ISH1 Pt2

0:01
The time now is 3:55 PM UM.

0:06
We will resume issue specific hearing one session 2.

0:11
I'll hand straight over to the applicant to continue with their presentation. Thank you very much, Madam Harwood Philpott Casey on behalf of the applicant. If I can have the next slide up please.

0:32
So when, when, when that comes up, you'll see we're we're now into the stage where we're talking about the components of the project and those elements which constitute the NSIP and constitute associated development. And I'll just say before I start speaking on this, while whilst that's being loaded, I will try and take this section and at a reasonable

0:58
pace conscious that we have a series of written questions which go to this matter. So what I propose to do is simply provide some headlines of of what we'll say in relation to each of the particularly in relation to the associated development each of the core principles. So that the, the slide which we've got are I hope helpfully divides the project between those parts which form part of the Ensip and those parts

1:29
and which are associated development that there is a detailed description of the project components themselves in chapter two of the ES, which is a P044. And I'm going to comment on the questions of legal status rather than simply describing things You can read and perfectly satisfactorily yourself that the status of the NSIP, the status of the terminals and NSIP is addressed in the Explanatory Memorandum

2:00
App 007 and the planning statement AP226. And as those documents explained, the harbour facility comprises a new terminal which is the in river Jetty with one birth together with its integral landside access ramps and top side loading and unloading infrastructure, the pipes, the pipelines and other utilities that connect the NSIP to the highest Gen production facility. It's comprised in work number one in schedule,

2:31
on to the Draught Development Consent Order and those elements that comprise associate development are in work numbers 2 to 10

2:40
and the division between the NSIP and the associated development occurs broadly where the jetty touches the land. That's essentially where we've drawn the the line. Now as is often the case, there is an element of judgement involved as to where the division lies, but it's of no consequence for the

purposes of decision making, provided that each element is either part of the N sip or its associated development. We're not in a jurisdiction where there are limits on what you can

3:12
approve that the terminal, as is was explained in the introduction provided by the panel, is an N SIP pursuant to sections 14, one J, 24 two and 24 three C of the Act. It's the construction or alteration of harbour facilities, and in this case it's an alteration.

3:33
The alteration of harbour facilities falls within section 14 one J only if it's holy in England or in waters adjacent to England, and the effect of the alteration will be to increase by at least the relevant quantity, the quantity of material the embarkation or disembarkation of which the facilities are capable of handling. Now we are wholly in England or waters adjacent to England, and this is a facility for cargo ships and thus the relevant quantity under section 24 Three

4:04
Sea is 5 million tonnes. The capacity of the jetty is in the order of 11,000,000 tonnes of liquid bulk cargo and therefore it's well in excess of the relevant quantity

4:15
and so far as the associated development is concerned. The main elements here are the Jetty Access Rd that connects the jetty to the public highway and the hydrogen production facility including the pipelines, pipes and other utilities which will connect the Nsip to that facility. And all of those elements are associated with the end ZIP and therefore fall within the definition of in section 1152 of the Act. Now the explanatory memorandum and the most recent version of that is PDA

4:46
006, addresses the core principles that are set out in paragraph five of the government's guidance. So as I said, I'll seek to summarise what we say about each of those core principles, briefly recognising you'll get more detail in response to the first written questions. And there's a series beginning Q1 point 2.2. So, so far as the first core principle is concerned, the relationship between the associated development and the N SIP is direct.

5:17
In each case, it either supports the construction or operation of the NSIP and helps or helps to address its impacts. Any one of those 3 possibilities is sufficient. It's important to understand the core principle is not whether the associated development is strictly necessary to the operation of the N SIP, which is a phrase we've seen in the draught written questions. That's not the question. The question is whether there is a direct relationship with the N SIP and the associated

5:48
that supports this operation.

5:51
In this case, the jetty can't operate as designed without appropriate land side facilities to receive the cargo that's imported.

6:00

So far as the first customer is concerned, the import of ammonia for the production of hydrogen requires facilities to receive, store and process that ammonia.

6:11
It is a hazardous substance and once it's been imported over the jetty, it has to be stored and treated in a way that limits the associated toxic risk

6:22
That leads to the need for storage and processing facilities close to the point of landing,

6:28
the pipeline from the jetty to the storage tank represents the greatest risk of potential damage and accidental leakage and needs to be kept as short as practical. In addition, the further the ammonia is moved in pipes, the greater the loss of refrigeration of the liquid and hence the greater the energy use in maintaining the ammonia at the correct refrigeration temperature. So the hydrogen production facility plainly has a direct relationship with and supports the operation of the jetty by enabling the efficient and effective

6:59
the port of ammonia for production of green hydrogen. And equally, without the jetty enabling a supply of ammonia, the production 1st 30 wouldn't be constructed because it relies directly on the import of ammonia via the jetty.

7:14
And for the same reason all the other elements of the associated development which enable the ammonia to be transported from the incoming vessels to the facility and thereafter transported off site to end users are part and parcel of the operation of the the jetty. And that is typical of the way that ports function.

7:34
It's common for them to provide facilities for customers of the port to store and where necessary process

7:42
the imported cargo for onward transmission to the point of use. The nature of those facilities necessarily varies depending on the cargo in question and in due course Mr Varley will consider some examples specific to liquid bulks. Responding to the point you've raised in the agenda. The second core principle, the hydrogen production facility is subordinate to the jetty. As I said, it wouldn't be constructed and wouldn't be able to operate without the jetty, and there's also a requirement requirement 5 in the draught

8:14
today that would prevent that occurring.

8:16
And the subordinate status also needs to be understood by reference to the nature and in particular the capacity of this N SIP

8:25
and how port facilities are provided as explained in the MPs

8:30
and the jetty will have a capacity, as I've said, in the order of 11,000,000 tonnes. The import of ammonia to the hydrogen production facility will only account for a minority of the capacity created. It's anticipated most of that will be taken up in due course by CO2 and something which I'll ask Mr Rahul to deal with. And so the relative size of the two developments or the area of land that's occupied by them is not there for the appropriate metric when considering subordinate status. In this context,

9:02
it's the functional operational relationship that dictates the subordinate status. And that's typical of N sips of this type, where the harbour facility might be relatively small, it might be a new birth, but the additional import capacity that it creates is substantial and generates the need for much larger areas where the imported cargo can be stored and or processed. Now we'll give some examples

9:33
of other similar facilities elsewhere in response to the written questions and we hope they'll be helpful in illustrating the principle. And in due course, Mr Varley will give some more

9:45
specific ones for liquid bulks.

9:48
Also the the development of port facilities is undertaken on a commercial basis in response to market demand. So the the fact that a particular NSIP is brought forward in response to demand from a particular customer needing its own associated development to facilitate the intended import operation is entirely typical. And that commercial relationship doesn't make the associated development an aim in itself or mean that it's not subordinate. It just reflects the way port development comes forward in the market

10:19
economy

10:20
and core principle three. Now this is only a relevant where development is provided for the sole purpose of cross subsidy.

10:34
That's what would infringe the principle. And so to take a hypothetical example to illustrate it,

10:39
if instead of putting forward this development, we put forward a proposal to develop a casino alongside the jetty, no functional link to the jetty at all. But we said, well, we just need the money from that to make the jetty work commercially. That would be solely for the purpose of cross subsidy and that would not be associated development. And I hope that illustrates the mischief that the core

principle is directed at. It's got no application at all. On the facts of this case, none of the development is being put forward only to subsidise

11:12
the cost of the handset.

11:14
And again, to be clear in terms of the underlying principle, the issue is not whether the port operator would make the commercial decision to develop the N SIP without the customer signed up. That's not the question that this is aimed at. It's instead is the item a development only being put in place to provide a source of revenue and that's not the case here.

11:39
Then core principle four and the nature of the Jetty is that it's designed to facilitate the import of liquid bulks and in particular as a first use of liquid ammonia for the production of green hydrogen. The provision of the necessary storage and production facilities to enable this to be achieved is very clearly proportionate in terms of its nature

12:01
and it doesn't provide the associated development, doesn't provide any more capacity than is needed to meet the volume of ammonia to be imported through the Ensip. As I've explained, the jetty will have substantial residual capacity to embark and disembark significant quantities of other cargoes in addition to that which is capable of being processed by Air Products. So it's therefore proportionate and scale. And then finally, paragraph 6. Although the import of ammonia

12:32
for the production of green hydrogen is in itself novel, the underlying nature of the relationship between the jetty and the associated development is entirely typical of port anceps.

12:43
In short, facilities for the storage, processing and onward transport of imported cargo are typical associated development for harbour facilities N sips. And as we explain in the explanatory memorandum at paragraph 220, the roll on, roll off terminal and the aggregates terminal authorised at Tilbury Two had essentially the same relationship with the two births authorises, end sips as the associated development that's proposed in this case.

13:15
So the fact that the particular cargo and the particular processing facility is in itself novel doesn't change that. It's an inevitable feature of the fact that the type of cargo you import through the ports changes over time in response to changing needs and markets. So I took that at a bit of a counter, but I hope that's helpful. Just to tee up some of the things you'll get. I'm now going to ask Mr Varley on the back of that just to talk to the next set of slides which provide some

13:47
comparison with other bulk port developments. So we've got four that Mister Barley will speak to.

13:54

Can I just direct a few questions? And it's like I've done before. If these are being covered by somebody else, don't worry about answering them. So can you just go back? One slide please.

14:07
Yeah, that one. This is just a clarification. Why is the ammonia, the pipeline, the pipes, pipe and pipeline

14:19
a part of the NSIP and not the associated development? Because presumably that is in place only to transport the cargo. And related to that question is that why would the Jetty access Rd therefore not be a part of the N SIP and be part of the associated development? To come back to my earlier point, there is a degree of judgement as to where you draw the line. So pipelines which form part of the jetty itself enable the Jetty to function.

14:50
So for the jetty to be able to import liquid bulks at all, you need to have pipelines to get the product from the end of the jetty to the land.

15:00
And so we took the view that those are appropriately regarded as part and parcel of the jetty. Once you get to the land then you could take pipelines in different directions. You may or may not need a that the same type of pipelines. But those we thought would be associated development. As I said, in one sense it doesn't much matter because they're definitely one or they're definitely the other, but that's why we've drawn the line there. The

15:25
Jetty Access Rd is needed in order to allow the Jetty to function,

15:31
but that is a that is typical and indeed, as a characteristic of associated development, it is not in itself the alteration of a harbour facility. It's not it, doesn't it? It is not a harbour facility strictly, whereas the jetty clearly is a harbour facility. Again, you could draw the line differently, but we think that's the right place to to draw it, especially because of what

15:58
what Miss Miss Standstill said, which is that, you know, one of the reasons this location is so good for you is because of good Rd connections. Yeah, which is why it just makes me think that. But anyway like you said, I, I, you know, we'll, we'll take that away and see how how important it is for us to draw that distinction. Getting access Rd is to enable access to and from the jetty. It's not to take product from the processing facility onto the road network. OK.

16:29
That's helpful. Yes,

16:31
all right.

16:34
The second question was

16:37
hydrogen supports the jetty Coke. Yes, you've said that the

16:44
is it's very common for ports to have processing you know their cargo on land side and and again I'm I'm really quite aware of time so I don't want to spend too much time on this. But what might be helpful is Mr Bird, given your experience in this, we really helpful to know

17:04
other examples of how this happens and where this you know and and the other thing that you said which was very interesting is that

17:12
the subsidiary nature of the associated developments not necessarily with respect to size and scale, it's more with respect to functionality. So it would be really helpful to understand where such an, where we might be able to see something else like this which is functionally subservient but in size and scale potentially slightly larger and why that's commonplace. One of the things you're about to hear. Yeah are some examples of precisely that point in relation to liquid bulks, Great. But what what I also have in mind that we can provide

17:43
view as part of the written material are some non liquid bulk examples, particularly if we can identify some useful ones that are on IMIM itself and then you can see them as part of your accompanied site site visit. But if I may, I'll ask Mr Varley to talk about the liquid bulk examples because I think flow on naturally excuse the unintentional pun in this context. OK. And then third and I think last question is that you have referred to

18:15
be

18:16
processing of carbon dioxide for carbon capture as a potential use for the port, potential future customers. What sort of associated facilities do you think they might need, You know if they start using this port facility have you and again if you're I think you might be covering that in items. Just to be clear, so far as CO2 is concerned, it's not a question of processing it

18:41
as I understand it, it, it, it's important onward transport because ultimately the idea is that it's taken through to storage. So it it in in broad terms it's the pipelines and things that are necessary to move it through the pipelines. But that's as far as I can help you right now. If we can, if we can come back to that in more detail in due course in writing,

19:07
OK, OK, so So can we note that as an action, this last one?

19:14
Umm,

19:15
we did forget to ask interested parties if they had questions before the end of the break, so I'm just gonna provide that opportunity now.

19:26
Richard Lemon NE links council, no questions. Thank you.

19:30
Anybody else online who might have some questions?

19:35
Uh, no, Madam. Allotment Hennock for the IT operators. No questions on our side. OK, Mr Sweetland.

19:45

19:46
So bye dash week, Langley water at no questions. Thank you. OK, thank you very much. Good, right?

19:55

19:58
OK, We can move on. Thank you. Thank you. So I'll hand over to Adam Varley, who will just give you some examples of other liquid bulk port developments.

20:11
Good afternoon. As Mr Philpott mentioned earlier, I'm Adam Varley, the Project Development Manager for Associated British Ports. The applicant I'm a qualified civil engineer with over 13 years of specific experience in the marine construction sector.

20:28
To frame the information that you can now see on screen, you will see that the following select examples of port developments.

20:37
A jetty leading to a deep water birth is a common development within an industrial port environment. The import of liquid bulk cargo is facilitated facilitated by ship transfer systems to tanks based on land. This does not require significant equipment on the birth and associated large platforms when compared to other types of cargo.

21:00

This common design concept allows allows berths to be positioned in deep water without significant facilities on the foreshore and greatly reduces the need for dredging works.

21:12
The following I hope will provide you with an idea of the typical scale of marine infrastructure and the associated land side development of liquid bulk terminals

21:21
within the UK.

21:23
So the first example on screen, the Immingham Oil Terminal, is perhaps the easiest and best comparison I can I can make, being that it's in the same location, handles a liquid bulk, and can accommodate similar sized vessels if not larger vessels.

21:43
The jetty itself stretches for approximately 900 metres into the Humber,

21:49
which supports then seven liquid bulk berths, three of which are deep water berths.

21:57
I'd note the substantial landslide storage facility of eight hectares at the base of the jetty and then also the 8 kilometre long pipeline that connects that facility to the Prax Lindsey oil refinery and the Phillips 66 Humber refinery.

22:15
These two refineries can contribute to 27% of the UK's refining capacity and have a combined area of approximately 400 hectares.

22:26
By comparison, Milford Haven

22:30
is home to a number of port developments, four of which are liquid bulk jetties which support 14 liquid bulk berths. The largest jetty exceeds 950 metres in length and they can also accept vessels of approximately

22:46
365 metres in length and a draught of over 16 metres, again what we would consider to be very large vessels.

22:55
The storage capacity at the Valero Terminal alone is 85,000,000 barrels in 52 tanks.

23:04

Milford Haven also has a significant role in the energy supply, with its largest jetty connecting to the South Hook LNG terminal, which handles approximately 20% of the UK's guard gas demand.

23:17
This is one of Europe's largest.

23:22
On the next slide,

23:25
I'd like to share information on the Fawley Oil Terminal. This has

23:30
2 liquid bulk jetties. They're approximately 400 metres in length and connect to a jetty head that is in excess of 1.5 kilometres. This serves multiple vessels on on those nine liquid bulk berths.

23:45
Again, this facility can can support and and

23:50
a vessel that's above 350 metres in length and has a draught of 4.9 metres.

23:58
The landslide associated development with this is the Fawley refinery which has an area of approximately 506 hectares and provides 20% of the UK's refinery capacity.

24:14
So Madam that that's it. In terms of the comparison with other liquid port developments, I we thought that would be helpful coming after the associated development and discussion because it illustrates some of those points. We then we were then subject to any questions you or your colleagues may have going to go straight into an explanation of how the Ensip and then how the associate development work,

24:40
probably taking more time on the associated development because it's a little bit more complex than the Jetty. But if if you've got any questions on what you've just heard, we can deal with those now or I can ask Mr Valley to go straight into the next part of his presentation. Just two questions on any one of those examples. If you can just take the mouse, I don't know if it's possible to do that because somebody else is controlling this

25:08
and just mark out for us the you know, for instance in this one, the the refinery and you know the jetty. So just

25:22
yeah,

25:25
sorry, you'll need your microphone. I'm sorry, sorry. Yeah,

25:30
Adam Valley for the applicant on the first image there, that's the immemorial terminal. It shows the jetty with those 3 berths at the very base to the left. As we look of the jetty, that's the the immediate kind of storage facility and the pipeline then leaves there an 8 kilometres away to the

25:53
upper right of the image. I think the refinery area is quite difficult to define on that that image though I can provide a I was just going to say that perhaps when you submit this just, you know if you just mark out, you know, associated development in a certain colour and the actual jetty and birth in a different colour, that would be helpful. The second question was, and you may wish to cover this now or later, just because you're about to go into the process.

26:23
Did you want to cover off those definitions that you've been

26:28
you wanted to explain to us in your covering letter? I I would suggest those those who are provided simply so that when we

26:41
as applicant others is interested party and you as the panel refer to the port we know we're all referring to say the port of Immingham or if you refer to the jetty that we all know, we're referring to the same thing. I wasn't proposing to go through the definitions here, it it was simply to as a as a plea when finalising the questions, to just consider whether there's any scope for uncertainty as to what's being referred to

27:11
with each question. That was simply the the point of that. OK.

27:21
Yeah, that's fine.

27:24
OK,

27:25
back to you. Thank you. I'll then ask Mr Varley if you can just work through the next two slides which explain how the end zip itself will function.

27:39
Thank you Adam Varley for the applicant. With reference to the detail included on this slide, I'll look to outline the steps involved in a maritime vessels journey from the planning phase through to birthing at a port. This is typical of the operations involved in the journey of one of the 34,000 plus vessel movements that are undertaken on the Humber each year.

28:04
I aim to highlight the importance of coordination between the ship's crew, port authorities and agents to ensure the smooth and safe transition from sea to port.

28:16
At the very beginning of the process,

28:20
negotiating of cargo handling contracts is is done and once that's finalised, A vessel is assigned and loaded at the port departure.

28:29
This step is important as it involves preparing the vessel for its journey and securing the cargo.

28:35
As the vessel departs and is in transit to the discharge point port, in our case Immingham on the Humber,

28:43
preparations for arrival begin. A commercial agent is nominated for the discharge port and vessel visits are booked through agents online. This would include the booking of pilots and also tugs when necessary.

28:59
Information about the incoming vessel is input into the Port and Vessel Information System, ensuring that the port authorities have all the necessary details to manage the vessels arrival and stay.

29:13
The vessel arrives at the harbour limits marking the beginning of port entry process. So on the image towards the the top right of the the slide, the outer blue line demarcates the jurisdiction of the statutory harbour authority. So that is essentially where it transitions from, from the sea into the the port itself.

29:42
This will traffic services input the arrival into the Port and Vessel Information System and pilots are allocated to guide the vessel safely to the dock.

29:52
As it again indicated on the image, pilots board the vessel all around that area depending on the vessel, but around the the area that's indicated on on the image,

30:02
a pilot boards the vessel to navigate through the Humber passage and tugboats are arranged at sunk spit buoy to assist with manoeuvring

30:14
the dockmaster. The Imim dockmaster is contacted to oversee the final docking process,

30:20
and the vessel continues its inward passage under the guidance of the Harbour Master and Dockmaster.

30:27
Again, just to It's fairly hard to see on that image, but there's a blue area around the Immingham dock itself. Thank you, Hannah.

30:41
That is demarcating again the jurisdiction of the dockmaster which is 200 yards from any of the the the ports facilities.

30:53
The vessel approaches the jetty aligning. Could you skip to the next slide please? Sorry,

31:02
the Jetty aligns.

31:05
Ohh sorry. The vessel approaches the jetty and aligns with the birthing line indicated on the the dotted line. Horizontally on the screen,

31:17
mooring dolphins are utilised for the tying up of the vessel. They're the 8 structures that sit back from that birthing line,

31:27
which are again are used by the vessel's crew and the birthing team to tie the ship.

31:33
Once the vessel is aligned, it moves towards the jetty, making contact with the breasting dolphins. So these are the two stretches. Again, quite difficult to denote, but they are separate stretches that

31:46
as the jetty head in between them, these structures absorb the energy of the vessel and assist in keeping that at a fixed distance from from the jetty itself.

31:58
During this birthing process, tugs and the pilot may assist the vessel to ensure it is safely and correctly positioned along the berth.

32:09

The vessel is positioned alongside the loading platform where cargo operations will occur. On the loading platform itself, the

32:18
coloured lines indicate the pipeline for ammonia. They're the on on this image the the darker

32:24
lines to the left hand side of the jetty structure itself and also we're providing here future provision for CO2 operations there. The green lines that are are highlighted on the image.

32:38
These pipelines are used for the loading or unloading of liquid products to and from the vessel.

32:45
The vessel is finally berthed at. I get where it will offload or take cargo and at this point the deck officer and the users operational team would coordinate the connection of the marine loading arms and then the the discharge of of any cargo.

33:03
That's it. Thank you.

33:06
Just one quick question from me. So can all of the cargo be disembarked via those pipelines or is it necessary for the storage to be in place first?

33:18
Yeah. Adam Varley for the applicant Yes you you would need a tank to to discharge to.

33:24
So does the storage need to be part of the end zip?

33:29
No, for the reasons I've explained earlier. The fact that something supports the operation of the N SIP is characteristic of associated development. In this case, the tanks support the operation of the N SIP in the way that's just been explained. That's one of the reasons why they're associated development.

33:48
Thanks.

33:55
So just a quick question for me. In terms of the alignment of the loading arm and the actual shift that comes in, does it have to be completely dead on or or is there, I don't know, some sort of flexi hose connection in between in case they're not aligned completely.

34:16
Adam Marley for the applicant, if you could just draw your attention to the image that's also on this slide that that is in fact a marine loading arm. They're they're they can move and adjust to suit certain

movements of the vessel. That being said, as I understand it, vessels tend to align with their manifolds, with those marine loading arms to make operations far easier.

34:40
OK. Thank you.

34:44
So it's it's not really a question actually just a request the the earlier slide an issue specific three we're going to get into navigational and and we have some questions on roles and responsibilities that might be quite a useful slide to have that sort of might help with our questions for you to sort of know who takes responsibility at which point. So it's that I think yeah request that if that could be here that would be helpful. We'll we'll we'll accommodate if there's anything else we think might need to be added to it having regard to what you want to discuss

35:12
about heading, we'll we'll do that. Otherwise, at least we'll provide this one

35:16
that helpful. Thanks,

35:23
Madam and Lester, something else I was going to go on to the next part of the explanation of how it all works, which is the associated development and in particular here the Air Products operation taking us from beginning to end in the way that you've requested in the agenda. So this is Mr Tymon Robson who's ready to my right but one

35:48
good afternoon time and Robson Air Products Project Director speaking on behalf of the applicant.

35:56
What what I'm showing you on the screen here is a is a simple pictorial

36:01
showing how we will create hydrogen in the Middle East using only wind and solar power and ultimately how we will deliver hydrogen to HGV vehicle drivers around the UK and to local industrial consumers.

36:18
What I will do over the coming slides is to explain in more detail each separate step of the process

36:25
and also to explain the green credentials not only of the overall process but of its individual step.

36:37
I'll just move on the slide.

36:48

Thank you. So before I talk through each individual step of the process, I'd just like to clarify a couple of points. So the green credentials of of the process is, is expressed in terms of a carbon intensity value, which is a measure of the life cycle greenhouse gas emissions of that process. So that includes the direct emissions caused by burning fossil fuels, but it also includes some indirect emissions

37:19
caused by electricity generation or production of lubricating oils or various other things. It's measured in terms of grammes of carbon dioxide equivalent per megajoule.

37:33
And

37:34
a point to make is that the green hydrogen project product that we will deliver will have a carbon intensity value of about 35% of the equivalent diesel value.

37:48
And for the industrial consumers it's about 30% of the equivalent natural gas carbon intensity value. So when in the in the in the next slides and I talk through each process step, I talk about the carbon intensity contribution of that step, I'm talking about how it contributes to the remaining 35%. We already have a 65 or 70% reduction from the current situation

38:19
and the carbon intensity threshold values are set in some key standards which I will discuss later in the in the slides.

38:35
So what I'm showing on the screen now is a simple flow chart of the whole process from

38:42
hydrogen production in the Middle East all the way through to our end consumers.

38:49
So we start with the production of the hydrogen from water, we convert it to ammonia, and the reason we can convert to ammonia is that is a convenient way to transfer the hydrogen from one place to another. Ammonia is can be transported in liquid form, which makes it easier to to ship. So we ship to Europe and to Immingham

39:12
where we break the heart, the ammonia, back out again into into hydrogen.

39:18
We then liquify the process because that makes it easier to transport via road to our ultimately to our hydrogen refuelling stations.

39:27
And over the next slides, I'll I'll talk about each step in a little bit more detail.

39:39
So as we've spoken before, the Neon Green Hydrogen Company in Saudi Arabia

39:47
is where our facility is to to produce the green ammonia in the 1st place and it's there predominantly because there is abundant wind and solar energy available and substantial space.

40:02
The process in Saudi Arabia starts with purified water, which we split into hydrogen and oxygen by electrolysis

40:13
and and that step of the process is entirely fueled by power from solar and wind.

40:20
So that step of the process to to create the hydrogen initially contributes just 3% to the overall carbon intensity of the final product.

40:31
There's a couple of other key process plants

40:35
in the NEON facility.

40:37
One is an A separation unit which separates nitrogen from air

40:44
and the second process facility is the ammonia plant which combines the nitrogen and the hydrogen to form ammonia NH3

40:58
and that is then stored in liquid form in large tanks ready for shipment.

41:04
Now that step of the process is is less tolerant of fluctuations in electrical power interruptions. And so that section is is powered by both wind and solar, but also supported by the local grid.

41:19
And that step of the process contributes 9% to the overall carbon intensity of the end product

41:31
if we move to the shipment stage. So ammonia is shipped again I explained in liquid form from the Middle East to Europe to Immingham

41:42
and around the world.

41:44
We will ship in very large gas carrier vessels up to about 230 metres long

41:51
and there are some specific ammonia carrying vessels in construction. Currently

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we ship in such large ships to reduce the carbon intensity of the shipping process just through economies of scale.

42:09
Now the shipping, at the moment the ships run on marine gas oil

42:14
and so this step of the process contributes 14% approximately to the overall carbon intensity of the end product.

42:24
It's expected that this step of the process will improve from a carbon intensity point of view.

42:32
The government have committed legally binding emission targets on the shipping industry as part of their Carbon Net 02050 legislation. And also the large engine manufacturers have research ongoing to develop ammonia fuelled marine engines

42:54
and we expect that the first of those engines would be on the commercial market next year

43:01
and potentially by the end of this decade. Ammonia carrying vessels would be fueled by on ammonia.

43:18
Before I talk about the process steps here in Immingham, I'm just showing you on the on the slide here a geographic layout of of where the the, the stages will occur. So obviously the ammonia offload will take place at the jetty head in the river Humber. The ammonia storage which is in work #3 is

43:43
is inland, about 1500 metres from the jetty head.

43:49
The hydrogen production stage in phase one of the development is is in Work 7

43:58
and it's connected to the storage area by an underground pipeline.

44:03
The hydrogen liquefier process unit will be adjacent to that also in work 7

44:09
and then also next to it will be the hydrogen storage area and the tanker loading area for the road tankers to be filled to take the hydrogen to the hydrogen refuelling stations around the country.

44:26
So looking at those stages in specifically so in in terms of the offload and storage, so the ships dock at the jetty head and they offload using the ship's pumps to pump the ammonia into the storage tank before the ship arrives. We have to cool down those pipelines, so we circulate liquid ammonia in order to bring the pipelines down to -32

44:54
agrees to allow the offload to occur

44:58
in the tank itself. Essentially the ammonia is effectively boiling, so it generates ammonia vapours and so there will be processed plant next to the tank which collects those vapours, reliquaries them

45:16
and and puts that liquid back into the tank to keep that whole storage in steady state.

45:23
So

45:25
this step of the process

45:28
contributes about 4% of the overall carbon intensity of the end product

45:40
moving on to the hydrogen production

45:43
process unit. So the ammonia will be pumped from the tank to the hydrogen production unit

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and in that in that unit the ammonia is heated in a in a furnace with a catalyst

45:59
and that creates a reaction that splits the ammonia back into hydrogen and nitrogen.

46:08
The hydrogen is then purified.

46:11
Now, before it can move to the next stage,

46:14
the nitrogen will be released into the atmosphere.

46:19
Now

46:21
this is a key stage of the process, so in its design we make sure that it's as optimised and energy efficient as possible.

46:31
And there's an example of that the the heat that's available at the back end of the process can then using heat exchanges to be reused at the start of the process. So we make that process as energy efficient as possible.

46:46
It is fired by natural gas

46:51
and so this step of the process contributes about 37% of the overall carbon intensity of the of the end product.

47:03
It's anticipated that there will be

47:06
process improvements in this stage in the future

47:11
that may allow us to use hydrogen as a as a firing gas for the furnace either

47:22
partially

47:24
or or totally,

47:26
but that's that's a process development that's that's being worked on.

47:31
An important point to note at this stage is that the overall carbon intensity of the end product and the whole supply chain will meet the requirements set by the standards using natural gas as as the firing mechanism. So whilst there is

47:50
aspiration and intention that this stage of the process

47:55
would become better from a carbon intensity point of view, that is future proofing the process going forward, it's not an immediate requirement in order to meet the carbon intensity value set by the standards.

48:15
If I move to the next stage of the process, which is where we we take the hydrogen and we liquefy it

48:23
into liquid form and then we store it in some large horizontal vessels.

48:29

48:31
It's extremely cold at -252°C.

48:37
It's it's liquified through a series of compression, cooling and expansion processes.

48:47
So that uses both power and cooling water,

48:52
and so this step of the process contributes about 15% to the overall carbon intensity of the end product.

49:02

49:05
The power that's used in this stage and across the Immingham site, a proportion of that will be renewable and it will be purchased through a power purchase agreement from a renewable electricity generator.

49:27
The the final step of of the process is that the liquid hydrogen is loaded into Rd tankers and they will

then be driven to a number of hydrogen refuelling stations which our products are constructing around the country as part of separate projects.

49:49
It's assumed at this stage that

49:53
the the HGV's transporting the hydrogen are fueled on diesel

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and so this step of the that transport element contributes 7% to the overall carbon intensity of the of the product.

50:07

50:10
Going forward, Air Products will convert its fleet of HGV vehicles to hydrogen fueled

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as a as a first mover in this industry and so that element of

50:26
a carbon intensity contribution will reduce.

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The refuelling stations themselves have compressors and pumps associated with them. They will be connected to the National Grid

50:39
and so

50:41
the HRS is the refuelling stations. They will contribute about 11% to the overall carbon intensity of the product.

50:55
So as a summary, what I'm showing you on the screen now is a breakdown of the carbon intensity contributions of each step in the process, from a from

51:07
hydrogen and creation in in the Middle East to the hydrogen refuelling stations. There's a couple of things. Just to note is that industrial hydrogen is supplied in gaseous form

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and so that comes off at a different stage in the process.

51:26
And also again to note that this,

51:30
this 100% that we're talking here is the 35%

51:35
that I spoke about in in the initially

51:39
in in terms of the equivalent

51:41
diesel carbon intensity.

51:47
If I move now just to explain the low carbon certification.

51:56
I I I will note to start that we will provide a written response to question 1.3 point 3.4 to explain in more detail the standards and specifically how they function in terms of the mechanisms and how they're secured.

52:14
But that's at a higher level.

52:17
There are two key standards involved. There's the Renewable

52:23
Transport Fuel Obligation which relates to transport hydrogen, hydrogen used for the for the HDVS,

52:32
and there is the UK Low Carbon Hydrogen Standard which would apply to hydrogen supplied to our industrial users.

52:44
In terms of transport,

52:47
the RTFO

52:50
sets a threshold value of 32.9

52:54
grammes of CO2 equivalent per megajoule as as the threshold value to comply with that that order

53:01
and so the the Air Products hydrogen that we produce from this process will meet that threshold.

53:11
On the low carbon hydrogen standard side, the value set is 20 grammes of CO2 equivalent per megajoule

53:20
for industrial customers and and once again our products

53:26
green hydrogen will meet that standard

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And and there's a final point just to make is the economic model

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for production of green hydrogen. The way that I've explained is wholly dependent on it meeting those carbon intensity threshold values.

53:47
UH, in that UH,

53:51
our customers

53:53
want to buy low carbon hydrogen. So on on the demand side, we need to meet that requirement.

54:02
And and the 2nd aspect is the mechanism of the RTFO provides additional revenue for Air Products if it's hydrogen meets that standard.

54:14
And so it's very much in Air Products commercial interest to ensure that our end product and our overall supply chain carbon intensity meets that threshold, not necessarily of any individual step, but the overall outcome

54:35
must meet that standard.

54:42
Mr Robson, that was really helpful and just demystified the process for us quite, quite, quite a lot.

54:53
I just have a couple of questions. One is,

54:59
and this is kind of implied in your presentation and I don't want you to spend too much time answering it right now, but perhaps in your written submission you can highlight this a bit more. So this first step, it's very clear what you're doing differently or what additionality there is in the process in order for it to be less carbon intensive and more sustainable, environmentally sustainable. In the rest of the steps, that is slightly less clear.

55:30
So while it's very clear what the environmental sustainability is, but it would be helpful to understand what you're doing differently. So just to give you an example, you said that the ships will use marine gas, oil and their carbon intensity. Did you say it would be 14%?

55:49
So what are you doing differently and what would say, some other shipping operator do where their carbon intensity would be higher than yours?

56:02
Yes, Mr. Robinson for the applicant.

56:07
We our products will not own the ships that we use to transport the ammonia. We will have a shipping team who arrange brokerages to to transport the hydrogen. We therefore have the ability to choose to a certain degree which ships are used. And so for sure that will be a element of that choice of shipping line or or ship if it's if it's more efficient.

56:37
So that's just the sort of additionality that would really help us in your written submission to just understand what you're doing to add value to the to the process in order to bring your carbon intensity down.

56:51
And like I said, I think in some of the steps that's quite

56:56
evident, in a few of the others that's less so. So, So that would help.

57:03
And the second question was that you referred to will meet standards or carbon intensity value, was that were you referring to that last slide that you just showed us?

57:16
Yes, I was. OK, fine. So, so that's not a question then. So that's clarified.

57:21
You have in a few places talked about future improvements to the process. Now given that's not secured in your draught development consent order, it's not something we can necessarily give way to, but I think it'll help the panel just slightly widen its understanding. If you could just explain to us where those opportunities lie and what the time horizon might be, what your interest and let's say incentive in delivering some of those process improvements

57:51
might be. So again, almost exactly as you've given the presentation, which I will repeat was very, very useful. It would be really helpful to understand what that additionality might be in the future.

58:04
Yes, Mr Robson, for the applicant,

58:07
we will address most of that in a in a written response. But in terms of the, the ultimate driver, it comes back to the commercial requirement for Air Products to meet that standard

58:23
and in the future that standard may be tightened. So we need to have the ability within our process to improve the carbon intensity of the overall product so that we're constantly ahead of that, that target. And that's the driver for Air Products to seek those improvements all through the supply chain to be able to improve that carbon intensity value.

58:53
Which very neatly brings me to my last question. Because you said that the economic model only works if we meet this threshold because our customers want it. And if you can just provide some of that evidence that if you weren't going to meet this threshold, those chaps over there, we're not going to buy from you. You know, So I mean what I mean by evidence is that just convince us a little bit more with whatever you've got to say that you know that this model only works. You know, there's nothing that posts consent of consent.

59:24
Granted, there's nothing that will, you know, mean that you can dismiss, for instance, some of these credentials.

59:32
It's I I must underpin everything that I've just said by saying that there is an overarching question about what kind of weight the examining authority can give to these aspirations and indeed these commitments that some of which are indeed secured in in your proposed Draught Development Consent Order,

59:54
given, you have described them as important and relevant, but they're not actually covered under section 104, subsection subparagraph 3. So so that that is an overarching question. It's a different line of questions, but these are some more technical. You know that it's it's almost a parallel line of questioning.

1:00:12
If we can give it weight, if we do decide during the course of the examination that yes, this is a relevant matter for us to give weight to, then we we need to have all the evidence lined up. So a lot of my questions are to make sure that we have that evidence before us.

1:00:36
I think I'm happy with those questions. If you've got anything further to add, otherwise you're happy to move. Thank you, Madam. Yes. And and just to say we've, we've picked up the theme of that parallel line of inquiry from the written questions and we're very much directing our efforts in answering those to make sure that we address it. So it it's helpful to have it confirmed, but that reflects what we had

1:01:00
understood from the written questions excellent. And I'm now going to go on to the the next setting which is forecast of other users and Jetty related activity. And this is back to Mr Raul, who's going to deal with this matter.

1:01:23
In responding to this agenda item,

1:01:28
I'm just going to explain to contextual points, which I think would be helpful to understand what what, what we go on to. What I go on to say

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the, the first point to note is that in respect of a piece of marine infrastructure, it's actually very difficult to give a definitive position on the capacity,

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what is the absolute capacity of that piece of infrastructure. And that's because port infrastructure capacity is influenced by a number of different matters. So I'll give you some examples of what they are and matters such as the precise type of cargo which might be handled over that infrastructure,

1:02:06
the available birth capability and capacity,

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the capability and capacity of the available land side storage facilities,

1:02:14
the capability and capacity of the relevant loading or unloading infrastructure, how quickly you can get the product or the goods off, off the vessel or onto the vessel.

1:02:23
And and also linked to that is the length of time that the cargo will product dwells within the port. So that all has an influence on the capacity of that marine infrastructure. So it's very difficult to say that

piece of infrastructure can over the course of its lifetime that is the maximum capacity of that jetty. So that's the first contextual point.

1:02:42
The second contextual point to note is that the police industry, and I'll give you some quotes from

1:02:48
a pause policy at the moment, but the ports industry does not, as the general operational practise, look to operate its facilities at full physical capacity. And, and again, this point can probably most easily be explained if I if I just give you some examples from the port policy where, for example, in respect of competition and resilience matters. Paragraph 3/4/13 of the pause policy says effective competition requires sufficient spare capacity to ensure real choices for poor

1:03:18
uses. It also requires ports to operate at efficient levels, which is not the same as operating at full physical capacity.

1:03:27
Demand fluctuates seasonally, weekly and by time of day, and some latitude in physical capacity is therefore needed to accommodate such fluctuations. So that really gives you a flavour of why a piece of infrastructure never or doesn't very often be operated at its full physical capacity.

1:03:48
And so against that contextual background and again having regard to the fundamental policy principle that's contained within the ports policy, that principle being and I've outlined this under item one, that it's for each port to take its commercial view and its own risks in terms of what it considers to be viable.

1:04:08
The applicant's doing the best that it can at this stage of the process estimates that the maximum theoretical capacity of the marine infrastructure that it's applied for

1:04:18
is the handling of 292 vessels moving approximately 11,000,000 tonnes of liquid bulk cargo products per year. So that's the best estimate which the applicant has able to identify at this stage.

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However, it's it's important to highlight that that's not a specific target which the proposed development has to achieve,

1:04:41
but rather that's a level of activity which has been defined primarily to ensure that a reasonable worst case environmental assessment can be carried out. So if that's what the deputy or the marine infrastructure could do, that's what's been assessed. So that's prime primarily the purpose for for for for estimating that that figure.

1:05:03
And

1:05:04
it's not necessary

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that this, this defined capacity has to be utilised or achieved overall,

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and neither is it so is it necessary for a certain level of capacity to be utilised by a particular point in time. It's certainly not necessary in our view for such matters to be achieved in order for the need for the proposed development to be proved or for the benefits of the proposed development to be achieved.

1:05:34
In terms of the breakdown of that overall capacity, the, the applicant commercial view is that this results in a minority element of that creative capacity being utilised for the handling of liquid ammonia reflecting the requirement of Air Products. And you you've, you've, you've heard from them directly about their view of the market and and why they're promoting the facilities they're promoting along the scale that they're promoting them.

1:06:01
But that also leaves that the majority of the creative capacity and capacity being utilised for the handling of carbon.

1:06:09
Now in respect

1:06:12
of the liquid ammonia, hydrogen element of the project, it's again I I once against highlight that there is a, there is a named first user of that Jetty Air Products. And in this respect I I would just highlight that it's not always the case in respect of port development proposals that there is a specific user of the facility known at the time of the application. Rather, it's often the case that the reason for the promoting, promoting the development, again which reflects what

1:06:42
sports policy says it's

1:06:46
it's a promotion that's based upon the commercial judgement of the port operator operating in the free market environment. And effectively that's the position which Mr Bird explained to you earlier. From ABP's perspective, they effectively do both take both of those approaches. Either they they deal with a specific customer or they promote it on behalf of their own commercial, their own commercial view.

1:07:12
Coming back to the carbon element of the proposed development, the applicant considers that this use will occur

1:07:19
having regard both to the wider policy context which I've summarised earlier on and we will we have explained in more detail than the application documents and we'll cover it off again in the note. But having regard to that policy context and also the commercial discussions which ABP is the applicant has had and continues to have in this regard, again matters which Mr Bird has clearly set out to you earlier.

1:07:42
It is the applicant's commercial judgement having regard to these commercial factors that there's a clear need for capacity to serve the carbon market in this location and that the capacity to be made available through the proposed development will be significantly used for that purpose.

1:08:02
The actual use of the marine infrastructure for carbon will however, clearly requires some form of additional supporting infrastructure, IE a new further storage or processing processing facility, or at the very least a landslide connection to an existing storage facility or distribution network.

1:08:22
Such additional supporting infrastructure will trigger the need for further consents and approvals

1:08:28
along with the associated assessment of impacts through the environmental impact assessment process

1:08:36
and allow us allow, as I think Mr Philpott has already alluded to, there are no specific proposals yet in regard to this issue. The the applicant's view is that having regard to the likely nature of the infrastructure required and pipelines, pipelines and facilities for storage and transport, and having regard also to the characteristics of the physical environment of this part of the Humber.

1:09:07
Having regard to the local land use policy in general terms and the clear need for such infrastructure and the urgent need at the urgent nature of that need. And the applicant's view is that any necessary consensus that would be required would be able to be secured.

1:09:24
This is, this is, in the applicant's view, no obvious there is sorry, in the applicant's view, no obvious impediment in this regard.

1:09:34
I would also add that If, however, for whatever reason, the envisaged carbon element of the proposed development were not to occur in the future and just to be clear, for the avoidance of doubt, having regard to the clear policy support for such activity and the clear need the applicant is aware of this position is considered highly unlikely.

1:09:55
But assuming that were to happen

1:09:57
and another liquid bulk product were proposed to be handled across the marine infrastructure,

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then this would similarly require some form of land side infrastructure and potentially even marine side infrastructure amendments, triggering the need for further consents and approvals along again with any associated assessment of impact through the EIA process.

1:10:21
The acceptability of any such future proposal would have to be judged through the relevant statutory process against the relevant policy and material considerations applicable at that time.

1:10:37
Some Madam that concludes what we're proposing to say today by way of forecasts of other users and capacity. Unless, of course, you've got questions from Mr Round based on what he's saying.

1:10:53
Yeah, just just one, if I may.

1:10:56
What was very helpful in the first session was the explanation of the need and that was the case. What we've just heard is a case that there may be a need for carbon capture the the carbons. Why isn't that included in the development? If there is a need now and there doesn't seem to be no obvious impediment to use the words to to that going forward. Why hasn't that been included in the NC?

1:11:18
If I if I may, just that the infrastructure that will be required on the N SIP itself

1:11:25
is included. So as you've seen from apologies from Mr Barney's explanation of how the ends it works, there is space provided within the N SIP to accommodate the pipelines that will be necessary for the import of carbon.

1:11:40
What we don't have, because at the moment there's nothing for us to connect into, is an associated development that will be required to connect those pipelines through to a carbon capture and Storage project.

1:11:53
You've heard the explanation that there is and you'll be aware of another application which is underway for a a nearby carbon capture and Storage project. But as yet there is no proposal within that application that would specifically link to this.

1:12:17
And and that comes back to Mr Raley's point that if that is to happen, ultimately if they get consent and they decide that they wish to connect to us as as we believe is likely to happen, there will need to

be at least a further application in order to facilitate that. So any impacts associated with at that particular end user and the connection between the two would fall to be assessed at that point.

1:12:44
Similarly, if that doesn't happen,

1:12:47
but a another liquid bulk proposal comes along that will also have to be assessed separately because that will need its own land side infrastructure and quite possibly different infrastructure on the jetty itself. So I I hope that that helps provide some

1:13:06
broad comfort will obviously provide more detail in the written responses as to why approving this particular application does not open the door for any and every type of liquid bulk to come ashore. At the moment we're only seeking consent for the associated development that will allow the Air Products operation to take place. But the end ZIP has been designed so that it can accommodate the carbon if as we believe that comes forward. But there would then need to be further applications to actually

1:13:36
facilitate that.

1:13:46
That was a really helpful presentation, Mr Rahul. Thank you very much.

1:13:51
One of the things that you're very helpfully stressed on is that the port doesn't always need to operate to capacity. And in fact the NPS requires spare capacity for flexibility and so on, which is absolutely fine. And the capacity that you've actually assessed the maximum capacity is for the worst case scenario. All very helpful.

1:14:14
My question is that

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is there a scenario where

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the capacity at which

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the jetty is operating at

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does not meet section 24? So that's question one. A question 1B is that

1:14:36

do we need a commitment to that effect? And if if I can answer both of those, yeah, first point is it it doesn't matter, OK? Because the creation of the capacity is what makes it an exit

1:14:50
and so for example if you have A to take it out of the ports context and into a. A another similar sort of categorisation if you issue if you have a an offshore wind farm that is would authorise the construction of turbines up to a capacity which takes one beyond the 50 MW limit and you provide provided that the capacity is is there

1:15:21
and it's still an Ensip even if they initially build a small part of it. Because what you're granting consent for is something which is nationally significant.

1:15:32
And so once the capacity is built,

1:15:36
the capacity is there, It's an end Sid. If the capacity is not utilised for a particular point in time, it's still an end zip

1:15:47
which is why

1:15:48
there's not even a deadline to say you don't need that because and and just to if I may, just to sort of complete the analogy

1:16:00
in in this case of course once you have created the jetty and the jetty has as an end set the capacity to bring ashore up to approximately 11,000,000 tonnes, you've created the capacity. It may be that you can't realise all of that capacity without further association development, but that's the associated development. It's not the capacity of the end sit per se.

1:16:30
Umm,

1:16:32
I think I'm ready to hand back to you, but I'm just gonna. Just one quick reminder. You're going to find this massively annoying, Mr Philpott, but you will have to introduce yourself each and every time you speak. It's going to be really annoying, but it's it's my fault. And despite despite having appeared in many of these, it's something which I've yet to master and and see I've just failed to do it. Then

1:16:57
Harry would Philpott Casey for the applicant failing to master that basic element of examination. Good practise. And just before I introduce the the final speaker we've we've we've we've come now to the final part of our presentation which is dealing with the construction programme which should specifically ask to deal with. I'm conscious of the time. I suspect we may be able to deal with it within the time we've got, but of course

1:17:27
if you have lots of questions, it may push us a bit beyond 5:30, but that may take some of the pressure off

1:17:34
tomorrow's timetable, which is also quite, quite full. We did have this discussion during the break time and I think we would like to cover it properly tomorrow if that's OK with everybody and I'd like to see not from the IP's particularly.

1:17:56
Yep. OK,

1:18:00
very good.

1:18:03
OK. So we will hold over item 3.7 for to be covered off tomorrow. Although the complexion of tomorrow is slightly different, but I think Mr. Hunter can manage both of them good.

1:18:20
So unless there's anything else, sorry, can I just check if IP's have any questions?

1:18:26
No. OK.

1:18:33
That's

1:18:46
Mr Boska. What I'm going to suggest is that you do ask your question directed to us and we will decide if we're going to field it to the applicant or not on the basis of what we said to you earlier at the preliminary meeting. So we'll definitely take your question, but whether or not we decide to cover it today, we will decide after we've heard it.

1:19:07
OK, that's fine with me. I mean, if this will be better as well for examining authority to submit my questions in the written form, I'm as well ready for that. If this is better for you, please just tell me,

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Go ahead and ask the question and then we'll decide.

1:19:30
OK. Thank you.

1:19:32
Um, So I I have a question to the applicant regarding the hydrogen production unit.

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So we know that in view of the fact that the hydrogen production via the dissociation of the ammonia has limited references

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put the applicant meaning our products illustrate

1:19:54
how the proposed design guarantees the liability of the implemented technology. Do they have the operational experience any industrial scale plant which they have been operating. I think this is important for the.

1:20:14
Your awareness on the technology readiness,

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Thank you for that.

1:20:34
I think

1:20:35
it could be quite an in-depth sort of discussion. So perhaps if you submitted it to us in writing and then we can give it due consideration

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and then take it from there. If

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if that's agreeable,

1:20:53
yes, this is totally fine with me. I have let's say a couple of similar questions which are uh, technology related and quite deep and technical. That's why I was suggesting maybe the written submission and this phone would be the best.

1:21:11
Yes, that that that would be great. So submit those in writing and and then we will. Thank you so much. Thank you very much. I will contact with the case team on that. Thank you.

1:21:24
May I just say on that, just picking up the theme which Madam you and your colleagues identified early in relation to that last speaker. In order to understand the relevance of those questions,

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we we obviously not only need to see the questions written down so we can understand exactly what

they are, but we also need to understand what is the nature of the case. This is a commercial competitor as I understand it

1:21:54
asking questions about my clients technology

1:21:59
and that as you can see just from my explanation of the nature of the questions we need to understand what this has got to do with the the proposal. And so if I may, I would suggest it would be helpful if we can consider the questions and what we might wish to say in response to them once we've had the opportunity to see what they put in in, in the light of the the way you've left it with them. And then we can

1:22:29
perhaps have a contribution to make as to the relevance and importance of those questions and their appropriateness more generally.

1:22:39
That's understood and and I think we've made that quite clear in the preliminary meeting where we've stated that Miss Jablonska would need to set out for us how

1:22:55
the engagement of her organisation aligns with the objectives of this examination. And the objectives of this examination being closely aligned to national policy statement, the balance of benefits and impacts and indeed the effect of this proposed development on herself or the organisation that she represents. Likewise the submission at deadline one of their written representation,

1:23:25
we will give it until deadline two when we see your responses to them before we can decide how the matter is relevant to us. So I I I think that process broadly covers off,

1:23:39
you know, those concerns and indeed should give us some clarity. Yes, Harry would Philpott Casey on behalf of the applicant. Indeed, Madam, that's much appreciated. That precisely meets what I was seeking to achieve. Thank you. OK. Any other IP's with questions?

1:24:01
OK, so I don't see any hands up now. We do need to take a very quick adjournment and that so that we can go over the actions that we've covered off today.

1:24:13
The time is nearly 5:20.

1:24:19
We might need 20 minutes, so let's meet back here at 5:40 PM

1:24:29
and then we will just read out the actions and hopefully close the meeting shortly afterwards.

1:24:36
OK,

1:24:42
Welcome back. The time is 1739 and we are going to resume the last part of this hearing. Excuse me.

1:24:53
So I will shortly list the emerging actions from today's meeting. You may start working on these actions now as I am formally issuing these actions at the hearing. However, we will issue them in writing in the first written questions to be published with our Rule 8 letter next week. Responses are due by the 1st deadline, deadline one on Wednesday the 13th of March.

1:25:18
Excuse me.

1:25:20
So the hearing actions, I've got 8 hearing actions

1:25:25
that I've we've taken down

1:25:28
now.

1:25:31
Sorry, I'm just trying to.

1:25:37
My mouse has disappeared. I'm sorry. No, I'm fine now. Let's come back.

1:25:42
Yes, they are all for the applicant and they're all due at deadline one.

1:25:47
So Action .1 was the demand national Demand forecast 2019 to be submitted into the examination.

1:25:57
Action .2 was relating to the Heathrow challenge and the relevant points were to be clarified.

1:26:06
Action .3

1:26:08
mentioned the citation required for challenges to the National,

1:26:15
State and National Policy Statement for ports, in addition to the Drax Court judgments.

1:26:24
Action Point #4 Provision of details of other proposed Air Products developments that are in the pipeline according to the Argos Tracker,

1:26:35
Point #5

1:26:37
was where do the 10 GW UK targets come from? And please provide other examples that will contribute to this target.

1:26:49
Action .6 was in relation to the pictures of other terminals that were shown and if these could be marked up to show the associated development and the handset.

1:27:02
Action .7 you mentioned. Um

1:27:07
as a products having a programme of hydrogen filling stations and it was just where these are and the time scales of production of those please.

1:27:21
Umm,

1:27:23
Action .8, What is the Applicant and Air Products commitment to further reducing carbon intensity in the end to end process and also what could be possible future reductions in carbon intensity?

1:27:39
Those are the action points that we noticed. And do you have any others that you've noted that we haven't taken down yet? I don't have any other specifically. I've got a couple of, just a couple of clarifications if I may on, on two items on on the list. And the first one in relation to item 4, the details of the other projects, I think you said other Air Products projects, they're not necessarily Air Products projects, indeed

1:28:09
number of them are not, but they are projects which are of a similar sort of type. And so just to be clear that the we're getting a list of their products projects, there'll be various companies that are

promoting them. And just a small clarification, the other one is in relation to item 6. Again, just to clarify, when we provide the pictures of the other terminals which are marked up, they will show the

1:28:38
port development as it were the jetty or the birth as the case may be and the onshore development which is associated with it. Because I I I suspect that in most if not all of those cases they wouldn't have been promoted as projects under the Planning Act. They won't necessarily have been classified as Ensip and associated development. But the principle is the one that we've explored and we'll we'll mark it up with that principle in mind. Thank you.

1:29:07
Thank you for that.

1:29:23
OK. I think that's brought us to the end. Unless just just quick show with around the room if there are any final questions for

1:29:36
the examining authority about the matters that have been discussed today,

1:29:43
I don't see any hands. Uh,

1:29:46
no. There is one.

1:29:48
No. OK. No hands on teams or in the room.

1:29:54
That concludes the business of the day. The time now is 5:44 PM and I will now close the issue specific hearing one.

1:30:07
Thank you.