddordeb mawr mewn gwneud cysylltiadau efo Cymru a'r Alban o safbwynt ynni'r môr, a datblygu ynni'r môr—ynni gwynt yn benodol—ac rydym mewn trafodaethau efo nhw.

12:30

[215] Ac mi fuon ni ym Malaga hefyd, ac mae Malaga yn awyddus iawn i gydweithredu efo ni i ddatblygu cynllun INTERREG. Roedd Colin yn sôn am y cysylltiadau efo Iwerddon, ac, wrth gwrs, mae INTERREG yn golygu y gallech chi edrych ymhellach hyd yn oed na jest Cymru ac Iwerddon. Ac roedden nhw'n awyddus iawn i weld beth oedd y potensial o ddatblygu, achos mae'n nhw yn yr un lle â ni, onid ydynt? Maen nhw eisiau gweld y partneriaethau yma yn datblygu.

[216] Felly, rydym ni wedi gwneud y cysylltiadau yna, ac maen nhw'n gysylltiadau hynod o ddiddorol. Rydym newydd hefyd ymuno efo'r corff sy'n gyfrifol am barciau gwyddoniaeth byd-eang, sef yr International Association of Science Parks, ac rydym wedi cael trafodaethau efo nhw. Ac maen nhw'n edrych ar y potensial, achos yr hyn y mae Horizon 2020 yn ei olygu ydy eich bod yn gwneud partneriaethau nid yn unig Ewropeaidd, ond ar draws y byd. Maen nhw'n caniatáu i chi drafod efo gwledydd eraill. Rydym yn gobeithio, pan fyddwn ni'n mynd i Tsieina, fel parc, i'r gynhadledd ryngwladol ym mis Medi, y byddwn ni'n gallu trafod efo rhai prosiectau yn y fan honno i ddod i mewn, achos mae'r Undeb Ewropeaidd yn gweld Tsieina, Siapan, a'r Unol Daleithiau yn wledydd y dylem ni fod yn cysylltu efo nhw.

[217] Felly, mae'r potensial yn fan hyn yn enfawr. Rwy'n meddwl mai'r hyn yr ydym isio'i osgoi yn y dyfodol ydy'r syniad yma

science parks in Europe that we could make links with, and they gave us three. One was in the north of Sweden, and we've been there—and that's where the Facebook headquarters is in Europe, by the way. We went to another one in Bilbao, and they had a great interest. There is a research body in Bilbao, called Tecnalia, and they have a great interest in making links with Wales and Scotland, in terms of ocean energy, and developing ocean energy—wind energy in particular—and we're in discussions with them.

And we were also in Malaga, and Malaga's very eager to collaborate with us to develop an INTERREG scheme. Colin mentioned links with Ireland, and, of course, INTERREG means that you can look further afield, not just to Wales and Ireland. And they were very eager to see what the potential was in terms of development, because they're in the same place as us, aren't they? They want to see these partnerships developing.

So, we've made those links, and they're very interesting links. We've also just joined the body that's responsible for global science parks, namely the International Association of Science Parks, and we've had discussions with them. And they are looking at the potential, because what Horizon 2020 means is that you make partnerships not only at a European level, but at a global level. They allow you to discuss issues with other countries. We're hoping, when we go to China, as a science park, to the international conference in September, that we'll be able to have discussions with some projects there, because the EU sees China, Japan, and the United States as countries that we should be making contacts with.

So, the potential here is enormous. I think that what we want to avoid in the future is this idea that you have a project, like

bod gennych chi brosiect, fel SEACAMS, sy'n gorfod dibynnu wedyn ar arian arall mewn blynyddoedd eraill—SEACAMS 1 a SEACAMS 2. Er nad ydy Horizon 2020 yn mynd i lanw'r bwlch i gyd, mae o'n gwneud eich prosiectau chi'n fwy cynaliadwy yn y tymor hir, oherwydd ei fod o'n golygu y medrwch chi edrych ar rywbeth mwy tymor hir sydd ddim yn dibynnu ar y blynyddoedd bloc yma, fel mae'r gronfa strwythurol yn ei wneud.

SEACAMS, which then has to rely on other funding in other years—SEACAMS 1 and SEACAMS 2. Although Horizon 2020 is not going to fill the gap entirely, it makes your projects more sustainable in the long term, because it does mean that you can look at something more long term, which doesn't depend on these block years, like the structural fund does.

[218] Jest pwynt terfynol ar Horizon 2020, beth mae Llywodraeth Cymru yn awyddus iawn i'w weld ydy'r defnydd yma o'r cronfeydd strwythurol fel grisiau i mewn i Horizon 2020—hynny ydy, bod ein dibyniaeth ni ar y gronfa strwythurol yn lleihau a bod ein gobaith ni o gael arian Horizon 2020 yn cynyddu.

Just a final point on Horizon 2020, what the Welsh Government is very eager to see is this use of the structural funds as a stairway to Horizon 2020—that is to say, that our dependence on structural funds reduces and that our Horizon 2020 funding potential increases.

[219] **Keith Davies:** Roeddwn i'n siarad â rhywun y penwythnos diwethaf am yr hyn sy'n digwydd yn Abertawe gyda'r lagŵn, ac mae cwmni o'r Almaen yn mynd i fod ynghlwm â hyn. Nawr, wrth gwrs, rydych chi'n sôn am yr un peth lan yn y gogledd, ar yr arfordir fan hyn, hefyd. Felly, mae'n bwysig bod cysylltiadau gyda gwledydd yn Ewrop.

**Keith Davies:** Because I was talking to someone last weekend about what's happening in Swansea, with the lagoon, and there's a company from Germany involved. Now, of course, you're talking about something similar in the north, on the coast here. So, it's important that you do have connections with countries in Europe.

[220] **Mr Jones:** Wel, mae'n hanfodol, rwy'n meddwl, achos mae'r partneriaethau yma am fod yn sail. Ac, wrth gwrs, yr hyn yr ydych yn gorfod bod yn ymwybodol ohono efo Horizon 2020 ydy nad jest cysylltiadau rhwng mudiadau ymchwil ydyn nhw; mae'n rhaid iddynt fod yn gysylltiadau efo busnes hefyd. Fedrwch chi ddim jest cael partneriaeth rhwng dau fudiad ymchwil—mae'n rhaid iddo fo fod efo'r gymuned fusnes, ac, wrth gwrs, mae hynny'n rhan mor bwysig o'r cynllun wrth symud ymlaen.

**Mr Jones:** Well, it's vital, because these partnerships have to be the basis of this. And, of course, what you have to be aware of with Horizon 2020 is that it does not just mean links between research institutions; they have to be links with business as well—you can't just have a partnership between two research institutions—it has to be with the business community as well, and, of course, that's a very important part of the plans going forward.

[221] **Keith Davies:** Diolch.

**Keith Davies:** Thank you.

[222] **Professor Jago:** Can I just add something on internationalisation?

[223] **William Graham:** Yes, please do.

[224] **Professor Jago:** I think a good parallel is with the hydrocarbon industry in the North sea. That kicked off in the late 1960s. What developed in parallel with the petroleum industry was what we call, 'the offshore industry', which is generally small companies that do work for the oil companies—they survey the sea bed and they look at the oceanography around the rigs, et cetera.

[225] Those companies started in the 1970s and developed in the 1980s. We know a lot about them because we trained most of the personnel who now run those companies. They started because of the North sea. Now they are operating far beyond the North sea. They are international companies. They are not based in Wales; they are based around the North sea coast because that's where they started. I think the parallel now is with marine renewable energy, which is on the west coast, and Wales is in a terrific position to exploit marine renewable energy. Companies that come here in order to work in Wales will expand their operations overseas. I'm pretty sure that Tidal Lagoon Power are already looking at China. They're looking at the Chinese coastline because China has got a big tidal range—fast tidal currents—just as we have. The potential for marine renewables and tidal energy in China is enormous. I would expect that any company that might be in north Wales that has got the required expertise is going to rapidly expand its activities way beyond Europe into areas like China, where the potential is huge.

[226] **William Graham:** That was well worth while. Jeff.

[227] **Jeff Cuthbert:** Thank you. That neatly runs into my area of questioning, which is about your views on the Welsh Government's approach to the maritime economy, particularly that of marine energy. We went, with a different committee, to Brussels some weeks ago, and we raised the issue of marine energy and we were told by the EU official that there was a problem in terms of skills, which wasn't just restricted to Wales. They wanted us certainly to develop marine energy projects, as we do, but that there needed to be a lot of work done in making sure that the higher level skills, in particular, to facilitate marine energy were developed in partnership with higher education, and what have you. Would you like to comment on that? Do you think there is a skills gap in terms of being able to take forward marine investment and particularly marine energy?

[228] **Professor Jago:** Are you talking at a high level of skills now?

[229] **Jeff Cuthbert:** Yes, and indeed perhaps at the—I don't like using the phrase—lower level in terms of maintenance and all the other work that has to go with it.

[230] **Professor Jago:** In terms of the skills required for the strictly engineering aspects of offshore energy, I am not an expert. In terms of the science that goes with marine renewables that is needed to support marine renewables, we have a skills gap only in the sense that we've been training scientists in our HE sector in Wales for decades in marine science and applied marine science. As I mentioned just now, we have more or less furnished the offshore industry in the UK, but they've never stayed in Wales because there's been no opportunity for them to stay in Wales. So, although we have trained a lot of people, at this present moment very few of them are actually in Wales.

[231] **Jeff Cuthbert:** Because there isn't the opportunity to develop this.

[232] **Professor Jago:** Because there hasn't been the opportunity. Given the opportunity, of the people who we continue to train, some of them will stay in Wales. We have some examples of people who have, but it's very small scale at the moment. So, we have the capacity to train people and we have been, but they just aren't in Wales. So, we're very good at bringing people in from outside because most of the people we train are not Welsh—they come from outside. But we're not very good at retaining them once we've trained them, because we just haven't had the opportunity. But people go where the opportunities are and, as the industry develops, we will surely see people staying within Wales.

[233] **Jeff Cuthbert:** So, you have an existing market to train people, but not for them to necessarily work here. But it's a question of putting those two together. So, there is hope,



then.

[234] **Professor Jago:** Absolutely. And, of course, one of the secondary advantages of a project like SEACAMS is we do develop those personal contacts with companies, and therefore it becomes that much easier to make sure that they recruit our people as they expand, rather than bringing in anybody from outside. In fact, one of my fears with SEACAMS was always that our researchers in SEACAMS wouldn't stay long, because having developed a collaboration with a particular business they might end up joining that business. That hasn't happened, but I suspect it will be a problem that we'll have in SEACAMS 2.

[235] **Mr Jones:** Rwy'n meddwl bod Colin wedi medru egluro'r sefyllfa o safbwynt sgiliau a'r ochr wyddonol a'r ochr gwyddoniaeth forol. Ond yn sicr, ac roedd o'n cyfeirio at y sgiliau peirianyddol, mae yna brinder yn amlwg yn y sector yna, ar y lefel uchel, oherwydd mae cwmni fel Minesto yn dweud wrthym ni, oherwydd bod y dechnoleg maen nhw'n ei datblygu mor newydd, mae yna brinder sgiliau ar draws y byd. Ac felly, er bod yna sialens yn y fan yna, mae yna gyfle i Fangor, oherwydd os—. Rwy'n meddwl, er bod Colin wedi dweud am y cysylltiad efo Minesto, efallai y dylwn i ei gwneud hi'n glir mai'r rheswm y mae Minesto yma yw oherwydd SEACAMS—maen nhw wedi gwneud hynny'n berffaith glir—hynny yw, bod yr arbenigedd yna. Ond, wrth gwrs, mae angen sgiliau ehangach a sgiliau peirianyddol. Ac, rydym ni wedi bod yn siarad efo'r cwmni o safbwynt beth y gallai'r brifysgol ei wneud o safbwynt darparu cyrsiau ar gyfer y sgiliau y bydd eu hangen yn y maes yna hefyd. Felly, os medwn ni gael y gwyddonwyr a'r bobl efo'r sgiliau peirianyddol i gyd yn yr un lle ac i ddal y potensial sydd yna, mi fydd cwmni fel Minesto, rwy'n meddwl, yn datblygu yr ardal yma fel arbenigedd byd-eang yn y sector. Dyna ydy ein gobaith ni, ond, wrth gwrs, mae yna lot o waith i fynd i sicrhau bod hynny'n digwydd. Ond medraf eich sicrhau chi ein bod ni mewn trafodaethau eithaf manwl efo nhw.

**Mr Jones:** I think that Colin has been able to explain the situation in terms of skills on the science side of the matter, and in terms of marine science particularly. But, certainly, and he referred to the engineering skills, there is a lack in that sector in terms of high-level skills, because Minesto is telling us that because the technology that they're developing is so new and so innovative, there's a skills shortage world-wide. So, even though there's a challenge on that side, there's an opportunity as well for Bangor, because if—. Even though Colin has told you about the link with Minesto, I should make it clear that the reason that Minesto is here is because of SEACAMS—they've made that perfectly clear—that is, because that expertise is there. But, of course, there need to be wider skills and engineering skills. And so, we've been discussing with the company in terms of what the university could do from the point of view of providing courses for the skills that will be needed in that area too. So, if we can attract scientists and people with the engineering skills together in the same place and capture the potential that is there, companies such as Minesto will develop this area as a centre for global excellence in the sector. That's our hope, but, of course, there is a great deal of work to be done to ensure that that happens. But I can assure you that we are in detailed discussions with them on that.

[236] **Jeff Cuthbert:** Right. So, basically, there is no insurmountable problem in terms of designing bespoke courses that companies would need. I assume, HE, you're quite used to that principle, and it would seem to me, especially with the Energy Island concept, that this is a very convenient time for that.

[237] **Mr Jones:** Ydy, mae o. Hynny ydy, beth rydym ni'n gorfod ei wneud, wrth gwrs, ydy edrych—. Beth sydd yn anodd—ac rwy'n gwybod hyn, wrth gwrs, oherwydd

**Mr Jones:** Yes, it is. What we have to do is look—. What's difficult—and I know this because, of course, I've had internal discussions within the university—what's

cael trafodaethau mewnol yn y brifysgol— beth sy'n anodd i brifysgol ydy jest teilwra un cwrs penodol ar gyfer un cwmni. Beth mae'n rhaid i chi ei wneud ydy edrych ar botensial y sector, a sut fedrwch chi addasu cyrsiau sydd gennych chi ar hyn o bryd i sicrhau eich bod chi'n medru cael y gwerth ychwanegol allan mewn cyrsiau Meistr ac yn y blaen. Felly, beth rydych chi'n gorfod ei wneud ydy gweld y potensial sydd yna, defnyddio sgiliau sydd gennych chi neu'r cyrsiau sydd gennych chi, eu teilwra nhw ar gyfer anghenion penodol, a gweld os medrwch chi ddenu cwmnïau eraill wedyn a fyddai'n gallu eu defnyddio. Achos, os ydy Minesto'n dod oherwydd SEACAMS, rydym ni eisïau iddyn nhw ddod hefyd oherwydd bod yna sgiliau eraill mewn meysydd eraill y medwn ni eu datblygu ar eu cyfer nhw. Ac, os ydy Minesto'n dod, y potensial wedyn ydy gweld cwmnïau eraill yn dod achos eu bod nhw'n gweld bod yna ystod eang o sgiliau y medran nhw eu cael yn yr ardal. A byddwn i'n dweud, mae yna nifer o sialensïau'n wynebu'r cwmnïau yma, ond y sialens fwyaf ydy sicrhau eu bod nhw'n cael y bobl iawn, yn y lle iawn, efo'r sgiliau iawn.

difficult is to tailor one specific course for one company. What you have to do is to look at the potential of the sector, and how you can adapt courses that you currently have to ensure that you can derive that additional value in terms of Master's courses and so on. So, what you have to do is to see the potential that there is, use the skills that you have or the courses that you have, tailor them for the specific needs, and see if you can attract other companies then that could also use those skills. Because, if Minesto comes because of SEACAMS, we want them also to come because there are other skills in other fields that we can develop for them. And, if Minesto comes, the potential is then to see other companies coming because they will see that there is a range of skills that they can draw upon in the area. And I would say that there are a number of challenges facing these companies, but the greatest challenge is to ensure that they do attract the right people, in the right places, with the right skills.

[238] **William Graham:** Thank you very much—. Sorry, please, Keith, do continue.

[239] **Keith Davies:** Can I just add one quick point to what Ieuan said there? I'm told as well, right, that GE Engineering are very keen to be involved in the Swansea tidal lagoon, working with Swansea University, because they see that if that's successful, it's going to mushroom.

[240] **Mr Jones:** Yes, well, what you'll find is that the main benefit also of attracting a large company like that would be that they will bring in a lot of the supply chain around with them, so you begin to get the clustering effect, and then you can begin to provide the skills in a much wider sense.

[241] **William Graham:** Thank you both very much for your time today, and the others. Most grateful. Perhaps you'll join us when we have a sandwich lunch.

*Daeth y cyfarfod i ben am 12:42.  
The meeting ended at 12:42.*