MR SMITH: So, to introductions, my name is Rynd Smith. I'm the lead member of a panel, which is the Examining Authority for the Lower Thames Crossing application. And I am in the chair also for this part of the hearing.

I will draw your attention to frequently asked questions, a document that is linked to our rule 6 letter and available on our website. You'll find my brief biography there and an explanation of the purpose of the Examining Authority's appointment.

My fellow panel members will shortly introduce themselves and I will flag that they, too, have biographies in that FAQ document. So I'm going to start by moving to introduce my colleague Mr Dominic Young.

MR YOUNG: Good morning, everybody. I'm Dominic Young and I will be leading today on agenda items 3, 4(b) and 4(d), and I will ask questions as they arise. I'll now introduce my panel member, Mr Ken Taylor.

MR TAYLOR: Good morning, everybody. My name is Ken Taylor. I'm a member of this panel and I will be jointly leading on matters in relation to agenda item 4(c), along with my colleague, Mr Smith. And I may also ask questions on other agenda items if they arise. I will now hand over to my colleague, Mr Ken Pratt.

MR PRATT: Good morning, everybody. I'm Ken Pratt and I'm a member of this panel and I'll be leading on item 4(e). But, as with my colleagues, I'll also ask questions on other matters, if they arise. When not directly leading on an item, I probably will switch off my camera to allow you to focus on those speaking but be assured that I will be listening to everything that is being said. And, at this point, I'm going to hand across to my colleague, Ms Janine Laver.

MS LAVER: Hello and good morning, everyone. I'm Janine Laver. I will be leading on matters in agenda items 4(f) and 4(h) for this hearing. I may also ask questions on other matters if they arise. I'll hand you back to Mr Smith. Thank you.

MR SMITH: Thank you very much, Ms Laver. This is Rynd Smith, panel lead, speaking again. And, indeed, just returning to what my colleague Mr Ken Pratt said, you may note that a number of us switch off our cameras as we move through the event. We will normally have at least one lead

member of the Examining Authority on camera to lead the discussion; the rest of us may drop into the background in order to absorb what is being said.

Having introduced the panel here today, I will flag that, in case the internet fails us, we have all arranged deputies for each other's roles that we've announced so, if we do change roles or lead on different items, don't be disconcerted. That will all be part of the plan for this event.

I will also introduce our Planning Inspectorate colleagues working with us on the examination today, some of whom you will have spoken to already. Eleanor Church and Ted Blackmore jointly case-manage the Planning Inspectorate team for the application. The team delivering this hearing is led by Eleanor with case officers Ryan Sedgman and Katy O'Loan in registration and planning officer Alice Humphries supporting the Examining Authority.

The agenda papers have been circulated and hopefully they do provide a clear explanation of our and your reasons for being here today: to hold this issue-specific hearing. And this provides the applicant with their first opportunity to make submissions – their opening submissions – in a more conventional manner, to introduce the Lower Thames Crossing project as they see it, as they have applied for it, to you and to us.

This hearing then provides the Examining Authority's first opportunity to explore the definition, the shape of the project: assumptions, design processes. Those things that have led it at a strategic level to taking the form that it does. And we will be asking what may seem to some of you to be some very basic questions about why the project has been brought forward in the way as it has. But be conscious of the fact that we are starting here at the beginning of a very substantial, a very complex, rationale for a very large, a very complex and a very important project. And so we do need to start that story at the beginning.

You'll see that we're holding another issue-specific hearing tomorrow: issue-specific hearing 2, into the draft development consent order. In order to authorise a project such as this, the applicant needs

the Secretary of State for Transport to make a piece of law – delegated legislation – the development consent order or DCO. The applicant has prepared a draft DCO as their starting point and, mindful that we will be making a recommendation to the Secretary of State about whether this project should proceed or not, we're not the decision-makers so we must also provide the Secretary of State with the best draft development consent order that we can. So we will need to explore the drafting of the DCO with the applicant before we go any further in the examination process.

Now, you'll have got a sense from those opening remarks that both of these two initial issue-specific hearings have been designed by us as places to 'unpack'. For the applicant, they enable the story to be told as to why things are as they are as they see it and, for this Examining Authority, they enable us to respond, to set out our first questions around the story as we see it so far and review the large-scale and high-level issues brought before us in the application documents, and, critically, in 1,147 relevant representations made by interested parties participating in this examination.

But this is just the start. This is the beginning of a six-month journey. And we are not going to put all of the issues that we need to put before you today so if your issue doesn't emerge in the discussions today, please don't be concerned. There's plenty of time for issues to emerge. And, in holding these 'unpacking' hearings, before we receive detailed cases from interested parties, or indeed your written representations at deadline 1 on 18 July – which is still nearly a month away – we wanted to show and share, essentially to give you a sense of what we see as major items for examination so that you, in turn, can provide your amplified views or detail on these at deadline 1 and to say whether these are big issues in your mind or whether other issues in your mind might be.

We will be holding further rounds of hearings in September, October and November 2023 and there will be a substantial number of issue-specific hearings in those rounds where we will explore individual issues in more detail.

You'll find information about the application and the documents produced for the examination on the Planning Inspectorate's National Infrastructure Planning website. This has a landing page for the Lower Thames Crossing. Now, if you haven't found that website already, just Google, 'Lower Thames Crossing Planning Inspectorate' and it will lead you there. And it's important to be alive to the fact that we publish everything that we accept as a document into the examination and also recordings and transcripts of these hearings. And it's important to be alert to that website because we'll use it to communicate with you and to provide access to all of the documents that emerge as we move on.

Okay. You now know who we are and why we're here. And I'm going to hand you over to my colleague, Ms Janine Laver and she will start the process of asking you to introduce yourselves so, over to Ms Laver.

MS LAVER: Thank you, Mr Smith. This is Janine Laver, panel member, speaking. Just a quick caution: I may look to my left when I'm doing introductions because I do have a list of people I think are here today to speak and, in order to work through those, I need to move my eyes over to the left side of my screen so please don't think I'm disengaged when you are introducing.

I will be asking you individually to introduce yourselves to the hearing but before I do, there are a few things that I need to cover. We advised you in the agenda that we are being livestreamed and recorded. The recordings we make are retained and published and form a public record that can contain your personal information and to which the UK general data protection regulation applies. Does anyone have any questions about the terms on which our digital recordings are made? I'll just look to see if there are any hands. No, I'm not seeing any raised hands so we'll move forward on the basis that this is all understood.

We would now like to hear introductions from anyone who has requested to be heard, either on their own behalf or representing another person or organisation. We will need to know your name, the persons or organisations you are representing and your role and briefly confirm the items on the agenda that you think you may wish to speak on. Where an

1 interested party is represented by more than one person, I would as that 2 someone takes the lead on making the introductions and then ask each 3 member of your team that intends to speak to introduce themselves. 4 So I will start with local authorities and I would like to know who we 5 may have speaking for Essex County Council today, which items you 6 think you wish to speak on and if you have other colleagues that may 7 wish to speak. 8 MR MACDONNELL: Hello. My name's Gary MacDonnell and I'm representing 9 Essex County Council today. I will be in for the entirety of the hearing 10 today, not necessarily wishing to speak on any specific matter. 11 MS LAVER: Thank you very much, Mr MacDonnell. Do you have any colleagues 12 that are with you today? MR MACDONNELL: No, it's just myself. 13 14 MS LAVER: Okay. I will move on now then to Kent County Council. MR RATCLIFFE: Good morning. My name is Joseph Ratcliffe. I am a transport 15 16 strategy manager at Kent County Council. There is not a specific item 17 on the agenda I wish to speak at today though I am here for the entire 18 duration and will be able to respond to any questions, either orally or following up in writing. 19 20 MS LAVER: Thank you, Mr Ratcliffe. I see that you are on your own today. 21 MR RATCLIFFE: Yes. 22 MS LAVER: Okay, thank you very much. Can I ask who is here to represent 23 Thurrock Council today, please? 24 MR EDWARDS: Yes, so, good morning, madam. I represent Thurrock Council 25 with various other representatives. My name is Douglas Edwards. I'm a 26 barrister and King's Counsel. I have three other representatives of Thurrock Council in the room with me and a further representative, Mr 27 Davis who is online. And, with your permission, I'll just ask those around 28 this table to introduce themselves briefly. 29 30 MS LAVER: Yes, please. Thank you, Mr Edwards. 31 MR STRATFORD: Okay. Chris Stratford, town planner, Thurrock Council. 32 MS LAVER: Thank you. 33 MR BOWERS: I'm David Bowers, transport planner, representing Thurrock 34 Council.

1	DR BLACK: Morning. Colin Black, strategic lead for LTC at Thurrock Council.
2	MR EDWARDS: My hope is that Mr [Andy Davis?] is also present at the meeting.
3	He is not in the room with us but is joining online.
4	MR DAVIS: Yes, good morning. Andy Davis here, representing Thurrock.
5	Utilities lead.
6	MS LAVER: Wonderful. Is that everyone, Mr Edwards, for your team?
7	MR EDWARDS: Yes, that is, ma'am.
8	MS LAVER: Wonderful. Thank you very much. Can I now move on to
9	Gravesham Borough Council, please? Who will be taking the lead for
10	Gravesham?
11	MR BEDFORD: Morning, madam. My name is Michael Bedford, King's Counsel.
12	I will be taking the lead for Gravesham Borough Council but with me also
13	today are Ms Wendy Lane, who is the assistant director of planning, and
14	Mr Tony Chadwick, who is the NSIP project manager.
15	MS LAVER: Wonderful. I can see Ms Lane there. Mr Chadwick – is he on
16	screen?
17	MR BEDFORD: Mr Chadwick is here so – I mean, you can switch. Yeah, there
18	we are.
19	MS LAVER: Great. Thank you very much. I'll now move on to the London
20	Borough of Havering.
21	MR DOUGLAS: Good morning, madam. Good morning, everyone. My name is
22	Daniel Douglas. I'm the transport planning team leader at the London
23	Borough of Havering. There aren't any specific items on the agenda that
24	we're intending to speak on today but happy to answer any questions the
25	panel may have and we also may follow up on some points in writing at
26	deadline 1. And I'm also accompanied here today by my colleague, Lynn
27	Basford.
28	MS LAVER: Wonderful. Thank you very much. Does Ms Basford want to come
29	onto screen or happy just to sit in the wings?
30	MS BASFORD: Happy to sit in the wings but good morning. Lynn Basford here,
31	chartered town planner and transport planner working with Daniel on all
32	matters DCO.
33	MS LAVER: Thank you very much, London Borough of Havering. Can I turn
34	now to Medway Council, please?

1 MR BULL: Good morning, madam. My name is Andrew Bull. I'm a chartered 2 town planner. I'm representing Medway Council and I'm the only person 3 here from Medway Council. I'd like to make a representation on item 4 4(b), please. 5 MS LAVER: Great. Thank you very much, Mr Bull. I'll move on now to statutory 6 parties. Do we have anyone speaking please for the Port of Tilbury 7 London? 8 MS DABLIN: Good morning, yes. My name is Alison Dablin. I'm an associate 9 with Pinsent Masons and I'm here speaking on behalf of the Port of 10 Tilbury. I will be available all day. I do notice that a couple of items on 11 the agenda specifically mention the port but I'll be available all day should 12 it be necessary. Thank you. 13 MS LAVER: Okay, thank you. Do you have any colleagues with you today, Ms 14 Dablin, who may be speaking? 15 MS DABLIN: No, it's just me for today. Thank you. 16 MS LAVER: Okay. Thank you very much. Can I now go then to the Port of 17 London Authority? 18 MS DILLISTONE: Hello. I'm Alex Dillistone from Winckworth Sherwood, acting 19 on behalf of the Port of London Authority. And today with me I have Lucy 20 Owen from the Port of London Authority. 21 MS OWEN: Good morning. 22 MS DILLISTONE: We're particularly interested in agenda item 4 so the 23 Examining Authority's question on project definition, and particularly the 24 effects of the two-year re-phasing in capital funding, agenda item 4(c); 25 4(e), on routing and intersection design with relation to port access; 4(f), 26 in relation to the mitigation design and delivery but particularly with regards to the acquisition of land; and the economic benefits, agenda 27 item 4(h). We're happy to answer any relevant questions around ports 28 29 as well, as the Port of London Authority, but we don't have any particular 30 desire to speak on any of those points today, bearing in mind that the 31 purpose of today is for really the Examining Authority's questions but we 32 are here to answer any questions, if necessary. 33 MS LAVER: That's great. Thank you very much. I'll turn now to the Transport

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for London.

MR RHEINBERG: Good morning, madam. My name's Matthew Rheinberg, 2 major projects and urban design manager at Transport for London. 3 There are not specific issues we intended to speak on today but happy 4 to answer any questions and we may wish to raise points in response to 5 what others raise but no particular issues to raise today. 6 MS LAVER: Okay. Thank you, Mr Rheinberg. Do I have someone in the virtual 7 room for Northumbrian Water Ltd? 8 MS WOODS: Yes, good morning. My name is Sam Woods. I'm an associate 9 solicitor at Winckworth Sherwood. We are legal advisers to 10 Northumbrian Water Ltd, who trade in the area of the DCO as Essex and 11 Sussex Water so you'll see both of those names appearing on 12 documents. There are no particular agenda items that we wish to speak 13 on today but I will be generally around to assist the Examining Authority 14 if necessary and also, as with others, to follow up in writing at deadline 1. 15 16 MS LAVER: Excellent. Thank you very much, Ms Woods. Do I have a 17 representative now then for Shorne Parish Council? 18 MS LINDLEY: Hello, there. Yes. Good morning. My name is Susan Lindley. 19 I'm a parish councillor in Shorne and I'm chair of the planning and 20 highways committee. I'm the only person from Shorne attending today. 21 I don't have any specific points that I wanted to intervene on but obviously 22 if there's anything raised I might want to comment. And obviously I'm 23 also available to answer any questions that the Inspectorate might have. 24 Thank you. 25 MS LAVER: Thank you very much. I'll need to see if there's anybody here now 26 for St Modwen Developments Ltd. 27 MR MANSELL: Hi there. Good morning. My name is Nick Mansell from Pinsent Masons LLP on behalf of St Modwen Developments Ltd. I'm here on my 28 29 own today so no other colleagues representing St Modwen. I don't have 30 any specific items I wish to speak on today but I'm available all day to 31 answer any questions or make any follow-up observations. 32 MS LAVER: Thank you, Mr Mansell. So do we have somebody representing the 33 Thames Crossing Action Group? 34 MS BLAKE: Good morning. Thank you, Ms Laver. Good morning to everybody.

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1 My name's Laura Blake. I'm chair of the Thames Crossing Action Group. 2 We represent those who are strongly opposed to the proposed Lower 3 Thames Crossing throughout communities locally and further afield. We 4 would like to reserve our right to speak on item 4 today on the agenda 5 and of course are happy to answer any questions that the Examining 6 Authority may have. Thank you. 7 MS LAVER: Thank you very much, Ms Blake. Do we have somebody 8 representing London Gateway Port Ltd? 9 MR SHADAREVIAN: Ma'am, good morning. My name is Paul Shadarevian KC 10 and I act on behalf of DPWLG, which I use as short-hand to cover both 11 the port and the logistics park. Ma'am, we have other people in the room 12 with me but it's most unlikely they will need to speak. And if I do, it's 13 going to be in relation to agenda items 4(e) and (h). 14 MS LAVER: Thank you, Mr Shadarevian. 15 MR SHADAREVIAN: Thank you. 16 MS LAVER: Do we have somebody speaking, please, for Uniper today? 17 MS THEOBALD: Yes, that's me. My name is [Margaret Theobald?] and I'm 18 representing Uniper and we would like to speak about item 4(b). 19 MS LAVER: Thank you very much. Is there any other interested party that I've 20 not come to as a representative of an organisation? No, I'm not seeing anybody. Could I just ask if Thurrock Council could maybe look at their 21 22 camera settings? You were quite far away from the screen when you 23 were introducing yourselves. Just, should we need to come to you, if we 24 could get a little bit closer to you visually, that would be fantastic. 25 MR EDWARDS: We are having some difficulty in this room because we can't 26 see any of the other speakers at the moment so I think there's a problem with the technology here. So, at an appropriate moment, with your 27 permission, I may just ask if we just leave the meeting and then re-join to 28 29 see if that can be remedied and we'll also try and sort out the camera 30 position at the same time, if I may. 31 MS LAVER: That's great. Thank you. That would be most acceptable. Thank 32 you. Okay, so I will now return back up to the applicant to see who we have here representing the applicant today, please. If you could 33 34 introduce yourselves for us?

1 MR HENDERSON: Good morning, madam and good morning, everyone. My 2 name is Tom Henderson. I'm a partner and solicitor at the law firm BDB 3 Pitmans. We are instructed by National Highways on the Lower Thames Crossing Project. I'm supported today by my colleague Mr Mustafa Latif-4 5 Aramesh, also a partner and solicitor at BDB Pitmans. And then, in 6 addition to us, we have some seven subject matter leads, reflecting the 7 breadth of matters to be covered under agenda item 4. I'm happy to 8 introduce those now or we could introduce them at agenda 4, as and 9 when they're required to speak. 10 MS LAVER: It would be helpful just to put faces to names at this point, please. 11 MR HENDERSON: Would you like those members to introduce themselves? I'll 12 call them up to speak and then obviously the camera can pan across to 13 who they are. 14 MS LAVER: That would be great. Thank you. 15 MR HENDERSON: So we'll start with Dr Tim Wright, please. 16 DR WRIGHT: Good morning, madam. Dr Tim Wright, the head of consents for 17 the Lower Thames Crossing. 18 MS LAVER: Thank you. 19 MR HENDERSON: And next we have Professor Helen Bowkett. 20 PROFESSOR BOWKETT: Good morning, madam. I'm Professor Helen Bowkett 21 and I lead on the transport modelling and economic appraisal of the 22 Lower Thames Crossing. 23 MS LAVER: Thank you very much. 24 MR HENDERSON: Then we have Mr Barney Forrest. 25 MR FORREST: Good morning. Mr Barney Forrest. I'm the environment lead 26 for the Lower Thames Crossing project. 27 MS LAVER: It was unfortunate there, Mr Forrest – we didn't catch what you look like but that's okay. I'm sure we'll see you a bit later in the hearing. I can 28 29 see you now. Thank you. 30 MR HENDERSON: Then we have Mr David Cook. 31 MR COOK: Good morning, madam. Mr David Cook, head of strategic operations 32 and maintenance for the Lower Thames Crossing. 33 MS LAVER: Thank you, Mr Cook.

MR HENDERSON: Then Mr Steve Roberts.

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MR ROBERTS: Good morning, madam. Steve Roberts. I'm the design and engineering director for the Lower Thames Crossing.

3 MS LAVER: Thank you.

4 MR HENDERSON: Then Mr Nick Clark.

MR CLARK: Good morning, madam. Nick Clark. I'm the lead ecologist for the Lower Thames Crossing.

MS LAVER: Thank you, Mr Clark.

MR HENDERSON: And, finally, not seated at the table – he'll join us later – is Mr Keith Howell. He's the utilities development lead and you'll meet him under agenda item 4.

MS LAVER: Okay. That's great. Thank you very much, Mr Henderson. So I will go back now to our agenda for today. The topics have been set out. In the agenda, the applicant will generally speak first after the panel member has posed their questions. The panel will ask its questions. It will then turn, at some point, to interested parties. So any questions from interested parties need to be put through the panel, please. Whenever you begin to speak to an item or question, if you could please reintroduce yourself by name and say which organisation, if any, you represent. This may seem a little tedious to keep doing so but it does help with those watching or listening on the livestream or watching recordings afterwards to understand who is speaking and what is going on.

Can I also add that, once an issue has been identified by one speaker, it does not need to be repeated by a second who agrees; it is sufficient to say that you agree with something that a previous speaker has raised. We may disregard a representation if it is vexatious or frivolous. And we may also ask you to move on if you substantially repeat what others have said.

If you are not in the virtual room with us today and are watching this on the livestream or in playback, you can make comments in writing on anything you hear by deadline 1, which is 18 July so there is still plenty of time available to submit your views in writing. And remember, please, matters put orally and in writing are treated equally by this panel.

I will remind everyone of the importance of respecting all

participants and allowing everyone here to have their say. In fairness, just as you won't want to be interrupted when you speak, please do not interrupt the other speakers. Every speaker should be allowed to make full use of their opportunity to speak. I'm receiving some feedback so if anybody not speaking could possibly turn off their microphones, that would be great. I think it was possibly coming from the Thurrock –

MR SMITH: It is Thurrock Council. There's a live microphone in Thurrock Council room so if we could just place that on mute, that would be wonderful.

MS LAVER: Thank you. That's great. I'll just return then to the issue around interruptions. If anyone does interrupt in a way that is unnecessary or disrupts the hearing, I will issue them with a warning and also will my other panel members. If the same person interrupts again, they will receive a further warning and we may ask the case manager to exclude them from the hearing. Be aware that repeated interruptions that lead to disruption can be viewed as unreasonable behaviour for which awards of costs can be sought by other interested parties.

Now, onto matters of housekeeping for today. We'll be running this hearing in sessions and we'll aim to keep to approximately an hour and a half in length. However, as you can understand, session lengths are not precise because the panel member in the chair at the relevant time will choose when to call the break. We will try to do this at natural break points when a particular part of the discussion has ended or can be paused, without everyone losing their train of thought.

Indicatively, I am hopeful that we can maybe take a break at around 11.30 for around 15 minutes, somewhere around 1.15 for approximately an hour for lunch and then, depending on the coverage of the agenda, we may take a further 15-minute break in mid-afternoon around 3.45. Again, these are indicative. We do hope that we can end the business of this hearing within one day but we do have time available within the notified hearing period of Friday, if we need to continue.

Finally – so you're probably all fed up of my voice already – if anything goes wrong with the technology for you today and you struggle to participate, please contact the case team by email or phone and they

will try to get you back into the hearing. If that fails, they may ask you to attend on Friday or to make submissions in writing at deadline 1 on Tuesday 18 July.

If anything goes wrong with the technology at our end, we will also try to restart the event as soon as we can so please try and stay connected. If the issue is so serious that the event can't continue, we will announce the next steps on the Lower Thames Crossing landing page of the National Infrastructure Planning website. Again, the contingency time set aside to continue this hearing is 10.00 a.m. on Friday, if we need to use it, if we have serious technical issues that we can't solve today.

So I'm happy to say that the introductions are now complete before I move onto the main business of session 1. Does anyone have a burning question that they need resolved now or can it be raised under any agenda items? Just look for hands in the room. No, I'm not seeing anything so I'll hand you back now to my colleague, Mr Smith.

MR SMITH: Thank you very much for that comprehensive introduction, Ms Laver. Now, you'll be very pleased to hear that we are now moving to agenda item 2 – the purpose of the issue-specific hearing, where I don't intend to dwell because we have made that pretty clear in introductory remarks and I hope the agenda is clear as well.

So, in a nutshell, we are enquiring into the definition of the project; we're providing the applicant with an initial opportunity to explain the key elements of it and its design approach in agenda item 3; and then we will be exploring certain key questions with them in agenda item 4. And, just to be absolutely clear: these are matters and these are questions that have emerged for the Examining Authority, arising from relevant representations in our preparatory work. The hearing does not limit the remit of issues to be identified in written representations or addressed at deadline 1 or examined in later written or oral processes.

And I think, everybody, that's as much as I need to say about the purpose of this hearing but is there anybody with any further question about what we are about to embark upon before I hand over to the first substantive agenda item and Mr Young? I will just check the room to see

if I see any yellow hands rising or cameras coming on and I am seeing no such. So, on that basis, I am now going to transfer to Mr Young who will lead us into agenda item 3.

MR YOUNG: Thank you, Mr Smith. This is panel member Dominic Young speaking. Now, turning to agenda item 3, that is the applicant's proposed development. Where we would like to start, and has been set out in our agenda, is to ask the applicant, first of all, to frame the purpose and definition of the proposed development. Mr Henderson, are you going to speak for the applicant?

MR HENDERSON: I am, sir. Thank you. Tom Henderson speaking for the applicant. Sir, we prepared, as mentioned, an opening position statement on the purpose and definition of the proposed development. It seeks to frame the purpose and definition at a summary level in order to set the scene for the matters to be explored in more detail under agenda item 4 so we don't seek to answer those questions under this agenda item.

It seemed to us convenient to address this agenda item in reverse order and so our opening remarks are structured as follows: firstly, we'll address the definition of the proposed development. And we've divided that into five parts, reflecting some of the key prisms through which the development is capable of being defined. And those five areas are: the physical definition of the scheme, namely the proposed works; secondly, the special definition, which we refer to as the land and rights required; thirdly, the operational definition; fourthly, the legal definition; and fifthly, we'll say something about the definition for the purposes of assessing the various impacts and benefits. We'll then go on to address the purpose of the project with reference, in particular, to the scheme objectives.

So we would now propose to spend – I'd estimate – 10 to 15 minutes making our preliminary remarks under these headings. For ease of everyone's note-taking, we'll be putting in this position statement at the next deadline as part of our written summary of oral evidence. And, in fact, that point goes also for our outline responses to agenda items under part 4.

MR YOUNG: Thank you.

MR HENDERSON: So turning now to the definition of the proposed development – and, as I said, part 1 of that – the physical definition of the works. Starting at first principles, the applicant is seeking development consent under the Planning Act 2008 for the construction, operation and maintenance of the A122 Lower Thames Crossing, which is a very substantial new highway connection on the strategic road network. This project would provide a connection between the A2 and M2 in Kent and the M25 south of junction 29, crossing under the River Thames through a tunnel. Junctions would be provided with the A2 to the southeast of Gravesend and at the A13 and A1089 in Thurrock and at the M25 between junctions 29 and 30.

The construction of the new road would require the delivery of a series of additional works, including a large number of utilities' diversions and new connections, the construction of supporting infrastructure such as drainage ponds, modifications to the alignment of a number of local roads, the realignment of existing and the creation of new public rights of way and the delivery of necessary environmental mitigation and compensation measures, such as the creation of new areas of ecological habitat.

The works are extensively described in the applicant's DCO application. And just a signpost where that is, in particular, the project definition, chapter two of the environmental statement, which is APP-140; in schedule 1 to the draft DCO, which is AS-038; and in numerous plans and drawings included in the application, in particular the works plans, which begin at APP-018.

Consistent with other large-scale NSIPs, including major highway schemes elsewhere in the country, the DCO application is founded upon a preliminary design for the proposed development and so, should the application be granted development consent, the detailed design would be developed in the post-DCO consent phase in accordance with the preliminary scheme design and subject to the other controls and constraints secured by the draft DCO, including the design principles document, which is APP-516. So that concludes part 1.

So I'll move on to the second part of the definition, which is the spatial definition, in other words the land required. Now, the land plans, which begin as a series at APP-06 and onwards and the statement of reasons, which is APP-AS-040, identify those parcels of land required to deliver the Lower Thames Crossing. This includes land and rights in land required permanently for the new highway and associated development, and land required temporarily during the construction phase of the project. The outer extent of this land is known as the order limit and the draft DCO contains a suite of compulsory acquisition and temporary possession powers in respect of this land.

In identifying the land required for the project, the applicant has had careful regard to Section 122 of the Planning Act and associated guidance related to procedures for compulsory acquisition – reference of which is DCLG of September 2013 – in order to ensure those various tests have been met, and this is set out fully in the statement of reasons. Within the order limit, the works referred to earlier in my submissions are subject to limits of deviation, which means that the land included in the application allows for a degree of flexibility both laterally and vertically. The applicant's position here is that the level of flexibility is proportionate and reasonable for a project of this nature and is necessary to ensure that the project can be delivered efficiently and effectively and at best value to the public purse.

Now, it's recognised that compulsory acquisition and temporary possession will be matters for examination later through written exchanges and compulsory acquisition hearings. But we did note agenda item 4(f)(ii) references land required for mitigation, so hence we wanted to make those points at the outset.

Moving on to the third element of the definition, as I mentioned, operational definition. I'll just make some brief points on this one. The A122 Lower Thames Crossing would be an all-purpose trunk road, in other words an A-road, with a 70-mile-per-hour speed limit and restrictions on certain slow-moving traffic. Operational measures sought within the consent include the power to levy a road user charge and powers to allow for the safe operation of the road tunnels.

Fourthly, the legal definition of the scheme, as set out in the planning statement, APP-495 and the explanatory memorandum, which is APP-557, the project qualifies as an NSIP by reason of it meeting the definitions and thresholds for highway-related development under the Planning Act, Sections 14(1)(h) and 22. And, having regard to the different limbs under Section 22, namely construction, alteration and improvement, the applicant's position is that the strategic road network elements of the proposed development fall under Section 22(1)(a) of the Planning Act, namely this is the construction of a highway within the meaning of Section 22. And we're happy to say more about that, particularly tomorrow's issue-specific hearing on the DCO, which touches upon matters of NSIP qualification.

As previously noted, as a consequence of the construction of the highway NSIP, there is a need to divert a significant number of utilities and of these, the scale and significance of certain works means that four of them constitute as NSIPs in their own right. To break that down, we have three gas transporter pipeline NSIPs under Sections 14(1)(f) and 20 of the Planning Act, and one overhead line NSIP under Sections 14(1)(b) and 16(1)(a) of the Planning Act. And, again, we appreciate these are matters for exploration at issue-specific hearing 2.

The remainder of the proposed developments, including construction activities, works to local roads, replacement of special category land, environmental mitigation and compensation all fall within the definition of associated development under Section 115 of the Planning Act. And a replacement travellers' site is provided for as related housing development under Section 115(4)(b) of the Planning Act. So that concludes comments on the legal definition.

Fifthly, I'll turn then to defining the scope of the project's assessments of impacts and benefits. Now, these are defined through a series of assessments in the application. I won't list them all now but, in particular, they include the transport assessment, the economic assessment, the environmental impact assessment and the habitats regulations assessment. Now, each of these has their own extent defined, both physically, spatially and temporally, in accordance with

relevant legislation, policy and guidance. For example, transport analysis guidance issued by the DfT forms the basis for the approach to traffic modelling and economic assessment in accordance with paragraphs 4.5 and 4.6 of the national policy statement for national networks. This is all explained in great detail in the combined modelling and appraisal report, which is APP-518 to 527.

The design manual for roads and bridges, which we'll refer to throughout as DMRB, informs the approach taken to environmental assessment, which reflects the requirements of the Infrastructure Planning (EIA) Regulations of 2017. The scope of the assessment was also validated through the obtaining of a scoping opinion from the Planning Inspectorate, which was adopted by the Secretary of State on 13 December 2017. Additionally, the assessments included in the environmental statement have employed the Rochdale envelope principle in order to account for the level of flexibility permitted by the proposed development via the limits of deviation I referred to earlier. This is explained in further detail in chapters 2 and 4 of the environmental statement, reference APP-140 and 142.

We highlight this fifth component of the project's definition, given the matters to be discussed under agenda item 4, but we wouldn't propose to say any more about them at this stage, noting they're very substantial topics in their own right and will doubtless be the subject of questions and hearings later in the examination. So that concludes our submissions on project definition and, unless you have any questions at this juncture, I can move on to the purpose of the proposed development.

MR YOUNG: Yes, please. Mr Henderson.

MR HENDERSON: Thank you. The purpose of the proposed development is best encapsulated by the scheme objectives, which are set out in table 1.1 of the 'Need for the Project' document, which is reference APP-494. These fall under three headings: firstly, the transport-related objectives, and those are to relieve the congested Dartford Crossing and approach roads and improve their performance by providing free-flowing north-south capacity; secondly, to improve the resilience of the Thames crossings and the major road network; and thirdly to improve safety. So

those are the transport objectives.

The community and environment objective is to minimise adverse impact on health and the environment. And then there are three economic objectives, which are to support sustainable local development and regional economic growth in the medium to long term; to be affordable to Government and users; and finally to achieve value for money. And these scheme objectives constitute what we call the golden thread, which runs through the development of the project since they were adopted during the early options phase development of the scheme.

The 'Need for the Project' document explains the severity of the problems currently faced at the Dartford Crossing and which give rise to the need for an intervention and how the proposed development will address those problems and meet the project's purpose and objectives. These will be addressed more fully in response to agenda item 4(a) so I won't repeat those now but suffice to say, at this stage, that there is a critical need for the Lower Thames Crossing project and the proposed development will meet that need.

This draws clear policy support, in particular paragraphs 2.10, 2.22, 2.23 and 2.27 of the national policy statement for national networks, which identifies that there is a compelling need for development of the national road network, including new alignments and links, which cross rivers and estuaries.

Therefore, the applicant's position for the purposes of the decision-making test under Section 104 of the Planning Act is that the project fully accords with the national policy statement for national networks and that the benefits of the proposed development clearly outweigh its impacts and this is set out fully in the planning statement, which is reference APP-495.

So, sir, that concludes our outline submissions on the purpose of the project and, unless you would like me to give way at that point, I can move on to part 2 of this agenda item, which references the minor refinements consultation.

MR YOUNG: Yeah, before you do that, Mr Henderson, let me just go and see if

anybody wants to make a point of clarification on anything that you've said regarding the purpose and definition of the project. There's not really an opportunity to discuss the merits at this stage but does anybody want to clarify anything with the applicant? Okay. Not seeing any hands go up. So, Mr Smith, you've turned your camera on. Do you want to...

MR SMITH: No, not at all. I was just standing in readiness, Mr Young, in case we had interventions. But I think the point that you are making, leading this part is very clear. These are opening statements and are therefore broadly the opportunity for the applicant to make their case and the questions will all come out in the wash and we've got six months to deal with them all and everybody will have their fair go in due time.

MR YOUNG: Thank you. Mr Henderson, then I'll pass back to you if you want to cover off that second bullet point then, the minor refinements consultation.

MR HENDERSON: Thank you, sir. Tom Henderson, again, for the applicant. So part 2 of this agenda item, as you say, was a request to introduce the minor refinements consultation and the changes arising from it. That consultation sets out three proposed changes to the project, which we've described in the document that we submitted – 'The notification of the proposed changes' – which is AS-083. I should say at the outset that the applicant considers these not to constitute material changes.

The three changes proposed were as follows: firstly – and they have reference numbers, which I'll employ because they're used in the documentation – so MRC01 is a change at Blue Bell Hill in Burham in relation to nitrogen deposition compensation sites. This change would entail the removal of farmland from the order limits, which is works number E2 and part of work E1, which is currently or was proposed for nitrogen deposition compensation. Further analysis from the project advisors concluded that this land can be removed from the order limits while still retaining sufficient compensatory habitat to respond to the effects of nitrogen deposition and the merits of this change will be explored later under agenda item 4(f)(i).

The second change – MRC02 – relates to the limits of deviation on the bored tunnel headwall. This proposes to increase the north portal

headwall limits of deviation from 125 metres to 275 metres. And the applicant is seeking here additional design flexibility to move this headwall to the north relating to matters such as ground conditions and then detailed design as and when that comes to be undertaken, as I mentioned, post any grant of DCO. This might result in a reduction in the length of cut and cover tunnel and an equal increase in the length of the bored tunnel.

Then the third change – MRC03 – relates to utilities relocations in east Tilbury and an associated order limits reduction. Here, the applicant is proposing to change the location of two utilities logistics hubs, known as Muckingford Road and Low Street Lane – reference in the order are ULH11 and 12 respectively. And then, to modify the alignment of the temporary Linford borehole pipeline, which is work number MUT6. This allows for reduction in temporary land requirements in the area, producing the order limit and the impacts on land as a result. The change would also move construction works further away from residential properties in east Tilbury, reducing the potential environmental impacts associated with those works.

The package of changes here would involve the acquisition of new permanent rights over a small number of land plots, around 10 of those, which were previously proposed to be subject to powers of temporary possession and of these changes MRC01 and 03 have arisen, in particular through engagement with interested parties, and both of those were intended to respond to and address concerns that have been raised.

Now, in addition to that, the minor refinements consultation provides an update on construction, setting out how construction of the two road tunnels could be delivered using a single tunnel boring machine as an alternative method to two tunnel boring machines. We thought it would be helpful at this stage to put on record that the applicant does not consider this to be a change. And we make four observations in this regard.

Firstly, the use of a single tunnel boring machine is within the scope of the environmental assessments prepared for the application for

reasons that will be discussed later at agenda item 4(c)(ii), but the summary point here is that use of a single TBM does not result in any materially new or materially different effects to those already assessed in the application.

Secondly, whilst the ES – the environmental statement – was based upon assessment of a scenario of two tunnel boring machines, the DCO application, as submitted, contains no constraints nor a commitment that requires the use of two TBMs. Thus, the application contains the proportionate degree of construction flexibility, which includes flexibility to employ a single tunnel boring machine and, for that reason, it's not a change to the application that has already been submitted.

Thirdly, the decision on construction methodology in terms of one versus two tunnel boring machines has not been made at this stage of the project's development and would be made at the detailed design and delivery stage, hence why there's that proportionate degree of flexibility afforded.

And fourthly and lastly, we would just note that it's commonplace for major DCO applications to allow for an appropriate degree of construction flexibility and indeed, in the case of a public project, it's very much in the public interest since it allows the project to be delivered at best value to the public purse, provided always of course that the various controls contained in the suite of DCO documents are adhered to, and that would be the case with a single TBM or a two-TBM approach.

Hence the single tunnel boring machine information was included in the minor refinements consultation to ensure that interested parties are fully informed of the flexibility allowed for in our proposals and allow them the opportunity to make appropriate representations should they wish. So that concludes comments on the minor refinements consultation, sir.

MR YOUNG: Okay, thank you, Mr Henderson. I'll ask my third question on this agenda item, and then I'll just see whether anybody has anything to ask before we move on to agenda item 4. So my next question is: were there any further substantial changes envisaged to the project definition or design during the examination period?

MR HENDERSON: Tom Henderson, for the applicant. The applicant does not currently anticipate any further substantial changes to the project definition or design. The only point we would note – which was a point raised by the applicant at the preliminary meeting – is that ongoing engagement with interested parties may result in additional minor changes to respond to representations, and there's clearly value in additional minor changes and our ability to advance those to close matters out. The applicant is very mindful of the EXA's comments at the preliminary meeting that any further changes should be advanced at a point in the process at which there is sufficient time remaining to examine them. So that was all we were proposing to say on that.

MR YOUNG: Thank you, Mr Henderson. Does anybody have any point of clarification on anything that Mr Henderson has set out for us? Okay. In that case, I will hand back to my colleague, Mr Smith.

MR HENDERSON: Sorry, might I just intervene before you move on to the next agenda item? It's Tom Henderson again for the applicant. I just wanted to signpost some submissions we'd like to make about additional documents that we would like your permission to put forward at deadline 1. Now, we don't want to take us away from the agenda that you've set out, so I propose to return to those at agenda item 5, if that would be acceptable. But just wanted to put that marker down now that we'll come back to that at the end of the hearing.

MR SMITH: Indeed.

MR HENDERSON: Thank you.

MR SMITH: On that basis – thank you very much, Mr Young – just before we finally close out agenda item 3, I'll briefly speak to a consequential matter arising from it, which is of course the minor refinements consultation process. Now, we hear, Mr Henderson, the submissions that you've made there on the view that the changes emerging from that are either non-material or are not, in a formal legal sense, changes at all. Those are matters that we are inquiring into making our own observations on as we move forward and some of the questions that in fact we'll be asking later on in agenda item 4 are directed to assisting us to resolve that question for ourselves. And so we will of course be seeking comments

from participants here today on those points as well in that agenda item

To flag though, procedurally, that we will be making a procedural decision on essentially the road to be travelled by the minor refinements consultation moving forward, because the road that it travels might be different, depending on the question of whether it is material and needs to engage with and be consulted with a broader group of folk or non-material. So we're going to make that judgment and we will, as soon as we reasonably can now, issue a procedural decision upon it.

So that brings me to the end of any observations arising from me on agenda item 3 so we can move without delay into the beginning of agenda item 4 and in relation to agenda item 4(a), I will be the lead for this item.

Now, this essentially is returning to the issue of the need case and we heard in Mr Henderson's opening submissions a very clear observation on behalf of the applicant that the proposed development will need anticipated need. He cited relevant national policy statement and objectives that would be met by it.

What I think it's important, just to refer back to though, is the question of the clarity with which the applicant is making that case. And the reason I'm pressing the applicant on this point is because we of course have read a lot of relevant representations that, I think it's fair to say, express a very considerable scepticism on the degree to which and this particular project located in this particular geography, designed in the form and with the capacity, the lanes, etc that it's designed with will be capable of meeting anticipated need.

There are others, of course, who have put submissions to us that their ought to have been a broader modal consideration and that some of the need could have been met by rail, etc. So we've got a very broad range of considerations put before us. Now, we are very clear: this, as we see it, is a case that proceeds under Section 104 of the Planning Act of 2008. The national networks policy statement is applicable. We must make a recommendation to the Secretary of State within the framework of that policy. However, we do need to drive some irons into the new case at this stage and ask the applicant to speak to us further on these

points.

need. Mr Henderson.

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MR HENDERSON: Thank you, sir. Tom Henderson, for the applicant. At this point I'm going to introduce my colleague, Dr Tim Wright, head of consents at Lower Thames Crossing to address you on this agenda item.

MR SMITH: Thank you very much. And whilst Dr Wright is readying himself, what I will say is that with all of these items we will be putting the questions to the applicant first, as it is their opening submission. Once we've received the applicant's response, we will then go around the room and we'll ask whether there are any observations on the point. So firstly to Dr Wright.

So if I can return to Mr Henderson on that first question about

demonstrating that the proposed development will meet anticipated

DR WRIGHT: Good morning, sir. Tim Wright for the applicant. So, as a primary statement, we have demonstrated through the application that yes, the proposed development will meet anticipated need and the current need for this scheme. This is set out, as my colleague Mr Henderson explained, in a document 7.1, 'The Need for the Project', APP-494.

But to explain our overarching position here: the high level of traffic demand for crossing the River Thames east of London significantly outstrips the available road space supply. That situation is in place today and is becoming progressively worse over time, and Government growth forecasts indicate how we should consider the growth in the future along those areas.

As a result, the Dartford Crossing suffers frequent transport congestion delays, poor journey time reliability, and that makes this part of the network one of the most unreliable sections of the strategic road network, which has a number of consequential impacts. It is a major impediment to economic growth in the southeast of England and the rest of the country, given that this is a major strategic link through to continental Europe.

The severance caused by the River Thames at this location and the congestion of the Dartford Crossing, combined with other factors, has meant that the lower Thames area has lacked investment and economies

to the north and south of the river have developed separately, and we provided demonstration of this in a number of our application documents. The congestion and delays also disrupt social and community interactions in the area, and they impact the environment and the surrounding communities.

So as a result, there's a strong need for a new river crossing of the River Thames. Now, this can be linked through to the national policy statement, which sets out how congestion and how low journey time reliability have an adverse impact on drivers and the economy, particularly in the section on drivers of need for development of the national road network, which are paragraphs 2.15 to 2.20, and in our document 'Need for the Project', we've also provided information from the users of the Dartford Crossing.

These set out both the frustration associated with using the crossing and the economic costs to suppliers and logistics companies. They give example through example on page 17 and 21 of that document, to give a little bit of personal experience to the information that we also provide in the detailed economic analysis.

Because of the volume of traffic use in the Dartford Crossing, the impacts often extend beyond the crossing itself, leading to congestion on the local road network, and again, in our document, 'Need for the Project', we've provided information from people who live locally, explaining how the impact from the Dartford Crossing impacts on their daily lives, and again, if you could refer to pages 21, 28 and 42 for examples.

I'll just return to my colleague Mr Henderson's comment. This will be provided in the written submission, so these references will all be supplied at that time.

So I think that summarises the need for the project. The question is: how does our project address and meet that need? So the project would increase the supply of available road space by over 80%, serving the traffic demand that wants to cross the River Thames east of London.

Traffic modelling undertaken for the project demonstrates that at Dartford, for the modelled opening year of 2030, there be an average 19% reduction of vehicles using the crossing in the peak hours, as well

as reductions in flows on the M25 A282 corridor, between junction 30 and junction 2 of the M25, and the connecting A2, M20 and A13, west of the new crossing.

Now, the consequence of this reduction leads to the real benefits that we see. These are substantial improvements in both the journey times and the journey time reliability across the region. As can be seen from a number of the relevant representations, business and the wider public across the area acknowledge and recognise the benefits in this area that the new crossing will bring, setting out how journey time reliability is a real concern for them, and how the uncertainty over journey time is an impact on their daily lives.

So our proposals will create better connections between Kent, Thurrock and Essex, both on the new crossing and via the existing Dartford Crossing, with a transformational effect on the local economies. It will improve the connectivity between the ports and the rest of the country, and that includes the ports on the Thames Estuary, and also on the south coast, which supports the regional and national economy.

In addition, our proposals will reduce the congestion in the region, leading to quality of life improvements for people living close to the existing crossing, and reducing the blight that the current congestion causes on their daily lives.

Now, that's a very narrative and explanation of how we see the need and the benefit for the project. This is all set out quite clearly through the various documents that we've supplied within the application, and our traffic modelling shows that these journey benefits, including the faster journey times and the journey time reliability, continue to be experienced by road users through to the latest forecast year of 2051, and in summary, we provide more information on the benefits in section 8.4 of the planning statement.

Now, I'm welcome to take further questions on that, but that sets out our position on the need and how we meet it.

MR SMITH: Thank you very much for those in principle submissions in response to that question. A couple of observations from myself, in relation to those submissions: firstly, you did make a direct reference to essentially

the separate economic development north and south of the Thames, and the degree to which this is a project that, amongst other things, will increase the economic potential of the region as a whole, by essentially unifying it into a kind of single transport-linked market, in a way that it hasn't previously been before because of the existing constraints on the Dartford Crossing.

One of the points that does arise in a number of the relevant representations is that the possibility that, in a sense, this is a project that could become dizzy with its own success; that it might create additional transportation demand within this newly integrated region – demand that's not present, in addition to serving, essentially, suppressed or frustrated demand for the existing connection. Is that something that you're able to make some observations on now?

Because, I guess, what we're running to here are the error bars around forecasting, at the end of the day. When we're looking at likely [inaudible] demand and then looking at traffic modelling and traffic demand on the new facility, are we in a world where we have reasonable certainty about the end state, or are we in a world where there are, I guess, the possibility of there being some floppy numbers, and does anything need to be done about that?

MR HENDERSON: Thank you, sir. Tom Henderson for the applicant. In response to this question, I'm going to introduce Professor Helen Bowkett, who, as I mentioned, is the traffic and economic lead for the project.

MR SMITH: Thank you very much. Professor Bowkett.

MS BOWKETT: Helen Bowkett for the applicant. The transport modelling work that we've done for the Lower Thames Crossing – we built a strategic transport model, known as the Lower Thames Area Model, and in building that model, we followed the DfT's transport appraisal guidance, and the model is what's known as a variable demand model, and what that means, that in the model, we take into account the change in journey times on the highway network that people experience as a result of the division of the new capacity across the Thames, via the Lower Thames

Crossing, and then we model the behavioural response of drivers to that, which, for some of them, is to change where they want to go to.

MR SMITH: Yes, yes. Indeed.

MS BOWKETT: So we do find that there might be people, for instance, who are currently in Maidstone and travel to work in Bexley, to stay on their side of the river, who choose, once the Lower Thames Crossing is open, to travel to a job maybe on the north side of the river. So that behavioural response is taken account of in the model, and you will see in the common modelling in the appraisal report application, number 51(a), that we do show that the total number of vehicles crossing the river at Dartford Lower Thames Crossing is higher than you would have just with the Dartford Crossing, because you do have people changing where they want to go to, and that response is in the traffic model.

MR SMITH: Interjecting briefly on that particular point, is your own observation, then, that this is a sufficiently conservative model in behavioural terms? That we are not likely to be in circumstances where some unlooked for or ununderstood social behavioural responses to the new Lower Thames Crossing could lead to possibly even orders of magnitude shifts that would be different from those that are dealt with in the model.

MS BOWKETT: Helen Bowkett for the applicant. When we developed the transport model, the strength of the response of drivers to changes in the time and cost of their journeys is calibrated using sensitivity tests set out in the transport appraisal guidance. So the DfT, from research over many years, set out ranges for the strength of the response that you would expect, and the model is calibrated to show that our responses lie within those ranges, and this is documented in the transport forecasting package at number 522.

MR SMITH: And drawing that into a nutshell, it's your professional opinion, then, that this is therefore a very reliable model.

MS BOWKETT: So Helen Bowkett for the applicant. It is my professional opinion that this is a reliable and robust transport model that has been developed in strict accordance with transport appraisal guidance set out by the DfT.

MR SMITH: Okay. Right. Now, do you have any further observations you want to make in order to wrap the particular response to that question that you

were asked? Because I have a related question on transport mode that I just wanted to pursue. It may be one to you, but I suspect it may be to one of your team member colleagues.

MS BOWKETT: Helen Bowkett for the applicant. I've no further comments to make on that question.

MR SMITH: Thank you very much, Professor Bowkett. Mr Henderson then, I will put this generally and leave it to you to find the right team member. You will have heard in my opening on the need case an observation that we have had a number of relevant representations that have spoken about mode, have spoken about the degree to which anticipated demand within this regional setting could be met by other modes than road. There have been a number of representations that have spoken about reinforcement of rail. There has at some point, and one of the things we are interested in, been a proposition that there would be a Lower Thames tram link developed, amongst other things.

Firstly, I wanted to hear from you about the degree to which rail mode, as a means of addressing demand within this region, has been factored into your modelling, and secondly, again, to get a sense of the degree to which it is your view that those issues, those concerns, raised by interested parties are ones that you believe you have broadly addressed in your case, or not.

MR HENDERSON: Thank you, sir. Tom Henderson for the applicant. We note, sir, that agenda item 4(b)(iii) touches on these matters. Professor –

MR SMITH: It does. It does, and without trespassing on my colleague, Mr Young, probably the best place to run to the detail is that. I was maybe jumping ahead a little, but I think you can see the way in which that knits into the need case as well, because the degree to which other mode options have been considered, obviously, is one of the Lego blocks that the broader need case is built from.

Maybe the best thing to do is let it rest there. Allow my colleague, Mr Young, to pursue his questions, and if we need to pull a piece of thread back to this part of the agenda, we can do so.

In which case, I will probably then just touch on my second point under item 2, which is the degree to which it might be anticipated that the

proposed alignment could be become capacity constrained by traffic demand. Now, to a degree that's a question that has been answered in the responses we've had already. Is that something that you wish to put anything further to us on, Mr Henderson? Before I ask who in the room wishes to speak to this item and open this up.

MR HENDERSON: Tom Henderson for the applicant. I'll invite Dr Wright again just to comment briefly on this element. Thank you.

MR SMITH: Thank you very much. Dr Wright.

MR WRIGHT: Tim Wright for the applicant. So to specifically answer the question, within the forecast period, it's not anticipated that the proposed alignment would become capacity constrained by traffic demand. I think we've talked about the traffic modelling we've done that will support that position. We forecast operation up to 2051. So that answer goes to the extent of the forecast in 2051, as we've set out.

I think it is worth commenting that traffic growth forecast towards the later years of the modelling show that some of the slips will potentially experience slowing of vehicles at certain times. We consider that the provision we've made is appropriate, in consideration of performance of the wider road network, and the direction on national policy, as set out in the NPSNN – sorry, national policy statement for national networks, but it's not national policy to meet unconstrained traffic growth, or predict or provide, paragraph 2.24, and therefore the provision we've set out sits within the framework required by national policy, and is appropriate for a scheme of this nature.

MR SMITH: Okay. Thank you very much for that observation. Now, I think we've reached a point at which I would like to bring this item out, and seek observations from the floor. What we'll then do is we'll return to applicant at the end, and just provide the applicant with a right of reply.

Now, looking at the sterling work that was done by Ms Laver and also the registration team, I can see that we definitely have a wish to speak on this from Gravesham Borough Council. Can I just validate that? And Medway Council in the local authorities. So I'm going to go to the local authorities first. Can I just check, actually, before I do? Are Essex

or Kent County Councils wishing to speak on this item? Essex or Kent. No, and Thurrock Council. Yes.

MR EDWARDS: Yes, sir. Douglas Edwards KC, Thurrock Council. In due course, Thurrock Council would just like to make some observations on this matter as well, sir, please.

MR SMITH: Okay, excellent. Well, I will come to Thurrock, but I think, given the clear indication that we did have from Gravesham that they wish to speak on it, they are prepared to do so, as I understand, and so can I then go to Michael Bedford KC for Gravesham to make observations on their behalf?

MR BEDFORD: Thank you, sir. Michael Bedford, Gravesham Borough Council. Sir, the starting point, as you've seen from our relevant representation, is we acknowledge there are clearly problems with the existing Dartford Crossing, but we are not highly persuaded that the solution that is in this proposal is the right solution. Primarily, that's of course driven by our assessment of the impacts that this solution has for Gravesham's administrative area, the communities within it, and the businesses that operate from it, but dealing with matters in hopefully fairly high level as to why we think that both your item 2(a) and (b) do merit detailed probing during the – I can just give you, I think, at the moment, three figures taken from the applicant's material.

So the baseline a.m. crossing movements across the existing Dartford Crossing as at 2016, as reported in the transport assessment – that's APP-[?] 529 – the 2016 figure is 14,430 movements across the existing crossing in the a.m. peak. Because of the various constraints that are outlined in the TA about the problems of those crossings, when you move forward to 2045, which was the end date for the modelling assessment originally reported in APP- 518 – that's the modelling report – the 2045 figure becomes only 15,481 in the 'do minimum', i.e. 'no' scheme for the Lower Thames Crossing.

So that 14,430 only increased by effectively a thousand movements over the period between 2016 and 2045 for the Dartford Crossing, and it's in APP- 529. Both of these 2045 figures are in table 6.4, is that in the 'do something', the Dartford Crossings accommodate 14,868 in the 2045

'do something' scenario. In other words, by 2045, 96% of the 'do minimum' traffic is back with the Dartford Crossings, and that is itself only marginally above the present position because of the constraints that already exist at the Dartford Crossing.

In other words, you're staying at roundabout 14/15,000, being able to get through the Dartford Crossings, both now, in 2045 'do minimum', and in 2045 'do something'. So that's one of the reasons why we question to what extent this is the right solution.

I should add, and we acknowledge this is definitely the case about the point about suppressed traffic, that in the 'do something' 2045, it's right that the LTC Crossing carries some 8,944 movements, table 6.5 of table – sorry, of APP- 518. So we're not denying that providing this releases, as it were, capacity.

But in terms of, 'Is it the right place to do it?' – and particularly, as I say, when you look at what's actually happening at the Dartford Crossings themselves, that we're not really, in a sense, building much capacity for resilience there, because it's at those kind of levels of flow, i.e. the baseline flows, that you still get the problems, the resilience problems, at the existing Dartford Crossing, which obviously are outlined in the transport assessment. So that is, in a sense, our starting point take on it – that we are sceptical as to whether this particular solution has addressed matters in the way that is the most appropriate, and you will have seen that we had referred to option A as being worthy of further exploration, but we know it was discarded in the options assessment as a matter that we can flesh out.

And then we come on to – and I've taken up probably too much time on this – but we come on to, as it were, our particular concerns about whether or not if you do go for an LTC located where it is, and landing, obviously, in Gravesham Borough on its southern end – whether the impacts on that are justified, given the consequences that means for residents and businesses of Gravesham.

So that's our overall initial view of it.

MR SMITH: Thank you very much for those submissions. I'm now then going to ask to hear from Medway Council. Is Andrew Bull ready to speak?

MR BULL: Yes. Thank you, sir. My name is Andrew Bull and I'm representing Medway Council today. At this early stage in the examination, I would like to bring to your attention an issue at M2 junction 1. I'll be able to set out a detailed position in Medway Council's submission of the local impact reports and written representation. The existing M2 junction 1 has emerged as a constraint to development, following representations received from National Highways in Medway Council's determination of a planning application. The planning application was for a 325,000 square metre development of employment floor space in the former Kingsnorth power station site, which was allocated for development in the local plan.

The National Highways representation noted concerns about both congestion and safety at M2 junction 1, specifically the northbound offslip and the southbound onslip links. National Highways considered that the junction has limited spare capacity. That's just 60 movements during either the morning and evening peak travel periods. The junction will need to be improved to accommodate further development once this spare capacity has been exceeded. Following Medway Council's resolution to grant planning permission, the conditions include an initial [inaudible] of 60 movements through these links to enable a phase of development to come forward, along with a monitor and manage framework.

And just finally, the project's limits[?] straddle the northbound offslip and the southbound onslip links. The project is not proposing changes to these links. The increase in traffic flows as a result of the project would likely exceed the spare capacity. So Medway Council will be pursuing existing investment processes, but the project would have ideally addressed this issue.

Thank you, sir.

MR SMITH: Thank you very much, Mr Bull. Those were very succinct and clear submissions, and I think it goes without remark almost, but I will say in any case. We are very conscious that these are very early, high level, sort of strategic overview conversations, and we look forward to the receipt of local impact reports. We look forward to the receipt of written

representations at deadline 1, which will no doubt drill into these issues in considerably more detail. Now, in terms of local authorities, we then have Thurrock Council who indicated that they wish to be heard, and Ms Blake, for the Action Group, I have seen your hand and I will come to you once we've heard from the local authorities.

So if I could go Thurrock Council, please.

MR EDWARDS: Yes. Thank you very much indeed, sir. Douglas Edwards KC, Thurrock Council. In response to your agenda item 4(a)(i), I'm going to ask Mr David Bowers to address you briefly on that, and then subsequently, Dr Colin Black has a comment and through your, sir, a question arising from what you heard from Professor Bowkett on behalf of National Highways.

So before I invite Mr Bowers to address you, so can I just make two preliminary points? One is, sir, we fully recognise that this is not an opportunity to rehearse in full matters that will be addressed in due course and in detail in the local impact report. So, sir, taking your lead, and following the approach adopted by Mr Bedford KC, what we'll offer is a high level response, in respect to these matters at this stage.

Secondly, and sir as you and your colleagues are well aware, Thurrock Council is continuing to undertake a review and an analysis of the application documentation. That process is far from complete at this stage, and therefore the observations made at this stage obviously will be without prejudice to the completion of that process.

MR SMITH: And in that regard, I will make a specific remark there to say that no, we are more than conscious of that, and as essentially part of our rationale for examining these high levels at this time was to embark on a journey that was a sequence of iterative cycles [inaudible] detail. So nothing that is being said at this point is something that is going to be so definitive that will firm or indeed in any way harm or prejudice any party's case. We're trying to stand up on top of a big, tall tower, and look over the whole landscape, and that's all we're trying to do at this stage.

MR EDWARDS: That's very helpful, sir. Thank you very much indeed, and that is noted, and what Mr Bowers will say to you this morning will be very much in that spirit. So, sir, can I then hand over to Mr Bowers?

MR BOWERS: Yeah, hi. David Bowers.

So just to build on the analysis or the description of the project, underneath[?] the project, we've been taking a preliminary look at the objectives, and as described previously, a key objective is around to relieve congestion at the Dartford Crossing, and to build on the comments by the gentleman representing Gravesham, which reflect our own initial examination of the traffic flows, we also think that in certain time periods that the Dartford Crossing return to existing conditions of congestion after only perhaps five years, and it would be good to understand further about what the significant relief, which is described at the conclusion of the traffic forecast nontechnical summary – what that significant relief actually refers to, because the information presented previously by National Highways – my understanding was that was all in the opening year, and obviously, as traffic flows change, what are the changes at Dartford Crossing after, say, five years or 10 years?

And to build on the issue around the modelling, clearly if the forecasts are underestimating demand and traffic flows are higher, would Dartford Crossing return to existing conditions earlier, and if the forecasts are lower than expected, then the benefits that are articulated in the economic analysis would be lower, leading to a reduction in the benefit-cost ratio, which, as analysis shows, is already lower – a level of 1.22.

So I think understanding more about what the significant relief as forecast by the National Highways is, and how that relates to different time periods, is something that we are interested in examining as part of our local impact report, and it would be useful to have further insight on that from National Highways.

MR EDWARDS: Thank you, Mr Bowers, and our expert Dr Black in respect of some matters raised concerning modelling.

MR BLACK: Thank you. Colin Black on behalf of Thurrock Council. Mr Smith, we note that Professor Bowkett was reluctant to be drawn on your specific question as to whether the traffic modelling is sufficiently conservative. It would be helpful to know if Professor Bowkett considers that the appraisal scenarios modelled do cover the worst-case scenarios in this particular region. Is it possible that induced and suppressed traffic

in this particular region may likely be greater than the scenarios the applicant has in fact modelled? Which may be in accordance with the DfT modelling guidance. Thank you.

MR EDWARDS: Thank you, sir.

MR SMITH: Apologies. Those are obviously questions through the Examining Authority, but I think in the circumstances I would like Mr Henderson to direct those back in the applicant's conclusions on this particular agenda item. So we'll pick those up at that point.

MR EDWARDS: Thank you very much indeed, sir. That concludes the comments at this stage from Thurrock Council on agenda item 4(a)(i).

MR SMITH: Thank you very much. Now I am going to move on. We've got two more hands remaining in the room. Laura Blake for the action group has been waiting for a very, very long time. She indicated right at the outset, so I am going to call her in, but I do note that more recently a hand has arisen from Matthew Rheinberg of TfL. So Mr Rheinberg, I'm alive to you. You will come in after Laura Blake of the Thames Crossing Action Group. So Ms Blake.

MS BLAKE: Thank you very much, sir. Laura Blake, chair of the Thames Crossing Action Group. Obviously, as others have said, we don't deny that there are issues at the current crossing that do need to be resolved. We think there's a big difference between whether or not the problems need to be solved, and whether a new crossing across the river by road is essentially the correct answer. Also, I would just like to make some observations. In the 7.1 'Need for the Project,' APP- 494, paragraph 4.2.2 actually clarifies, 'The design capacity at the Dartford Crossing is 135,000 vehicles per day and it's regularly seeing 180,000 vehicles per day.' If you do a basic calculation on that, that means that we'd need to see a reduction of more than 25% to bring that back below the design capacity.

I notice that the applicant stated that in 2030 it was predicted there will be a 19% reduction. Now, that actually doesn't add up to bringing it back below designed capacity, and I also question the fact that we're using a 2030 opening year, but in actual fact the government had stated that there would be a two-year delay in the construction if the project

goes ahead. Therefore the opening year, presumably, would go back two years, and there is likely to be a further increase in the amount of traffic, so what would the actual figure of reduction prediction be in two years later than has been quoted?

And also it would be interesting to know, in addition to Thurrock's question, about whether or not the induced demand in the local area is actually the same as it would be nationally, would also be the fact that historically, when you look at projects, when new road projects have come in, induced demand is around 50%. That does seem like quite a high amount on induced demands, so to be having that, it would be interesting to know to what extent that is actually being considered, compared to what National Highways are actually saying is in the modelling that they've allowed for.

And just to finish off as well, sir, just two points. One, we feel that the incidents at the Dartford Crossing are largely to do with a lot of the congestion, and we don't feel that adequate connections would be in place with the proposed Lower Thames Crossing to take into account how traffic would migrate between the two crossings, when indeed there are incidents at either crossing, but specifically at the Dartford Crossing. For instance, to go along to the Dartford Tunnel being closed, there's only one single lane off of the A2 coastbound on to the Lower Thames Crossing, if it goes ahead.

So things like that we feel also would impact the actual congestion throughout the region. And another point, just to finish up, is that we have asked numerous for the design capacity of the Lower Thames Crossing, should it go ahead, which has not to date been clarified with us. I'm wondering if that has changed and is available in any of the documentation. Thank you.

MR SMITH: Thank you very much, Ms Blake. Now, some of those matters that you raised in relation to the performance of the existing road network – M25, the A28, Dartford Crossing, etc – are going to rise, actually, quite swiftly, in Mr Young's item, 4(b). So we'll probably deal with those better there, but in relation to, I guess, the performance of the existing Dartford Crossing and its designed capacity, it would be useful if in responding at

the end the applicant could address this question about the degree to which the Dartford Crossing would still, as Ms Blake suggests, be operating above its intended designed capacity or not, and if that is the case, whether that gives rise to operational constraints or concerns that we need to alive to.

Moving, then, finally, I'm going to call Mr Rheinberg of TfL, and what I will indicate before he starts to make his comments, is that when we've heard from Mr Rheinberg we will move to a break. We'll take a 15-minute recess, and the applicant will be asked to respond on these agenda items very briefly after the break.

What I will also flag to the applicant, of course, is that you may run to the headline responses on items, but of course this is as well a written procedure, and the applicant will, and indeed everybody does at deadline 1, after these hearings, have the opportunity to render their oral submissions into writing, and the fine detail, the argumentation, the evidence to support argumentation is very well set out in those written submissions.

So TfL. Mr Rheinberg.

MR RHEINBERG: Thank you, sir. Matthew Rheinberg, Transport for London. This is just really an observation that's arisen as part of the conversation today, just about strategic capacity provided by the Lower Thames Crossing scheme, and I don't want to go into too much detail about the case or so on, but it's just an observation that while a lot of extra capacity across a river is provided by the scheme, it does generate significant traffic to either side, and there is a particular example on the M25 itself, north of where the Lower Thames Crossing joins it, and particularly we've been looking at north of junction 28.

We have identified from the modelling that at least at the anticlockwise direction, in the morning peak, the M25 is effectively at capacity, according to the modelling results from 2037 onwards, in the morning peak. So that draws into question just the point that, while the scheme may be relieving the local network and connectivity in the Dartford area, there is a risk that there may be impacts on the local road network further away from the scheme as a result of the strategic network

becoming at capacity, and therefore, in our view, there is certainly a need to make sure there are appropriate measures in place to secure mitigation for those impacts, should they arise. So that was really just the point that I wanted to make at this stage, which felt like it was of a strategic significance.

MR SMITH: Thank you very much, and noted, and, again, I will be asking the applicant to address those immediately in their return. Everybody, it is now 11.37, so it'll be creeping up towards 11.40 by the time we draw this first morning session to a close, but I am going to suggest that rather than asking the applicant to start responding and then cut them off at the knees, it will be far better if they come with a clean run, so I am now going to draw this session to a close. We will go into recess. We will resume, ladies and gentlemen, at 11.55. That's 11.55, when we will turn directly to the applicant for responses on this item, and then we will move to item 4(b), led by Mr Young. Thank you very much. See you at 11.55.

(Meeting adjourned)

MR SMITH: Welcome back, everybody, after that brief break to the resumed issue-specific hearing 1 in relation to the Lower Thames Crossing. My name is Rynd Smith, and I'm the panel lead. And you will see the other members of the Examining Authority have also rejoined the session. What we are now going to do is return to agenda item 4(a) and turn directly to the applicant for their responses to the matters that have been raised, reminding the applicant, of course, that if elaboration is needed, there is a full opportunity to do so in writing at deadline 1. So can I just call the applicant now to respond to those matters?

MR HENDERSON: Thank you, sir. Tom Henderson for the applicant. Sir, as you've alluded to, a number of detailed and technical matters have been raised there by interested parties and, as you noted, we will respond to those in due course in full. But we will take the opportunity to respond at a relatively high level to a number of the points that have been raised, so just to outline how we will handle that. In response to the comments

made by Medway, the point is well understood, and we'll deal with that one in writing, so I won't say any further at this stage.

But in a moment, I'll invite Dr Wright to respond to the comments made about the relief at the Dartford Crossing, incorporating the point made about design capacity and also the implications of a two-year delay. I'll invite, then, Professor Bowkett to respond on the comments from Thurrock Council about the conservative nature of the assessment and then, finally, return to Dr Wright to respond to the comments made by Transport for London in regard to junction 29 of the M25, so, Dr Wright.

DR WRIGHT: Tim Wright for the applicant. So, we recognise that the 2045 forecast show an increase in the flows across Dartford, as would be expected given the forecasts of growth in traffic across the region. The overall reduction in traffic at the Dartford Crossing in 2045 remains up to 30% in peak hours compared to without the crossing. But it's important to look at the nature of this traffic as well, and there are three key points I want to note on that.

Firstly, the traffic modelling demonstrates there would still be significant journey time savings, so the journey time across the Dartford Crossing in 2045 would fall from 14 minutes to just over seven minutes in the morning peak in 2045. And the journey time reliability assessment shows that reliability gains continue to be found until the end of the appraisal period, so whilst the traffic flows across the Dartford Crossing do increase, the benefits continue to be seen.

Secondly, I refer to tables 8.50 and 8.52 of the transport forecasting package, which is appendix C of the combined modelling appraisal report APP-522. And this sets out how you have changes in the destination and the choices people make who are using the Dartford Crossing. And what you find is that there's a – the largest increase in the number of people using the Dartford Crossing is people making local-to-local journeys. In other words, they are travelling from the local areas north and south of the river and across. These are the people who are filling up, and therefore, these people receive the benefit of that new capacity

that's created by relieving the Dartford Crossing. And that benefit is continued to be felt by the local communities through 2045.

And thirdly, refer to the nature of traffic flows across the Dartford Crossing. Table 5.3 of the traffic forecast non-technical summary APP-486 shows that there's a reduction in the proportion of vehicles using the Dartford Crossing which are heavy goods vehicles. That leads to changes in the traffic flows. And it also leads to improvements in the user experience for car drivers currently using the Dartford Crossing whilst there are a large number of HGVs using that route, so that's quite a narrative description of how the benefits continue to be delivered right the way through 2045.

But fundamentally, the answer can also be given by referring to the substantial economic benefits that arise from the project. And these are set out in the economic appraisal report, part of appendix D of the combined modelling appraisal package APP-526. And the transport and economic efficiency calculations that are set out in that document show that the project delivers economic benefits, both to the country as a whole but also to each of the assessed areas individually, including all of the affected authorities, and that these continue through the extent of the model period.

So I think that explains our position, that whilst, yes, we acknowledge that there will be an increase in flows across the Dartford Crossing, the benefits continue to grow for the project throughout the model period.

Coming to the second point on design capacity, so the design capacity value quoted for the Dartford Crossing – if I can get a little bit technical, as in annual average daily traffic number. Now, that's useful information to contextualise the nature of a link. But it doesn't really explain the performance of a road, which is both the link itself, as in the Dartford Crossing, but also the road network that surrounds it and the movement of traffic through that region.

And therefore, whilst we do reference it, and we talk about that number, fundamentally, we point to the journey time benefits, the journey time reliability benefits, as being the way to understand the benefits of

this scheme and whether the scheme continues to meet the need into the future, rather than measurement against that theoretical capacity across a 10-hour period.

And if I can talk about the design capacity of the Lower Thames Crossing, for that reason, we don't provide a design capacity for the Lower Thames Crossing tunnel itself because we want to talk about the performance of the crossing as a network of roads that link into the existing road networks, not about the performance of the tunnel itself, which has sufficient capacity throughout the model period. But that answers the design capacity question.

And the third point I was going to pick up was the question about the modelling being for 2030, given the written ministerial statement and the announcement of a project rephase by two years. In the application, we provide model information for 2030 and for 2045. Now, as you'd expect, there is always uncertainty, as we've set out previously in our submissions on the opening year, and the written ministerial statement response that we provided in March set out our position on that. We consider that the 2030, 2045 models set out sufficient information to understand the performance of the scheme throughout that period in accordance with the standard approach that you would take. Thank you. That's all I have to say there.

MR HENDERSON: Thank you, Dr Wright. This is Tom Henderson again for the applicant, so I'll now introduce Professor Bowkett to respond to the comment from Thurrock Council around whether that model is sufficiently conservative. But, just to preface that, we did want to draw your attention to paragraph 4.6 of the national policy statement from the national networks. Professor Bowkett, in her earlier submissions, noted that the model in the appraisal was fully compliant with TAG.

And you'll note from within paragraph 4.6, and I quote, 'The Examining Authority and the secretary of state do not need to be concerned with the national methodology, the national assumptions, around the key drivers of transport demand,' so there's clear support in policy terms for the approach that's been taken. But I'll just now introduce Professor Bowkett to elaborate on that.

PROFESSOR BOWKETT: Helen Bowkett for the applicant. So, I stated earlier, the Lower Thames area model is available demand model. And within it, it has elasticity values, which show the strength of a response to a change in journey times and costs, so that elasticity value shows how people change where they travel to when there's a change in the cost of maybe going to location B as opposed to location A. These elasticity values, they're a bit like the elasticity for the price of bread, so the price of bread goes up, then you would buy more – no, you'd buy less.

And the elasticity tells you how much less bread you're likely to buy as the price rises, so those elasticity values within the transport model, which show how much more likely you are to travel location B rather than location A if it becomes quicker to go to location B rather than location A, they are provided in TAG. And it is those values, based on UK research published in TAG, that have been used in the transport model.

Also, the forecast of the levels of predicted traffic growth in the area come from the DfT traffic growth forecast, known as TEMPO[?], 7.2. But we have, again following TAG guidance in the application, set out both the forecasts, the traffic flows and journey times, in both a high and a low growth scenario. And they are reported in the traffic forecasting package APP-522 and its appendices 523.

TOM HENDERSON: This is Tom Henderson again for the applicant. Thank you, Professor Bowkett. And finally, I'll pass back to Dr Wright to comment on the submissions that we made for Transport for London in relation to capacity on the M25 at junction 29.

DR WRIGHT: Tim Wright for the applicant. So I think it's worth stepping back almost to talk about the project position regarding the impacts that the road has on the wider network, the wider road network. And we refer to this in a number of places through the application using the phrase 'wider network impacts.'

As a result of the Lower Thames Crossing opening, people will choose to make different journeys. And in many places on the network, this will lead to beneficial impacts, notably at the Dartford Crossing but also along the M25-A282 corridor, and the correct inroads, as we've spoken about previously. In some cases, this would lead to adverse

impacts, and both beneficial and adverse impacts are described in document 7.9 transport assessment APP-529. Overall, the benefits on the road network outweigh the adverse impacts.

And this is reflected both in the economic benefit of the project, within each local authority area and on an aggregated basis, as I mentioned earlier. This is described in detail by the transport economic efficiency information. I gave the reference earlier, and it will be repeated in the written response.

The adverse impacts on traffic flows across the road network have been assessed and considered against the policy requirements set out in the national policy statement for national networks to demonstrate our compliance of our proposals. We set this out in document 7.9 transport assessment, appendix F, wider network impacts management and monitoring policy compliance APP-535.

Talking about those impacts, working with local highways authorities is an obligation within the national highways licence with the DfT. And in delivery against this obligation, collaborative work with local authorities is required and will continue into the future. And to support this work, we've set out an operational traffic impact monitoring scheme secured by requirement 14 of the draft DCO application document AS-038.

Now, the purpose of this monitoring scheme is to monitor the impacts of the project and other changes in traffic on the local and strategic road networks. If the monitoring identifies issues or opportunities, because of traffic growth or new third-party developments, highways authorities will be able to use the monitoring information we provide as evidence to support scheme development and case-making through existing funding mechanisms and processes.

It's worth saying many locations across the existing road network have strong cases for intervention now, and others would have strong cases in the future, both with and without the project. This requires a structured regional approach to the management and investment on the highway network that allows for the prioritisation of funding. There is a need for specific investments across the network to respond to the

changes in traffic flows, and it has to be considered in the context of this need to prioritise investment.

Across England, the Department for Transport works with highway authorities to agree the need for funding and to prioritise investment decisions. This funding framework is, by necessity, a balanced approach that looks at the various needs and priorities across the country, and so it's the appropriate mechanism to manage any future investment decisions. So it's within that context that the Lower Thames Crossing was set out as an investment priority through the road investment strategy and, as other projects have found that can optimise the road network in the future, they will go through similar funding framework mechanisms.

MR HENDERSON: Tom Henderson for the applicant, so that concludes our responses to the matters that were raised under agenda item A.

MR SMITH: Thank you very much, Mr Henderson, and thank you to your team.

And thank you indeed, also, to everybody who spoke on that item. I'm going to move on with no further ado to my colleague Mr Dominic Young, who will lead on item 4(b), so Mr Young, the agenda is yours.

MR YOUNG: Thank you, Mr Smith. Okay, right, so moving on to transport demand, traffic modelling and the role of the road in the national and regional transport system. Well, I know that we've already spent some time on this already this morning. And I don't want to necessarily go over old ground, but just looking at the first question, is there anything further, I guess, that the applicant wishes to say about the effect of the scheme on the operation of the Dartford Crossing that hasn't already been said? I know we've had various figures, and the 19% figure has already been put to us. I mean, I'll put it to Mr Henderson first. Is there anything further we need to say about that?

MR HENDERSON: Tom Henderson for the applicant. Thank you, sir. I think we've made all the submissions we had to make on that subject matter. Certainly, we're content to move on, sir, (ii) and (iii) under this agenda item.

MR YOUNG: Yeah, let me just check then. Is there anybody else in the room that wants to raise a point that we haven't already covered under (b)(i) –

bearing in mind that as we go through the examination, we'll be hearing in specific respect of traffic and transportation where we'll perhaps revisit this. But I'm not seeing any other hands. Well, okay. Alright, then. I think we'll move on to my second question then, and that revolves around how the Lower Thames Crossing will address traffic demand arising from the M20 corridor and possible demand for trips in between the Lower Thames Crossing alignment and the M20 alignment in Kent.

MR HENDERSON: Tom Henderson for the applicant. Sir, again, I'm going to pass back to Professor Bowkett to respond to you on this matter.

PROFESSOR BOWKETT: Helen Bowkett for the applicant. One of the responses in the transport model is for people to change the route that they use, going to either their same destination or the new destination that they've chosen. And the model forecast that for trips originating further east in Kent, if they wish to use the Lower Thames Crossing, rather than using the M20, they reroute to use the A2-M2 corridor to reach the Lower Thames Crossing.

For trips that originate more in the Maidstone area, so that's towards the southern end of the A229, then if they wish to use the Lower Thames Crossing, they reroute up Blue Bell Hill and onto the M2 and to the Lower Thames Crossing. And some vehicles that are located – they start their trips on the A228, for instance at Leybourne, rather than using the M20 and the M25 at Dartford. They travel up the A228 to join the M2 and to use the Lower Thames Crossing.

We do have maps that illustrate the forecast changes in traffic flows on the road network. And they were shown in the traffic forecast non-technical summary APP-528. And this is described in detail as well in chapter 7 of the transport assessment application document 529.

MR YOUNG: Thank you. Okay, anybody in the room want to come in on that? Right, got a few hands going up. I shall go to – well, I'll start with the authorities again. Mr Bedford, you have your hand up, so I'll let you go first.

MR BEDFORD: Thank you, sir. Michael Bedford, Gravesham Borough Council.

I start by recognising the obvious. We are a borough council. We are not the highway authority, and I'm obviously conscious of that in the

remarks that I make. I'm also conscious, obviously, of the administrative area of Gravesham, that Blue Bell Hill, which has just been referred to, does not lie within Gravesham. But obviously, the local road network is effectively interconnected. The A2 obviously passes through Gravesham.

The communities and businesses of Gravesham rely on the A2 as indeed they do on the A228 and the A227 and also the A229, so what we are concerned about, and as we raised in our relevant representation, is, in simple terms, the lack of joined-up thinking. It is acknowledged in the transport assessment material that has just been referred to, that with the Lower Thames Crossing in place, there is a considerable attraction to the A229, that is the Blue Bell Hill route, for strategic traffic, particularly traffic from Dover M20, but wanting to go either to the Midlands or north, so wanting to route round the M25, and using the Lower Thames Crossing, and one can see quite clearly there is greater use of the Blue Bell Hill corridor.

But that Blue Bell Hill corridor is currently constrained by the nature of the roundabouts at each end and the carriageway up. I know you've seen this. And we are concerned that, albeit that at earlier stages of the option appraisal work, the applicant did propose to incorporate, as option C variant, improvements to that corridor to cater for the greater flows that will be attracted to it. That has now been discarded from the project which is before you to consider.

The position is that Kent County Council as local highway authority has got an embryonic proposal to improve that corridor. They've made a bid submission, but they can't fund it themselves. And they've made it clear in their representations, they're actually looking to National Highways to make a substantial funding contribution towards that, which is not something which is currently agreed.

And the concern for Gravesham is, as I say, a lack of joined-up thinking that, at the moment, it's not clear how that will happen, when it will happen, and if it doesn't happen in a timely fashion, the knock-on consequences for the local road network in Gravesham. And therefore,

the communities and businesses that rely on those will have adverse impacts for Gravesham. And we are anxious that that should not happen.

So, in our relevant representations, we have talked about whether the Blue Bell Hill improvement should be brought into this project as associated development. That is certainly a route, but we're not precious, as it were, on the mechanism that is used for addressing the problem. And, of course, again, we recognise we are not the applicant, and, to that extent, we can't dictate what the applicant does or doesn't include in the project.

But what we certainly want to see, and we would be looking to the applicant to do something on this, is to show how, in a timely fashion, the improvement will happen so that it does not cause the adverse impacts on the local road network. And that may be through, as it were, a phasing requirement as opposed to bringing it in as associated development. I say, we're not entirely precious on the mechanism. But we want to see something done to cater for the movements from that M20 corridor, which we can see will have adverse impacts on Gravesham unless adequately addressed and mitigated, so that's what we would wish to say to you on item (b)(ii).

MR YOUNG: Thank you, Mr Bedford. I'm sure the applicant will address us on that. But it has been a common theme in a lot of the objections about concerns, capacity concerns, on that A229 corridor and, indeed, other routes between the LTC and the M20, so we will seek some responses from the applicant on that. Let me just see who else we have. We have Ms Lindley from Shorne Parish Council. Do you want to go next?

MS LINDLEY: Thank you, sir. There's two aspects I wanted to mention. One is the impact on the A2 and the M2. Although the applicant is of the opinion that traffic westbound on the A2 from the Shorne area will be reduced, in our opinion, there will be a considerable pull of traffic eastbound from the M25 along the A2, so there will be other effects and also on the A2-M2 going up the hill after the Medway, edging eastbound. The prediction is for very much – very considerable slowing of traffic, which is not compatible, in my view, with function of a motorway.

As I mentioned earlier about problems with the A289, parts of the proposals for the side feeder roads is that a lot of traffic, additional traffic, will be required to use the A289, actually going up it and then back and then back down it in order to access the M2, which is going to put quite a considerable pressure on the A289.

And the other point, which hasn't been addressed in terms of traffic moving from other major roads onto the LTC, is that traffic which is on the M25, and heading in an anti-clockwise direction, is likely to use the M26 and then either the A227 or the A228 in order to access the Lower Thames Crossing. This will particularly be the case if there's a problem, as there will still be, at the Dartford Crossing, so that's going to be a very large migration of traffic along roads which are presently unsuitable and, in many cases, residential. Thank you.

MR YOUNG: Thank you. Ms Blake.

MS BLAKE: Thank you very much, sir. I'm Laura Blake for the Thames Crossing Action Group. Just really to add on to what the representative for Gravesham said in regards to the option C variant, which included at route selection the improvements between the M20 and the M2, Blue Bell Hill, the A229.

And just to add on that that the applicant's reasoning for ruling that out was actually because it wasn't considered essential for a new crossing and because of the large costs, environmentally and financially, and that is an issue that we have concerns over. I appreciate that the adequacy of consultation stage has now passed, but I'll just do a comment on the fact that my understanding is that you consider from a statutory consultation onwards. Route selection would have been before that, so I think it important to mention that as a bit of background by the fact that route selection options weren't properly consulted on, and we don't feel they were properly considered either. Thank you.

MR YOUNG: Thank you. Margaret Theobald.

MS THEOBALD: Hi. I'm Margaret Theobald, and I'm representing Uniper. The National Highways' response to planning applications on the Hoo peninsula has shown that they do believe that the junction of the M1 – sorry, junction 1 of the M2 is very sensitive and that the layouts of the slip

roads are not compliant with DMRB for the existing traffic. However, the LTC proposals are putting a substantial amount of increased traffic on both the mainline carriageways through there, which will have a direct impact on the operation of the slip roads at that junction, which are the throttle on development within the Hoo peninsula.

MR YOUNG: Thank you. Well, I think Mr Henderson's already set out that they will address us in writing on that particular issue, which was raised by Kent – sorry, Medway.

MS THEOBALD: Yeah.

MR YOUNG: Yeah. Okay, well, that's useful. Thank you. Anybody else got their hand up? Mr Ratcliffe.

MR RATCLIFFE: Thank you, sir. Yes, Joseph Ratcliffe, Kent County Council. I just wanted to put on the record that, obviously, these issues will be set out in our local impact report. Kent County Council is supportive of the project as a whole for the net benefit in terms of traffic that this project gives, especially to Dartford, although our primary concern is of the wider network impacts, both to the strategic road network and to the local network. And the A229 Blue Bell Hill link is the key one there for which none of these wider impacts have any mitigation agreed yet or, more specifically, any funding for mitigation agreed. But, yeah, I don't want to say too much because this will all be set out in our local impact report, which will be with you by deadline 1. Thank you.

MR YOUNG: I'm grateful. Thank you. Right, there's no other hands up. I shall pass back to Mr Henderson. Mr Pratt, you want to ask a question. Just unmute yourself.

MR PRATT: My apologies. I'll get used to this IT eventually. Thank you for allowing me to speak, Mr Young. It's really a question for the applicant, if I may. In Mr Smith's session and earlier in this one, comment was made that the base requirement for the project is resilience. Now, I've heard this morning about the fact that the highway's going to supply an 80% increase in road availability.

Yet there's only a – somewhere between 19% – reduction in the Dartford Crossing, so what other – can the applicant actually demonstrate how this resilience is possible in other matters? The

obvious one is if there's an increase in flows if there's an accident on either the existing Dartford Crossing or whatever. Where does this or how does this particular project offer the resilience that meets their own base requirements for the project?

MR YOUNG: Okay, thank you, Mr Pratt. Well, let's put that to Mr Henderson along with all the other comments. Mr Henderson, a lot of concern, particularly south of the river and routes between the M20 and the project – what does the applicant say?

MR HENDERSON: Thank you, sir. Tom Henderson for the applicant. So, dealing with, firstly, the Blue Bell Hill, the A229 connection, and the comments that were made in respect of that. As was alluded to, a potential intervention in this location was considered in the development of the project, known as C variant. That was considered during the options phase development of the project but was discounted as part of the scheme for reasons, in summary, that it wasn't required to meet the scheme's objectives. And there's much more information set out about this in the planning statement chapter 5, document reference APP-496.

Those options have been subject to successive back checking as the project development – developed, sorry, following its preferred route announcement. But again, that back-checking information is included in chapter 5 of the planning statement, so I think that addresses the point about whether active consideration has been given to options throughout the development and up to submission of the application. And the answer is that, yes, they very much have done.

My colleague Dr Wright referenced the project strategy in respect of wider network impacts, and I wouldn't propose to repeat that point here. But that's essentially sets out the position that the project takes in respect of an intervention in this location and, as has been pointed out, there is actually a parallel scheme under development to address that location and that really gives flavour to what we're talking about. Projects on this scale, which redistributes traffic in a way that probably no other highways DCO promoted in the country to date has done so, has to be considered differently and that really informs our wider network impact approach.

And I just reemphasise the point that all of the traffic modelling and all of the economic assessment the project's undertaken takes full account of not just the benefits but some of these adverse impacts that we've talked about, so it's all fully reflected in the case that we're making. And our ultimate conclusion, the project clearly demonstrates a beneficial impact, both on the traffic network and economically. I think that probably touches upon all the headline points that we wanted to make.

In respect of – sorry, just resilience was the further point that was raised by Mr Pratt. This is addressed in the need for the project, which is APP-494 paragraph 5.26, how the project needs resilience, so I won't rehearse that here but suffice to say that the construction of a second crossing clearly adds resilience to a network that only has one road crossing east of London at this current time, and also, as Dr Wright set out earlier, provides extensive network performance improvements. So that's our outline answer in resilience, but as I say, we direct you to the need for the project document, which sets that out.

MR YOUNG: Mr Bedford, do you want to come in at this stage?

MR BEDFORD: So I hadn't planned to, sorry. I think my camera had somehow come on without me – I must have knocked my icon, but, no, thank you, sir.

MR YOUNG: Okay, thank you. Sorry, back to you then, Mr Henderson.

MR HENDERSON: Thank you, sir. That concludes everything we had to say in response to the comments that had been raised.

MR YOUNG: Alright. Okay, well then, let's move on to my next question. Are there elements of demand for the Lower Thames Crossing alignment that could be met by existing or new heavy rail or light rail for tram services, such as KenEx Thames Gateway Tramlink, and to what extent has the contribution of such modes and options been explored?

MR HENDERSON: Tom Henderson for the applicant. For this question, sir, I'm going to pass you back to Professor Bowkett to respond.

MR YOUNG: Thank you.

PROFESSOR BOWKETT: Helen Bowkett for the applicant. The transport model that we use includes the ability for people to choose to switch to or from car to rail. And it contains within it really detailed representation of

existing rail services, both in the south-east London and throughout the rest of the country, so the possibility of them switching to or from rail is contained within the transport model. That is one of the responses in the variable demand model.

Looking at future schemes as well, the applicant does not consider that future light or heavy rail schemes would have the capacity or be sufficiently attractive in terms of the journey times to carry a sufficiently high number of trips across the Thames so as to reduce the need for the project.

The applicant has considered the contribution of alternative modes within section 5.3 of the planning statement APP-495. In particular, there it talks about the alternative mode of heavy rail, concluding that, for passenger services, a service sufficient to accommodate the projected number of passengers along with their diverse origins and their movement of patterns, where here you've got a lot of north-south movement, whereas the heavy rail is well suited to serve where lots of people want to go to one common point, such as London, which is served by the east-west rail services in the area. So, for passenger services, it would not be feasible to provide sufficient services for it to be an alternative.

And for rail freight, it's very unlikely that sufficient new infrastructure, including the rail intermodal distributional terminals that are needed for when you transfer goods from road to rail and back again, will be provided over the foreseeable future. As such, enhanced provision would not represent a viable modal alternative. But that is all set out in more detail in the planning statement APP-495.

Now, with regards to new light rail crossings of the Thames, and there's various ideas have been put forward, the applicant considers that this actually would meet some elements of the local demand for the project and serve some of the trips that local people want to make to the other side of the river but that this would not be able to accommodate a sufficient level of demand to reduce the need for the project. Indeed, such complementary provision of a light rail or bus rapid transit system

across the Thames in the area would actually serve to prolong the relief that the project would provide at the Dartford Crossing.

And in considering bus services, there is currently a bus service across the Dartford Crossing, the X80, and the project would decrease the journey time of that bus service and improve the reliability of those journey times. This is set out in section 711 of the transport assessment, where we set out the impact that's forecast on bus services in the area.

The Lower Thames Crossing as well would also provide a new route across the Thames that public transport operators may choose to use to provide other new local services in the Gravesend/Thurrock area or for regional coach services that might like to make use of the Lower Thames Crossing. Local buses wouldn't be required to pay the user charge at the crossing, which would help in regards to the bus fares and the attractiveness of those services. The fact that they, local buses, would not be charged to use the Lower Thames Crossing is set out in section 2.2 of the road user charging statement APP-517. If you'd like further information on those alternatives, we'd be happy to provide that in writing at a later date.

MR YOUNG: Thank you. Now, my colleague Ms Laver has a question.

MS LAVER: Yes, thank you, Mr Young. It's a question for Professor Bowkett. It's in relation to the rail, light rail/tram services that you just covered. I'm just trying to understand if what you're saying is that this hasn't really been explored because there isn't demand. And the reason I ask that, and I'm trying to get to the heart of that, is because when you spoke earlier on under the first item that was dealt with this morning, you talked about behavioural changes.

So the applicant's already acknowledged that by having alternative road options going north and south, people will likely take a different job so they can get from Maidstone to somewhere north of the river much easier, so they would change their behaviour, where they probably wouldn't, at this point, think about making that journey because they've got to go via Dartford.

And I suppose I'm coming a long way round, but train connections at the moment going north-south, you've got to go into London to come

out, so people making those choices about where they would work, where they would invest in a business, are heavily restricted. And I'm just wondering how much rail, light rail, tram, whether it's instead of or in addition to, has been considered because there could be a behavioural shift. I wonder if you could come back to me on that, please.

PROFESSOR BOWKETT: Helen Bowkett for the applicant. When considering public transport alternatives to the Lower Thames Crossing for providing relief at Dartford, there's two main issues to consider. One is the business case of those, the provision of that public transport infrastructure, and would they be commercially, financially viable. Would the funding come forward to construct those schemes and to run the services through them and, given the high level of subsidy that's required for rail services and the high capital costs of providing them, so that's on the economic – the cost of providing those services in the first place. You consider that the supply side constraints.

And then, on the demand side, you've also got to consider would those services, if they were provided, be sufficiently attractive to a large number of people, given that they will take into account their journey times from their front door to their final destination. And that's quite tricky, then, for public transport services to provide when they want – people want to go to multiple destinations, so that their journeys necessarily entail interchanges, so the journey times would come high compared to car. So the challenge would be, would actually enough people want to move to public transport away from car to remove the need for another highway crossing across the River Thames? And the applicant contends that that would not be the case.

And although the provision of local light rail services or extensions to fast track or new bus routes, if they appeared, would actually be helpful in serving transport needs of people to cross the river, they aren't in themselves sufficient to reduce the need for the project.

MS LAVER: Okay. Thank you very much. I may have some further questions on that, but I could reserve them for written questions if needs be. Thank you.

MR YOUNG: Right. Is there anybody else that wishes to speak on this agenda item before we move swiftly on? Not seeing any – okay, a couple of hands going up. Let me go to Thurrock first.

MR EDWARDS: Yes, thank you, sir. Thurrock does have one or two observations in respect of this agenda item. I'm going to ask Mr Bowers to address you on this, sir, I think.

MR BOWERS: Yes, hi, David Bowers of Thurrock, so it's worth noting that the National Highways ruled out public transport as a solution to the cross-river connectivity issues that they've highlighted back in 2009 with the Dartford river crossing study. Obviously, that was a long time ago, and things have moved on, and schemes like the Kent fast track scheme have been implemented since then.

And although there's been further review of the option hearing that has taken place, back in 2017, there was a post-consultation scheme session recall, which looked at the 2009 decision. And National Highways have stated that the same decision held, i.e., a highways solution [inaudible] to help resolve the highway issues that have been identified.

But National Highways haven't actually been willing to share the underpinning analysis, which looked at the different public transport options. And it would be very useful to be able to see those. That analysis is referred to in environmental statements. But, without that analysis, it's hard to see how they've looked to see how public transport could meet the same level of reduction in demand across the Dartford Crossing.

And as we've been talking already this morning, the level of change in traffic flows across the Dartford Crossing is actually very low. And it seemed plausible that a public transport scheme could deliver that same level of change in traffic flows in a reasonable way, which would be potentially delivered in the same way that other public transport schemes are delivered around the country.

And I noted the comments about the X80 having a decreased journey time. Again, it would be useful to know if that was just in the opening year and what the decrease in journey time for the X80 would

be in, say, five years, 10 years or in 2045 because, as we've been talking earlier, traffic flows will change at Dartford Crossing back to their current level quite swiftly after opening and so to understand the impact on the X80 would be very informative. Thank you, sir.

MR YOUNG: Thank you. Ms Blake.

MS BLAKE: Thank you very much, sir. Laura Blake, Thames Crossing Action Group. Just a few observations to make on what has been said on this matter. Firstly, with the Lower Thames Crossing offering provision for a bus service, we believe that that wouldn't be viable due to the lack of adequate connections to actually really make that viable as an option for the bus companies, and particularly north of the river in Thurrock, where the access points to there would mean long detours for bus services to actually get onto the LTC to serve the crossing.

In the topic of the rail freight, we find it very surprising that at a time of climate emergency in this day and age that there isn't any rail connection for, say, the port of Dover, for example. And the focus from National Highways on the aspect of rail freight seems to be very focused on crossing the river, whereas there is actually a rail improvement option between Ashford in Kent round to Reading, bypassing the London, which is already busy for rail, and actually could and would serve the Gatwick area as well.

In regards to the comment about finances, we would observe that the money is being found for the LTC, so money could equally be found and, instead of LTC being funded, could be put into public transport. As for whether or not it's attractive for a modal shift, we would comment that, again, in a time of climate emergency, we should be looking at necessity rather than keep building more and more roads, which are proven not to solve the problems because of induced demand and actually be looking to encourage and support modal shift, rather than simply saying we haven't got the money and will people actually use it. Thank you.

MR YOUNG: Thank you, Ms Blake. Mr Henderson, do you want to come back on or are you content to deal with that in writing or...?

MR HENDERSON: Tom Henderson for the applicant. If I might just make some brief comments in response to that, and we will respond in writing as you

say. In response to the comments made by Thurrock Council as regards the 2009 multimodal study and suggestion that that was aged, we would just emphasise that the planning statement chapter 5 contains a back-checking reassessment of that. In other words, an up-to-date reappraisal of the position so that information is contained in the application.

It was also mentioned, I think, I wrote down that the level of change associated with the scheme at the Dartford Crossing was low and the journey times would return to their current levels quickly. And just to emphasise, that's not the case that was made by Dr Wright. We submitted evidence very much to the contrary on that point.

In response to the comments made by TCAG, Professor Bowkett's obviously spoken at length on the situation as regards rail freight, so I won't comment on that. And as regards the cost of the scheme and the potential to pursue other forms of transport across the river, I set out in agenda item 3 the scheme objectives that the project is seeking to respond to. Importantly, the policies support that this scheme draws from the national policy statement, which is clear that there's a compelling need for new road capacity, so I'll conclude at that point.

MR YOUNG: Thank you, Mr Henderson. Right, we will now move on to the next agenda item, and I will reintroduce my colleague Mr Smith.

MR SMITH: Thank you very much, Mr Young. And our colleague Mr Ken Taylor will also come onto camera for this item where, I think you'll be pleased to hear, we can be very quick because, in terms of our initial questions on the effects of the two-year rephasing in capital funding, I had an initial question about whether there is sufficient scope within the Rochdale Envelope for the proposed development and whether, particularly, the ES has sufficiently assessed the potential slippage to take account of the two-year rephase.

Now, we've had very clear submissions from the applicant, both here and previously in writing to the view that the applicant is clear that they think this is well within the envelope of that which was being assessed. So, unless, Mr Henderson, you have in principle submissions that you wish to put to us further on that point, I was proposing to move

out to the room and just seek any further final observations or comments on it. Mr Henderson.

MR HENDERSON: Tom Henderson for the applicant. Thank you, sir. As you say, we've made full submissions on this, so we've got nothing further to add to what we've already said.

MR SMITH: Okay. Now I do see then I have two hands on this point. We've got Michael Bedford KC and then Alex Dillistone, who is for the Port of London Authority, so I'm going to go to Michael Bedford for Gravesham first.

MR BEDFORD: Thank you, sir. Michael Bedford, Gravesham Borough Council. Sir, we are not, at present, persuaded by what the applicant has said. I know Mr Henderson just referred to full submissions. We've looked at the letter of 30 March 2023, that's AS-086, where I think the position from the applicant is set out. And we have considered that, but we don't find that to be either comprehensive or full to deal with all of the issues that would arise in relation to a consideration outlined in your questions. And, sir, it's not that we've got a concluded view. It's that we simply don't really think the examination has been given sufficient information or material to make a properly informed judgment on that.

And, sir, I mean, the way that we would put it is to enquire, as it were, through you, whether it is possible for the applicant, as it were, to supplement what they said in AS-086 by the provision of a coherent rationale which looks at each of the environmental topics in relation to the environmental impact assessment and explains, first of all, why the change in construction period, therefore, does not make any change to the assessments for the purposes of identifying what is the reasonable worse case for a Rochdale Envelope parameter.

And then secondly, also in relation to each of those topics, takes the various environmental disciplines and their guidance on methodology and explains why staying with the assessment years which are assessed in the environmental statement still accords with guidance if you acknowledge, which is now the case, that the year of opening will not be 2030 and will be not before 2032.

Now, we're in a sense open to be persuaded that the applicant's starting point is valid, but we really don't think that there is sufficient information provided by the applicant so far to deal with that.

MR SMITH: In a nutshell, Mr Bedford, it seems that you are inviting us to pursue the road that, notwithstanding that this change, this rephasing, was not the applicant's change. It was essentially foisted upon them, but you are inviting us to treat it as though it were the applicant's changed proposal and, essentially, to document it up in the way that they typically would for a changed proposal that they themselves originated and give us the same ES chapter by ES chapter summary table breakdown. Is that what you suggest we should be having?

MR BEDFORD: Well, sir, certainly, that would be one way, procedurally, of dealing with the issue. And we wouldn't, as it were, oppose that. Whether it needs to be formalised in that way or whether it can simply be dealt with, as it were, more by simply a request from the Examining Authority for further information, without, as it were, focusing on is it actually a change to the applicant application or not is perhaps a point of fine-tuning. Essentially, what we think the examination needs is the information. The procedural route to achieve it is perhaps more of a matter for you.

MR SMITH: Well, we will certainly give very careful consideration to that. I'm sure that's something on which the applicant will wish to make their own submissions before we close out this item. I now note that we have two sets of port interest because we also have a request to speak from Alison Dablin here, who I believe is representing Port of Tilbury London Limited. But I did see Alex Dillistone for the Port of London Authority, so I'm going to go to the Port of London Authority first and then, finally, to Port of Tilbury London Limited.

MS DILLISTONE: Thank you, sir. The Port of London Authority has environmental and conservancy responsibilities for the River Thames, and so we do have an interest in the various surveys and the dates of them as they've been identified in the environmental statement, document 6.53. Those, we are interested particularly in the surveys for marine biodiversity, ornithology and air quality. But we also have queries

about the effect of a delay on the water framework directive assessment, which is document 6.3 of the environmental statement at appendix 14.7.

In terms of the dates of the surveys, those surveys that inform the biodiversity chapters and the habitats regulations assessment, which is document 6.5, are potentially and arguably already out of date because the most recent surveys have been carried out in 2019. When you look at some of the other surveys, the data for seals, for example, that was carried out in 2013, 2014, so we are already getting on for 10 years ago, and that will be 20 years away from the new proposed opening date, the new earliest proposed open date, I should say.

The air quality chapter is similar. The older the data, the less relevant baseline, so in our view, that makes a two-year delay problematic. The baseline could have altered significantly in the years between the surveys being carried out and between when the works are going to commence.

Now, what we would expect to see is an updated baseline to address any potential changes in the baseline, and therefore, the assessment on which they are based. We would also query the effect of a two-year delay on the water framework directive assessment, which is appendix 14.7 to the environmental statement. And in our view, an updated assessment would be required if there were any significant changes to the project, or if the water body classification is updated. That last happened in 2019.

Now, in terms of updating these statements and whether there is an intention to do that on behalf of the applicant, we note that, looking at the register of environmental actions and commitments, document 6.3 and appendix 2.2, the code of construction for practice, as far as we can see, that document doesn't include any commitment to update the surveys and the environmental baseline to take account of these delays.

Now, what we would welcome is the applicant's justification of how the older surveys, and therefore, the baseline, remain relevant, particularly given the two-year delay and that the opening will not be until before 2032, so we would support a request from the Examining Authority for further information, or however else the Examining Authority

wishes to deal with that. But we would welcome that information. Thank you.

MR SMITH: Apologies. Thank you very much, Ms Dillistone. And then finally, if I can go to Ms Dablin.

MS DABLIN: Thank you. Alison Dablin for the Port of Tilbury. I believe my submission is very much aligned with the submission just made by the Port of London Authority. The Port of Tilbury would definitely welcome an explicit requirement that the ES complies with all relevant guidance and standards as the age of data – that would be the Chartered Institute of Ecology and Environmental Management and British Standard 42020 – essentially, just to ensure that particularly the baseline data remains relevant and that time-sensitive elements of the environmental statement can be refreshed in order that they may be suitably relied upon as set out in our relevant representation.

The Port of Tilbury does have concerns over the age of the baseline data that underpins the current assessment, in particular, where, in places, this predates the development of Tilbury 2. And any delay in the carrying out of the scheme will only exacerbate this issue. Thank you.

MR SMITH: Thank you very much. Succinct. And now, what I will do is just pass back to the applicant to put a responding position on this point.

MR HENDERSON: Tom Henderson for the applicant. So, as we've said, we put our position in the response to your procedural decision of 21 March 2023. In response to the points that we've heard just now, procedurally, we recognise it's a matter for you, Ms Dillistone, how to examine this matter going forward. We anticipated that your first written questions would raise matters relating to this issue, and that's where we would anticipate then responding more fully should that be what you desire us to do.

The one point that I would wish to make at this stage is that we do not agree that this should be conceived as a change to the application because, in common with every other DCO I would suggest that's ever been made, there is a degree of flexibility over commencement of the scheme, notably five years. Again, I think that's consistent with every other DCO that's ever been made, certainly, the ones I've seen. And

therefore, what's been proposed is no different to the level of flexibility that every DCO application contains. In other words, some delay in the commencement of construction does not then serve to undermine the environmental assessment that accompanies the application.

MR SMITH: And returning to some previous conversations we've had on this point, the proposition there being, essentially, that, of your five years commencement, you have, effectively, taken on the chin two years. Look, we're not going to resolve this in the here and now. I think it's very important to reflect that we have had substantial submissions on the question around additional analysis from Gravesham and from the port authority and the port, so what we will do is we'll take those away – we will consider very carefully what our best procedural response is. If there is anything further that we need to address in this hearing, we'll do it in the closing before we leave the hearing at the end of this agenda. Alternatively, one of the routes we'll do is, in fact, one that the applicant has already flagged up in Mr Henderson's submissions there. It can be dealt with in writing in the Examining Authority's first written questions, so if it's not the one it will be the other, but we will be giving very careful consideration to this, and on that basis I'm going to move away from this item to Mr Taylor, who will take the second question under 4(c).

MR TAYLOR: Yes. Hello, everyone. So the question we're dealing with – so we're looking at item 4(c)(ii) on the agenda and the overarching question is: 'What is the effects on construction duration and environmental effects of the proposed use of a single boring tunnel machine' – so TBM is the likely language we're going to use going forward – 'compared to having two tunnel boring machines?' So I'm going to first turn to the applicant to ask that question, but I'm just going to flag up a couple of things before I do.

So in terms of documents that are in our document library, we've got the notification of proposed changes from the applicant – which is document reference AS-083, and very specifically pages 9 to 11, and then also we had a very preliminary discussion about some of these matters but not a detailed discussion at our preliminary meeting part 1, and the transcript of those the applicant responded to on page 94 at lines

22-26 so that's where I'm looking to start for the applicant, and they raised the point that whether or not there were one or two boring tunnel machines did not have any implications in terms of the powers that were sought in the development consent order.

So I'd like the applicant to address that first and then, secondly, I'd like the applicant to address whether the wider environmental implications were taken into account of whether there were one or two tunnel boring machines and the differences, and then I've probably got some follow-up questions after that. So Mr Henderson, over to you first, please.

MR HENDERSON: Thank you, sir. Tom Henderson for the applicant. So just to repeat the points that I laid out under agenda item 3, insofar as the way in which we invite you to handle this – as I said, our submission is that this is not a change to the application but rather is something that was already accommodated within the proportionate degree of flexibility that the application allows for.

In a moment I'll invite Mr Barney Forrest, who's the environment lead for the project, to address you in more detail on the environmental aspects of that, but in relation to the question of the development consent order and the various control documents that are secured by it, as I mentioned earlier, no change is required to those documents in order to accommodate the delivery of the scheme using a single tunnel boring machine, and so that's why I made the point that it's not a change to the application that was submitted, but rather it's accommodated within the degree of construction flexibility that we've already applied for. So that's the answer, I think, on that first point unless you've got further points, and I'll then pass over to Mr Forrest, as I say.

MR FORREST: Hello. Mr Forrest for the applicant. I'm the environmental lead on the project, and specifically in relation to your question on the environmental effects of one versus two tunnel boring machines or TBMs, I think the first point is around duration and duration of effects and the overall construction duration which is presented in chapter 2, which is the project description of the environmental statement which is

application document 142 in plate 2.13 on page 147, that envelope of assessment would remain the same.

This is because with a single tunnel boring machine, the elements of construction work required at the northern tunnel entrance before the tunnelling can start would initially be smaller in scale, allowing the tunnelling to start approximately 10 months earlier than set out in chapter 2. The remaining works in the northern tunnel entrance would be constructed after the launch of the tunnel boring machine and once operation of that tunnel boring machine is underway. The construction of the second tunnel would be serviced from the north portal.

So I think this is a really important point in the assessment, and hopefully we set this out clearly in our submission, that the tunnel would be driven from north to south, turned around, and driven back again, but the slurry – the excavated material that comes from the tunnel head – would be transported as a slurry back through the tunnel to the north portal and, similarly, the material required to construct the tunnel as the tunnel boring machine proceeds would be provided from the north tunnel entrance, so the logistics that are set out in the project description chapter 2 would remain the same. So we wouldn't be looking to shift any servicing of the tunnel to the south portal which would change the construction traffic.

So fundamentally, there would be no change to the permanent works or footprint of the development. The works at the north portal would start earlier and there would be an increase in early-phase activity, and I think if you – but this early-phase activity would be no greater than the next phase of construction as assessed within the environmental statement, so we would assert that we've undertaken a reasonable worst case assessment that is presented in the environmental statement for those tunnelling activities, and then there would be marginal benefit – circa 38,000 tonnes of carbon as a result of using one less tunnel boring hole machine, because there's a lot of embedded carbon in the machine itself, and that's basically the statement that we have in terms of how the environmental statement wouldn't change as a result of one or two tunnel boring machines. Thank you.

MR TAYLOR: Okay, thank you. That's really helpful. I think what we'd request is if and when you put in the change request, that that is very clearly set out in terms of your case for why the development consent order in of itself wouldn't need to change, and then the environmental impacts sit within the parameters you've already considered.

MR HENDERSON: Sir, could I just come back in at that point?

MR TAYLOR: Yes, please. Yeah.

MR HENDERSON: It's Tom Henderson for the applicant again.

MR TAYLOR. Yes, please. Turn your camera back on.

MR HENDERSON: There we go. I mentioned that we were going to address you about some additional documents that we want to submit at deadline 1 in the last agenda item but, actually, one of those matters is relevant to the point that you've just made. For reasons that we can return to later on in the agenda, we're seeking your permission to submit an addendum to the environmental statement at deadline 1. This would incorporate some additional assessment that we wish to put before the examination, but as part of that addendum, we were proposing to make modifications to the project description to recognise that the tunnel could be constructed using either one or two tunnel boring machines.

Now, procedurally, we think that's helpful to you because you'll then have that information in advance of your decision or your receipt and decision upon our change application, so if you're of the view, contrary to us, that it should be considered as a change that can then inform the change submission that we anticipate putting to you in early August, so if you're content with that approach that's one that we would like to follow.

MR TAYLOR: I think, Mr Henderson, we have not made a view on whether it is a change or not and we will obviously review that when we get the documentation from you, but I think what would be helpful is that in the submission it's really clear the construction timescale differences and the effects that result from either having the two tunnel boring machines or the one, and then also if ultimately you as an applicant are seeking a DCO to nail down whether it's two or one, or the flexibility to have both, the sooner we know your position the better it is for us to then consider that.

MR HENDERSON: Tom Henderson for the applicant. We can certainly put that information before you and, as I say, we propose to do that in deadline 1. We can return to the form of that, perhaps at agenda item 5, because we may have some further questions on that.

MR TAYLOR: Yeah, and just to be really clear, it's probably helpful to state to everyone in the room that it's highly likely that we'll have an issue-specific hearing that revolves around tunnelling in our next block of hearings in early September where we can deal with some of these very technical issues, but as a starting point I think a clear understanding of where we want to go from this with this as an applicant will be helpful.

MR HENDERSON: Thank you. We will do that.

MR TAYLOR: Thank you. So I'm now going to look to the virtual room, and I see that we have – Susan Lindley has a hand up.

MS LINDLEY: Thank you very much, sir. Obviously, the applicant has just said some things which do provide more information than was actually in the consultation document. I think it just said something about the slurry being removed. It didn't say about all the materials being provided through the tunnel. However, the point I wanted to make is that the comments on the consultation have gone back to the applicant. So two aspects about that – one is, to us, whether it would be helpful to do the inspectorate for the comments from interested parties to be copied to yourselves for information so you can see what we submitted, and the other aspect of that is that experience to date is that points that are raised aren't always translated into the consultation report. Thank you.

MR TAYLOR: Yeah, so Ms Lindley, anything that you want to say, you can pop into your deadline 1 response, which might include details of what you've submitted to the applicant in the past, as in an annexe. Yeah – so absolutely fine. You can do that.

MS LINDLEY: Thank you.

MR SMITH: I will also indicate, actually, briefly, on that point, Mr Taylor, and that is that one of the things that we need to consider, of course, is the procedural route forward for the applicant on this material. Now, one of the mechanisms that is sometimes pursued here is the submission of what amounts to a mini or shadow consultation report where the applicant

actually addends specific matters put in a consultation as part of the documents provided to the Examining Authority making a judgment on a proposed change to an application. Now, it's certainly been done in the past. It's not universally done because it sits in this place between the judgment point about whether the changes are material or not but, again, we will give consideration to that. Sorry, Mr Taylor.

MR TAYLOR: Yeah. Thank you. So can I go to Mr Bedford, please.

MR BEDFORD: Thank you, sir. Michael Bedford at Gravesham Borough Council. So we note what is said. What we would envisage wanting to see happen, and it probably won't be something to get into the detail of tomorrow when we're talking about the DCO in overarching terms, but we would certainly want to see the things that Mr Forrest was referring to. That is to say, in particular, that if an elect for the one tunnel boring machine nonetheless that will be serviced from the north and that all the spoil will be removed to the north, we would want to see that reflected in one or more of the control documents so that it's absolutely clear, because that would go a considerable way to allaying our concerns that we will work out the most appropriate submission point to make a specific comment on that when we have reviewed further some of the documentation.

It's certainly something I think we'll flag up in our local impact report and it may be that, as I say, there are particular documents which are appropriate as the best place to secure the things that Mr Forrest was talking about. Thank you, sir.

MR TAYLOR: Thank you. Yeah. I just ask the applicant to note that and consider that in their response. So can I go to Thurrock Council, please.

MR EDWARDS: Yes. Thank you, sir. Mr Stratford is going to address you in respect of this agenda item.

MR STRATFORD: Good afternoon. Chris Stratford for Thurrock Council. The comments I've got, I suppose, stay within the confines of 'not enough information'. We have of course submitted a consultation response to the MRC to the applicant and I took the opportunity to copy the inspectorate to that. Essentially, the only information we have is set out within the booklet that they provide – those 30-ish pages – and in a short

briefing we've had as a council. Now, in the booklet, this construction update is described in one page with a couple of other pages setting out in summary what the environmental effects may or may not be.

So our approach has been to ask a number of questions, for the simple reason that there is no information on which to base anything other than what we're being told. We haven't actually seen the evidence and we have 25 separate points and questions about a range of matters – overall matters. I'll just give you the subheadings: proposal definition; excavated and constructed materials; the construction method and transport; worker operation; DCO commitments and control, like the previous speaker mentioned; and emergency and incident provision of such a proposal – how do emergency vehicles get to and from when everything else is in that one single bore?

So I would alert the Examining Authority to that submission. It might provide some guidance to possible questions. It may, in fact, provide the applicant with ways to respond. They don't normally respond to our consultation responses, so we await your thoughts on this, really. Thank you.

MR TAYLOR: Yeah. Thank you, and just to reiterate what I've said – it's likely that we'll have an issue-specific hearing on these matters and it's almost certain there'll be first questions around some of the issues that you've raised, so thank you very much, and I think we have a representative from the Port of London Authority also with their hand up.

MS DILLISTONE: Thank you. Alex Dillistone from the Port of London Authority. We do also have a genuine question around the effect, on the environmental statement, of switching to a single tunnel boring machine, because the applicant's original proposal was to have the two tunnel boring machines running, to a large extent, concurrently, which would have meant for a shorter construction timetable. Now, using a single tunnel boring machine takes longer, and that's not just because you have to – there is no concurrent working; it's also because the tunnel boring machine has to turn around on the south side, which takes longer than tunnelling in a straight line.

So we've just heard from the applicant that those works would need to start 10 months earlier and that there will therefore be an increase in the early-phase activity, and we've also heard from the applicant that the response to that – I won't call it a 'change', but the response to using a single tunnel boring machine is to submit an addendum to the deadline 1 which mentions the description of the project only. Now, we would like to see some kind of information which justifies the basis on which the applicant is saying that it does not need to make any change to the environmental statement and that there will be no new or different significant effects that arise from starting the constructions phase earlier and increasing the early-phase activity. Thank you.

MR TAYLOR: Yeah. Thank you, Ms Dillistone. So I'm just going to flag that to the applicant that that's, obviously, an open question, and I'm very aware we're sat in a position where the applicant hasn't actually formally submitted their change request to the EXA, but if they do then we'll have to consider those matters, so it's one of those things that I'm going to ask the applicant to take away and think about, and unless anybody else wants to put their hand up to talk about this question, I'm going to turn to the applicant for their final comments on this issue. I'm not seeing any hands, so I will go to the applicant.

MR HENDERSON: Thank you, sir. Tom Henderson for the applicant. Just dealing with the points that were raised in turn – as regards responses to the consultation, I can confirm that our application for change, as I indicated – provisionally coming in in early August, will include a consultation report which thematically reports back on what interested parties have said in respect of the three changes.

As regards potential commitments that might be made in the DCO or related documents, we'll be happy to pick that point up tomorrow at the issue-specific hearing on the draft DCO, and then, as regards comments from Thurrock Council and the Port of London Authority about additional information, we're very content to answer any further questions on this which we would anticipate again coming through your written questions. We recognise, procedurally, that's a matter for you. So that's, really, all we have to say on the points that have been raised.

I think I would just reiterate that fundamentally here, what we're saying is that we have three – in our view – non-material changes which we are seeking permission to have accepted into the process, as I say, in August, but we are clear that in our view the single tunnel-boring machine is not a change, and that's why I submit that it would help the process if we were to put the information that supports that through our ES addendum – the project description – into the process at deadline 1, and that allows, then, this issue to be dealt earlier in the process rather than waiting until August, and incorporating it into what is actually an application for a change, and to be clear we're not asking at this stage for permission for a change to a single tunnel-boring machine, for the reasons we've said. I hope that makes sense.

MR TAYLOR: Yes. Thank you, Mr Henderson. I'm now going to pass over to Mr Smith.

MR SMITH: Thank you very much, Mr Taylor, and on that final point before we close out this item that Mr Taylor and I have both been leading, we'll do some thinking over lunch and if it turns out that there are matters that we can usefully address at agenda item 5 when we're talking about, essentially, some forward look to future actions, we will come back and have a conversation with the applicant and parties at that point, but I think we have reached a sensible place. I said we were aiming to take the lunch break at an hour at approximately 1.15. We're just a little bit late on that, but if we break now at 1.22, for the sake of a round figure so it's relatively easy to find on our watches, why don't we say we will resume at 2.25, everybody?

2.25, and that's when we will then move back to Mr Young, who will take us through item 4(d) on this agenda. Thank you very much, everybody. We are now adjourned for lunch.

(Meeting adjourned)

MR YOUNG: Right. Item agenda 4(d). So let me ask the applicant this: having regard to anticipated traffic levels and user safety, is there a case for a different road design approach? Including, perhaps, consideration of a

special road, motorway, provision of a continuous hard shoulder, or any other particular safety measures.

MR HENDERSON: Thank you, sir. Tom Henderson for the applicant. My colleague, Mr Latif-Aramesh is going to lead on the response to this question, so I'll pass over to him now.

MR LATIF-ARAMESH: Good afternoon. As Mr Henderson explained, my name is Mr Latif-Aramesh. I'm here on behalf of the applicant. I will shortly be handing over to Mr David Cook, who is the head of the strategic operations on the Lower Thames Crossing, to provide an explanation and a detailed answer to your question, but I wanted to make two preliminary remarks. The first was to say, very clearly, that the A122 is not proposed to be a smart motorway nor a special road, and the second relates to exactly how that is secured under the terms of the order. Bearing in mind that we have an issue-specific hearing tomorrow on the draft order, this will be very brief.

Article 15 of the draft order relates to the classification of roads, and that cross refers to schedule 5 which sets out the classifications which would apply to each road that's proposed as part of the project. Part 2 lists out the relevant trunk roads and the A122 is proposed to be an all-purpose trunk road. This is also shown in the classification of roads plans very clearly. That's APP-041. As Mr Cook will go onto explain, there are important distinctions between motorways or special roads and trunk roads, particularly relating to which design standards are relevant. We propose to respond to this question in two parts.

The first relates to the distinction in classification and the second element, which is the latter part of your question, relates to the safety measures and whether it would be appropriate to incorporate hard shoulders, and on that note I will hand over to Mr David Cook.

MR COOK: Good afternoon. David Cook on behalf of the applicant. So as we've just laid out, we propose to split this down into two key answers but with a thread that links the two together. So first of all, I'd like to pick up on the first half of the question so, 'Having regard to the anticipated traffic levels and user safety, is there a case for a different road design approach, including consideration of a special road or motorway?' So

first of all I wanted to lay out that, as we've mentioned today, Lower Thames Crossing is being designed as an all-purpose trunk road, also known as APTR, and our position is there is not a case for an alternative road design approach.

The current design is compliant with standards and appropriate for the traffic levels and user safety. So building on that, to state the obvious, LTC – Lower Thames Crossing – is therefore not a motorway. Now, it's fair to say that consideration has been given to whether a motorway would be appropriate, but our consideration has ruled that out, and I'll give some of the key reasons now.

MR YOUNG: Yeah. Just on that – you say it's obvious, but it isn't obvious to a lot of people, and you'll have read the objection and representation and you will know that a lot of people don't really understand the distinction between an A-road – and the fact that this is an A-road when some people say it looks and it smells just like a motorway, yet it's an A-road. So it's not obvious to a lot of people – that distinction, so it would help if you could explain that.

MR COOK: Yes, absolutely. I'll go onto explain some of those. So first of all, picking up on consideration of why we would rule out motorway as the appropriate classification. So at the highest level, the Lower Thames Crossing provides a link between the M25, the A13, and then the A2 in the south.

So when we look at motorways, they generally provide main arterial routes – so long distance corridors across the country, typically, and that's rather than what we might consider a link road or an in-field road such as Lower Thames Crossing, and then when we look at the types of roads that we're connecting into – so as I've mentioned, the M25, the A13, and the A2 – two of those roads are all-purpose trunk roads as well – so the A2 and the A13, and then when we also look in and around those junctions, there are further all-purpose trunk roads – so for example, at the M25 junction 29, close to where we link in, we also have links available to the A127, similar with the A13 – we've got links available to the 1089, and then at the A2 junction – the A289.

So what we're starting to build there is a picture that we're largely in an area of all-purpose trunk roads, so therefore to maintain that route consistency and the ease of customer experience, an 'all-purpose trunk road' has been deemed the most appropriate classification for the Lower Thames Crossing, and therefore we have proceeded to develop as an all-purpose trunk road. So moving to the second key part of the question – so, 'Provision of a continuous hard shoulder or any other particular safety measures – have they been considered?'

So starting off at the top – and that distinction of an all-purpose trunk road – all-purpose trunk roads do not normally feature hard shoulders and that's a key design element of an all-purpose trunk road, and then when we look to the detail of how we've designed the Lower Thames Crossing – so it's been designed in accordance with the design manual for roads and bridges – or the DMRB, as we've described it – and that's to the standard GD300 ,and the full title of that standard is the requirements for new and upgraded all-purpose trunk roads, and as a new road we will feature, in terms of our geometry, full-width lanes – so 3.65 metre lanes – so full-width lanes standard design lanes.

On top of that, to each side of the carriageway – so nearside and offside – will feature a minimum of a one-metre hard strip, and then to the nearside – so looking at the verge – so typically the grassed area to the nearside of the carriageway – what we're looking to do there is to create that feeling of open space and safety. So looking at what that verge would typically feature in terms of a layout, where we do need to feature vehicle restraint barrier to the nearside of the carriageway – for example, if that's protecting a structure or equipment that needs to be in that verge – that will be set back at least 2.3 metres from the nearside of the running lane 1, and what that will be made up of is that 1 metre of hard strip, as I've already mentioned, and then a further 1.3 metres or so of hardened drainage area.

So if you did need to leave lane 1 and there was a barrier there, there would be at least 2.3 metres of space and that's a typical car – if absolutely required could fit into that space, and then on top of that, almost half of the road would, as we anticipate in our preliminary design,

have no barrier at all or would already be an emergency area or layby to stop in, and what that would mean is that the road user potentially has full access, if they absolutely needed to, to that verge area – and again, creating that feeling of space and refuge if required.

As I've mentioned, we do feature places of relative safety or emergency areas, so our priority would be to get people to those emergency areas to create that place of relative safety, as I've laid out, but if absolutely necessary, that verge would create that feeling of space and availability. On top of that and then moving to additional safety measures, what we're proposing to create here is a best-in-class all-purpose trunk road, and I'll just run through some of the features that we have proposed to include that you wouldn't typically find on a conventional all-purpose trunk road.

So we do propose to include lane control signs – so signs that can display closed-lane, diverts, etc – so a red X if we needed to close a lane – and also variable mandatory speed limits if we did need to change flow speeds or control traffic speed for safety reasons, they could be implemented. We'd also feature stopped vehicle detection – again, linked to the technology that I've just outlined above. An important consideration here is that that stopped vehicle detection can detect vehicles across all lanes, not just vehicles that might have been trying to get over to lane 1 or over to an emergency area, so we've got full coverage. On top of that – full CCTV coverage and, as I've outlined earlier, places of relative safety or emergency areas at regular and predictable intervals if you did need to stop whilst on the road.

We'd also propose that we have on-road resources from our traffic officer service patrolling the Lower Thames Crossing route and also active management of the route – monitoring management of the route from our regional operations centre. I've laid out a number of things above there, but National Highways will continue to incorporate advances into this design, and particularly in the area of technology as they emerge in the years to come and throughout our design as the DMRB standards potentially develop in the years ahead. So therefore, for the reasons that I've outlined there, we conclude that it would not

appropriate in this instance to include a hard shoulder or necessary to include any additional safety measures over and above the ones that I've just outlined there.

MR YOUNG: I know it's had a lot of press, but the stopped vehicle detection has been the subject of a lot of controversy in recent years, and [inaudible] bring this up, but I do have personal experience of this on the M6 of driving along one night and the inside lane wall's closed off on the gantry signs, and then half a mile down the road, there was a vehicle stuck in the third lane. I don't know whatever happened that night, but it just struck me there were real flaws with the system then. Have there been any improvements in recent years to it, because it has had its problems, hasn't it?

MR COOK: Yes. David Cook on behalf of the applicant. So yes, a huge amount of effort has gone into the development of stopped vehicle detection, and it is subject to annual reporting at the moment and further reporting is imminent, but it's absolutely fair to say that a huge amount of effort has been put into that system and enhancing that system, and just to also add that that system will continue to be enhanced as further developments come forward and in the time we have available to developing the Lower Thames Crossing.

MR YOUNG: You didn't say anything about speed cameras and that type of thing. Would we expect to see those of the type that we all love and enjoy on other parts of the network?

MR COOK: David Cook on behalf of the applicant. Yes, a key part of the implementing overall mandatory speed limits, as I outlined earlier, is that we have enforcement that works alongside that. So yes, enforcement would be part of the package.

MR YOUNG: Can I just ask a question about – just going back to the A-road thing, one of the issues that's been raised in representations – and it may be a question, actually, for one of your colleagues – but the modelling work that was done to support the scheme, did that model the LTC as a motorway or as an all-purpose trunk road? There's been a suggestion on some of the relevant representations that it was modelled as a motorway.

MR LATIF-ARAMESH: Hi there. Thank you for that question. Mr Latif-Aramesh on behalf of the applicant. I think at this point, we'll hand over to Professor Bowkett.

PROFESSOR BOWKETT: Helen Bowkett for the applicant. So the Lower Thames Crossing has been modelled as an all-purpose trunk road. I believe that the cause of the confusion has arisen in the texts that we've provided in the combined modelling and appraising report, appendix D – the economic appraisal report APP-526, where we describe how we've applied the accident appraisal using the COBALT software.

Now, the COBALT toolkit that is prescribed by TAG as the way for doing the measuring and valuing the accident benefits and disbenefits, is quite an historic piece of software and it has within it a prescribed set of road types with the accident rates that get used in the software, and in our professional judgment we had to consider – of the very limited set of road types and accident rates that are available to us, which would be the most representative to use for the Lower Thames Crossing in the accident appraisal, and based on the fact that the road would have prohibited traffic – so it wouldn't have slow-moving traffic – that it would have segregated junctions, and the distance of the junctions under decisions taken to use the motorway accident rate provided in COBALT for that assessment.

- MR YOUNG: Right, okay, so it related just to the accident appraisal side of the modelling.
- PROFESSOR BOWKETT: Helen Bowkett for the applicant. Yes, and I wanted to be very transparent in everything that we had done in the appraisal, so that's why we wrote about it in the report.
- MR YOUNG: Thank you. That's helpful. Has the applicant got any more to say, or had you wound up at that point? I'll open it out to the floor if that's...
- MR LATIF-ARAMESH: Thank you, sir. Mr Latif-Aramesh for the applicant. We didn't have any further comments.
- MR YOUNG: Right. Let me just check with the panel, then. Does anybody in the panel want to ask questions before we go to the floor?
- MR SMITH: Certainly. Thank you, Mr Young. There was just one point that I wanted to check, and it may well be a matter where the applicant can

make a detailed response in writing at deadline 1 rather than at this point. However, in relation to the operation of the tunnel element of the scheme, I was just making a merely anecdotal observation that a reasonable number of dual carriageway tunnels, even all-purpose trunk roads, do seem to operate with essentially a range of traffic restrictions that are designed to have the effect of essentially limiting the traffic usage of the road to an equivalent to a motorway. My understanding is that's done in order to reinforce safe operation of the tunnel.

Now, an example that just springs to mind is – so for example, the

M23 triple-bypass Southwick Hill tunnel – where there are restrictions on

traffic equivalent to a motorway in operation, despite the fact that that is otherwise an all-purpose road. Where are we going in relation to this pair of specific tunnels between the two intersections where the only option is to pass through a tunnel? Are we likely to see restrictions in this case? MR LATIF-ARAMESH: Thank you, sir. Mr Latif-Aramesh for the applicant. I think I'll just make two preliminary remarks. One of them is to agree with what you've said, which is there are often restrictions like the ones proposed on the A122 on other all-purpose trunk roads, and that is itself is a feature of the standard Mr Cook referred to – so that's GD300 – and that's why it's commonplace. I will also just agree with the other comment you've made that the purpose of these restrictions is to reinforce the safety, to prevent overtaking, but also slow-moving vehicles, which would encourage lane-changing. I'm just going to hand over to Mr Cook to deal with the second part of your question on the sections leading up to the A122 and whether those have restrictions. Apologies, can I just have a moment to confer? Thank you.

MR YOUNG[?]: By all means.

MR LATIF-ARAMESH: Thank you, apologies for that. I'm just going to hand over to Mr Cook.

MR COOK: David Cook, on behalf of the applicant. So yes, just building on that point around – obviously, we have those restrictions for safety, and we would adequately sign all those restrictions on each and every access point to the road to ensure that all road users had clear and

1 understandable signage to prevent them entering a part of road that was 2 restricted or inappropriate for them to enter. 3

MR SMITH: We may need to follow up on that, but over to you, Mr Young.

MR YOUNG: Mr Pratt? Just unmute yourself.

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MR PRATT: Thank you very much. I'll get used to this eventually. Ken Pratt, panel member. I was interested to hear your – the applicant's definition of why this is an all-purpose trunk road, and one of his suggestion was it was delivering to an A road rather than anything else. As you can tell by my accent, I'm quite used to the M6 going on to the A74, but with the questions that some of the relevant reps that have come in, regarding the questions over the modelling, what changes would the applicant expect to need to see to change it from an all-purpose trunk road into something else? Are we talking about purely numbers of vehicles, or is there other aspects that you would expect to be – to take into account as well? And if necessary, it might be the response – you might have to respond in writing rather than an off the cuff remark at this present moment in time.

MR LATIF-ARAMESH: Thank you, sir. Mustafa Latif-Aramesh for the applicant. I think we'll take that away and respond in writing, if that's okay.

MR PRATT: I'm content with that if the rest of the panel is.

MR LATIF-ARAMESH: Thank you, sir.

MR YOUNG: Right, just looking round the room, does anybody have any questions? Okay, we've got some hands going up. Let me go to Thurrock, first.

MR EDWARDS: Thank you, sir. It'll be Dr Black who'll respond to this agenda item on behalf of Thurrock Council.

DR BLACK: Colin Black of Thurrock Council. We note a key scheme objective is to improve safety. We are concerned that this key objective is not borne out by the accident and economic analysis submitted by the applicant, which shows that the scheme will increase the number of casualties. The applicant, in fact, predicts that this scheme will mean 26 more people are killed, and 182 more people are seriously injured within the design assessment period. The council is concerned that the scheme adopts many elements of so-called smart motorway design, and we are unclear which elements of smart motorway design are considered appropriate for

adoption on this scheme, and the extent to which these so-called smart motorway design features may contribute to the predicted increase in casualties.

Furthermore, we're seeking clarification as to why the government's safety concerns that led to the recent cancellation of the smart motorway programme are not considered appropriate for this scheme. The council remains concerned that the narrative provided by the applicant to date on the applicability of design standards and safety matters has been confusing and inconsistent throughout the consultation period, and evidently remains so now. Thank you.

MR YOUNG: We did hear from the applicant, and he did set out what the – what features were being incorporated into the design. Which one of those – or which of those – do you have specific concerns about, then? Because they've already been set out. We had lane control signs, stop vehicle detection, enforcement, so can you be a bit more specific about what concerns you have?

DR BLACK: In particular related to the provision of hard shoulder and the variable[?] message signing.

MR YOUNG: Okay. Right, let me just take a few more and then we'll give the applicant opportunity to respond. Ms Dablin, we'll go to you next. Then I'll come to you, Ms Blake.

MS DABLIN: Thank you. Alison Dablin for the Port of Tilbury. Just a small point, when reviewing the application documents, Port of Tilbury have not identified any plans for the evacuation of the Lower Thames Crossing Tunnel once it's operational, and given the proximity of the north portal to the Port of Tilbury and what has been designated the Freeport, the Port of Tilbury considers that it's something that needs a little bit more consideration. It's something that we are looking to ensure that the evacuation protocols dovetail with those of the port, so I'm just putting a marker down that that is – so it's on everyone's radar. Thank you.

MR YOUNG: Thank you. Ms Blake?

MS BLAKE: Thank you very much sir. Laura Blake, Thames Crossing Action Group. Just a few comments to make on the smart motorway by stealth aspect of this project. Firstly, throughout the process of consultation, the

route was actually referred to as a motorway until smart motorways started getting bad press, at which point it was referred to as 'an express way', 'a road', or simply just 'the project'. Also, when we had questioned about provisions for, options for, cycle connections and services – as similar with the Dartford crossing where a free cycle option is available – we've been told it's not possible, and it's not relevant because it would be connecting a motorway to a motorway with the LTC. So I find it strange that it's now being referred to as an all-purpose trunk road if they're saying on one hand that it's connecting a motorway to a motorway, and where the LTC meets the A2 to the south of the route, it would actually be the M2 if you were turning coastbound, extremely soon if not directly.

And also, a large amount of the traffic that would be using the LTC would likely be journeys that are longer journeys, that are actually starting off on motorways coming up maybe the M20 from the ports and heading through to the Midlands and beyond. So whilst they may call it a fill in road, surely it is actually part of a longer motorway journey. And then to just top that off, when you look at the 7.7 combined modelling and appraisal report transport forecasting package APP, paragraph 6.2.3 actually refers to the rode as being coded as a three-lane motorway, with the exception of the southbound carriageway between the M25 until just past the A13. I'm a little bit puzzled – as are many people – and concerned over the fact that this road is being disguised as an all-purpose trunk road when the reality is it's being coded as a three-lane motorway. Thank you.

MR YOUNG: Thank you. Okay, does the applicant want to come back on those points?

MR LATIF-ARAMESH: Thank you, sir. Mustafa Latif-Aramesh for the applicant. We'll address the points that have been raised first by Thurrock. So first, on the number of the number of accidents, we'd refer to paragraph 9.3.7 of the transport assessment, which is application document APP 529, which sets out how, on a per kilometre travel basis, the accident rate drops. In relation to which features are included for the proposed A122, to reiterate, there are no features of a smart motorway. There are features which are associated with an all-purpose trunk road, and you've noted that those were set out by Mr Cook earlier in his submissions. On the Port of

Tilbury's comments around evacuation, I think we just refer to a design principle, which is included in the design principles document at 9.24, which is – sets out the requirement for points suitable for initial mustering of tunnel evacuees, including safe access routes, in the vicinity of the tunnel portal area. So we think that addresses that comment.

On the comments that were raised around references to the Lower Thames Crossing being a motorway, Professor Bowkett addressed one element of that earlier in her submissions, but it's also worth saying that the government and the applicant have obviously been reviewing the position, and the position which is included in the application is that the A122 is an all-purpose trunk road, for the reasons that were set out by Mr Cook. I think that's all we have to say at this point on the submissions that have been made.

MR YOUNG: Thank you, Mr Latif-Aramesh. Okay, wary of going round and round, but I do have a hand up from Ms Blake. Ms Blake, just quickly.

MS BLAKE: Thank you, sir, certainly. Laura Blake, Thames Crossing Action Group. Sorry, so I've just missed if there was any clarification on that mention that the road is actually coded a three-lane motorway. I didn't hear any clarification. Could we expect that in writing, or...? Thank you.

MR YOUNG: Does the applicant want to respond? We will have that in writing, a response on that point, will we?

MR LATIF-ARAMESH: Sir, Mustafa Latif-Aramesh for the applicant. Conscious that you didn't want to go round, we're more than happy to provide that in writing.

MR YOUNG: Okay, thank you.

MR SMITH: Thank you. Mr Young, if possible, there's just one point that I was going to refer back to. Alison Dablin, of Pinsent Masons for the Port of Tilbury, London Ltd – although the point relates to other port facilities as well, so it could possibly be relevant to London Gateway, and possibly indeed even to the Port of London Authority. And this is to look at this question about the relationship between safety/evacuation plans and their implications for the operation of the road itself, and their implications for the operation of other major facilities closely reliant on, or within a short radius, of relevant junctions on the road. I think it would assist the

examining authority to understand the point that the Port of Tilbury are making if they could put something in at deadline 1 that explains, essentially, how their existing emergency management system works, and what implications it has for the operation of the surrounding highway network, and could potentially have for the operation of the proposed Lower Thames Crossing.

Once we've got that in at deadline 1 – and as I say, that's an open invitation to any other port/major logistics facility – what that would then provide is an opportunity for, at deadline 2, the applicant then to respond to the obvious supplementary question, which is, 'Well, how do we deal with – if those implications are anything other than ordinary for the operation of the road and the tunnel, how do we deal with them?' So we'll try and capture that in our action list.

MS DABLIN: Thank you, sir. That's certainly something we'll take away and consider, and confirm in writing the extent to which we can answer these points, bearing in mind that certain amounts of confidentiality will inevitably apply to emergency evacuation protocols in respect of a secured area.

MR SMITH: Indeed, and we're not asking you to necessarily show us the within secure perimeter side of this. We're just interested in what happens in relation to you going into an emergency state in terms of the implications of that on the operation of the highway network.

- MS DABLIN: Understood, thank you.
- 3 MR YOUNG: Mr Shadarevian.
 - MR SHADAREVIAN: Sir, I realised my mic was off. I'm so sorry. We will do exactly the same, and try and assist you by the 18th on that particular issue.
 - MR YOUNG: Thank you.
 - MR SMITH: Thank you very much.
 - MR YOUNG: Right, do we have anything further, then, before we move on? No. Okay, in that case I'll hand over to my colleague, Mr Ken Pratt.
 - MR PRATT: Good afternoon everybody, Ken Pratt speaking. Right, it's now my turn to go through item 4(e) which is really a general item about routing and intersection design, and the processes. What consideration has been given to the proposed alternative routes? And I know we've talked a little bit around the different possibilities earlier on today, but it's more the

alternative routes and alignment design mitigations at those pinch points, specifically in the land between North and South Ockendon, at Baker St where there's been a number of people suggesting that it's very close to the existing properties, and between the hamlets of Thong and Riverview Park. Would the applicant like to come back with that one, please?

MR HENDERSON: Thank you, sir. Tom Henderson, again, for the applicant. Sir, the development of the alignment through the pinch points that you've referred to, we've interpreted that in two stages. Firstly, a regional consideration of the of the alignment, which culminated in the preferred route announcement in 2017, and I'll shortly hand over to Dr Wright to address you on that matter. And then secondly, there was then a detailed assessment which led to the exact alignment set out in the application documents, and for that I'll pass you over to Mr Steve Roberts who's the design and engineering director at the Lower Thames Crossing. So if I can invite Dr Wright to respond on that first point.

DR WRIGHT: Thank you, Dr Wright for the applicant. So the first part of this covers the selection of the preferred route. As required by the national policy statement for national networks, paragraph 3.3, 4.11, 4.26 and 4.2, we need to undertake an options appraisal process in developing the alignment for the scheme. This is set out – just to give you some references to look at – in the planning statement chapter 5, project evolution and alternatives, application document 495, and in the chapter 3, assessment of reasonable alternatives, application 141. So the early development of the Lower Thames Crossing involved a detailed options appraisal, and between 2009 and 2017, a series of corridors were considered, narrowed down into defined potential routes through a process of study and consultation. As part of this process, corridors were located both east and west of the proposed alignment, and they were considered and discounted.

By 2016, the options had been narrowed down, and four alignments were set out at consultation, alongside information on the process and all of the routes that had been considered up to that point. These included crossing the river Thames at the current location, which historically was referred to as location C, and at Dartford, which was referenced as

location A. At location C, there were three potential alignments north of the river Thames, which were referred to as routes 2, 3 and 4, which converged on a single crossing and then diverged onto two alignments south of the river, referred to as the eastern-southern link and the western-southern link. At Dartford, a single alignment was considered, referred to as route 1.

So each of these routes was considered in turn for their different impacts on communities and the environment. For example, the pinch point between North and South Ockendon and at Baker St would have been avoided by selection of routes either 1 or 4, simply as the route did not pass through this area. The pinch point between the hamlet of Thong and Riverview Park would have been avoided by the eastern-southern link for the same reason. However, while these pinch points would have been avoided, each of these potential alignments brought with them other issues and other pinch points which brought their own community and environmental impacts. Detailed explanations of why these routes were not selected as the preferred route by the Secretary of State in 2017 are set out in chapter 5 of the planning statement that I referenced earlier.

Fundamentally, the alignment that was selected by the Secretary of State on the grounds that only a new crossing at location C satisfies the transport scheme objectives. Route 3 provides the most direct route with the lowest environmental and community impacts north of the river, and that the western-southern link would achieve the transport and economic objectives whilst having a material lower impact than the eastern-southern link on the environment and communities. So that sets out the big position that gets us to the alignment that we have today, but that then needed to be developed in further detail, and I'll refer back to my colleagues for more information on that.

MR PRATT: Thank you.

MR HENDERSON: Thank you, Dr Wright, so I'll now pass over to Mr Roberts to provide some evidence in relation to the more localised and detailed considerations that were given.

MR ROBERTS: Good afternoon, Steve Roberts for the applicant. So as Mr Henderson says, I'm going to set out the more localised considerations

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that we've made for the route alignment following the preferred route announcement. So if I may just start with some overarching, generic principles that we have adopted, which is firstly the need to take account of existing constraints and conditions. Obviously minimising environmental impact and impacts on local communities, land and property, minimising impacts on physical constraints, including local road network, railways, rivers and existing utilities, working with the existing topography, and understanding and taking account of existing ground conditions. So they were the existing constraints which helped guide us with the precise alignment that we took for the Lower Thames Crossing. The second part to that is application of relevant standards within the design manual for roads and bridges applicable for an all-purpose trunk road, and central to that is designing for safety and designing with future operation and maintenance in mind.

So turning now to the three specific pinch points that you reference in your question, and if I may just make reference to application document 17, gen arrangement plans, and application document 16, APP-016 with 017, the three pinch points which you have identified in your question. I'll take each in turn, starting with the North and South Ockendon area. So in this area, we've sought to align the route to lie approximately equidistant between the communities of North and South Ockendon, avoiding North Ockendon conservation area and the associated listed buildings. An important consideration in this area, too, is the vertical alignment of the Lower Thames Crossing, and we've sought here to utilise false cuttings where this can be beneficial in helping to mitigate the lower Thames Crossing and screen the road. In this location, we've also sought to minimise the impact on the environmentalist sensitive areas of the wilderness. To the north, the consideration is the tie into the M25, and avoiding the Upminster and West branch railway, and finally seeking to avoid the Ockendon landfill site. So those are the site specific considerations that we took into account: the alignment between North and South Ockendon.

Turning to Baker St and the A13 junction, the tie into the A13 junction is important to achieve the required connectivity, which I might

come on to in response to your next question. The A13 junction location is restricted by the geometry of the existing junction connections, and that was a key consideration in how we tied in Lower Thames Crossing at that point. We've also sought to avoid specific heritage assets in this area, most notably the Baker St Windmill which is a grade II listed property.

Moving on to location 3 which is between Thong and Riverview Park, similar to Ockendon, we have sought to align Lower Thames Crossing to lie approximately equidistant between the communities of Thong and Riverview Park, importantly avoiding the Thong conservation area and associated listed buildings there. There's a need to tie into the A2 junction to the south, and to the north to the southern tunnel portal, which was positioned to minimise the impact on the Thames Estuary and Marshes Ramsar site. And finally in this area, taking into account the topography and the need to tie into the tunnel means that this section of route is in a deep cutting, and it therefore provides some mitigation through means of a vertical separation of the route and the communities of Thong and Riverview, and that concludes my points on this particular question.

MR PRATT: Thank you very much. I think, for simplicity's sake and as you suggested, the questions one and two in this block seem to be linked. So what I would like to do is I will ask you the second question, and then I'll open in for further debate once you have — once we've heard your response to the second — what I would almost class as part of the question, which is what the consideration is being given to the land take at the intersections, whether alternatives to that connectivity requirement that you said for an all-directions slip road model, particularly at Baker St, and obviously Shorne A2/M2. What alternatives have been considered? I suppose are all directions to all directions outcomes needed at these intersections? What's the rationale behind it? Could some of those slips be removed to try and reduce some of the land take? And could it be feasible to incorporate roundabouts rather than the straight slip road connections?

I'm going to add a little bit in on this; you made the comment that there was the grade II windmill being protected at Baker St, but there are a number of buildings in that area which are – have got heritage grades

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on them, which your current proposals seem to be suggesting need to be taken away. So it would be interesting to find why the – why protect one, and another location should protect the heritage designations, but at Baker St there are a number that can go? Mr Henderson, would you like to come back – come on for this one, please?

MR HENDERSON: Thank you, sir. Tom Henderson for the applicant. Again, this is a question that will be responded to by Mr Roberts, so I'll pass over to him. Thank you.

MR ROBERTS: Thank you, sir. Steve Roberts for the applicant. So if I may, I'll take your question in two parts; firstly, responding to your point about the connectivity that we sought to provide at those junctions, and then secondly, your question about the junction type and whether another form of junction would be more preferable. So in terms of land take and connectivity, the land take at the junctions is a function of the connectivity required and the type of junction used, and the connectivity is predominantly based on forecast traffic flows, and what we're seeking to do is to maximise the benefits of the scheme by minimising journey times, whilst seeking to minimise impacts. We're also seeking to balance the need to maintain the strategic nature of the Lower Thames Crossing whilst ensuring adequate connectivity for more local journeys.

So in terms of the connectivity at specific junctions, the tie in of the Lower Thames Crossing to the A2, as you note, this is an all-movements junctions. At the A13, this is – we're not proposing an all-movements – as you refer to, all directions to all directions junction, as some of these movements are not required. The connectivity between the Lower Thames Crossing and the A13 provides east-facing slip roads, and these links are essential for traffic wishing to connect between Kent and East Thurrock and Essex, including London Gateway Port. This traffic, predominately, is the A13 at present, connecting to the M25 at junction 30, and because there will be a substantially lower demand for traffic from Grays and Tilbury west of the project due to the proximity of the Dartford Crossing, no free-flowing, west-facing connections are provided between Lower Thames Crossing and the A13. So we haven't sought to provide all-movements at the A13 junction.

At the A2 junction, as you noted, it is an all-movements junction that we propose, with free-flow slip roads. The predominant movement, of course, is to and from Lower Thames Crossing and the A2 to the east. However, the connections to the west are also important to facilitate local access from Gravesend, and hence my earlier point about the need to maintain a balance between the strategic nature of Lower Thames Crossing and ensuring adequate local connectivity. So that concludes my points on connectivity.

If I just make some points on junction types – and you ask in your question have we considered roundabouts. So just to set out the considerations that we have made for the type of junction that we provided, very obvious first point is the capacity that junction can provide. The very simple at grade – and by that I mean at the same level priority junction – would have considerably less capacity than a grade-separated, links at different levels junction, so the capacity is an absolute crucial part of the decision-making process. An understanding of the detailed origin destinations of journeys is also key, as are physical and environmental constraints, and one example at the A2 junction is that we're quite heavily constrained by High Speed 1 to the south. And then compatibility of the chosen junction type with the wider strategic road network is an important consideration, as is the chosen junction type and compatibility with Lower Thames Crossing being an all-purpose trunk road.

The land take, or the footprint, and the scale of junction will be significant even with a roundabout option, as can be seen with the existing M25 junction 2, and the existing A2 joins the M25 where a multi-level roundabout junction is augmented by free-flow slip roads to and from the A2. Generally, you'll see in our design that we have provided free-flow links, and that this is to minimise journey times, maximise economic benefits, and again, that's informed by the traffic modelling. So in summary, we believe we've provided suitable arrangements, both in terms of connectivity and junction types, to seek to maximise the project scheme benefits whilst minimising the impact on land, and that concludes my remarks on that question.

MR PRATT: So am I right in saying that in response to the last part of my question – which was based on the heritage assets – that the benefit of vehicles moving quickly along the round is in preference – has – is enough to support the windmill being saved, but the other items within that area are thought to be secondary? Or are they – is there another analysis that you've undertaken to determine which can be removed, and which should be saved?

MR HENDERSON: Tom Henderson for the applicant. If we might have a moment just to confer amongst ourselves as to who's best placed to address you on this point, because it spans across environment and planning statement matters. I mean I will say that we've certainly given very careful consideration to heritage impacts, and the balance of that as opposed to the delivery of the requirements of this scheme, but let me just confer with the team, see if we can give you a –

MR PRATT: Mr Henderson, if you wish – you can return with a written answer if you wish. That way, we – because I am conscious that it's not 3.20 and it might be a case of moving on to other items in the agenda so that we can – if you want to go away, discuss and write something back to us, that might be the way to deal with this particular matter.

MR SMITH: And to assist there as well, I mean I will frame here that we are very much in the helicopter view in this hearing, and there are tendrils in nearly all of these questions down into matters of detail, some of which are going to get picked up in the written stream through our first written questions, and some of which are going to fall to subsequent issue-specific hearings. So we don't have to solve all parts of the equation today, but yeah, no Mr Pratt's suggestion, I think, is a very useful one.

MR HENDERSON: Thank you. Tom Henderson for the applicant. We're very happy to do that, and we'll point you to where that's dealt with in the application in writing.

MR PRATT: Thank you very much. In that case, I'll go onto the next question. I will actually say, before I start, that at this stage, we want to get as – hang on. I'm going ahead of myself. What I should really be doing is asking everybody, or anybody, who would like to make a comment on what – of the recent couple of questions before we go on to a slightly different topic.

On the simple answer that the first hand up was Ms Blake, would you like to...

MS BLAKE: Thank you very much, sir. Laura Blake, Thames Crossing Action Group. I would just like to comment –and I am going to try to remain calm even though this is a very emotive topic – the mention of the wilderness being avoided in the route alignment is absolutely ludicrous. I'm sorry; I know we're not meant to go into the actual merits. For the benefit of anyone who isn't aware, the wilderness is actually a privately owned woodland. It is what we consider to be ancient. We managed, as a local community action group, to find evidence dating back to 1767, which was further than the applicant managed to go back, so we're not convinced they've put in the effort required for that. It's definitely a new, longestablished woodland, and the route actually destroys the oldest part of that woodland if it goes ahead as proposed, and it was moved to that alignment to avoid a nearby landfill, which we assume is because it was easier and cheaper. We're talking about a historic landfill of not only environmental value, but also was the home of Sir Richard Saltonstall, the Lord Mayor of London in the 1500s. So I'm sorry; I have to mention that.

MR PRATT: Thank you. It's probably going to end up as another discussion, but thank you for bringing that to our attention. If I may, can I go next – as I say, I'm just doing this purely on who was quickest – Thurrock Council, please.

MR EDWARDS: Thank you, sir. It will be Dr Black that will respond to this agenda item on behalf of the council.

DR BLACK: Colin Black on behalf of Thurrock Council. A few points to make: the council has sought for the LTC route to be designed such that the layout between North and South Ockendon does not preclude the future creation of an interchange at location, and we remain concerned that appropriate safeguarding is not written into the control documentation. The proposed Lower Thames Crossing junction arrangements incorporate, as part of the design, Thurrock Council local highway network at and around Orsett Cock junction. Part of the local road network at the A13 to the Orsett Cock junction was recently upgraded by the council at substantial cost. The applicant is proposing the use the capacity provided

at Orsett Cock junction as part of its LTC scheme. From opening, the applicant's modelling shows long queues and persistent congestion at this location. This is what the applicant prefers to refer to as 'slow moving traffic'. We are concerned that the applicant has been unable to put forward any modification that would relieve this traffic congestion. The LTC scheme will use all available local road capacity at Orsett Cock. It places the burden, instead, on the council to remedy the serious traffic congestion issues that the applicant has identified in its operational traffic modelling, but we know has yet to share with the examining authority.

The council has continued to raise concerns about the lack of adequate alternative option appraisal at this junction. An analysis undertaken by the council suggests that, in fact, there are alternative design options that would provide a better balance between strategic benefits and local harm in Thurrock. The council is concerned that the proposed LTC design does not provide adequate provision for port access and for future access to industrial and employment uses. Of particular concern is the removal of the Tilbury link road from the scheme. The applicant states in its planning statement, APP-495, that the Tilbury link road is not included as part of LTC because the road would not contribute to the scheme objectives. We do not believe this position is substantiated by the modelling provided to the council, which in facts demonstrates significant benefits for alternatives incorporating the Tilbury link road, including the potential to significantly reduce the need for land around the A13/A1089 LTC intersection incorporating Orsett Cock. Thank you.

MR PRATT: Thank you very much. You were beginning to move a little bit into the next question, so...

MR YOUNG: Mr Pratt, if I could just on Orsett Cock – it is something that had been raised. It is on our radar; make no mistake of that, and I think it's highly likely that we're going to have to see some additional information coming forward from the applicant in relation to fine grain modelling analysis of how that junction is going to operate. So I just want to make that clear, and undoubtedly this will be one of the issues that we pick up in the traffic and transportation hearing that we're going to have in due course. I just want to say that.

MR PRATT: Thank you very much, Mr Young. Ms Dablin, you're up next.

MS DABLIN: Thank you, sir. Alison Dablin for the Port of Tilbury. I appreciate that quite a lot of points are going to be – come up in the next agenda item point. We just wanted to say that the Port of Tilbury is not currently convinced that the A13 junction currently, as designed, performs to the level that is required, where there is no direct connection to the A1089 southbound to the Port of Tilbury in the absence of the Tilbury link road, and I'll explain more about the Tilbury link road, I'm sure, in the next agenda item. Thank you.

MR PRATT: Thank you very much. Mr Douglas?

MR DOUGLAS: Good afternoon, sir. Daniel Douglas, London Borough of Havering. It was really just to flag up to the panel, in relation to the element of the question that concerned the alignment, particularly between North Ockendon and the South Ockendon area, it was really just to make the panel aware that Havering will be providing detailed comments from our perspective on that part of the alignment is our local impact report. In particular, we'll be raising matters in relation to the M25 construction compound that's sited just to the north of the road and to the south-west of the North Ockendon conservation area that was referred to earlier, and also matters in relation to sites of interests and nature conservation, particularly the North Ockendon Pit and the 7.3% temporary irreversible loss of that site as a result of the compound, and also matters in relation to how the compound layout can be maybe better set out to minimise the impact of the compound on residents in the North Ockendon area, but also raise some issues around archaeological matters in the area as well. Thank you.

MR PRATT: Thank you very much. Mr Bedford, from the Gravesham Borough Council.

MR BEDFORD: Thank you, sir. Michael Bedford, Gravesham Borough Council. So starting with the remarks that Dr Wright made at the outset about, effectively, the option selection process. So we're not currently persuaded from what is set out in chapter 3 of the environmental statement – that's APP 141 – that there's a coherent rational to explain the dropping of option A in location A, and then the pursuit of option C in location C, and

we contrast table 3.4 of APP 141, where, in summary, essentially location A doesn't have as many benefits, but it also doesn't have as many disbenefits, and location C, it has more benefits but it also has much more disbenefits. Okay, there is a judgement to be made there, but what we find confusing and not adequately explained is it then tells us that in 3.8.2(a) that, well, actually location A is dropped because it doesn't meet scheme objectives, and we find that to be somewhat inconsistent because certainly in terms of economic and social impacts, A in table 3.4 would seem to be passing muster. It just doesn't pass muster, perhaps, as well as some other things, but as I say, it has less benefits – sorry, less disbenefits.

Then the important point, obviously, is we then move to where we've ended up. When you then do try to thread location C, option C, through to connect the LTC to the A2, you have the pinch point that you've obviously described, and you also have the complex junction arrangement in order to accommodate movements to and from the LTC and the A2. What we see, in a sense the constraints and the problems are because of that original option choice, and we're not persuaded that option A should have been discarded. Moving on to the position then that – where we now are with the LTC A2 junction, whilst we do think it's a complex junction and we do have concerns, particularly in terms of safety and ability of people to fully understand that junction, we are very anxious that in a sense the answer to that is not to reduce the local connectivity and access of that junction, because we are certainly concerned to ensure that the A2 remains as an important route for local traffic, and also that the connectivity benefits that would then be provided with a connection to the LTC are not lost.

So although we recognise the problems, we're not, as it were, in favour of what might be hinted in part of your question of, 'Well, would it be made more simple if we removed some of the slip roads and some of the connectivity?' Yes, it would be made more simple, but it would be at the expense, we say, of local access. So those are our concerns.

MR PRATT: Thank you very much. I don't see any other hands from those present, so Mr Henderson, would you like to comment on some of the comments that you've heard and respond to some of the comments?

MR HENDERSON: Tom Henderson for the applicant. Thank you, sir —

MR SMITH: Mr Henderson, just very briefly I will interject before you start to speak. There does seem to be a problem with the livestream. No, it has been resolved. No, that's fine. You can proceed.

MR HENDERSON: Thank you. Tom Henderson for the applicant. Obviously there was a large number of points raised there, and noting the nature of this hearing and the time of the day, we propose to respond to most of those in writing if that would assist. Just one point in response to the

there was a large number of points raised there, and noting the nature of this hearing and the time of the day, we propose to respond to most of those in writing if that would assist. Just one point in response to the submissions made by Gravesham there in relation to the option selection of location C versus location A, just to draw attention to chapter 5 of the planning statement which we've referred to throughout this hearing, that also contains significant information and assessment of the choice of options, and as Dr Wright alluded to – I mean he could only provide a brief summary in this hearing, but there's a huge body of assessment work over a number of years that led us to where we are today. That information is cross-referenced in chapter 5 of the planning statement, in particular the scheme assessment reports that were undertaken before and after the options consultations which led to the preferred route announcement, so we just wanted to draw attention to that, which sets out comprehensively why location C was preferred over location A, and as I've said earlier, that work has been backchecked at the point of submission of the application to verify that it remains the right decision. So I just wanted to put that on the record, thank you.

MR PRATT: Thank you very much. I will go on to the next question here, now, as I was starting to allude when I decided to invite everybody to have their say on the first two questions. At this point, what we're looking at is to get a sense of the significance and scale of this issue. I'm almost certain that the detail is going to be examined at a further issue-specific hearing, but I'm just looking at the time, and at 3.35, I would ask that if the comments are brought as – to give us an impression of the significance, rather than the detail. So the question I'm going to go on to next is about the adequacy

of the provision made in the proposals for port access – and I'm aware that people have already made comment on such – and for access to other proposed and emerging business, industrial areas, employment areas, and, I suppose, potential housing development as well. That's really E3[?] on your list. Mr Henderson.

MR HENDERSON: Tom Henderson for the applicant, thank you, sir. I'll invite Dr Wright to respond on this question, and note the steer you've given us around summarising the positions in so far as we can.

MR PRATT: Thank you very much.

DR WRIGHT: Tim Wright for the applicant. As directed, I have a rather longer response and will provide that in writing. However, to summarise, we do consider that the proposals provide improved access for ports and other employment uses in the area, and all those set out in the question, and that provision by us we consider to be adequate. Just to expand a little bit on that, we talk in our application about how two ports in particular will be supported by the new design, including London Gateway Port and Port of Tilbury, and I refer you to appendix C of the combined modelling appraisal report, application 522, where we give tables of route-based journey time comparisons between the Port of Tilbury, London Gateway and a series of locations both north and south of the river, mindful that those ports have also got a number of businesses associated in the area, that does go wider than the port and to a broader business use.

Just to speak specifically to the provision in those areas, Port of Tilbury will retain their existing connectivity on the road network, but benefit from substantial relief. For traffic leaving the port, a new free-flow route is provided from the A1089 onto the M25 via the LTC, supporting traffic that would otherwise have had to navigate along the A13 and around junction 30 of the M25. So whilst that provides access from the Port of Tilbury to the north, that relieves the approach roads to the Dartford Crossing. London Gateway also retain their existing connectivity on the now less congested road network, but benefit from direct free-flowing lines from the A13 on TLTC[?] northbound, and southbound from the LTC onto the A13 and into the port. So overall, we do enhance and provide access

for employment and for those businesses, and we can obviously provide more information of that as required.

MR PRATT: Thank you very much. What I intend to do here is I'm going to go through the next couple of questions, because they're all to do with has adequate provision been made for the provision of and the restoration of community connections, and also – I'll deal with that one next and then I'll follow that up with the connectivity for non-motorised users, and then I'll open it to the floor after that, if I may. Mr Shadarevian, if it's something that you wish to say just now, I will obviously let you in, but if it's something that can be held on until after I've dealt with the other two questions, it – can I leave it until then?

MR SHADAREVIAN: That's fine, sir. It can wait until then.

MR PRATT: Thank you very much. So as far as – so to the applicant, it's about adequate provision being made for the community connections and the restoration of any community connections, and obviously the provision and restoration of them for non-motorised users. Mr Henderson, would you care to provide some detail on those two questions at this stage?

MR HENDERSON: Thank you, sir. Tom Henderson for the applicant. I'll address you on these matters, sir, and I think we can be relatively brief on these ones. So firstly, in relation to your question on the provision of community connections, our response there is that addressing severance has been an important aspect of our project design. All local roads severed by the Lower Thames Crossing would be re-provided with grade-separated connections, with the exception of Hornsby Lane, and that's the only one, for which access is provided via a short diversion route to Stanford Road. In most cases, these re-provided local road links include new or enhanced provision for walkers, cyclists and equestrian users, and some of the re-provided local road links also include green corridors to reconnect or enhance connections with ecological habitats.

So that's our response in relation to community connections, and then moving on to the provision for non-motorised users, it's very much a similar theme. The project has made provision for the restoration and enhancement of existing public rights of way impacted by the Lower Thames Crossing. In the majority of cases, existing routes will remain

along their current alignments, and where that's not possible, an alternative route has been provided. Many new public rights of way are also promoted by the project, which augment and enhance the existing public rights of way network, and these have been identified through an assessment of existing and potential user needs to inform the project design.

In places where we have promoted some non-motorised user routes that deal with historic severance, that opportunity's also been taken up, and we've noted there've been a number of relevant representations about the provision of non-motorised users,. So we just wanted to emphasise at this stage that the application is very much in accordance with national policy set out in the national policy statement for national networks, the specific references being paragraphs 3.17, 5.184, 5.205 and 5.216. These policies point to a very strong expectation to mitigate impacts on non-motorised users but, additionally and importantly, that opportunities to improve access should be considered. Those are our responses in relation to part 4 of this agenda item. Thank you.

MR PRATT: Thank you very much, Mr Henderson. It's at this point I will open it to the floor, and I do recognise that Mr Shadarevian – I must apologise for my pronunciation. If you would like to take the floor. Please take the floor, Mr Shadarevian.

MR SHADAREVIAN: I can't get my camera to work, so bear with me. Sorry, can you see me now, sir?

MR PRATT: Yes, in full glory.

MR SHADAREVIAN: Thank you. I'm doing this, as it were, flying from a helicopter, so I'm going to be quite brief, but the points I have to make at this juncture, recognising the role of this part of the proceedings, are very important, nonetheless.

Sir, no one would dispute the importance of the smooth operation of both the Orsett Cock and Manorway Junction for the unimpeded operation of the port and logistics park. I'm certain I don't need to remind you or your colleagues, sir, of their importance to the national economy, and particular the emphasis that national ports places policy on the resilience of our national ports and their operation. Now, sir, you will be

aware that national ports policy is in the process of being revised, and the likelihood is that this emphasis will gain even greater weight because of the emergence of the free ports and their importance to the UK's economic future.

Against that background and in that context, it's important for the panel, I think, to be satisfied as to whether or not impacts would occur at these junctions, how often they might occur, the severity of those impacts – not only on the safe and efficient operation of those junctions, but also the attendant and consequential impacts on the port and the logistics park. It will be important for the panel to consider whether these junctions have been modelled appropriately and has the evidence upon which to make a proper assessment. Apart from very strategic modelling, there is nothing before the examination to show what those localised impacts might be, and the LTAM modelling which has been referred to, which does take in Orsett Cock, is of such a strategic level that it's completely irrelevant to the issue of whether or not actually the localised impacts detract from the overall benefits which the LTAM model predicts.

In that context, it's very important to understand what view the applicant is taking and what it intends to do about it, given the timescales involved in this examination, and the implications which it might have both procedurally and for the form of the order, and I draw specific attention to the possible impacts that they have on schedule 2 and part 1, because clearly if harm is found, and depending upon the nature and the severity of that harm, it will be necessary to consider the extent to which impacts could or should be mitigated, and have regard to the limits of deviation any required mitigation might be delivered, and what legal mechanisms will be required to ensure that it is provided in a timely manner.

All of that requires sufficient interrogation of the evidence, but more than anything else, that interrogation cannot take place unless the evidence is before the examination. It is not at the moment. And if I can also anticipate the next question, because it is actually linked, it could have implications for the BCR because the project cannot be isolated from the requirement for national port resilience. It is a very fundamental and important consideration, and of course overall any such evidence could

have impacts for the environmental assessment and its competency. So, sir, I'd like to draw your attention to those points at this stage of the examination. Thank you very much indeed.

MR PRATT: Thank you very much. I think in this juncture I'll keep the ports together, so to speak, and would ask Ms Dablin if she would like to come to the floor at this point.

MS DABLIN: Thank you, sir. Alison Dablin for the Port of Tilbury. In terms of the adequate provision for port access, we have two key strands of concerns. The impacts that might occur during construction, and whether or not access has been suitably built into the design of the project itself. At a very high level, our concerns in relation to construction relate to the Asda roundabout, which has been identified within the transport assessment as a location where there will be additional delays on the A1089, caused explicitly in one phase and implicitly in the remaining phases due to project-related construction traffic – the affected phases being phases three through seven inclusive, and I can provide you with a full paragraph reference if that would assist.

MR PRATT: If you could drop it in your written comments that will come to us at deadline one, I think, yes. So if you could do that, that would be lovely. Thank you.

MS DABLIN: No problem at all. We will do that. So we have concerns about congestion that has, in our view, not been fully considered, that would result in the Asda roundabout being over capacity. As has been noted, the resilience of the port is a key consideration, and the Port of Tilbury currently has one access via the strategic road network, which is the 1089, and therefore the Asda roundabout is very relevant.

MR PRATT: Just one question on that, you said Asda roundabout over capacity.

Do you mean under capacity?

MS DABLIN: We understand that the Asda roundabout is currently operating at or very, very close to capacity, and that with new planning applications coming forward in the area, National Highways is requiring them to do a specific junction modelling assessment of their impacts on the Asda roundabout, in order to identify if mitigation is required.

MR PRATT: Thank you very much.

MR YOUNG: Just to that point, Mr Pratt, can I just – and we mentioned Orsett Cock roundabout earlier and the fact that there was going to be the need for the applicant to submit further information to address some of the comments. The same comments apply to that Asda roundabout and, if anything just as pertinent in that National Highways have taken itself a very stringent approach to any new development in and around that roundabout in recent years, so it's only right what they've required of others is what they submit with this application. We'll certainly want to see some fine-grain junction modelling for that Asda roundabout, as well as Orsett Cock.

MR PRATT: Thank you very much, Mr Young. Sorry, Ms Dablin, please continue.

MS DABLIN: Thank you. The further consideration is in relation to just materials handling. The Tilbury 2 has a construction materials aggregate terminal located on Tilbury 2 that, should there be a firm commitment in the Lower Thames Crossing to use the CMAT, it would greatly reduce the amount of road traffic that would need to use the A1089 for construction and travel through the port. Currently, the applicant has declined to make any firm commitment, which in the view of the port is somewhat hampering the ability to make forecasts and fully understand the impacts and have that feed into the agreements and the arrangements.

In respect of the Free Port, we have a number of concerns that the traffic forecasting that the Port of Tilbury has provided to the applicant for the Free Port has not been taken into account at all. During construction, this is on the basis that the traffic forecasting was for a date at which there would be a fully operational Free Port, which would not coincide with the construction of Lower Thames Crossing. However, with the two-year delay to the start of construction, there is an increased likelihood of interaction, and it is therefore disappointing that there has been no assessment, not even to adjust the traffic forecasting numbers to allow for the partial impacts of a partial interaction.

Finally, in respect of what is known as the Tilbury Link Road, this is a road that was in an earlier iteration of the scheme and then removed later, and I have every confidence that colleagues at Thurrock will raise

this in greater detail. In terms of the application as it has been submitted, the Tilbury Link Road is not included. In terms of the legacy value of the project, the Port of Tilbury are very concerned to ensure that, as a minimum, the Lower Thames Crossing is constructed in a way that enables the Tilbury Link Road to be brought forward in the future. Currently, there is no requirement in the DCO for the Lower Thames Crossing scheme to be designed in a way to accommodate and enable the Tilbury Link Road.

It is the view of the port that in order to minimise the economic and the environmental impacts, the roundabout, the junction immediately to the north of the north orbital, must be constructed in a way that the Tilbury Link Road can be brought forward at a later date without needing to make substantial layout changes. We also have concerns to ensure that the earthworks and drainage infrastructure needs to be designed in a way to facilitate the Tilbury Link Road and future port development more generally. This is something that we would also be looking to secure in an agreement.

Finally, we are mindful that there is a haul road that the applicant is planning to construct that – it forms part of the temporary construction compound in this area and is shown on plans to take the approximate alignment. It is the view of the port that there are significant benefits to ensuring that the haul road is constructed in a way that it can essentially form the basis of a later Tilbury Link Road, recognising however that it does not currently form part of the application. It is the view of the port that in order to avoid and minimise indirect negative effects and ensure future mitigation, it is necessary to avoid the Lower Thames Crossing being an impediment to bringing forward these known future projects. A sort of 'do it once' approach. Thank you.

MR PRATT: Thank you very much. Mr Shadarevian, did I somehow cut you off in your prime, because I notice you've still got your hand up? If I did, I apologise.

MR SHADAREVIAN: No, no, please, it's my apology. I forgot to lower my hand, so I'll do that now.

MR PRATT: Thank you very much. As I said earlier on, I'll ask the ports, so I suppose, Ms Dillistone, have you anything to add to what's been said by the other two representatives?

MS DILLISTONE: Thank you. Alex Dillistone for the Port of London Authority. We do not have anything specific to add on road access to ports at this

time.

MR PRATT: Thank you very much for clarifying. The next person on my list is Mr Bedford of Gravesham. If you would like to take the floor, Mr Bedford.

MR BEDFORD: Thank you, sir. Mike Bedford, Gravesham Borough Council. Just two very short points and they are important but, given the time, I'm not going to develop them. It's in terms of E, items 4 and 5, on adequate provision for community connections and non-motorised user connections. We do have some concerns that the proposals are not fully thought through so far as construction impacts are concerned, particularly in the vicinity of Brewers Road and improvement of the national cycle route 177, which effectively runs parallel to the A2 northbound. That's the point where I explain more in our LIR, but we do have concerns on how construction severance impacts on local communities. Thank you, sir.

MR PRATT: Thank you very much. In that case, I think we'll go through the councils, so Thurrock Council, would you like to come to the floor?

MR EDWARDS: Yes, sir. Thank you, sir. If I can begin by briefly responding to item 4(e)(iii) on the agenda concerning ports, and then I'm going to ask Mr Bowers to address you briefly on item 4.

So far as item 3 is concerned, and in the interest of brevity, the council supports what you have submitted on behalf in particular of DP World London Gateway Port, in terms of the impact of the scheme as currently proposed on the port, and also in large measure what is said on behalf of the Port of Tilbury. The council at this stage aligns itself with those comments. The council's opposition does go further in the sense that – and as already rehearsed in what Dr Black said in response to the earlier item – the council has concerns about whether there has been proper, proportionate and objective assessment with regard to the Tilbury Link Road, which was part of a proposal at an early stage.

At this stage, the council considers that that Link Road has not been properly assessed and that, when properly assessed, its merits in terms of both providing access to the ports and also relieving impacts on the wider road network become compelling, and the council's position is that it is necessary for provision of that nature to be made in order for the proposal to be acceptable. And that is, at a very high level or helicopter level, the council's position in respect of this particular matter, which obviously will be expanded upon in its local impact report in due course. So, sir, unless there's anything further on that matter, can I just ask Mr Bowers to deal briefly with item 4(e).

MR BOWERS: Yes, David Bowers, representing Thurrock. The Lower Thames Crossing provides very significant severance across Thurrock, and so therefore it's really important that the connections across the alignment enable people to continue to be able to access different parts of the borough, and that could be by car or by cycle or by bus. The council has very significant concerns about the design of those connections in terms of their width, particularly the ability of the connections to provide facilities for cycling and walking, and also in terms of providing bus-priority facilities. In several cases, the width of these connections precludes the ability to provide those public transport facilities to enable good public transport services to be provided.

We have suggested that two of the crossings could be adjusted to provide those sorts of facilities, but National Highways have not progressed with that as a part of their application, so this is something we're going to further develop as part of our local impact report. We see these connections as a really important consideration for ensuring the residents of Thurrock can continue to move around the borough. Thank you.

MR PRATT: Thank you very much. Mr Young.

MR YOUNG: Yes, I was just going to ask a quick question of Thurrock, there. We've mentioned Orsett Cock and the need for further information, and that in itself will then inform the position on the Tilbury Link Road, but would you agree with the point that the applicant made earlier which was that when it comes to the question of port access in Thurrock, one will need to

take a holistic view on this, and so there may well be significant benefits to port access in certain directions, and it may be sub-optimal in another direction, but one will have to make a balance. Is that a fair approach?

MR BOWERS: I mean, obviously there is no utopian solution. I think we'll have to adopt a balance, but I think the point at the moment is that we do not feel that the analysis has been sufficient to strike an appropriate balance or explore alternative design options which may work more effectively to serve the needs of the ports.

MR EDWARDS[?]: So if I can just add, the answer to your question I think, in principle, is yes, but it comes down to the correct inputs into striking that balance and, at this stage, the council is not satisfied that there has been a proper assessment or sufficient information to allow that balance to be struck robustly.

MR YOUNG: I understand that point, yes. Thank you.

MR PRATT: Thank you very much, Mr Young. Thank you very much, Thurrock.

Next on my list is Mr Douglas, from the London Borough of Havering.

Thank you for waiting.

MR DOUGLAS: Good afternoon, sir. Daniel Douglas, the London Borough of Havering. I just wanted to touch upon, if I may, question 5 within that wider question concerning adequate provision around non-motorised users. From Havering's perspective, there are a number of specific non-motorised user routes that are proposed as part of this project, as part of the wider scheme, that Havering does welcome. But I think Havering would submit to the panel that there's the non-motorised user routes, in addition to that, in order for there to be policy compliance in particular with paragraph 3.17 of the national policy statement, National Networks Sustainable Travel, there's also got to be adequate connectivity to those particular crossing points, whether it's a footbridge or a particular public right of way, and we would submit that that's not the case at the moment.

We will be going into further detail in our local impact report about that, in particular a concern for Havering is the approach routes to the proposed A127 non-motorised bridge between Moor Lane and Folkes Lane, where the approach roads to that particular crossing point aren't adequate enough for pedestrians, cyclists or horse riders – that's

something that we want to go into a bit more detail about within our local impact report. Thank you.

MR PRATT: Thank you very much. Mr Mansell, would you like to come to the floor?

MR MANSELL: I would. Thank you, sir. Nick Mansell, Pinsent Masons, on behalf St Modwen Developments Limited, so that's the promoter of Brentwood Enterprise Park, adjacent to junction 29 of the M25. I would like to make brief submission, if I may, in relation to general item 4(e)(iii). The Brentwood Enterprise Park represents more than 50% of the employment land allocated within the recently adopted Brentwood local plan, and a planning application is currently under consideration by Brentwood Borough Council.

Now, there's been extensive engagement between St Modwen and the applicant over a number of years, in order to ensure that the Enterprise Park and LTC can both come forward, and in particular, technical solutions are being worked out to address how a shared vehicular access from the B186 can be delivered, and how walkers, cyclists, and horse riders can cross the A127 without severing the proposed northern vehicle access to the Enterprise Park. We'll provide further detail as part of our written report at deadline one, but at this stage we'd just like to emphasise that it's extremely important that LTC does not prejudice the delivery of this highly significant employment site. St Modwen and the landowner will require a formal agreement with the applicant in order to ensure that the interface between the two schemes is properly managed. Thank you.

MR PRATT: Thank you very much. Next on my list is Ms Blake, if you would like to come to the floor, and I'm glad to see that you're not static any more.

MS BLAKE: Thank you very much, sir. Laura Blake, Thames Crossing Action Group. Just a couple of observations and comments on the non-motorised users, the public rights of way. We do have concerns that there is no provision for cross-river active travel within the plans, and also the lack of information that has been available on the standards, the surfaces, the widths, etc, of the proposed routes. Not to mention the fact that a lot of the routes that are being claimed as new are actually existing routes, but it seems to be on a technicality that the applicant calls them new, based

on the fact that they will be realigned as a direct result of the Lower Thames Crossing displacing the routes that are currently in use, which seems a little bit disingenuous to us.

And also just to comment on the fact of the lack of real value to the proposed routes that are coming forward. For example, Tilbury Fields is full of zigzags, spirals and paths that run parallel to each other, which actually seems to be more of a tick-box exercise rather than a real provision for any active travel. Thank you, sir.

MR PRATT: Thank you very much. I have no other hands raised, so with that in mind, I think it's probably time to go back to Mr Henderson to – Mr Smith.

MR SMITH: No, don't worry. Apologies, that was me jumping the gun.

MR PRATT: Well, I see as Mr Smith has decided to leave us for a short time, Mr Henderson, I believe the floor might be yours to make some response or comments on the items that the different participants have raised in the last few minutes.

MR HENDERSON: Thank you, sir. Tom Henderson, for the applicant. In the interests of time, we won't respond to all of those points. We obviously will respond to them in writing in due course through the various deadlines that we've got coming up, but I did want to just come back on a small number of those points. Firstly, in relation to port access and port connectivity, Dr Wright addressed us earlier in terms of the reasons why the LTC improves connectivity for ports, so I think fundamentally the point we just want to make is that port connectivity is improved and is better with LTC than without LTC, and that's the fundamental point that we want to get across at this stage.

In terms of the statement that was made about the adequacy of the modelling, we wanted to put on record that we don't agree with the statement that was made that LTAM is inadequate for the purposes of understanding junction impacts, and then by extension it's therefore adequate for the purposes of assessing the benefit-cost ratio. So that just responds to that point.

The Port of Tilbury made a comment about a lack of commitment to the use of port facilities. On that point, we would direct them to the

338, which contains a firm commitment to use port facilities.

outline materials handling plan, which is application document reference

In relation to the submissions that were made about the Tilbury Link Road, our position there is that it's not required to meet the scheme objectives, and indeed is being progressed separately under the road investment strategy process. This is a perfect example of the point we were making earlier, that for a project of the scale of the Lower Thames Crossing, it's not feasible for it to incorporate all potential interventions across the region that are not required to meet the scheme objectives. Just moving through to check whether I've got any other points that I wanted to respond to. No, I think the remainder of those we'll consider in writing. Thank you.

MR PRATT: Thank you very much. At this stage I notice there's no hands, so, Mr Smith, would you like to take the floor?

MR SMITH: Thank you very much, and apologies for that slightly unplanned intervention before that ran the risk of cutting off the applicant. Just before we move to the break, noting that we are approximately half an hour later that we said our indicative break time would be, I did just want to canvass the room in relation to process, because I think it's fair to say that looking at the content of the remaining agenda items, it has become apparent that we will not do justice to the remainder of this agenda tonight, because realistically, in fairness to everybody, I don't think it would be acceptable to sit on for any great time later than 5.30. So I think we are, I'm afraid, in a world where we will need to use a small amount of our resumption time from 10.00 a.m. on Friday morning.

So the first thing I did just want to check is whether there is anybody in the room for whom that is particularly difficult, because that, in turn, might enable us to further prioritise our routing through the remaining agenda items and consider who we might then hear. Can I see hands if there's anybody who will struggle, for good reason, to use resumption time from 10.00 until approximately 12.00 on Friday morning? I am not seeing any hands, which I suggest then gives us reasonable operating flexibility to adjourn an element of this hearing into that reserve time, so I'll flag that we will do so.

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So what we're going to do is at approximately 4.15 now, we will break for 15 minutes until 4.30, and we will resume, and we will start to deal with item 4(f). We will move as far as we can, and any material that is uncomplete from 4(f) onwards – I flag that will be (g) and I can't imagine at all we will get onto (h) tonight – will be picked up from 10.00 a.m. on Friday. So, ladies and gentlemen, let us break now and let us resume at 4.30. Thank you very much.

(Meeting adjourned)

MR SMITH: Welcome back, everybody. Good afternoon, and we are now resuming issue-specific hearing 1 in relation to the Lower Thames Crossing application. For those following the agenda, we are at agenda item 4(f), mitigation, design and delivery. Very shortly, I will hand over to my colleague, Ms Janine Laver, who will lead this item.

However, just before I do, I will flag, as I did before the break, for anybody who is maybe joining us on livestream after the break, that it is clear that we will not finish all of this agenda tonight. We will make as much progress through item F as we can. We will, come what may, adjourn at approximately 5.30, maybe even a little earlier, just to make sure that various people with commitments in the evening are able to fulfil those, and we will be resuming at 10.00 a.m. on Friday with the unheard business on this agenda. So with no more ado, I'm going to move back to Ms Laver who will proceed with agenda item 5(f). Ms Laver.

MS LAVER: Thank you very much, Mr Smith. Everybody, I'm conscious of the time and how late we are into the afternoon, but I do have a slight change to the published agenda for item 4(f), in that I have a preliminary query on nitrogen deposition site selection, which leads us then into the published questions about the two sites within the application, and then I have an additional question about delivery. My plan is to move through the questions and ask the applicant to speak, and come to interested parties at the end, but I'm going to take question one first, then to the applicant, and then couple the rest together, just simply because that's how they sit neatly in that way.

So my first question for the applicant is, very simply, how were the nitrogen deposition sites selected? And then the second part to that, could the applicant provide an explanation of the basis or requirement that indicates the amount of land required to be provided to mitigate the various effects, e.g. how is the area of woodland or grassland etc computed? So if I can hand over to Mr Henderson to maybe ask somebody in the team to give me a response on that. I appreciate it wasn't published, but somebody must know how the sites were selected.

MR HENDERSON: Thank you, madam. Tom Henderson, for the applicant. I'm going to invite Mr Forrest – Barney Forrest – the environment lead on the Lower Thames Crossing project to respond on that immediate question you've asked.

MS LAVER: Thank you.

MR FORREST: Good afternoon. Barney Forrest, for the applicant. Thank you for the question. I think the selection of the nitrogen deposition sites was set out in our local refinement consultation, and then in the application within the project air quality action plan, which is appendix 5.6 to the environmental statement, document 6.3, and its reference is 350. It sets out a detailed rationale of how the sites were selected and then refined, and it also provides a detailed basis of how the area provided was calculated, based on an understanding of the area of designated habitats which were impacted by nitrogen deposition. So the document to look at for a clear explanation of that is in there. I could go further, but I think it's probably better to have a look at that first and then come back as required.

MS LAVER: I'm comfortable with that. If we have any questions in the process, we'll obviously put them in written questions, but thank you for leading me to water. So moving then on to the published question, can the applicant provide some clarity on what appears to be some element of double counting of the benefits of some elements of mitigation, design and delivery? Now, the two examples we have there are Hole Farm near Great Warley, and obviously Bluebell Hill and Burham which are affected by your potential minor refinements consultation. When the panel visited Hole Farm recently, we saw some signs which were up saying, 'This site has been acquired by National Highways for creation of a community

woodland,' and we're told in the application that this is specifically nitrogen deposition as mitigation.

Through the Bluebell Hill and Burham – they weren't initially in the project. They then are in the project, and now there's potential to take them out of the project, so we're really trying to get some clarity on whether sites are being double counted. And I suppose in relation to Bluebell Hill and Burham, I understand if you do take them out from minor refinements, it's because there's a stewardship scheme in play there. Now, I don't know the details of that stewardship scheme, but that clearly sits outside of the DCO. So are they mitigating or are they not mitigating for the LTC, and if they're still intending to be mitigation but under stewardship, how is that guaranteed long-term? If you could come back on that, that would be great.

MR FORREST: Hello. Barney Forrest, for the applicant. Many thanks for the question and for clarifying it, and good to see that you've been out to Hole Farm, which is a lovely site. So Hole Farm is an interesting case because it was initially purchased by National Highways to provide a legacy and benefit function. Following the purchase of the scheme, we identified that it would be a suitable place for some ancient woodland compensation to go, and that is Hole Farm West, which has the works number E50, I believe. Just a sort of point of clarity, Hole Farm is providing compensation rather than mitigation on all of these points.

So there's ancient woodland compensation, which is referred to as Hole Farm West, which is 26 hectares, and then 75.2 hectares is provided for nitrogen deposition compensation, and that's works number E52. And there's also the provision of replacement special category land for 2.9 hectares within that area. Just in terms of the back story of Hole Farm, it was initially purchased to provide community woodland as part of a legacy and benefit initiative which National Highways was undertaking outside of the Lower Thames Crossing scheme, in partnership with Forestry England. National Highways had been working hard with Forestry England to develop that as community woodland.

The purchase of Hole Farm was recognised as an opportunity to provide early delivery of that compensation that I've just mentioned on the

site, but importantly it doesn't necessarily preclude the use of the site as a community woodland, because the provision of the habitat that we're talking about – both ancient woodland and the nitrogen deposition compensation, which can be a mixture of both woodland and mosaic habitat depending on the habitat that's been impacted and what's appropriate in the area – has been brought forward.

The proposals are that for any infrastructure elements that would be unique to the community woodland, they will be brought forward as a separate town and country planning application by Forestry England, and those sit outside the order limits, or the powers of the development consent order, so we're not looking to bring forward those community elements as part of the Lower Thames Crossing consent order. Is that clear, or not quite clear?

MS LAVER: Well, it is to a point, but I'm still then confused of the overlap with a planning application now separate. Mr Taylor, you've come on video so I'm wondering if you're sharing the same confusion. You need to unmute, Mr Taylor, sorry.

MR TAYLOR: So sorry, Ms Laver, I do have the same confusion. I think we need to know precisely what the mitigation is for this scheme compared to other environmental benefits just generally that arise from –

MR FORREST: Okay, so sort of precisely, for the compensation of the aforementioned elements, those are being brought forward under the development consent order, but they — I think the distinction is that in the event that the Lower Thames Crossing project does not proceed, National Highways is committed to delivering the community woodland at Hole Farm in partnership with Forestry England. But this would no longer form a requirement and the compensation would not be bound to the requirements of the design principles or of the outline landscape and ecology management plan, which are two of the control documents attached to the order, and you could then see the design change.

The detail that has been included within the compensation which we're providing, provides a greater density of planting and a specific species mix with far less non-native species, and all of that has been developed in consultation with Natural England as an important partner in

understanding the compensation meets the requirements that are set out in those previously mentioned control documents.

MS LAVER: Okay. One of my follow-up questions – which I said I did have a further question – you've probably just covered, because what we didn't have in the agenda was a question around delivery of that community scheme and whether it goes ahead if this falls away, because as you say, there's nothing to prevent it happening, it's just there were signs on site saying, 'We've purchased it. This is going ahead.' We should have already seen trees and planting in the ground, but we didn't see any of that. We didn't see any activity; we just saw signs. I don't know when they were erected but I suspect there are people in the community that are waiting for their community woodland, and they're not receiving that because they're waiting on the outcome of the DCO. Is that fair to say? I realise I'm slightly off-point, but I really want to understand this overlap.

MR FORREST: It's a fair question, and I think what we would say is that five hectares of planting has already been undertaken as both an active engagement with the community – and they've been involved in planting – but also that provision of planting is also aligned with the compensation requirements of the DCO scheme, and as with woodland which takes a long time to establish, this is an excellent opportunity to provide that benefit earlier. But the areas such as the car parking and the community facility are outside of the development consent order, as they're not part of the Lower Thames Crossing scheme, but Forestry England and National Highways in partnership are bringing those forward through a separate application.

MS LAVER: Yes, I understand. Could you then take me to the part of the question which I asked about stewardship, just to refresh memory. It was about Bluebell Hill and Burham – I don't know if I'm saying that correctly. As I said, they weren't in, they're now in, they're now not possibly in, or bits in, and there's a reliance on a stewardship scheme. A stewardship scheme's fantastic, but if we're relying on those areas to still be potential mitigation but outside of the DCO, how do we have any control of that?

MR HENDERSON: Madam, if I could just interject for a moment and just take us back one step. Sorry, I know you've just asked your question, but I have

a couple of additional points to add to what Mr Forrest has said in relation to Hole Farm.

MS LAVER: Oh, of course, of course.

MR HENDERSON: It was just that there's a compulsory acquisition angle to the Hole Farm situation, which I think is important to bring out in response to your question. So, as Mr Forrest has explained, Hole Farm was initially purchased as a legacy and benefits opportunity when the land became available, and is progressing in parallel, but separately, to the order limits for the Lower Thames Crossing, and therefore none of the ecological benefits at that stage that accrued from Hole Farm were reported in the environmental statements or formed part of our assessments.

Now, as the project developed, it was recognised that there was a need for additional land for the elements that Mr Forrest has referred to – so ancient woodland compensation, replacement special category land, but most importantly the requirement to provide compensation for the effects of nitrogen deposition following changes that were made to the way that those matters are assessed. It was important, having recognised that, that the applicant looked to land that it owned first, before looking to potential acquisition of land from private landowners. That's entirely compatible with law and practice around compulsory acquisition.

So in fact what happened was the land was brought into the order limits of the Lower Thames Crossing to provide for the essential compensation that was then required as part of the scheme. So in effect there was a repurposing of land which was held by National Highways, in order to deliver the compensation requirements that were needed for the scheme. So that's the difference between the original proposal that was being brought forward in parallel and what you see before you now, but clearly it's possible for us to deliver those compensatory benefits whilst still delivering on the original aspirations to deliver a community woodland.

So what you have now is compensation being delivered through the Lower Thames Crossing application to respond to the needs of that scheme, a local application being made for small elements outside of the order limits, which will deliver elements to the community woodland – for instance, the access to the car park – and so that's the situation that we're

now presenting in the application. There's absolutely no double counting but there's just, I appreciate, quite a complex history to that but one, as I say, which when you look at the compulsory acquisition angle to this is, in our view, fully consistent with what we should be doing.

MR SMITH: Ms Laver, if I could just briefly flag, as the panel member who is leading on CA, that I have noted that point and that we will need to do some further untangling of the Hole Farm story within a compulsory acquisition hearing as well. So I'll just place that down as a marker.

MS LAVER: Thank you, Mr Smith. So we return to Mr Forrest, Mr Henderson.

MR HENDERSON: Yes, please. Thanks for allowing me just to make those extra points.

MS LAVER: No, that's beneficial, thank you.

MR FORREST: Hello. Right, so, Mr Forrest, for the applicant, coming back to the second bullet point of your question, which was around the Bluebell Hill and Burham sites which form part of our nitrogen deposition and compensation offer. As Mr Henderson sort of alluded to there, our understanding of the habitat impact of nitrogen deposition on existing sensitive habitats is still a developing science, and the inclusion of ammonia as a component of nitrogen deposition changed the area of designated habitats which were impacted by the proposed scheme in that gap which you identified between application one being withdrawn and the current application being submitted. That is detailed in the project air quality action plan, document 350, an important part of the way we've approached the identification of compensation land.

What we've done in our recent minor refinement consultation is we highlighted the implications of our habitat creation proposal on the farm business, as well as the countryside stewardship, and I think it's important to highlight that the impact of the land take, which is from a single landowner for both of those sites combined, was flagged to us of being of importance in terms of consideration to the viability of their business in that location. That forms a very important part of the progression of the minor refinement consultation proposals in this site.

So the removal of the reservoir field, which is the section we've removed from the Bluebell Hill site, which is works number E1, and the

removal of land at Burham, which is E2, is proposed primarily to minimise the impact of the site acquisition on the viability of the landowner's business, whilst being mindful of the benefits being provided outside of our scheme via this countryside stewardship scheme – which is hard to say sometimes. As explained, the primary driver for nitrogen deposition compensation is enhancing ecological connectivity.

So, very simply, we've taken a landscape scale approach to providing compensation for the nitrogen deposition, seeking to enhance ecological connectivity between existing areas of ecological value and, in our view, removing the Bluebell Hill site and the Burham site doesn't necessarily preclude that ecological goal of the site. So we don't feel that it massively reduces the ecological benefit, but at the same time it reduces the impact on the farm business. The presence of the countryside stewardship scheme in this location – and there are various different schemes – focuses on strengthening field boundaries, and this is seen as a complementary to the objectives of habitat creation for nitrogen deposition. We consider that the benefits associated with this scheme and its contribution to the ecological connectivity, as well as considering the impacts of the proposals on the viability of the landowner's business, make it appropriate in this area.

So removing the section of the Bluebell Hill site, which is part of a larger field, already has a countryside stewardship scheme proposal to enhance the boundary, which in itself provides some benefit to ecological connectivity in that area. In terms of how the individual sites would be managed to maximise the ecological benefit, that's set out in the outline landscape and ecology management plan, which I referenced earlier, which is application 490, and if you look at section 5.16, that highlights that area. That was the answer I think hopefully covers the question, but if you have anything else on that, I'm happy to try and answer.

MS LAVER: Yes. What I'm really trying to get to the nub of is whether you are still relying upon those sites within your ES as contributing to benefits, because I'm not saying they don't – the countryside stewardship clearly will deliver benefits – but it isn't as in mitigation or compensation for this proposal. So do you then have enough nitrogen deposition sites to do

what you need to do, to wash its own face for this project, because we can't be dipping into something else if we have no control over it in the long term through the order?

MR FORREST: Absolutely. We believe that the core goal with the provision of ecological compensation land is ensuring that we have ecological connectivity between the sites. We believe that the reduction here doesn't undermine the principle of providing comparable ecological connectivity to the area of impact, as detailed in the project air quality action plan. So the simple answer is we think it's fine and we don't rely on the countryside stewardship scheme in the provision of our compensation or mitigation in this instance, or in any instance.

MS LAVER: Right, okay, so in essence this site goes, and it still does what it does under stewardship, but it doesn't form part then of your benefits as part of your LTC project.

MR FORREST: Yes, that's correct.

MS LAVER: Good, alright. I don't know if any of my colleagues have any questions on that. Mr Taylor.

MR TAYLOR: It's not so much a question, but a clarification. Just, if that's the case, can we be really clear that that is not put forward as a mitigation and it's just pushed away from the side, so we're really clear of what we're looking at.

MR FORREST: Barney Forrest, for the applicant. We will be really clear that that is the case, and just to sort of highlight, it is compensation rather than mitigation, because we can't mitigate the impacts of nitrogen deposition, which is an important point, I think, in this.

MR TAYLOR: Thank you.

MS LAVER: I think that is a really important point to raise, particularly the way our questions are framed in the agenda. We have used mitigation, which is generally what we do refer to in ES terms, but you are right. I suppose you've in part answered the final question I had, which is about the extent of land take. I think I started with how did you pick your sites? Do you have enough site to wash its face? But the question is there so I will put it out in case you have anything to add, and that is can the extent of land

take and acquisition for compensation be fully justified as addressing the need arising from the Lower Thames Crossing project?

MR HENDERSON: Thank you, madam. Tom Henderson, for the applicant. Can I just clarify, is your question here one of generality of approach across the LTC scheme, or in relation to compensatory habitat for nitrogen deposition effects?

MS LAVER: It is just about nitrogen deposition at this point. We're not going wider than that.

MR HENDERSON: Thank you. Mr Forrest, do you want to just come back on that one? Thank you.

MR FORREST: Thank you, madam. Barney Forrest, for the application. In terms of the nitrogen deposition, I think you're right, I did pick it up before, and it is all quite – well, it's complex but it's set out within the Project Air Quality Action Plan, and I think importantly the approach to the provision of compensation and the application of mitigation where possible has been developed in consultation with Natural England, as the statutory stakeholder who's interested in biodiversity matters. But, simply put, yes, we're confident that we're providing a comparable level of compensation land to the level of significant effect that we've identified on designated habitats as a result of nitrogen deposition, and we're not going beyond that which we should, or below.

MS LAVER: Okay. Thank you. If any members of the panel want to ask something before I put it out to the floor. No. Does any interested party wish to come in at this point? Okay, I can see Ms Laura Blake from TCAG, if you would like to join me, please.

MS BLAKE: Thank you very much, Ms Laver. Laura Blake, Thames Crossing Action Group. Just really a comment on the Hole Farm community woodland. This is something that we've been raising with the applicant from the very first announcement that National Highways made in regards to the Hole Farm community woodland. As it was publicly stated numerous times that they would be progressing it regardless of whether the LTC went ahead or not, to improve biodiversity on the main routes that they have on the strategic road network, there has been mention from the applicant about the fact that there is a separate application going in, which

we understand will go to Brentwood Council, regarding a car park and visitor centre.

With all due respect, a car park and a visitor centre is not a community woodland. A woodland, by very nature, would have to have trees and planting, which is where we feel that it is creative accounting, because if you're talking about planting for a community woodland, how can it then be considered as compensation for the LTC, should it go ahead? Thank you.

MS LAVER: Thank you, Ms Blake. Does anybody else want to raise something before I go back to the applicant on that point? No. So Mr Henderson, do you want to come back on that point, please?

MR HENDERSON: Thank you, madam. Yes, please. I'm actually going to introduce a new witness, Suki Coe, who is the planning lead for the Lower Thames Crossing and can respond on the point that was raised about Hole Farm.

MS COE: Thank you. Suki Coe, for the applicant. The important thing in relation to this aspect around the town and country planning application and Hole Farm is that of course tree planting is not development and therefore doesn't require town and country planning permission, so the application is focused very much on those elements of the Hole Farm project that require planning permission. The planning application is due to be submitted shortly, and the planning statement that accompanies that application sets out very clearly which elements are requiring planning permission and which elements do not, and also it sets out, therefore, how those other elements will be delivered as part of the Thames Chase Community Forest. Forestry England are the joint applicants, supported by National Highways, and their objective is absolutely to provide that woodland environment, so that's why there's a town and country planning application. It is only for those elements that require planning permission.

MS LAVER: Thank you very much for that clarification. I don't see any further hands raised, and I don't have any further points to make. I said at the start I had a question about delivery, but that was covered, and so I don't need to ask it again. So on this particular agenda item, I think I'm complete, so I'll pass over to my colleague, Mr Smith.

MR SMITH: Thank you very much, Ms Laver. Now, ladies and gentlemen, we are moving on in the agenda to item 4(g), which is a very short item – a relatively short item – compared with some of the previous ones. I'm hoping that we will conclude 4(g), but I'm very clear that, once we do, that is the point at which we will adjourn this hearing. We will not attempt to even make a start on 4(h), because there's a lot of material in there and that has to live to fight on Friday morning.

So turning, then, to 4(g), I will firstly look at item 1. I will then take item 2 to the applicant as well and ask for responses to them both before I open it up to the floor.

One, you'll see that, of course, this is, in part, a development consent order matter and we will be exploring the drafting approach in the draft development consent order in issue-specific hearing 2 tomorrow, but we had, in the introduction from Mr Henderson, a very clear view provided that the utilities and transmission diversions are matters that are characterised as nationally significant infrastructure projects in their own right.

Now, we had two questions in relation to that, the first being the simple legal technical threshold question, which is: are they? And running the slide rule over them, not being 100% clear about the degree to which they are.

But there is a slightly higher-order question than that, which is: whether they are or not, legally is there any reason why they should not, even if they are capable of meeting statutory NSIP definitions for works of their particular class and character, also be capable of being authorised as associated development pursuant to a highways NSIP under this development consent order? Now, that might sound like an arcane point, but it is a point, and this is the nub for this particular hearing as opposed to the DCO issue-specific hearing.

It is a point that bears on the applicability of policy, because, if those particular elements of the project are specifically NSIPs in their own right, then there's an argument that they then fall to be determined under the relevant policies in the national policy statements for energy that apply to them, and that, if there is any conflict of terms between those policies

and policies in the national networks national policy statement, the two, basically, butt heads, whereas, alternatively, if these are a form of associated development, albeit NSIP capable, albeit ones where it is acknowledged that the energy national policy statements are important and relevant, if that is true, then there is a policy primacy here, and the policy primacy is that the national networks national policy statement is the primary policy and the one that is applied, and where definition in accordance is broadly required under section 104 of the Planning Act of 2008. So that's our first matter that I'd like to hear from the applicant on.

Then, finally, in relation to item 2, it could be seen as a very minor point, but it relates to design approach and strategy, and so, on balance, we did end up thinking it should come into this hearing. Simply, that is to observe that the electricity transmission components that are proposed to be reinstated – the pylons – are traditional lattice-design pylons, and I did want to ask the project team – an appropriate witness in the project team – whether any specific consideration had been given to alternative approaches to the siting and design of the landscape-visible elements of the utility alignment, including the possible utilisation of sub-surface alignment and/or the possible utilisation of alternative infrastructure such as, for example, T-pylons, because other schemes are bringing forward that sort of infrastructure now, arguably to deliver possible landscape and visual-impact benefits at costs that are not out of order relative to the nature of the benefits provided.

Hopefully, that's a reasonable summary from me, so if I can go to Mr Henderson first and hear who will be addressing those, and then I will open this up to the floor.

MR HENDERSON: Thank you, sir. Tom Henderson for the applicant. Those questions are well understood and I'm going to invite my colleague, Mr Mustafa Latif-Aramesh, to speak. He's going to cover all of the questions you've raised under this agenda item.

MR SMITH: Thank you very much.

MR LATIF-ARAMESH: Thank you, Mr Henderson. To address each of the questions that you've put before us, I think it's worth starting with the

position which we were expecting to provide further information on tomorrow, and I anticipate we will provide that.

MR SMITH: And so do I. So we can leave the technical drafting side of it, really, until then –

MR LATIF-ARAMESH: Sure.

MR SMITH: - and probably move to the policy implications of it, really.

MR LATIF-ARAMESH: Absolutely. So the position is that, as a starting point, the elements of the project – particularly the three gas pipelines identified as NSIPs and the overhead line identified as an electric line NSIP – fall into the categories of the relevant sections and, therefore, the only way they can be granted permission to proceed without committing a criminal offence is to grant them development consent.

The planning statement, as you will have heard, does consider the energy national policy statements as applying to those elements of the project. We agree that the primary national policy statement, because this is a highways construction project, which is what gives rise to the other energy NSIPs, is the primary document.

On your query around the conflict, or potential conflict, between the different requirements, the planning statement, because it's carried out a detailed assessment of the energy national policy statements, shows that we fully accord with those energy national policy statements, but it's also very difficult to identify any conflict between the national policy statements on the more general aspects of policy compliance. There is a high degree of uniformity in what they require. There are technology-specific requirements which you have alluded to, but they don't conflict with one another.

I think what I would say in addition to that is that the information on how we've considered the policies applying to the electricity line NSIP and the three gas pipeline NSIPs is contained in the explanatory memorandum, as well as the planning statement.

I think, on your last query, which is around T-pylons and constructing them in a way and how they're designed, I'd ask my colleague, Mr Keith Howell, who is the utilities development lead, to address you on that point.

MR SMITH: Thank you very much. It might assist, when he's doing so, if I just flag the application documents that I've been referring to in terms of the landscape and visual effects of the proposed electricity transmission alignment, which is from APP-244, 245, 246, 247, where, obviously, there are illustrations of the post-construction state.

MR HOWELL: Good afternoon, sir. Good afternoon, all. Mr Keith Howell for the applicant. I am the utilities development lead. With regard to the electricity transmission networks, essentially they haven't been disaggregated in our approach to how utilities are integrated into the design. And I'd make reference to application document APP-140, which is the project description – namely, plate 211, which shows the iterative process for design development.

But I'd also like to go slightly further and then make reference to application document APP-495, which is the planning statement. Within there, at para 5.6.12, we iterate that the designs have been collaboratively formed with National Grid Electricity Transmission. They are the relevant subject matter experts with regard to this, and it is their network.

Now, they have undertaken internal reviews as part of their design development before proposing them to the applicant. And quoting paragraph 5.6.12, they communicated that 'various factors have been considered in assessing the various options for overhead line diversions relevant to the project'. Firstly, the technical feasibility, ensuring clearance of the project road design, minimising impacts on the existing overhead line network, minimising the length of change and number of new temporary towers, ensuring efficient, safe and economical construction and maintenance, factoring in construction work areas associated with access, scaffolding and screening[?] activities, and then taking account of industry-standard routing practices through application of the Holford rules and compliance with national policy statement EN-5.

have also further communicated that they They avoided/minimised impacts on known ecological, historical, landscape and visual and socioeconomic constraints, and they've had regard to

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project design elements, including compounds, environmental mitigation and flood mitigation.

We will communicate further, but I think, for the relevance of time, with regard to the T-pylon question, these networks contain hundreds of pylons, of which our maximum extent is nine new pylons within those hundreds. To change the form of the pylon to a completely different material and structure type would be illogical and then impose issues onto National Grid in the context of the maintenance and operation of those networks, which they have tried to stay away from. They've been very clear in their communication with the project, and I will provide the relevance in the quoted text in our written response, but, essentially, they would not expect no additional cost or burden associated with our development on those networks for the operation and maintenance of those networks, which those pylon types may have incurred, or the undergrounding of them overhead line networks may have incurred.

MR SMITH: Okay. That is a very clear answer. From your perspective and their perspective, proposition, you have the best optimised design approach. Now, I'm just going to ask for raised hands in the room. Are there people that would like to speak on this item? It will be the last item we deal with today before the adjournment. And I am seeing Thurrock Council and I'm also seeing Alison Dablin, Michael Bedford KC. Anybody else? Okay. Those are the people who I will invite to speak. And I will run to Alison Dablin first, and then I will do the local authorities and, just to change thing around a bit, I'll go to Thurrock Council, and then, finally, Michael Bedford for Gravesham. So Ms Dablin.

MS DABLIN: Thank you. Alison Dablin for the Port of Tilbury. The proposals in the application include the realignment of a number of utilities in and around and over the Port of Tilbury's land. Of particular practical concern is the intention to lay multi-utilities below Substation Road. I believe this is work number MUT4.

The Port of Tilbury – we have informed the applicant that there is ducting in this location that is at capacity and is, therefore, not available to be used for the multi-utility realignment, and there is also a conveyor tunnel that serves the CMAT that crosses Substation Road in this area,

meaning that the multi-utilities will need to be routed around it. It's not clear at this point how the applicant will be able to realign the multi-utilities beneath Substation Road in view of these obstacles, and there doesn't appear to be enough room within the order limits in order to change the routing, so we are very much alive to the fact that, depending on how the applicant chooses to address this issue, a change in the order limits may be required.

The Port of Tilbury would, therefore, welcome further insight from the applicant as to how it anticipates managing this, so that we may also advise on the feasibility of any proposed solutions and, I suppose, just on a more broad basis, flagging that there may similar instances along the route in relation to the proposed realignment of utilities, where it may not be possible in practice. Thank you.

MR SMITH: Thank you very much. Okay. I'll now go to Thurrock Council, please.

MR EDWARDS: Thank you, sir. Good afternoon. I'm going to begin – it's Douglas Edwards KC for Thurrock Council – in respect of the point that you raised concerning how the utility diversions are dealt with and how national policy statements apply, and then Mr Stratford and Mr Davis are going to deal briefly with some further matters arising under [asset T1?].

So if I can deal with the first matter, which, essentially, is a legal matter, in Thurrock Council's view, the proposed utility diversions can be treated as NSIPs in their own right. There is also no reason, as far as we understand the position in law, why they should not be considered as associated development.

However, whichever way they are considered – either as NSIPs in their own right or as associated development – we agree with what the applicant has submitted, that they would have to be considered by reference to and against the national policy statements that apply to those particular forms of development. And even if they are considered as associated development, those national policy statements are still engaged and need to be applied. The council will address any matters of conflict with those national policy statements that arise in the context of the proposed diversion works in its local impact report in due course.

So that is how we see the matter in terms of approach. Unless I can be of any further assistance on that, I'll hand over to Mr Stratford and then Mr Davis, who will deal with some particular additional matters briefly arising out of item 3(i).

MR SMITH: Thank you. No, do hand over. Those were clear submissions.

MR STRATFORD: Okay. Chris Stratford for Thurrock Council. Good afternoon. I think the first point – originally, as part of your annex B of rule 6, you did indicate that the majority of today would be about utilities. Consequently, we made a submission under procedural deadline C and, in that submission, we dealt, in two or three pages, with the issues we had about how utilities have been dealt with throughout the DCO application. We drew attention, as you will remember, to previous comments that we've made in earlier consultations, with the fact that it was rudimentarily dealt with. It was scattered over several documents. And then we've done an initial assessment of the current DCO documentation, and we've listed all the different places in which you could find reference to utility diversions.

Andy Davis can go into a little bit more detail after this, but the two assessments of the gas and the electricity diversions are contained in two separate documents. One is appendix 1.3, which is APP-334, and the electricity one is contained in annex 2 of the explanatory memorandum, which is APP-057.

Now, at the risk of being slightly cheeky, you have 55,000 pages devoted to the impact of the scheme of the road. In those two documents, there are only 25 pages devoted to the assessment of those four NSIP diversions against policy, which seems slightly inconsistent. So at that point, having said that and drawn your attention to the PBC submission, if I hand over to Mr Davis to just summarise some of the points in that previous submission and some of our concerns going forward as to how we analyse anything. Thank you.

MR SMITH: Thank you very much.

MR DAVIS: Good afternoon. Andy Davis here representing Thurrock. I think, from reading the information contained to date, as Chris mentioned, the utilities information is spread over a wide number of documents, which,

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in essence, makes it very difficult to understand the exact limits of the diversionary works and what is entailed. So to make life a lot easier for us, I would suggest that these should be contained in one or two documents – one covering the electricity NSIP and the other document covering the gas NSIPs – with plans, etc, clearly identifying the existing routes and the proposed routes of diversions, what works are going to be entailed, and temporary works corridors, etc.

Chris, is there anything else? Sorry.

MR STRATFORD: No, I don't think so.

MR EDWARDS: Thank you, sir. That concludes the comments on this matter from Thurrock Council.

MR SMITH: Thank you very much. Thanks. I was just grabbing a note of those there. So I'm now then going to transfer to Michael Bedford KC for Gravesham, and then we'll return to the applicant and close off this item. So Mr Bedford.

MR BEDFORD: Thank you, sir. Michael Bedford, Gravesham Borough Council. Sir, I'm going to make this point with a degree of temerity, because I know that it's not the point that has just been made to you by Mr Edwards. It would seem to me that the terms of section 115(i) of the 2008 Planning Act meant that, if something fell within [inaudible] – that is to say it was something for which development consent was required – that would put it within subsection 115(i)(a) and, therefore, it would not be associated development, which is in what [inaudible] had read, section 115(i) [inaudible] as disjunctive. That is to say there are things for which development consent is required [inaudible] development or there are things which are related housing development, and I had read them as three different things and that, therefore, if it were the case that the utilities diversions constitute NSIPs in their own right, then that is the route that you would go down. You wouldn't then treat them as associated development. But sir, I put that forward with a degree temerity, because I'm realising that it's directly contrary to a very experienced practitioner, who I normally take a great deal of note of his position. So I don't want to waste -

1 MR SMITH: I will be completely frank, Mr Bedford – and this will assist, hopefully, 2 the applicant in their submissions on this too. There's a degree to which 3 this is territory on which angels fear to tread. There are different views 4 amongst eminent analysts, and that's why we're exploring it. 5 MR BEDFORD: Indeed. So what I think you would probably be helped by, 6 because it's purely a point of law and a point of construction – it may be 7 helpful if, outside of the examination, those with an interest – the legal 8 representatives with an interest in the topic perhaps try to explain 9 positions to you and reach a common position. Certainly, we're not 10 saying it creates a problem as to how it is going to be dealt with. It's just, 11 in a sense, that one ought to get the analysis right. 12 MR SMITH: Absolutely. 13 MR BEDFORD: So sir, as I say, I don't want to waste undue time on it, but, at 14 the moment, my current view is that it's slightly different to the way that it 15 has been put by Mr Edwards, but it's certainly a matter that can be 16 resolved through this process. 17 MR SMITH: I think that's a very, very productive suggestion and certainly one 18 that I will be suggesting the applicant and, indeed, counsel for a number 19 of the interested parties with an interest in this specific point should 20 engage upon. Do you have further matters to add, Mr Bedford? Thank you very 21 22 much. In which case I will go back to Mr Henderson for the applicant. 23 MR HENDERSON: Thank you, sir. This one is still being led by Mr Latif-24 Aramesh. 25 MR SMITH: Apologies. Well, Mr Latif-Aramesh. 26 MR LATIF-ARAMESH: Thank you, sir. Mustafa Latif-Aramesh for the applicant. 27 We've just got some brief comments to make, noting that we're five 28 minutes from your desired end for this hearing. 29 MR SMITH: Yes. 30 MR LATIF-ARAMESH: So to take the points in reverse order, we agree with 31 Mr Bedford KC's comments that they're mutually exclusive categories. 32 And if something is development for which development consent is required, it cannot then be associated development. And we would just 33

draw your attention to section 160 and 161 of the Planning Act as well,

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which says that, if you carry out development for which development consent is required, it's a criminal offence.

And so if we proceeded under the associated development route, it would run the risk of constituting a criminal offence. In the end, we think we've taken the precautionary approach, not least because, when there is an energy NSIP, there are requirements under the 2009 regulations to prepare particular documents, and so, had we not proceeded how we have, there would be a risk of not complying with the 2009 regulations. Ultimately, the judgement will be for the Secretary of State to decide, but, from our perspective, we meet the tests of the relevant energy NSIPs. We've considered the policy, though we agree with you that the primary policy in consideration here is the national networks NPS.

I think the next comment I'd like to make is just in response to Thurrock Council's comments on the way that the assessments have been presented, and I think it's important here to disaggregate three different types of assessment. So the first is whether the utilities works are themselves NSIPs. The analysis for that is presented in the explanatory memorandum, and reference has been made to two separate documents which then touch on them. The first is annex 2 and the other is appendix 1.3 of the ES.

In high-level terms – and again, I don't want to get into the detail of it – appendix 1.3 forms part of the ES, because the test relates to a consideration relating to significant environmental effects. And so from our perspective, we thought that was more appropriately sat within the environmental statement. I would just note on that point that the A428 project, which included a gas pipeline NSIP but was, fundamentally, a highways NSIP, went with the same approach, so what we've done is not abnormal in that context.

Then we have the environmental assessment of the works. Now, to be completely clear, the environmental statement assesses all works associated with the project, including the utilities works, whether they are or are not NSIPs. So to a certain extent, the assessment of significant environmental effects associated with the gas pipeline is a theoretical

exercise that we've carried out for the purposes of determining whether those works are NSIPs in and of themselves.

And then there's a final assessment, which is the assessment against policy. That is contained in the planning statement, because the planning statement is the primary document that deals with the application of policy. There is, in appendix C of the planning statement, a comprehensive and full assessment against EN-1, EN-4 and EN-5, which we would specifically refer to as looking at the areas where there might be different requirements in showing full compliance with those, to the extent that they are applicable.

And then the final point, which was a request for clarity on how the plans show the utilities works, the works plans themselves disaggregate the different types of works. They also show, in connection with electrical lines specifically, which I think was the comment, the existing route for those works. From our perspective, those plans are clear in disaggregating the different types of gas pipeline, overhead line and multi-utility corridors.

I think those are all the submissions we had in response to what's been raised. Thank you.

- MR SMITH: Thank you very much, Mr Latif-Aramesh. I do have a hand from Alison Dablin and, at risk of going back round in circles, because that was the applicant's responding submission, but conscious that we're very close to the end of the day, Ms Dablin, can I just ask you briefly what the matter is?
- MS DABLIN: I'm just flagging that I don't think Mr Latif-Aramesh responded to our points, so I'm just taking the opportunity to clarify that we can expect it in writing.
- MR SMITH: Okay. Indeed. Good point. Mr Latif-Aramesh, is that taken onboard?
- 30 MR LATIF-ARAMESH: Yes, thank you, sir.
- 31 MR SMITH: I know we're tight for time.
- 32 MR LATIF-ARAMESH: Yes, we will respond in writing and we're happy to do so.

MR SMITH: Thank you very much. So in which case, then, that takes us to the end of agenda item 4(g). That's the point at which we will adjourn this hearing for the day.

If I can just briefly invite my panel member colleagues all on to camera and flag that we will be resuming at 10.00 on Friday 23 June in order to hear the remaining agenda item 4(h) and then through to the end of — that's the remaining substantive agenda item, and then the procedural items at the end of the agenda, and we will then close the hearing on Friday. So we won't cover off any of the other consequential matters like actions tonight. We're going to draw a line under everything.

And on that basis, ladies and gentlemen, can I wish you all a good evening and ask that, when you do join on Friday morning – and registration will be open from 9.50 – and I'll just flag that it really does assist our case officer colleagues in registration if people do come in promptly for registration, so that everybody is assembled and ready to go with a reasonable number of minutes in hand before the event itself starts at 10.00.

Thank you very much for participating, and I will now adjourn.

(Meeting concluded)