

# PLANNING INSPECTORATE ISSUE-SPECIFIC HEARING 3

on

5 SEPTEMBER 2023

Ubiqus (Acolad UK Ltd) 291-299 Borough High Street, London, SE1 1JG Tel: 0207 269 0370

#### **PRESENT**

## PLANNING INSPECTORATE

RYND SMITH

JANINE LAVER

**KEN PRATT** 

KEN TAYLOR

DOMINIC YOUNG

# **CASE TEAM**

**BART BARTKOWIAK** 

**TED BLACKMORE** 

SPENCER BARROWMAN

RYAN SEDGMAN

JESSICA WEATHERBY

#### LOWER THAMES CROSSING

ANDREW TAIT KC

ISABELLA TAFUR

**GARY HODGE** 

STEVE ROBERTS

CLARE DONNELLY

DR TIM WRIGHT

ANDREW KAY

BARNEY FORREST

## LOCAL AUTHORITIES

DANIEL DOUGLAS (London Borough of Havering)

[LEE WHITE?] (London Borough of Havering)

[EMMA GRAYSHAM?] (London Borough of Havering)

GEORGE MACKENZIE (Thurrock Council)

KIRSTY MCMULLEN (Thurrock Council)

CHRIS STRATFORD (Thurrock Council)

ADRIAN NEVE (Thurrock Council)

[MAT KILEY?] (Thurrock Council)

DR COLIN BLACK (Thurrock Council)

SHARON JEFFERIES (Thurrock Council)

MARK WOODGER (Essex County Council)

GARY MACDONNELL (Essex County Council)

MICHAEL BEDFORD KC (Gravesham Borough Council)

WENDY LANE (Gravesham Borough Council)

TONY CHADWICK (Gravesham Borough Council)

JOSEPH RATCLIFFE (Kent County Council)

NOLA COOPER (Kent County Council)

ABIGAIL ROSCOE (Kent County Council)

SUSAN LINDLEY (Shorne Parish Council)

DEBBIE WRIGHT (Higham Parish Council)

## STATUTORY PARTIES

ALISON DABLIN (Port of Tilbury London Ltd)

PAUL SHADAREVIAN KC (DP World London Gateway)

SIMON TUCKER (DP World London Gateway)

ALEX ROBERTS (DP World London Gateway)

ALEX DILLISTONE (Port of London Authority)

LUCY OWEN (Port of London Authority)

MATTHEW RHEINBERG (Transport for London)

# **INTERESTED PARTIES**

[JOHN JOHNSON?]

**ROBIN BEARD** 

JACKIE THACKER

DAVID WOOD (Veolia ES Landfill Ltd)

[IAN WHARTON?] (Bellway Homes Ltd)

[BEN HUNT?] (Emergency Services and Safety Partners Steering Group)

[HEATHER GUERDEN?] (Emergency Services and Safety Partners Steering Group)

[EMMA POTTER?] (Emergency Services and Safety Partners Steering Group)

LAURA BLAKE (Thames Crossing Action Group)

LEIGH HUGHES (Thames Crossing Action Group)

MURIEL BLAKE (Thames Crossing Action Group)

ANTHONY LEEMAN (P.W. Leeman)

1 MR SMITH: Thank you very much ladies and gentlemen. We will now make a start in 2 the physical room and virtually, too. Good morning and welcome, everybody, 3 to today's issue-specific hearing 3 for the Lower Thames Crossing, and we have 4 already dealt with the preliminary matters so I'll move straight to introductions. 5 My name is Rynd Smith; I am the lead member of a panel, which is the 6 Examining Authority for the Lower Thames Crossing application and I'm in the 7 chair for today's hearing. I'll draw your attention to the frequently asked 8 questions linked to our rule 6 letter and available on our website, and you'll find 9 my brief biography and a brief biography of all of my panel colleagues, and an explanation for the purpose of the panel's appointment there. My fellow panel 10 11 members will introduce themselves shortly, and I'll start by moving to my colleague, Dominic Young, to my immediate left. 12 13 MR YOUNG: Good morning, everybody. My name's Dominic Young, and I may have 14 some questions as we go through today. Thank you. 15 MR TAYLOR: Good morning, everybody. My name is Ken Taylor. Again, I'm likely 16 to ask some questions as we got through today. 17 MR PRATT: Good morning, everybody. My name's Ken Pratt and yes, I'm on question 18 duty as well today. 19 MS LAVER: I'm Janine Laver. Nice to meet you all. 20 MR SMITH: Thank you very much. Now, the nature of the engagement of the panel is 21 22 23 24 25

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that because today's hearing is focused on design matters, it will be a little bit of a tag-team event. I will be, as I say, in the chair today, but my colleagues will all be interjecting as their own particular specialisms and issues arise, and we'll try and make this as orderly and clear as we possibly can, and hopefully the agenda has structured that in a way that makes clear how we will move through the elements of the project that we'll be examining.

Now, having introduced my panel colleagues, I'll just also mention my Planning Inspectorate colleagues that are working with us today. Bart Bartkowiak and Ted Blackmore, jointly, are the case managers leading the case team for these applications and they're supported by Spencer Barrowman in this room. Ryan Sedgman and Jessica Weatherby are available online, supporting the virtual side of what is a blended event.

You've seen, I trust, the agenda paper and I've given you a sense of the nature of today's examination. Today's issue-specific hearing 3 is where we are

broadly investigating project design, and I think it's important to flag that we have requested the applicant to prepare visual representations of key elements of the proposed highway design to assist the discussions that we'll be holding today. This, we felt, was quite an important thing to do here because this is a very large, it's a very complex project, and one of the things that we want to try and shake down around the table today is our understanding of the nature and function of the key elements of the project: how they actually work, therefore why they take the amounts of land they do, etc. And having a physical, visual, functional representation of the proposed function of the project that we can turn to and interrogate will help us, we trust as clearer questions but also help all of us understand physically, in geographical terms, where we are when those questions are being both asked and answered.

And so I will draw attention to the fact that we made a procedural decision that was published on 1 September 2023, formally seeking the introduction of this visual representation material by the applicant. It is fair to say that the applicant has been in dialogue for a number of weeks with our case management who were tyring to secure a useful tool that could be put in front of all of us today, and that procedural decision that we published to admit the result of the work that the applicant had been doing in the background was taken in order to formally bring that material in as examination documents that everybody can refer to.

So I thought I would flag why we issued that decision, which also raises that you will find information about that and indeed all of the other application documents produced on the National Infrastructure Planning website in a thing called the examination library, and you can use Google or another search engine to search for Lower Thames Crossing Planning Inspectorate and you will be taken there. Do please keep up to date with the documents on the website, and also with the website itself because we use it to communicate with you and to provide access to all of our procedures and documents throughout the examination.

I'm going to spend a little bit of time briefly this morning talking about the hearings that we're going to hold as we move through this week and next week. My intention in so doing is to assist people, particularly who may not be in the room today but are listening or watching online, because it will not then

be our intention to have long introductions to subsequent issue-specific hearings; we will curtail introductions and move directly into substantive business in all of the remaining hearings following on through this and next week.

So as a reminder, tomorrow we have issue-specific hearing 4 on traffic and transportation. That's Wednesday 6 September from 10 a.m. Open-floor hearing 4 will be held from 7.30 p.m. on the evening of the same day. Issue-specific hearing 5 on tunnelling will be held on Thursday 7 September from 10 a.m. Issue-specific hearing 6 on mitigation, compensation and land requirements will be held on Friday 8 September from 10 a.m. and that will wrap this week's events. These will all be blended events, held in person here Orsett Hall and online at the same time.

Moving through to the following week, issue-specific hearing 7 on the draft development consent order is to be held as a virtual only event on Monday morning from 10 a.m. Monday 11 September. We anticipate that that won't extend into the afternoon. Principally, the purpose of that is to provide a monitoring point on progress around potential changes to the draft development consent order and, to a degree, its business is driven by what is or is not said in these hearings this week, because if substantial changes to the draft order are flagged in these hearings, we will want to pin back to what those might look like, how those might emerge and when they might emerge at that particular point, whereas if relatively little is asked for during this week, there won't be a lot to say. So I thought it was important understand that, the monitoring nature of that issue-specific hearing on Monday.

Tuesday, Wednesday and Thursday of next week we are holding three days of accompanied site inspections. Anybody who wishes to attend those ought already to have expressed interest in so doing. The applicant has been provided with all of those requests and has booked vehicles to enable the accompaniment of the site inspections. It's worth noting that in a pair of instances, inspections are being made on private land where, for good reasons, access is proposed to be limited. The first of those is to an operational and soil remediation waste recovery site around what is proposed to be the north tunnel portal on Tilbury marshes. That is land where the landowner, as is their legal right, has requested the number of people to enter on to the land to be limited, and that's on the Wednesday morning, Wednesday the 13<sup>th</sup>. And then we are

also, on the morning of Thursday 14 September, proposed to visit a care home facility at the request of the operators of that facility at Baker St, and again there, because of the sensitive nature of the land use and because of the fact that it is in active use and there are clients on site, it's been requested that we limit the numbers of people attending.

An accompanied site visit – it's very important – is held because the Examining Authority needs to see something on land that we cannot see from the public domain. It's important that when we attend, therefore, we attend in public and we're seen to be with representatives of the principal parties and the parties can then assure themselves that everything that goes on on that private land is properly conducted; there is due propriety and good conduct. So that's why we go in company, but we must always remember that it is the private landowner's right to actually restrict who goes on to the land. We will not carry an accompanied site inspection if our minimum propriety expectations cannot be met, so we'll always have to have a representation of the applicant, of the principal local planning authority and the landowner to assure that this is a fair process and that what is being done is fair and above board, and we can't assure that then we will not go on to the land, but if you happen to be on that visit and we ask you not to attend a particular part of it, please don't get too upset because the landowner does have the right to say who does or does not go on to land.

So those are the three days, Tuesday the 12<sup>th</sup>, Wednesday the 13<sup>th</sup> and Thursday the 14<sup>th</sup>. Those will be followed by two final hearings on Friday the 15<sup>th</sup>: a first compulsory acquisition hearing where we will be investigating the applicant's strategic case for compulsory acquisition overall, and the degree to which overarching statutory and policy tests are met, and the first of, we anticipate, a number of individual objection compulsory acquisition hearings will be held in the afternoon, and I would flag if you are an objector to compulsory acquisition and you do not see your name on the list for compulsory acquisition hearing 2, that isn't because we've forgotten you. It's because we go through everything stepwise. We are hearing specific issues which we've identified in that agenda, starting on the afternoon of Friday the 15<sup>th</sup>, but we will walk through all of the outstanding objections and requests to be heard and we have additional hearings, shorty to be notified, in both October and November of this year.

| 1  | So, hopefully that gives you a sense of hose this coming fortnight works.            |
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| 2  | I'm very briefly now also just going to cover a few matters around the operation     |
| 3  | of hearings in general terms. Firstly, we are of course being livestreamed and       |
| 4  | recorded. Most people participating in this event have participated in previous      |
| 5  | ones. Does anybody have any questions about the terms on which our digital           |
| 6  | recordings are made or kept or published? Excellent, in which case we will           |
| 7  | move on. What we now will do is take introductions from the people present           |
| 8  | who are wishing to be heard, wither on their own behalf or representing another      |
| 9  | person or organisation, and what I'm going to do is I'm going to start with the      |
| 10 | local authority and then statutory party requests to be heard, and then I'm going    |
| 11 | to move through other interested parties, and then I'm going to come to the          |
| 12 | applicant last. So, if I can then start – looking at my local authority list – with  |
| 13 | the London Borough of Havering, please. Who's here for the London Borough            |
| 14 | of Havering?   |
| 15 | MR DOUGLAS: Good morning, sir. Good morning, everybody. My name's Daniel             |
| 16 | Douglas. I'm the transport planning team leader at the London Borough of             |
| 17 | Havering. I'll ask my colleagues Lee and Emma to introduce themselves.               |
| 18 | MR WHITE: Yes, good morning, sir. [Lee White?], technical advisor to the London      |
| 19 | Borough of Havering on all matters of DCO.   |
| 20 | MR SMITH: Thank you very much, and welcome also into this process, the virtual room. |
| 21 | I was looking worriedly at the back bench at that point thinking, 'Where are the     |
| 22 | London Borough of Havering?' and then, of course, they magically appeared on         |
| 23 | our screens, which is excellent because it demonstrates that the technical issues    |
| 24 | that we were suffering from a little earlier have now been resolved.                 |
| 25 | MS GRAYSHAM: Sorry. Just to add, sorry, you asked about the London Borough of        |
| 26 | Havering. Good morning, I'm [Emma Graysham?], one of the technical                   |
| 27 | specialists supporting London Borough of Havering as well, so thank you.             |
| 28 | MR SMITH: Apologies.   |
| 29 | MS GRAVESHAM: No, that's absolutely fine. Thank you.                                 |
| 30 | MR SMITH: And we're not seeing Ms Hooton[?] today, the ecological consultant. No.    |
| 31 | MR DOUGLAS: No. Ms Hooton won't be attending the hearing today. It'll just be us     |
| 32 | three.   |
| 33 | MR SMITH: Okay, so returning to the physical room now, can I turn to the lead        |

representee for Thurrock Council, please?

1 MR MACKENZIE: Good morning, sir. I am George Mackenzie, a barrister; I will – 2 instructed together, I should say, with Douglas Edwards of King's Counsel. I'll 3 ask the remainder of the team to introduce themselves, but on Mr Edwards' 4 behalf, can I convey his apologies that he can't be here today or tomorrow, but 5 he will be here for the remainder of the issue-specific hearings in the next 6 fortnight. 7 MR SMITH: Thank you very much, so to the remainder of the Thurrock team. 8 MS MCMULLEN: Good morning, sir. My name's Kirsty McMullen on behalf of 9 Thurrock Council. 10 MR STRATFORD: Chris Stratford, planner on behalf of Thurrock Council. Can't get 11 to a mic, so... 12 MR SMITH: That might actually be an issue, because although we can hear you, the 13 external room, the virtual room, probably can't. We do have roving mics. 14 MR STRATFORD: In which case, let me repeat. Chris Stratford, planner for Thurrock 15 Council, and there are three other people towards the back of the room. Bart, if 16 you wouldn't mind... 17 MR NEVE: Thank you. Good morning, Adrian Neve for transport for Thurrock Council. 18 Thank you. 19 MR KIELY: Good morning, [Mat Kiley?] for transport at Thurrock Council. 20 DR BLACK: Good morning, Colin Black from Thurrock Council. 21 MR SMITH: Right, does that conclude Thurrock's representation? Now, actually it does 22 flag a matter that I will speak to briefly which is that until yesterday, we were 23 due to be conducting this hearing in a much larger room, but it's a room that, I think it's probably fair to say, is an orangery and with today's weather forecast 24 and a failing air conditioning system, apparently the decision was taken that it 25 wouldn't be an appropriate room to conduct a hearing in in the temperatures that 26 27 we were likely to face, so apologies to those of you who are sitting on the b ack 28 chairs. This is a smaller room that we'd hoped to use, but I trust a considerably 29 more comfortable one. Moving on from Thurrock Council – 30 PARTICIPANT: Forgive me, sir, but before you do, I think we may have one person 31 online, I've been told. 32 MR SMITH: Yes, okay. 33 PARTICIPANT: It's [Steve Plum?]. 34 MR SMITH: Now, can we hear...?

| 1  | MS JEFFERIES: Hello, it's Sharon Jefferies from Stantec, representing Thurrock       |
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| 2  | Council.   |
| 3  | MR SMITH: Ms Jeffries heard loud and clear. Thank you very much. Does that?          |
| 4  | PARTICIPANT: I think it does. We thought there may be one more but it doesn't look   |
| 5  | like – he may be here later.   |
| 6  | MR SMITH: Okay, was that?  |
| 7  | PARTICIPANT: Steve Plum.   |
| 8  | MR SMITH: Steve Plum, okay. Yeah, noted. Well look, listen, if you need to introduce |
| 9  | him later on, I'm sure that's relatively easily done. Let's then move on to Essex    |
| 10 | County Council, and who is leading the representation For Essex?                     |
| 11 | MARK WOODGER: Good morning, sir, and thank you to yourself and the hearing panel     |
| 12 | today for your very thorough introduction. My name is Mark Woodger. I'll             |
| 13 | spell that for you in case you need it. It's W-O-O-D-G-E-R, and I'm a principal      |
| 14 | planner and I work in the growth and development team at Essex County                |
| 15 | Council, and I'd just like to also introduce my colleague to my left, Gary. Thank    |
| 16 | you.   |
| 17 | MR MACDONNELL: Hello, yeah, Gary MacDonnell, here representing Essex County          |
| 18 | Council. I am a programme manager working in highways and transportation.            |
| 19 | MR SMITH: Thank you very much. Okay, if we can then move on to Gravesham             |
| 20 | Borough Council, and I believe Wendy Lane is leading for that authority.             |
| 21 | MR BEDFORD: Sir, thank you.  |
| 22 | MR SMITH: Michael Bedford.   |
| 23 | MR BEDFORD: Yes, sir. Thank you. Michael Bedford KC for Gravesham Borough            |
| 24 | Council. Wendy Lane is here. She is the assistant director of planning, as indeed    |
| 25 | also is Mr Tony Chadwick who is the NSIP project manager, but for the most           |
| 26 | part I expect I'll lead the contributions and if I need to bring them in I will do   |
| 27 | so.  |
| 28 | MR SMITH: Excellent. Thank you, Mr Bedford. Now, can I then turn to Kent County      |
| 29 | Council, and if I just check that – do we have Kent in the room?                     |
| 30 | MR RATCLIFFE: Thank you, sir. Good morning. My name is Joseph Ratcliffe. I'm         |
| 31 | the transport strategy manager at Kent County Council and I'm supported here         |
| 32 | today by two principal transport planners: Nola Cooper and Abigail Roscoe, but       |
| 33 | it will be primarily me that will be speaker. Thank you.                             |

| 1  | MR SMITH: Okay, thank you, and then if I can just confirm that Brentwood Borough    |
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| 2  | Council said that they will no longer be attending, so that brings the principal    |
| 3  | local authorities through. In relation to parish councils, can I ask if we have     |
| 4  | Shorne Parish Council and Susan Lindley – apologies.                                |
| 5  | MS LINDLEY: Good morning, sir. Yes, I'm Susan Lindley from Shorne Parish Council.   |
| 6  | Thank you.  |
| 7  | MR SMITH: Thank you very much, and then from Higham Parish Council, we should       |
| 8  | have Debbie Wright.   |
| 9  | MS WRIGHT: Yes, good morning. Hello, I'm Debbie Wright.                             |
| 10 | MR SMITH: Thank you very much. If we can then move on to other statutory parties,   |
| 11 | Port of Tilbury London Ltd.   |
| 12 | MS DABLIN: Hello, yes, Alison Dablin, associate with Pinsent Masons, here           |
| 13 | representing the Port of Tilbury.   |
| 14 | MR SMITH: Thank you very much, and if we could then move on to DP World London      |
| 15 | Gateway.  |
| 16 | MR SHADAREVIAN: Sir, good morning. My name is Paul Shadarevian KC, and I'm          |
| 17 | accompanied by Simon Tucker to my left here from DTA, and Alex Roberts of           |
| 18 | LSH who sits behind me. Alex, would you raise your hand, please? There you          |
| 19 | are.  |
| 20 | MR SMITH: Thank you very much, and again, if you need the roving microphone, Mr     |
| 21 | Shadarevian, please do ask for it.  |
| 22 | MR SHADAREVIAN: I'm grateful, sir. Thank you.                                       |
| 23 | MR SMITH: Thank you very much. Can I then move on to the Port of London             |
| 24 | Authority?  |
| 25 | MS DILLISTONE: Good morning, sir. I'm Alex Dillistone, acting on behalf of the Port |
| 26 | of London Authority and I'm here today with my client                               |
| 27 | MS OWEN: And I'm Lucy Owen from the Port of London Authority.                       |
| 28 | MR SMITH: Thank you very much, and then finally Transport for London.               |
| 29 | MR RHEINBERG: Good morning, sir. Matthew Rheinberg, major projects urban design     |
| 30 | manager at Transport for London, representing them today.                           |
| 31 | MR SMITH: Thank you very much. I'm now going to move on to interested parties who   |
| 32 | have requested to attend. I do note that we did have a request for the attendance   |
| 33 | of Dr Andrew Boswell, but he is not with us either virtually or physically. Let     |
| 34 | me just check. No, he is not. Okay, do we have Mr [John Johnson?]?                  |

2 MR SMITH: Just bear with me, Mr Johnson. We'll get a microphone to you. 3 MR JOHNSON: Hello, I'm John Johnson. I'm a local resident in Sole Street in Cobham. 4 MR SMITH: Thank you very much. Mr Robin Beard. 5 MR BEARD: Robin Beard. I suppose I'm another local resident. 6 MR SMITH: Thank you very much, Mrs Jackie Thacker. 7 MS THACKER: Hello, I'm Jackie Thacker and I'm an Orsett local resident. 8 MR SMITH: Indeed, and we're very conscious that you have attended these events 9 before. Can I check we don't appear have either Mr John[?] or Mr Wayne[?] Thacker. Are you representing both of them? Excellent. Right, then we have 10 11 Mr David Wood of Hogan Lovells International LLP on behalf of Veolia ES 12 Landfill. 13 MR WOOD: Good morning, sir. That's me. I'm David Wood, senior associate and 14 representing Veolia ES Landfill Ltd. 15 MR SMITH: Thank you very much, and then we have Mr [Ian Wharton?], an associate 16 director of transport for Bellway Homes Ltd. 17 MR WHARTON: Good morning, everybody. I'm, yes, Ian Wharton. I'm a consultant 18 engineer representing Bellway Homes. 19 MR SMITH: Thank you very much, and then we have, I believe, [Ben Hunt?] of the 20 emergency services and safety partners steering group. Is Mr Hunt available? 21 We have multiple representatives. Okay. 22 PARTICIPANT: Good morning, sir. Mr Hunt gives his apologies; he's had to drop off 23 the call for another prior engagement. He will be monitoring this event and 24 hopes to be back with us for item 7, but he is representing emergency services 25 and safety partners steering group, so that is his role in this and hopes to, as I 26 say, be back with us as soon as possible. 27 MR SMITH: Thank you very much. Okay, and so then [Heather Guerden?] and [Emma 28 Potter?] we do see before us on screen, so welcome to both of you. If I can then 29 move on to the Thames Crossing Action Group, TCAG, and I believe we should 30 have Laura Blake, Leigh Hughes and Muriel Blake. 31 MS L BLAKE: Good morning, yes. Laura Blake, chair of the Thames Crossing Action 32 Group, and I am joined by Leigh Hughes and Muriel Blake behind me should 33 they be needed. Thank you.

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MR JOHNSON: John Johnson, local resident –

1 MR SMITH: Thank you, and again, Ms Blake, do call for the microphone should you 2 need it at any point. Do we have Anthony Leeman of P.W. Leeman? 3 MR LEEMAN: Yes, Anthony Leeman, P.W. Leeman Ltd, landowner at East Tilbury. 4 Thank you. 5 MR SMITH: Okay, now can I check – I don't believe we have, but will make sure – Tom 6 Rowberry, a solicitor at Pinsent Masons for St Modwen, or Nick Mansell who 7 is also a solicitor of Pinsent Masons for St Modwen. Any attendants from those 8 people? No, thank you, so that takes me to the end of the list that I'm aware of. 9 Is there any – before I go to the applicant and ask them to introduce their team, is there anybody else in the room who believes that they have requested to speak 10 11 who we have not already covered? No, excellent. In which case, to the 12 applicant. 13 MR TAIT: Good morning, sir. My name is Andrew Tait, T-A-I-T, King's Council for 14 the applicant. I am instructed by BDB Pitmans, Mr Henderson on my right, and 15 I will also be appearing on other occasions with Isabella Tafur of Council. 16 Speaking today, there will be Mr Gary Hodge who is the highways technical 17 lead who will be dealing with the review of function and traffic movement at the 18 intersections, and so will be speaking to the material pursuant to your procedural 19 decision, PD 33. Mr Hodge is putting his hand up. 20 MR HODGE: Hello, sir. 21 MR SMITH: Good morning, Mr Hodge and thank you to you and your team for the hard 22 work that has gone on behind the scenes to hopefully simplify our way thought 23 this material. 24 MR TAIT: Sir, in relation to siting and land take and design mitigation, the remaining 25 items on the agenda, the speakers will be Mr Steve Roberts who is the design 26 and engineering director for LTC, two to my left, Ms Clare Donnelly, who is the 27 project architect and design advisor, who is in the row behind at the moment, 28 and also may call upon Dr Tim Wright, head of consents on my left, Mr Andrew Kay who's the lead landscape designer who is – 29 30 MR SMITH: Mr Kay, thank you. 31 MR TAIT: Behind the pillar at the moment, and Mr Barney Forrest who's the 32 environment lead, who's also put his hand up. Actually, if it would at all assist...

MR SMITH: I don't know if there are any more chairs in that direction, but if that part of the bench were able to shift slightly down room, they would see the panel a little more clearly and we can see them.

MR TAIT: And so we anticipate perhaps moving when they come forward to speak, doing a little bit of chair swapping.

MR SMITH: Good. Excellent. Even better, in which case, worry not. That will be just fine. Okay, is there anybody else wo needs to be introduced immediately from the applicant team?

MR TAIT: Not at present, no. Thank you, sir.

MR SMITH: Okay. So, just a few more preliminary matters before we get stuck into the agenda. When anybody begins to speak on an item on an item or to a question, please remember to reintroduce yourself by name and say which organisation, if any, you represent. This is very important because it helps people on the live stream to understand what's happening, and of course we record events and afterwards, if names are not said, trying to find out who said what and link the transcript to the ideas, the words, becomes quite difficult. So please do remember to reintroduce yourself, even if it appears to be boring to do so.

I will flag again, once an issue has been identified by one speaker, then it doesn't need to be repeated by a second who agrees. If somebody introduces something that you agree with, say you agree with it. We may also disregard representations that are vexatious or frivolous and we will ask people to move on if they substantially repeat what others have said. I will also remind everybody of the importance of respecting all participants and allowing everybody here to have their say. In fairness, none of us want to be interrupted when we speak and so therefore please do not interrupt other speakers, and if the panel needs to clarify something that somebody has said, we will intervene and ask for that clarification.

If anybody, of course, does interrupt in a way that is unnecessary or disrupts the hearing, then I will issue a warning. If I need to warn a third time, then I could ask the case manager to exclude someone from the hearing, and again, also people should be aware that repeat interruptions that lead to disruption can be viewed as unreasonable behaviour, for which awards of cost can be sought by other interested parties.

Finally, in terms of session lengths, what we're aiming to do is speak for – to allow the proceedings to proceed for approximately one and a half hour sessions and take 15-minute breaks, so the first, we will target at approximately 11.30 for about 15 minutes. We'll probably break somewhere around 1.15 for approximately an hour for lunch and then we may take a 15-minute break in the mid-afternoon, depending on our progress and coverage of the agenda, at around 3.45 p.m., and we hope to wrap up about 5.00 p.m.

If needs be, we may defer defined questions and issues into subsequent hearings that are there, essentially, as holding positions in both October and November, if detail threaten to overwhelm us but we do need to speak further about a matter before it's closed. So that's how we will deal with overruns that might happen today, and similarly, if anything goes awfully wrong with the technology and we find ourselves unable to proceed today, then we will deal with that by opening up a new hearing day within the October or November hearing windows, so those are our contingency arrangements.

Those are all of the introductory remarks that I wish to make. Now, being conscious of the fact that this is the beginning of a fortnight of hearings, if there is anybody with any remaining questions about how we're going to do business for the remainder of this week or next week, including on the accompanied site inspections, please do feel free to ask them now. No, that's good news, in which case I'm going to move on to agenda item 2 which is very brief because we set out the purpose for this hearing in the circulated agenda papers and it has not changed, so unless anybody has any questions about the purpose of today's hearing... And again, do I see any hands? No, I don't. Then there is nothing more to do. We can move directly into the substance of today's agenda, so let us turn to agenda item 3.

As you'll have gathered, what we intend to do is to move through the project in the direction that the applicant moves through the project in its own submissions and plans, so I had a real southern hemisphere moment because we're starting at the bottom and moving northwards, not, as would often be the case, of starting in the north and moving south, but here we are, trusting that the water doesn't go down the plugholes the wrong way in Orsett.

Let us start agenda item 3 and the A2-M2 LTC intersection. Now, what we wish the applicant to do is to explain the function of the proposed junction

1 2 3 4 5 6 questions. So can I ask for that to be introduced? 7 8 9 10 sir. 11 12 13 14 15 16 17 18 19 20 21 22 23 slide, which is the strategic connection. 24 25 to M2 and M2 to A2. 26 27 show the path of the... 28 MR SMITH: Yeah. Oops, let's have another go. 29 30 31 32

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and the route paths through it that can be taken by traffic, and I think with little more ado here, it would help if the applicant can start by showing what they've prepared and we can start to test it by asking questions about, 'How does one proceed from here to here? How does that particular slip road work and why?' with reference to the tool that has been put forward to enable us to ask those

MR TAIT: Thank you, sir, and it'll Mr Gary Hodge, sir, previously introduced, the highways technical lead, and he will start to - with the pack from this intersection and it is on – in the examination library, as you've indicated already,

MR SMITH: Excellent, thank you very much. Anybody needing to refer to this, of course, will be able to move to the examination library online and see this as well. Okay, so A2-M2 LTC intersection, let's actually see what the model does.

MR HODGE: Hello, sir. Gary Hodge for the applicant. I'll just take you now through the slide presentation we prepared for the A2-M2 LTC junction to show the functionality of the junction and also the route pass through it. I'd just like to explain before we start, it's in two sections. We've got the functionality with this series of slides, and then we go on to the traffic movements.

The first thing I'd like to explain is that we've got three connection types, which are strategic, major and local, and they've been shown in blue, green and yellow, and what we've done is we've – where it's an existing route, we've shown it dotted, and where it's a new route, it is solid. So I just go to the first

MR SMITH: And to be clear here, this is then demonstrating the existing line of the A2

MR HODGE: That's right. Sorry, sir, I'm just trying to get the pointer up so I could

MR HODGE: Sorry, sir, about that. Right, so the first slide will show the connection from the M2 westbound as it travels through the A2-M2 corridor and joins the LTC northbound. The next slide – the next link shows the Lower Thames Crossing southbound and the reverse, and going through the A2 corridor, and that's why it's dotted because it's an existing route. We then have the two connections on the west side of the junction which connect to the A2 but they aren't as priority movements as the ones that go from the A2 from – towards London.

MR SMITH: And can we just check there that that representation that you show there is summarising a smaller traffic movement anticipated?

MR HODGE: That's right, sir. The key movement through the junction is from Lower Thames Crossing down through to the M2. We've still got the A2 coming through, but the priority movement for that particular junction is that movement, but we still do have the links back into the A2 towards London, both southbound from the Lower Thames Crossing and eastbound from the A2, to northbound on the Lower Thames Crossing.

MR SMITH: Now, in terms of taking our individual questions on this, I mean, we are now into the specifics of individual movements modelled here. We can either ask as we move through – and if that wouldn't disconcert you too much, I think that would assist us – or alternatively, we can wait until you've presented the grand picture. What would be your preference?

MR HODGE: I don't mind. However you'd like to do it.

MR SMITH: Okay. Well, in which case I will probably ask as we walk through, and we essentially have a dialogue, conversation. In terms of certain representations that have raised concerns about, essentially, the residual mainline capacity between the A2 and the M2, and the M2 and the A2, is it your view that the nature and the volume of traffic moving, essentially, southbound from the proposed LTC and east on the M2, and indeed west on the M2 to northbound on the LTC will be that the primary movement needs to be accommodated through that intersection? And if I can just follow that up with a brief supplementary as well, is there enough – in your design opinion capacity – to enable the existing east-west movement along the A2-M2 corridor provided for in the design?

MR HODGE: Yes, so I think if I go to the next slide that will help explain that, but – so if I go to – this is now the major connection, so we've left the two key links on, as shown, but then if I actually introduce the – what we've done is we've created two – a parallel connector road, we call it – it's a one way, two lane parallel connector road which starts just to the west of the junction, and goes all the way through to the M2 junction 1, and there's the same in the opposite direction. Now, these are key routes because what they're doing is they're taking out the strategic traffic from the traffic from the Lower Thames Crossing joining the

M2. So what's happening is you're not getting a weaving in a section – which is vehicles changing lane – because they don't have to come on at a junction and go off, so that's how we're getting the capacity through that particular section.

MR SMITH: Right, which then takes us to one of the matters that led to the request for this hearing, this process, to understand, essentially, the operation and rationale for what we have been referring to as the eastbound and westbound frontage roads – you may be using different terminology – because we have noted that if, for example, one is seeking to access the A289, as we understand it, one would need to leave the eastbound A2 towards M2 at what is currently the Valley Drive – what we would refer to as the Valley Drive intersection, and then proceed along your green frontage route, and that that would in due time take you out at a replacement to the slip to the A289. It would take you that entire journey, and you would essentially be removed from the LTC intersection itself.

MR HODGE: That's absolutely correct. It starts after the Gravesend east junction, so the diverge is just slightly to the east of the Gravesend east junction, because we've had to take out the two east-facing slips because of the proximity of the Lower Thames Crossing junction. So the two slip roads on the east side of the Gravesend east junction have been removed, so what happens is you would go through the Gravesend east junction and then you'd go on to the frontage road which – the green route, and then – so you'd bypass the Lower Thames Crossing junction as it comes into the M2-A2.

MR SMITH: And similarly, the same would be true westbound from the M2, that if one was seeking, for example, to access Park Pale, or Darnley Lodge or Brewers Road, one would be needing to exit – well, can you just pop the pointer on where you would be needing to exit.

MR HODGE: Yes, so this is the westbound, and it comes back in to the A2 at that point there.

MR SMITH: Yeah. Okay, so that then leaves the existing accessibility to the mainline at Brewers Road completely transitioned into access to the eastbound or westbound frontage road.

MR HODGE: What's happened with the Brewers Road junction is the eastbound, we've kept the same connections, so you can come off or go, but you can only go on to the connector road. You can't, obviously, go on to the central LTC A2-M2 route, and on the westbound carriageway, we've actually removed the

1 connections at the Brewers Road junction, but we've provided them slightly – 2 well, it's about a kilometre further to the west. Some of this will become clear 3 when we go through the paths, but – 4 MR SMITH: I will let – I think probably the best thing I can do is to let you now walk 5 us through those paths. I do know that at least two of my colleagues, I think, 6 have follow up questions on this, but walk us onwards and let's see where we 7 go. 8 MR HODGE: So this, the particular slide I've got up now has obviously demonstrated 9 the frontage road, and we go to the next slide. What we've got here are the local connections, and with this the – again, they're shown in dotted where they're 10 11 existing and solid where they're new. The key link here is that, because we close 12 the east-facing slip, so at Gravesend east, we've had to put a two-way connector 13 road in, which is this – sorry, it's gone. A two-way connector road which is the 14 solid line that joins Henhurst Road – with the new roundabout on Henhurst Road 15 - to Brewers Road roundabout, so that is a two-way connector road which 16 provides the link from Gravesend east to the Brewers Road connection. 17 MR SMITH: Yeah. Just to be clear, I think the mouse is probably suffering a little bit 18 of lag, because it didn't quite get to where we expected at – or... 19 MR HODGE: So the two-way connection starts from this location here – is that…? 20 MR SMITH: No, that's not where your mouse is on screen, I'm afraid. You're in a field 21 south of High Speed 1 on our screen. 22 MR HODGE: Sorry. 23 MR SMITH: No, look, we fight the technology, but I think we know where we are. I 24 mean, Ms Laver, are you content that you know where the beginning of that 25 two-way section is? It's the solid gold or yellow alignment – 26 MR HODGE: Immediately above Henhurst... 27 MR SMITH: Immediately above Henhurst Road, and that's the start and it would run 28 through to -29 MR HODGE: To the east, so it goes along Darnley Lodge Lane and it connects to the 30 Brewers Road junction. 31 MR SMITH: And that is also the road that would receive the turning movements out of 32 the Thong Lane green bridge. 33 MR HODGE: That's correct. Yes, sire. 34 MR SMITH: Yeah, okay. Right.

MR HODGE: So that's the only new link that we have on the – so that's a two-way link.

MR SMITH: Can I just ask one more supplementary about that that's certainly been scratching my brain? That, therefore, is the rationale for the proposed roundabout. If we look at the wording on the plan, there, at Gravesend east junction, immediately to the north, there is a roundabout shown. The purpose of that roundabout is to allow ingress to and egress from the southern frontage road to the local road.

MR HODGE: That's correct, sir.

9 MR SMITH: Okay. Yeah.

MR HODGE: Right, shall I...?

11 MR SMITH: Yes, please do.

MR HODGE: So this particular slide is to show the key local links to LTC and the A2-M2, so it's for local connections, so this is – from the bottom of Valley Drive, we actually have a connection directly on to the Lower Thames Crossing northbound. We also have a direct route through the junction on to the M2. This goes on to the M2 and not on to the frontage road, sir. We then have a connection from the connector road up to Lower Thames Crossing northbound. That is from the connector road on – the eastbound connector road.

MR SMITH: And the rationale for that is that's attempting to provide the same local connectivity if one was moving west from the east – as you have just provided on that diagram – moving north or east from the west.

MR HODGE: Yeah, that would be serving the Strood and Rochester traffic coming on to the connector road. Then there is the southbound link. Again, this is joining the connector road, so again, it's going on to the connector road and not into the M2. There are other connections into the M2 and the... So the last local link is southbound on Lower Thames Crossing and that joins in to Gravesend east junction, so there is a spur off that link which also goes back on to the A2, and then we've also got a link from the connector road on to the local two-way road on the south of the scheme. So again, if people were coming from, say, the Wainscott by, A289, or Rochester, they could come off on that link to get to the Gravesend east junction.

So now, I go to the traffic movements, so what we've done here is we've actually identified those in purple. There is one alternative that we've got in there that comes later in the slide pack, and if it has a variation or a change, it's

shown in red with the scheme, so there's an existing, and then there's a slide that's got with schemes. So we'll just go to the first slide, so this is a part – what we've done is we've actually – we put origin/destination points that we think will represent the best routes to show the links through the junction. So the first one is from – so it's going literally from the A2 to the M2 and then going back again. This is obviously in the existing situation. Then we've got the same with the scheme, and there is no change. That will just be straight through. Then we go to the next one; this is from the A2 to the 289, so this will –

MR SMITH: You do seem to have a little bit of feedback. Turn off microphones for a second. Ms Blake, you had your hand up briefly.

MS L BLAKE: Yeah, thank you, sir. Laura Blake, chair of Thames Crossing Action Group. I'd just like to point out, there, that Gary mentioned that there'd be no change on that route, but the number of lanes would change. I just thought that relevant to point out.

MR SMITH: Yeah, I'm very – I am conscious of that and what I am going to do is once the applicant has set out its stall is I'm going to provide an opportunity to move round the room and seek submissions on all of this material, and my colleagues also have unasked questions, so I think if I can just ask you to hang fire, Ms Blake, we will come to you. Turn to the applicant.

MR HODGE: Thank you, sir, so yeah, this one's showing the A2 to the A289 and in the opposite direction, so this will use the frontage road, so that's the current route and going reverse is showing the reverse. Then with the scheme, this shows that it will then – the red section is where it leaves the central road and then goes on to the frontage road, and coming back, again, you can see it comes off and... So if I go to the next slide, this is very similar. This is the route into Strood and coming out again, and again it will use the two connector roads.

So the next one is from Valley Drive to the A289, so currently you can get on at the Gravesend east junction with a slip road directly on to the A2 and along the A2 and come off and go straight up to Wainscott bypass, and the reverse of that, again, is you can come off at the slip roads because we've moved the slip roads from the east side of this. What we now have to do is to – our proposal shows that you use the two-way link road on the south side, and then re-join the connector road on the north side at Brewers Road to get to the A289. Going the

opposite direction, you use the connector road and you come off at the roundabout on the connector road, the two-way link road and then re-join.

This is a link from Valley Drive to Cobham, and I've shown this using the A2 just so you see what the scheme impact is on this particular route, so again, with the existing situation, you come along the A2 to Brentwood Road, come down to the – sorry, Brewers Road, apologies, Brewers Road – and then you can go down Halfpence Lane down to Cobham again, and then the reverse again, because there's currently an access at Brewers Road, you can come along, use the A2, come off. With the scheme, this route again is to use the two-way connector road to access Cobham, and again, going back it's using the two-way – so what we're doing is we're taking that traffic out of the A2-M2 links.

Shorne to Cobham, that uses the Brewers Road – well, Halfpence Lane and Brewers Road into Shorne, and then the reverse of that is obviously the same route. Going with the scheme, there is no change on this particular route. Then Shorne to the M2, so if you're in Shorne, there is an option here that you could go up to the A226 and come down the Wainscott bypass and then join the M2 eastbound. The reverse of that is to go back up to... You can also go down to the A2 and you can connect here at this – at the junction with Brewers Road and the A2-M2, you can get onto the M2, but we've actually – this is one of the movements we have removed, so you can't do that anymore but coming back – so that would be the route. If we go to – with the scheme, what you'll see is that the route down the A226 is the same, but the route – if you were to go down to the Brewers Road junction to get on to the A2, you'd have to use the connector road, which doesn't connect to the M2, so you'd have to go around the roundabout and come back down to get onto the M2 eastbound. And the route the other direction is that you'd come along the M2 and come off at the two-way connector road and come back on yourself if you were to take that route, so we wanted to show what the options were on that particular link.

MR SMITH: In broad summary terms, that second route is not a particularly well-favoured or feasible route, is it? I mean, you're effectively signalling that, although it's somehow possible, that it's not desirable.

MR HODGE: No, that's right, sir. I mean, it does obviously depend where you're starting from and where you're going to, so we have taken the middle of Shorne... But if you're coming out of Shorne Country Park, that might be the

| 1  | desired route that you would take. It does really depend on where you re starting      |
|----|--|
| 2  | from and going to. So that concludes the A2-M2 traffic routes and the junction         |
| 3  | functionality  |
| 4  | MR SMITH: Okay, thank you very much. Well, what I'm going to do is – I think I will    |
| 5  | proceed to my colleagues and just whether there are further in-principle               |
| 6  | questions that they wish to ask and test on, and I think the best way through this     |
| 7  | will then be to run to items (b) and (c) under this agenda and essentially allow       |
| 8  | the applicant to have its case completely stated. And then we'll turn to the rest      |
| 9  | of the room because otherwise, I think we'll just get into a kind of tennis game       |
| 10 | of representations.  |
| 11 | MR TAIT: They're very closely linked questions, clearly.                               |
| 12 | MR SMITH: Yes, they are.   |
| 13 | MR TAIT: We thought that would also be the right way forward. Might we – sorry.        |
| 14 | MR SMITH: If I can just briefly check around the room with the principally represented |
| 15 | parties. Is everybody content that we do this in that order? Yeah, excellent.          |
| 16 | Sorry, Mr Tait.  |
| 17 | MR TAIT: So I was going to ask Mr Roberts, and then – yes, good, Ms Donnelly's now     |
| 18 | come forward to the front row –  |
| 19 | MR SMITH: Good.  |
| 20 | MR TAIT: – just to run through –   |
| 21 | MR SMITH: Just, though, before you do, I just wanted to check on those movement        |
| 22 | plans before they evaporate from our vision. I did know that Ms Laver had a            |
| 23 | question, and I think – Mr Young, did you, or are you going to leave it?               |
| 24 | MR YOUNG: No, I'll leave it.   |
| 25 | MR SMITH: Wait. Okay. Ms Laver.  |
| 26 | MS LAVER: Good morning. Janine Laver, panel member. I think it's slide 5. If I could   |
| 27 | get slide 5 put back on. Slide 14 might do it as well.                                 |
| 28 | MR HODGE: Certainly, ma'am.  |
| 29 | MS LAVER: I'm struggling on the little ones down there – keep turning behind me. I'm   |
| 30 | particularly interested in the routes that go to the A289 and to Strood, so from       |
| 31 | west to east. Yeah, that one. Yeah, I'm less interested in the M2 at this point.       |
| 32 | It's more the green – it's the path of the green that I'm interested in.               |
| 33 | I suppose the query I have is, if you want to go to the A289, once the LTC             |
| 34 | is in place, you've got to make your choice at Valley Drive. Is that correct?          |

| 1  | MK HODGE. That 8 fight, ma am, yean.  |
|----|---|
| 2  | MS LAVER: And if you haven't made that choice, and you find yourself on the blue      |
| 3  | route heading eastwards, and you're thinking, 'Oh, gosh, I don't want to go the       |
| 4  | M2,' what's your option once you've made the wrong choice at Valley Drive if          |
| 5  | you want to go out to the A289 or to Strood?  |
| 6  | MR HODGE: If you've actually missed the link, you then get onto the M2, and you'd     |
| 7  | then go down to junction 2 of the M2, and you could, at that point, turn around       |
| 8  | and go back into Rochester.   |
| 9  | MS LAVER: So, if you then got down, you had to go into Rochester, and you went, 'Oh,  |
| 10 | gosh, I've totally made it wrong,' you've then got to come back up. Where do          |
| 11 | you then have to come back up to to make that journey back up to the A289? I          |
| 12 | need the pointer to take me through that.   |
| 13 | MR HODGE: Yes, unfortunately, the M2 junction 2 is off the screen slightly, so if you |
| 14 | were going through and you miss this link at that point there —                       |
| 15 | MS LAVER: I can't see your mouse, unfortunately. Sorry.                               |
| 16 | MR HODGE: I'm sorry.  |
| 17 | MS LAVER: Yeah, you're up at Valley Drive with your mouse pointer.                    |
| 18 | MR HODGE: Yes, I'm up at Valley Drive, so you're going where the green starts on the  |
| 19 | western end, so you miss that point. You then go through the middle, and you          |
| 20 | join the blue and go down the dotted blue, continue down dotted blue, continue        |
| 21 | to junction 2 of the M2.  |
| 22 | MS LAVER: So how far along is that? If you've missed Valley Drive, how far do you     |
| 23 | have to drive to make the diversion?  |
| 24 | MR HODGE: I don't know off the top of my head. The difference would be the distance   |
| 25 | from the junction down to the M2 junction, back again, which looks to me to be        |
| 26 | roughly about 2 kilometres.   |
| 27 | MS LAVER: Okay, so once you've turned around, you've queued to come off at            |
| 28 | junction 2 – there may not be a queue, so I don't want to surmise, but you've         |
| 29 | come off at junction 2, you've got to spin around, but you still need the A289.       |
| 30 | What route do you follow then when you're coming back up?                             |
| 31 | MR HODGE: So you'd then use the M2, and you'd come off the normal link that goes      |
| 32 | around into the A289 from the M2, so you can get off at junction 1 of the M2. I       |
| 33 | mean, this will be clearly signed, obviously, before you get to the junction.         |
| 34 | MS LAVER: No, I realise that, but we all make mistakes, don't we.                     |

MR HODGE: Absolutely.

MS LAVER: And that was just wanting to understand that path through there. Now, is that the same then for Strood – because you're showing a split for Strood roughly where you'd come off at the A289, so that's normally the route. You'd take the green. You'd take the split there if you wanted Strood, but if you missed that, again, you're saying you'd come –

MR HODGE: The same, yes.

MS LAVER: You come down and spin back around. Okay, that's very helpful. I think that's my question on that. If I could just get some clarity throughout the course as to what that distance is that you'd have to travel, that would be really helpful. Thank you.

MR HODGE: Thank you.

MS LAVER: The other question I have, and it may be picked up, but we were looking at traffic movements. You've got this – with this new service road – it's the connector road. I think you mean the Darnley Lodge Lane. There's a lot of traffic being pushed onto Darnley Lodge Lane, so two-way, single lane. It's currently single-lane, but it's pretty much a local road.

But because of the way that the road is designed, a lot of traffic's being forced onto that to make connections to other local roads. I wonder if we could just have a look at that again. I just want to understand, from what's current and what's proposed, how many different local movements have to use that single-lane, each way road?

MR HODGE: Yes, ma'am. Can you see the spike on the screen now? Is that...?

MS LAVER: Yeah, that's got – that's right. That's the yellow one.

MR HODGE: Yeah, so it's the link from Penhurst Road roundabout through to Brewers Road junction. It is obviously a traffic-related question, which I think we might be doing tomorrow, but that does provide the link from the Gravesend east junction to the Brewers Road, so any local traffic that was going to go from Gravesend east to either the A289 or to Strood would go down this route because they can't get onto the connector road directly from Valley Drive. So they would have to go through that route and then go across the main – go from south to north, to Brewers Road, and then connect on to the connector road on the north side, as we call it, to go to either the A289 or Strood, yes. So it would be pushing traffic along that two-way link.

MS LAVER: Thank you. I just wanted to clarify that. Thanks.

MR SMITH: Anything further from my colleagues? I mean, I have one that I'm just going to leave hovering on the table because it may well be a matter that we pick up as we move on through the remaining item B and C, and it may also potentially be something that the Mr Young picks up tomorrow. But that is visitation to the country park using the access from Brewers Road. I'm just getting embedded in my mind the nature of the traffic movements, the traffic moving to and fro the Shorne Wood Country Park into Brewers Road would take under the proposed change if they need to move eastbound and/or westbound. I mean, if that can quickly be shown, then good. Otherwise, we'll pick it up as we move.

MR HODGE: So, if you're coming out of Shorne Wood Country Park and you wanted to go onto the M2 eastbound, you'd have to come – in fact, I think it's most probably – if I show the – there's a slide that shows – so this is the slide that shows the existing – although this is from Shorne, where the Shorne Wood Country Park is, down towards the A2. If I show with the scheme, so this would be the route. So, if they want to go down to the M2 eastbound, they would start at the Shorne Country Park, join the connector road, and then have to get the A289 to the junction with A226, go around and come back on themselves to –

MR SMITH: And again, I'll leave this hovering in your mind, but it does raise somewhat of a concern in terms of some of the site inspection work we've done already, including to Shorne Woods, where we've seen moderately substantial visitation on a sunny summer day in Shorne Woods, and wondering about the numbers of vehicles that might actually end up – whether that's been taken full account of in the modelling as well, and it may be something that gets picked up tomorrow rather than running the detail of that today – but whether the sorts of traffic volumes and movements that that might generate on a busy day at the park is something that's been taken into account in that layout.

MR HODGE: Yes, sir, we can feed some of that information.

MR SMITH: It might be something best followed up in writing, but I think it would be useful just to have a clear explanation of how that element of it might work. Okay, let's move on, and let's deal with items B and C with principle submissions from the applicant. Apologies, no. Ms Laver.

| 1  | MS LAVER: Sorry, before we do move on, I just had one other query. If you find          |
|----|---|
| 2  | yourself east or west, ending up on LTC, you don't want to be on LTC, what's            |
| 3  | your option? And I ask because the route, you show Valley – but if you come             |
| 4  | off Valley Drive and you end up taking the left slip and you end up going               |
| 5  | towards the portal, do you have to then go through the portal across to county          |
| 6  | boundaries, go up through the tunnel, pay a toll and come back?                         |
| 7  | MR HODGE: Yes, ma'am, you would have to.  |
| 8  | MS LAVER: That's what I thought. Thank you.   |
| 9  | MR SMITH: Okay, so if I can return to Mr Tait, we'll deal with the siting and land-take |
| 10 | and design mitigation matters.  |
| 11 | MR TAIT: Thank you, sir. So I'm going to do this in sequence, first of all with         |
| 12 | Mr Roberts dealing with the rationale and then with Ms Donnelly dealing with            |
| 13 | some of the design thinking and practicalities. So, in relation to this, there are      |
| 14 | one or two slides that we were intending to put up from the existing material,          |
| 15 | just to —   |
| 16 | MR SMITH: Anything from existing material is absolutely fine. We only had an issue      |
| 17 | in terms of needing to put in matters that were, in principle, new, which dealt         |
| 18 | with those previous slides.   |
| 19 | MR TAIT: So there are one or two slides. In each case, they have the APP number         |
| 20 | written on it, so one can see readily the source.                                       |
| 21 | MR SMITH: Good. And anybody following along, best thing to do is to actually look       |
| 22 | that APP number up in the examination library and actually bring it up on your          |
| 23 | own screen as well. Can I ask that phones are put to silent, please? All phones         |
| 24 | to silent, please. Apologies. Thank you. I'll go to Mr Tait again and, hopefully,       |
| 25 | you will get a good run at this now, Mr Tait.   |
| 26 | MR TAIT: Thank you, sir. So, starting with Mr Roberts, please.                          |
| 27 | MR ROBERTS: Good morning, sir, panel. My name is Steve Roberts. I'll be speaking        |
| 28 | on behalf of the applicant. So, as Mr Tait said, I shall be covering item 3(b) of       |
| 29 | the agenda, siting and land take, and then dovetail with my colleague,                  |
| 30 | Ms Donnelly, to my left here, who'll be taking part (c) of the agenda.                  |
| 31 | It's very difficult to distil down into a short period of time, seven years of          |
| 32 | _   |
| 33 | MR SMITH: I know.   |

MR ROBERTS: – work we've done on Lower Thames Crossing. Just to say, we believe we have a very highly evolved design, which has, as I say, progressed over a number of years. It's been led by a detailed understanding of local context and site constraints. And importantly, it's been informed through thorough engagement with the stakeholders and, indeed, members of the public at consultation events, so there's lots we could say.

But I'd just like to point interested parties and panel to the project design report, which covers a lot of what we've been talking about today. In particular, the project design report, part G, which is application document 514, and that gives the design evolution story as a whole and that goes to all junctions.

So, turning to the question of siting and land take, I'm just going to be supported whilst I talk to this junction with the slide on the screen, which is an extract from part D of the project design report, application document 509. So, in terms of siting and land take for this junction, this was dependent on three main factors.

And if I may spend just a little bit of time unpacking them here because they apply to all three junctions and so it will save time later reiterating the same points, so the three main factors are, firstly, seeking to maximise the scheme benefits by providing appropriate connections to the existing strategic road network and where appropriate local network, with regard to capacity to accommodate the forecast traffic flow. So we've already started to talk about some of that this morning and the connectivity choices that we've made.

Secondly, the second factor is taking account of the existing site constraints. So these include minimising environmental impact, including those impacts on communities, land and property; minimising impacts on physical constraints, which include local road network, railways, water courses, and utilities working with the existing site topography and existing ground conditions.

Third point, in terms of siting of junction and land take, is design to ensure operational safety, so this is really adherence to the relevant standards and, in that case, that means the design manual for roads and bridges, which is the governing standard for trunk roads in the UK.

And it's important that the adherence to the standards are consistent and commensurate with the type of road that we're seeking to build. So, in our case,

we're seeking all-purpose trunk road, and so there are certain standards which apply to the highway geometry, in particular, and the suitable junction designs in terms of spacing and the merging and weaving between those junctions, which dictate to some extent the land take that we then have.

MR SMITH: Can I just test something there? I mean, obviously, you'll need to have appropriate and safe spacings between intersections. It is a key spatial driver, the other being the degree to which you agree that it's functionally necessary to interconnect a whole set of routes, and we've just been walked through that.

I mean, there is a residual question if you're looking at a constrained land environment, which is whether it was ever in reasonable prospect to decide that there were – to deliver a safely functioning intersection, there were certain routes that would not be served, so you end up with a limited functional intersection to a degree, because one of the things we've been working with, thinking our way through the design of these, is looking at the degree to which they do broadly provide, in most cases, most points to most points. They are quite flexibly designed – well, very flexibly designed intersections, and whether there had been thought given at any point to the balance to be struck between land take and the impact on surrounding residential communities and the surrounding environment by actually reducing that flexibility to some extent, and what was the price one paid by doing that?

MR ROBERTS: So it's about striking a balance, so the connectivity that we've chosen to include in the scheme directly correlates to the scheme benefits that might accrue. It's true to say that, for the A2-M2 Lower Thames Crossing intersection, we're providing an all-movements junction, but that's not the case at the A13-A1089 junction, where we've been more selective because, in providing all movements, there's obviously a price to say in terms of impact on existing constraints, so we're always balancing, weighing up connectivity versus the impact on constraints, essentially.

MR SMITH: Okay. And it's your submission that you've struck that right balance and that, in your view, if you start, on this intersection, filleting away connectivities in the interests of reducing the land take and/or increasing the separation between the intersection and key receptors, that you quite rapidly start to deliver an unacceptable benefits outcome. I'm summarising a lot of material here, but is that your broad submission?

MR ROBERTS: Yes. And so, I think this particular junction, it's more clear cut; there are fewer choices to be made in terms of the trade-off between connectivity and impacts. The A13 junction, there's more balance to be struck, so we'll perhaps have that discussion when we reach it at item 4, the agenda. But certainly, at this particular junction, I'm going to go on to say that the key movement, as Mr Hodge has already outlined, is intercepting the traffic from the east, from M2 on to Lower Thames Crossing, and vice versa.

But it's also beneficial to have west-facing connections because they not only serve some of the strategic traffic that may wish to use Lower Thames Crossing rather than travel to Dartford across the Thames. But it also provides that local connectivity that we talked about, Mr Hodge talked about, and your questions followed up. So, yeah, it's a balance, but not always strategic – sometimes local connections as well providing the opportunity for local people to join the scheme. Shall I move on?

MR SMITH: By all means, yeah.

MR ROBERTS: So, having set out those three key constraints, if you like, if I take each one in turn in terms of the site specifics of the A2-M2 junction, I've just mentioned the predominant movement to the east and up the M2 to Lower Thames Crossing and vice versa. To maximise the benefits of the junction, not only are we seeking to provide all connections at the A2-M2, but we're also seeking to provide free-flow links. That is to allow movement through the junction from A to B without stopping. Again, that assists with journey times and maximises scheme benefits.

Turning to some of the key constraints in this area, in the vicinity of the A2-M2 Lower Thames Crossing junction, we have various environmental constraints, including Shorne and Ashenbank Woods SSSI, Kent Downs AONB; Claylane ancient woodland, which is to the south and west – sorry, west of the junction; Shorne Country Park, and the junction is also relatively close to the settlement of Thong, Riverview Park and Shorne, including the conservation areas of both Thong and Shorne, so quite a few constraints in that bracket.

Turning to some of the physical constraints in this area, the site is bounded on the southern side, along the east-west axis, by High Speed 1 railway, which is a significant constraint, and it would obviously be prohibitively complex to realign and move HS1 to create space for our junction. Equally, it would be

complex to construct above or below High Speed 1, so we've taken it as a constraint position, a junction clear to the north of HS1.

Other physical constraints in this area include significant utilities, including overhead high-voltage power lines. The topography in this area – I'd just like to make a quick point about the topography in relation to the A2 corridor and where the siting of the junction actually aligns quite well with a low point in the topography, and where the junction sits is approximately 40 metres lower than Brewers Road to the east. So, when you see it on site, you'll see that there is a natural dip, and that helps in mitigating the vertical extents of the junction.

Thirdly, and finally, the operational requirements. As I said earlier, for an all-purpose trunk road there, the requirements are fairly onerous, and the standards require the need to have significant separation between junctions to achieve merging and weaving links, so this is why it's important, where Mr Hodges set out earlier, the strategy of creating these parallel frontage roads, as you call them, allowed us to separate strategic traffic that was using the A2-M2 from the local traffic that currently has to access the A2-M2 to progress east/west to make local connections. So we're separating out those movements, which is a safer operational layout.

MR SMITH: And can I just test at this point, very briefly, the question around the maintenance of running speeds at a major and complex intersection, which I suspect also underlies various of the concerns that certain other representations have raised, which are that, if you've brought out that separation, then the main line is no longer experiencing the same extent of lane change and preparation for manoeuvre, and so, at least theoretically, the main line should continue to run more often at an expected normal running speed.

MR ROBERTS: That's correct, sir, and that's perhaps a matter that my traffic colleagues could add to tomorrow.

MR SMITH: Yes. I mean, that's pushing a little into –

PARTICIPANT: I'm not sure planning can discuss this junction in any detail tomorrow. It's not on the agenda, so [inaudible].

MR SMITH: We better get it out today or followed up in writing. Well, look, take that on notice in writing – I think is the best way to deal with it – because I think it would assist us to understand your view about – it's essentially the design running speed of the intersection and your view as to whether or not the design

was proposed sustains that, or whether there would be still some anticipated issues that might lead to congestion.

MR ROBERTS: Thank you. Yes, we'll take that action, sir. So that concludes the points I wanted to make on siting and land take. If I perhaps just move to – so it concludes the point on part 1 of site and land take. Part 2, the question about the relationship between the junction and the settlements at Thong, Riverview Park and Shorne, if I may just touch on that.

MR SMITH: Can I just bring in Ms Laver? Apologies. Ms Laver.

MS LAVER: Thank you. I just had a question. On the screen, you're showing what is a snap from one of your reports. But within the report itself, it's got a key and some numbers. And for those who aren't south of the river, they're trying to follow where Shorne is, Claylane Wood. And yet, on your – the same slide in the actual APP-509, it's got a key. It's a little difficult, I think, for people who don't know the geography of this bit of the south, particularly for those from the north of it. Just following the discussion, I just wondered if there were meant to be some little numbers and a key on this slide.

MR ROBERTS: Yes, of course. Perhaps I'll just explain, so we lifted the image from the project design report to show on the screen because the numbers were, on some of these, perhaps a distraction for a presentation mode, but further details are in the project design report, including the key, as you rightly say. And perhaps my colleague, Ms Donnelly, when she goes through her part of the presentation, can point these features out better than I have.

MS LAVER: Thanks. I just wanted to make sure you weren't meant to have clicked something to show the key.

MR SMITH: Yeah, okay. Please continue.

MR ROBERTS: Okay, so just to finalise this point about the relationship of the junction with the settlements of Thong, Riverview Park and Shorne, as I think I said at issue-specific hearing 1, we were seeking to basically strike a balance, the impact on these communities, by aligning the Lower Thames Crossing to be broadly equidistant between these two communities.

We also sought to use the existing topography to our advantage in this location because, as we progress north, the road ramps down towards the southern tunnel portal, so the roads – the link between the junction and the southern tunnel portal is mostly in-cutting, in most places in quite a deep cutting,

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and this vertical separation helps to mitigate the impacts of the junction and Lower Thames Crossing on the nearby communities. And that concludes my point, sir, on that.

MR SMITH: What I'm going to suggest, this is 11.30, almost precisely. I think the best thing to do is to have item C proceed immediately after the break, so we'll break now for 15 minutes. Can we return at 11.45? It's a little shorter than 15 minutes, but I think we need to keep to target. Ladies and gentlemen, we will resume then, and the applicant will complete their in-principle submissions on this item, and then we'll move to other parties. Thank you very much, ladies and gentlemen.

# (Meeting adjourned)

MR SMITH: Welcome back, ladies and gentlemen. It is now 11.45, so if we can retake our seats. Can I have a signal from the rear of the room when we're ready to resume, and I do, so we are back in session. And we are returning on agenda item 3 to 3C, design mitigation and the principle submissions from the applicant.

MR TAIT: Sir, so this is Clare Donnelly, the project architect and design advisor. Could I just mention one matter? I indicated that all the slides will have the APP numbers on. I think this sequence don't but they have the source, and they have the, in particular, National Highways numbering, so we will add further the APP number before we submit.

MR SMITH: That will be much appreciated, and then they can come in at the written submission deadline 4 with the APP numbers on them. Perfect. Ms Donnelly.

MS DONNELLY: Okay. Clare Donnelly for the applicant. Each junction is complex, and the place-based design choices and mitigations are many and various. Through a long and peer-reviewed process, informed by stakeholder and community consultation, we've developed proposals which we believe substantially mitigate the scheme and comply with both National Highways and NIC principles of good design. These measures are described in our project design report, which is APP number 506 to 515, and secure through the design principles, which were recently revised under REP-3110[?].

They are too numerous to describe in detail, so we would like, with permission of the inspectors, to describe some examples of how the design and mitigation has evolved over the course of design development, with reference from some visual material contained with our application, to demonstrate our response to this question.

First of all, what you can see on slide there is an extract from our design report, project design report, which describes our narrative. All strategies for design have been developed with regards to a detailed understanding of the landscape character areas through which the road passes. These were defined by the design team as part of our design narrative, which was begun in 2018 and subsequently developed to shape our mitigation design choices.

Based on this understanding, we have identified the constraints and opportunities at each location and strategies for the potential integration of the road infrastructure into that location. For example, this analysis led to a project-wide strategy whereby tree planting is used at the junction as we found that this was contextually appropriate in each location. This has the benefit of visually screening the junctions while also narrowing the field of view of the driver as they navigate the complex weaves and turns within the junctions.

We're going to be structuring our answer today to deal with design mitigation first, by which we mean how we've shaped the engineering elements and layout to respond to the site-specific considerations. And then we will move on to mitigation design, which is how we have designed mitigation areas to be multifunctional and balance the needs and different impacts of the scheme, and also meet different requirements with different design disciplines and stakeholders. Okay, so next slide.

Okay, so this is the site of the A2 junction. I'm going to point to some elements. Hopefully, you can see my curve and stuff through here.

MR SMITH: Yeah.

MS DONNELLY: This is an image looking north towards the Thames in the distance, and you can see HS1 along the bottom of the image here with the existing M2-A2 corridor. The junction sits within the villages, which is just off-screen to the west, Thong, which you can see here and, Gravesend east. As we noted, it sits in a shallow point. You can just about make out in this image how the

ground rises towards these wooded hilltops around Brummel Hill Woods and Shorne Woods Country Park.

There are pockets of woodland surrounding the site, so not only at Shorne Country Park and Brummel Hill Woods, but also a pocket of ancient woodland at Claylane, just here to the west of the site. There are a number of utilities diversions required around this junction, some that you cannot see, such as the gas pipelines that need to be diverted, and some that you can, most prominently, a line of pylons that pass through the site.

If I then take you through to our design as it was at statutory consultation, this is our first iteration of the design as we developed it. You'll notice that the design is flat as it did not yet include the link and the new link eastbound from Valley Drive through the junction, and it was kept low but relatively spaced out. You can see that there were large pockets of trees within the junction and a large drainage pond just to the west here.

Through the development that we've described and the stakeholder feedback, which requested the additional link through the junction, we developed these proposals as we went forward into supplementary consultation. This is the process as they appeared on supplementary consultation, and you can see that the new link is now included through the junction.

This had the benefit – sorry, we have tightened up, as you can see – and I'm going to flick through back and forth a little bit – we've tightened up the location of the slip roads and tried to pull those slip roads away from the most immediately affected receptors at Thong, for example. So, if I go back, you can see how we've pulled away in this particular area.

However, the inclusion of this link through here did mean that the height of the junction did increase relative to those properties. Therefore, we sought out new mitigations, for example, the inclusion of a four-metre false cut along this edge, which would be planted with trees to screen the works. We also had to make additional provisions as this new link then cleared the bottom of the ancient woodland pocket at Claylane Wood.

Compensatory planting was provided elsewhere around the scheme, and we broke down operational elements of the scheme, such as the ponds, so instead of having one large pond in this location, we broke it down and located those throughout the junction to try and bring that footprint in further.

If I was to go back to statutory consultation now and just talk a little bit about the mitigation design, we received advice from the Defra families about the scale and type of mitigation that we should be producing, both prior and during statutory consultation. The things that they asked us to look at were potential woodland links linking up the pockets of woodland in and around the junction via a green bridge, and so you will see that, at statutory consultation, our strategies of extensive tree planting around the junction and linking those up, east-west across the alignment, were already in place.

However, as we developed our proposals and we were speaking with stakeholders, particularly as regards to cultural heritage, we noted that this actually materially affected the setting of the village of Thong, which is in an open grassland setting at the moment. Therefore, as we move forward into supplementary consultation, we revised our proposal to provide a woodland edge to Gravesend, but to try and keep some of the open character that was developed to maintain the setting of that village as it is viewed across the junction.

Further mitigation – this approach was further refined as we went forward into DCO planning, as we felt – as some of our stakeholders felt that that woodland connection was not strong enough. And therefore, the area of planting here was increased, along with the fringe planting – so I'm just flicking again through here – to try and get the correct balance and mitigation of our impact through our design.

You will also note that additional compensatory planting was planted in this area up here, and also note the pound location when I'm not on this slide. We strengthened that with more pockets of woodland compensation in this area to have that better and stronger woodland link in and around the junction. And the ponds here were moved from a location – moved up the hill in response to archaeological investigations that had highlighted Mesolithic finds in that particular area. That concludes our examples of how we believe we've mitigated the design and impact of the junction and how we've complied with the requirements of the national policy statement.

MR SMITH: Okay. Thank you very much. Now, can I just check whether there are any further in-principle questions from the examining authority before we introduce interested parties on this whole agenda item? No. In which case, can I just see

indications of those who wish to speak on this item? I am noting that each of the councils will, so I will go to the local authorities first, then statutory parties and the parish councils, and I do see TCAG, so I will come to TCAG at the end.

In terms then of moving through the councils, what I'm going to suggest we do is, if we hear from the two county councils first, and then I'll go to Thurrock, etc, in that. So would it be possible for Kent County Council to make a start on this?

MR RATCLIFFE: Thank you, sir. Joseph Ratcliffe for Kent County Council. Yeah, just start by saying that Kent County Council supports the Lower Thames Crossing, so everything we say is in that context of overall support for the scheme.

I mean, we've had many discussions with the applicant over the years, from Mr Hodge over the design, and seen it change quite a lot from the early days through to some tweaks towards the end and what we finally have now. I mean, an overall observation, it does everything from a strategic point of view and maintains local connectivity, albeit some of those local connections are made more convoluted, as we saw from the Shorne Woods example. That would be our main concern, was access into and out of the country park and that convoluted access.

I would just like to correct one of the responses to the questions from Ms Laver in the questioning, in that if you were to need to turn around at M2 junction 2 and backtrack, you cannot join the A2 eastbound into Strood. That connection doesn't exist. You would simply use where you've got off at M2 junction 2 to take the A228 into Strood. That would be the logical way. You wouldn't backtrack and come in. You just can't make that connection now as it exists, so that was just a minor correction on that point.

But, yeah, I mean I do agree that the choice of route as early as the Gravesend east junction, for whether you are going on the M2 or the 289, is very early in that process to make that choice. And if you get it wrong, you do need to divert. And so that'd be our concern from a strategic movement point of view, as is the reduction in lanes, and I think one of the other groups had already mentioned that, the two lanes as you go through on the M2 mainline.

We do have some concerns around the traffic and some of the capacity issues, some of the queue lengths, especially on the local connections. But we're

having discussions with National Highways and their modelling team. I'm not entirely sure if that is for today's agenda or for tomorrow, or maybe we follow it up with some more detailed responses in writing, perhaps, on the detail of that.

What is key, of course, is that the monitoring and management plan is robust to deal with these issues, with changes and, potentially, issues on our network around those junctions. And we have significant concerns about that plan. Again, probably not one for today.

Any, obviously, changes to our network at the junction arms will need to be agreed at detailed design with our highway agreements team, through the usual process that we have for any National Highways scheme that changes our network.

Just finishing off a final point on the land take issues. Obviously, to accommodate the junction, there is land take of Shorne Wood Country Park, which is KCC's flagship country park. We have again worked with the applicant over the years to reduce that land take. We are still waiting for confirmation, I think, on the precise distance of the strip of land, between the A2 into our country park, that you need, and the number of trees that will be lost, to check that the compensatory planting is sufficient for that. Again, I think that's more for Friday's agenda, but yeah, I think that that's everything that I wanted to say on the issue.

MR SMITH: Okay. Can I just check on two points there? Firstly, in relation to the ongoing operation of the Shorne Woods Country Park, which I understand – it is your facility. I mean, it would certainly be very useful if the current state of your conversations with the applicant is reflected in a written submission at deadline 4, because what we want to understand is the degree to which you have residual concerns about the usefulness of access to that facility, and the nature that demands to access that facility, the expression of that demand on the local highway network might have, looking at the potentially somewhat convoluted route necessary to access it, and potential for delays and slightly odd turning movements etc. So we're interested in that.

Turning back to this 'two lanes on the main line' point. I mean, it has been one that's been raised by a considerable number of parties. Checking with you, and again, you may want to come back to us in writing on this rather than give an off the hoof response today, but we've received an explanation from the

applicant that talks about, essentially, the segregation of local, regional and strategic network traffic through the intersections so that hopefully the needs of all conceivable traffic movements are being met, and the effect of that ought be that there is not additional congestion as a result of that change, notionally, but again, we would be very interested in any finalisation of your view, having heard the points that the applicant has put today.

MR YOUNG: Just adding to what Mr Smith said there, Kent, I'm not aware that you have done any analysis of journey time through that junction. Now, you'll be aware the transport assessment has looked at that, as table 7.11 onwards, and there, that shows in the assessment scenario reductions in journey time along that A2/M2 corridor. Have you presented any alternative assessment on journey times, or are you planning to do that?

MR RATCLIFFE: Yeah. No, we have not. Sorry, Joseph Ratcliffe for Kent County Council. No, we have not done any alternative assessments of anything on the strategic road network. Our local impact report sets out our analysis of National Highways' transport assessment, plus our own work looking at the wider network impacts, but we have focused on KCC's local road network and the knock-on effects, rather than the M2 itself.

MR YOUNG: So what are you concerns about the M2? What evidence is that based on? MR RATCLIFFE: Well, as set out in our local impact reports, there are capacity restrictions as you move through those junctions. We did have a discussion with National Highways just a couple of days ago about the use of volume over capacity versus other measures. So I think it'd be best if we submitted something in writing which clarified our position on that, rather than, perhaps, making an incorrect statement at this stage.

MR SMITH: Yeah.

MR RATCLIFFE: Yeah. If I could just come back on some of the other points that you raised around Shorne Woods, I should have also said: yes, as well as the access issues, both once the scheme's operational but also during construction, will have an impact on the financial viability of that site. Again, possibly, one for Friday's hearing, and the need for financial compensation over what is a viable business, both in terms the educational provision, the café, the car parking, and the general amenity value for the area. Yeah, I think that was everything. Thank you.

MR SMITH: Okay. Thank you very much. Now, I'm very conscious that we're currently firmly in the territory of south of the river and Kent, and the Kent authorities. Did Essex County have anything that you wanted to say on this agenda item?

MR MACDONNELL: Gary MacDonnell, Essex County Council. No.

MR SMITH: Okay. Excellent. Well, in which case, I will then move to Gravesham Borough, and we'll stay south of the river.

MR BEDFORD: Thank you, sir. Michael Bedford, Gravesham Borough Council. So just as an introductory remark, I make the point, obviously as you've understood from our local impact report, that unlike Kent County Council, we are not currently in a position of support for the project. We're in a position of objection to the project. So I don't, obviously, rehearse that or the reasons for it, but that's the context.

Having said that, we recognise, obviously, the subject matter of this issue-specific hearing has, as it were, moved on from that, and so we're dealing with the issues on the design as set out in the agenda. So our first point to note is that whilst, obviously, we welcome the visual representation material that has been presented today, which, I think, was uploaded possibly sometime late yesterday – so we haven't digested that, and if you don't mind, we will, I think, reserve to our written post-hearing submissions any detailed comments we want to make on –

MR SMITH: Mr Bedford, I think you make a very, very important point here. We are very conscious that this process is moving fast, and what I would therefore extend to any party making oral representations here, so that we don't have to go back over it, is an invitation to provide their reflections, having absorbed that material that has now been uploaded, by deadline 4, and that is just as weighty as anything that will be said in this room.

MR BEDFORD: Thank you, sir. I'm grateful for that, and that's, as I say, the way we were intending to deal with that, in terms of any points of detail.

There is a slightly wider point on visual material. We did notice, obviously, procedural decision 37, but until we saw what had been presented, we weren't quite clear as to the ambit of your request. We, as you will have seen from our earlier representations, have urged the applicant to provide more information, particularly by way of 3D modelling, to enable us to understand

more clearly not only what you might say are the operational effects for users of the scheme, but also to understand, in terms of environment impacts, issues as to how the scheme actually will physically appear, and whilst we've already made that request, which has not so far received any positive reaction from the applicant. So we do just reiterate the point.

The applicant, obviously, has presented and has available to it, a computerised, virtual representation of the scheme in its physical context, which it's able to interrogate, as it were, at its own leisure or preference to produce the still images, which appear in the visual material that the applicant has chosen to present. The applicant has also produced a fly-through, which is obviously not static, but which, as it were, a bird's eye level, and again, as it were, the location of the bird is chosen by the applicant, and it moves through different parts of the scheme, but what we would certainly request is: is there any reason why other parties can't have access to that computer modelling, which presumably exists, so that we can interrogate it?

Because there are, for example, ground-level locations where we would want a better understanding of, 'Well, what does it look like? How is this going to impact on either communities, landscape, or cultural heritage, matters of that nature?' And so as to understand those issues, as I say, we rather wondered why that can't be made available to us, given that, presumably, the computer software programme exists. So that was a second point. Obviously, I don't expect the examining authority to respond to that, but it would be helpful if the applicant could tell us why that can't be done.

Then turning more specifically to the issues raised in the presentations that we've heard this morning. Essentially, we note, that the A2/M2 Lower Thames Crossing intersection is a complex junction for the various reasons that have been explained, but we would want to stress to the examining authority that it's certainly of great importance to Gravesham Borough Council, not, as it were, to lose any of the connections that are provided by that complex junction, because were that to happen, effectively, we see that being as a disbenefit to Gravesham residents.

We think there are disbenefits to the scheme, but clearly, what we don't want to do is compound those disbenefits by, as it were, removing local connections and local connectivity, particularly noting that the A2, albeit being

part of the strategic road network, serves as a very important local road connection.

MR SMITH: Mr Bedford, I mean, that was a key question that, through you, I was intending to ask your client, and given that you've taken us straight there, we might as well just finish it off. One of the trade-offs, essentially, in our mind around the possible relationship between the scheme benefits and performance overall, as against the management of specific risks and harms emerging from it, was – you probably saw the thrust of my question to the applicant on this point – the degree to which some measure of incompleteness in the connectivity of the intersection might provide the benefits of better managing or mitigating adverse effects, and/or reducing land take, but I take your submission as a very clear one, that, 'Please do not...'

MR BEDFORD: Absolutely, sir. We did, actually, make that point, I think in our issue-specific one submissions as well.

MR SMITH: You did.

MR BEDFORD: So I just reiterate that point.

MR SMITH: It's an all or nothing position, isn't it? 'This thing were better not built. However, if it were built, you want it to work well for your residents.'

MR BEDFORD: Absolutely, and we certainly don't want to see, as I say, the ability of local residents to make movements through the junction in any way impeded.

So then moving on to the next concern, what we do want to ensure, noting that it's a complex junction, is that it's both safe and convenient to use – and we obviously recognise we are not a highway authority, so we note that point – but nonetheless, what we are concerned about is that, in simplistic terms, two categories of users of this complex junction.

There will be those who are, essentially, regulars, who become familiar with the junction and its, as it were, pros and cons, and for some of those, given, particularly, the restrictions on, as it were, some of the journeys that can be made and some of the consequences, some may choose to avoid the junction because of its complexities, and we don't want to see overspill onto local roads by those people.

There will be others, the less regular or infrequent users, who may be confused by the junctions and this partly relates to Ms Laver's point about, 'Well what happens if...', because however the signage strategy is, 'you get yourself

into the wrong lane, you can't get into the right lane, and you end up, as it were, being taken around the houses, before you can get back to where you want to get to? And what are the implications of that?' Again, for the way that the junction works, as I say, we don't want to see this complex junction, as it were, be perceived by those who are familiar with it, as it were, as either an accident location or as a congestion location, which causes them, as I say, to find alternative routes, which would involve using the local road network.

So that's the concern. Maybe it moves more into agenda item 7, as how you deal with it, but at the moment, we do have a concern that the design principles don't really appear to include that usability factor as a design principle, and we will come on to agenda item 7 in due course, but we are also concerned to ensure that we have, as the relevant host local planning authority — we have a proper say in the finalisation of that design, so that we can be satisfied that it works, as it were, for movements in a way that doesn't have disbenefits to the local communities.

Then, sir, I think the last point to make is simply that we would agree with the remarks made by the Kent County Council on the importance of monitoring and management during operation, and we don't think, at the moment, the arrangements are satisfactory.

MR SMITH: Thank you. Those are very clear submissions. Can I just check with my colleagues whether there's anything else? I rudely interrupted you, Mr Bedford, but I think we got to the core of the point that you were making. Looking then at the geography of this and the fact that we are south of the river, can I just briefly check whether either of London Borough of Havering or Thurrock wish to submit on this point at all? In which case – I'm saying nods of 'no' – we will then move to the two parish councils who are, I believe, both distinctly Kent entities. So can I ask for Ms Lindley first, from Shorne Parish Council if there's anything that you want to put on this?

MS LINDLEY: Thank you very much, sir. I won't dwell on this at this point, because clearly, some of these things are better put in writing, but there are two points I want to make. The first is that some of the slides that were presented from AS145 are not correct. There's only limited trips presented where there are some other trips which would be more difficult, or cause more rat running, etc.

I especially comment on slide 23, which is supposed to be the routes taken by Shorne residents, and that suggests that the principal route that people would take would be to head north to join the M2. That is just not correct. The principal route, actually, is to go south past Country Park, and turn that way. Whereas in the future, yes, people probably wouldn't do that, because it doesn't pass the 'Are you in your right mind?' test to actually take that route. It would be better to turn right onto the A226, but that has its own consequences, particularly with regards safety.

And the other point I'd make is that we've had a lot of discussion with National Highways – 'discussion' is a euphemism – over the difference between a function being provided and providing something that is functional. We've heard the connector roads referred to as 'convoluted,' and I think that's another euphemism, really. We're talking about considerable extra distance for a large number of residents.

I'm not talking just about Shorne – in Gravesham as well – a lot of extra roundabouts, traffic lights and, as we've heard, a considerable risk of congestion because of the large number of additional users that would be on these routes compared to presently, and obviously, I share Gravesham's concerns, particularly that people in the know will try and avoid these routes in various ways, and this is going to be a problem.

Thank you very much.

MR SMITH: Thank you very much, Ms Lindley. Now, if we have Councillor Wright.

Councillor Wright.

MS WRIGHT: Good afternoon, everyone. Yes, so following on a little bit from Susan's comments, I think the diagrams that were shown earlier are useful but do miss some key information. I think in one area for me is that, currently, Higham and A289 and Medway residents, of which there's 300,000, if they wish to come up the A2 may well just come up and go straight onto the A289.

I think one of the things that's been kindly added but may be an issue, and we really need to see it through traffic modelling, is that we have a direct connection from the 289 into the northbound LTC, and this then leaves us prone to any traffic issues in the LTC, blocking up all Strood, Rochester and Higham and Isle of Grain A289 traffic. So it's some consideration whether that A289 westbound, LTC northbound junction needs to be taken out.

In addition to that, I think, if you then took that out, actually to get to the LTC A289 and Strood and Rochester, residents would then need to go up to the Valley Drive exit to access the LTC, which is not necessarily a problem. I think the issue comes is the congestion and the number of routes that are now converging on the Valley Drive, Gravesend east Marling Cross junction. A lot of routes are now converging onto that Eastbound exit, coming in from London coastbound to that roundabout at Valley Drive. So not only will you have London-bound traffic coming from there, but you'd also have LTC traffic, that's coming from locally, potentially going there, and so I think that Valley Drive junction could become incredibly congested.

Again, the congestion – if it happens currently on the A2, backs up a long way onto the A289. A2 London-bound, in the mornings, can back up a long distance onto the A289, and again, with the addition of being so closely related to the LTC portals, I think the prospect of us – if you see some of the congestion that's at Dartford Crossing, at least Dartford town is not directly linked to Dartford Crossing in a lot of ways – there's 300,000 residents, or a portion of them from Strood and Rochester, and from Higham and Grain, will be directly linked to the congestion that's potential to occur at the LTC north portal – south portal, northbound. So it's how we're going to mitigate that.

If you also think that one of our alternative routes would therefore be along the 226 through Gravesend – that meets to Gravesend Council's point – but also an alternative route would have been to come back up Thong Lane or Valley Drive, and those routes, effectively, would not be there, and therefore you would have to go all the way through Gravesend, potentially, up through Northfleet to re-join the A2 if there's bad congestion. So I think there's very few alternative routes if this junction gets blocked up, and it does on occasion, regularly, currently.

To the point of the fact that this is in the dip of the road, I go back to Ms Laver's point about signage, which is actually the road from the M2 up to Brewers Road is incredibly steep, and the signage could be very difficult for people to see to go on to the south portal, so that really needs to be considered long and hard.

If you were to go from Valley Drive and missed the turning for the 289, if you wanted to get back to Gravesend or to Higham, then you would have to go

back up to junction 1 and around, and that's going to be about seven miles, to answer to Ms Laver's earlier point.

And just a final point: the access from Shorne through the 226 is not the main route for Shorne residents. It is through the Brewers Road junction, and also for traffic going to Shorne Country Park, particularly if they're coming from the further end of Medway towns, again, they would have been going along Brewers Road. They will now have to go up to Valley Drive and back round, and also to note, the Brewers Road junction will be closed for 19 months.

Sorry. That was a lot of areas, but thank you for giving me the time to answer that.

MR SMITH: That was very considerable detail embedded in that response, so thank you very much for bringing that material in front of us.

Now looking at other statutory parties, I believe I have a hand from Matthew Rheinberg of TfL.

MR RHEINBERG: Yes. Thank you, sir. Matthew Rheinberg, Transport for London. Clearly this junction is significantly outside Transport for London's area of responsibility, but there is one element of the project design that is quite significant for London, we feel. So one of the benefits of the scheme is to improve the resilience of the strategic road network, because when there are planned or unplanned disruption at the Dartford Crossing, there is significant impacts on the road network within London as traffic diverts to the Blackwall Tunnel, Silvertown in the future, and one of the seven objectives of the scheme is to improve the resilience of the Thames crossings and the major road network. So we have a strong interest in Lower Thames Crossing being available as a diversion route at times of disruption.

So the key question we have, really, is whether the design of this junction provides significant capacity for specific movements, and that is, in particular, between the Lower Thames Crossing and the A2 to the west, where at least parts of those connections are one lane in each direction – is whether that does, actually, provide a realistic alternative route without causing significant tailbacks, which could result in it not being advertised as an alternative route in the event of the Dartford Crossing being closed.

So we don't know the answer to that, but it will be very helpful to understand whether the design of this junction actually does help meet that

objective of improving the resilience of the road network in London, and that's really the key point we wanted to make and the question we wish to ask.

MR SMITH: Thank you very much, and the applicant we'll be returning to at the end of these submissions I'm sure will wrap that issue up.

Can I then just check from the statutory parties who are requesting to speak on this item – any other statutory parties, particularly the ports or Port of London, wishing to speak on this item? No. In which case, we move on to other interested parties, and I am going to go to TCAG, because I did note that Ms Blake has been asking for some time to speak. Ms Blake, now is your opportunity.

MS L BLAKE: Thank you very much, sir. I'm sorry for jumping the gun a little earlier as well. I just got a bit frustrated with the fact that they were saying it was the same route when I knew it was a lane drop.

MR SMITH: Well, now's your ability to tell us that it's not.

MS L BLAKE: Thank you. I'm very much agreeing with a lot of the points that have been made by those that oppose the scheme, and I'll try not to go over what they've already said.

Regards to Ms Laver pointing out the complexity, and others have commented on the complexity and the signage of there, just to point out you'd actually pay the toll twice as well, obviously, because you'd have to go up and then back, so you would end up paying it twice, and the confusion and the late decisions that could result to incidents along that section as well, and also, whilst it's not currently in place, I believe that government are looking into potentially charging per mile for travelling, which, obviously, with things like that and different incidences of the complex, long routes that we've seen would have an impact on users' affordability for using the new route, and fear of being charged, so maybe not taking that route.

Just touched on by TfL there about the route potentially migrating from the Dartford Crossing to the LTC, and there only being one single network connecting the A2 coastbound on to the LTC, that is, obviously, a very big concern.

And then the other one that nobody, I believe, has actually mentioned, is just the connectivity with the M20. With this being designed, predominantly, to serve the ports, to get them from Dover and the south east, up to the midlands

and beyond, to come from the M20, you'd have to use Blue Bell Hill to connect to this junction that we're being shown. I will touch on this, obviously, in the written questions that you have asked Thames Crossing Action Group, but the fact is there was variant C, which included improvements to that, which has been ruled out by National Highways, and I think it just shows that this junction is being shown as the start of LTC, but if you're looking at the traffic that it's meant to be serving, it actually starts on the M20, and that connection comes through via Blue Bell Hill.

So I'll keep that short and take the rest in writing. Thank you, sir.

MR SMITH: Thank you very much. Now, can I check other interested parties presented?

A quick show of hands. We've got two, so can we just get the roving mic to the gentleman here? Is this Mr Beard, Mr Robin Beard?

MR BEARD: Yes, it is. Robin Beard. We've seen a nice depiction today of all the different routes and what I want to say is – well, it might be treading on the toes of what we're talking about tomorrow with the traffic movements, but the only reason that this junction needs to be as complicated as it is, with the high bridge and the tunnel under the A2, and also the A2 would have to be – the actual carriageway would have to be moved for about a mile to make space for it – the only reason why it has to be that complicated is because of the link road on the south side of the carriageway, one of the two that they were talking about earlier.

Now, it might be that link road is a vital part of the design, simply because of the volume of traffic, and if that's the case, then the junction really does have to be this complicated, but I'm not convinced. I think that you could potentially do away with that link road, and if you could, then the junction would be radically simpler. Well, you wouldn't have to move the A2. You wouldn't have to dig a tunnel, and you wouldn't have to have any really high bridges either, so it would be a big improvement.

MR SMITH: Mr Beard, noted, and I'm sure the applicant will respond to that point.

Now, can we move on, though, whilst another gentleman – sir, you are...

MR JOHNSON: John Johnson, local resident living in Cobham and Sole Street. I would
begin by saying I support this scheme, travelling regularly on the local roads,

overall, to relieve congestion at Dartford. I'd also echo particularly the points made by Gravesham Council and by Higham Council. The additional point I

really want to stress relates to the Valley Drive A2 junction, and the junction on the south side of the A2 with Henhurst Road. I have three points around that.

First, in relation to the new connecting road that the colleague on my left has just referred to, whilst some traffic coming up the A289 will obviously be able to join the A2 direct, a lot of traffic at the moment, particularly in the morning rush hour, cuts through Cobham village, and then down to Wrotham, Sevenoaks and so forth. 700 or 800 vehicles per hour is not an insignificant amount, and that figure is recorded in the documentation.

By changing the junction so that the traffic has to use that connecting road, it will put pressure on people to come down and then either cut through Henhurst or, if they do go get on to the A2, they will cut through Wrotham Road. Wrotham Road is an A road. Henhurst is a road that's less than five metres wide. Kent County Council won't even put a white line down the middle of it. It is totally unsuitable as a rat run.

The traffic that would have gone through Cobham will be displaced there, as has been set out in other documentation. So something needs to be done at the junction roundabout with Valley Drive to stop traffic going through, and the obvious thing is, initially, a weight limit.

Second, the point that's made about congestion at the Valley Drive junction – slide 5 of the first presentation clearly showed three roundabouts, an additional roundabout going in. Traffic coming down the new connecting road, and wanting to come off to Henhurst there, will be held up by traffic coming up Valley Drive.

The reality of Valley Drive throughout the day, never mind just morning rush hour, is it's a constant flow of traffic coming out of Gravesend. It stops traffic joining the roundabout from the right. It will add to the congestion there, as has already been said.

The third point. Traffic moving east on –

MR SMITH: Can I just interrupt you a minute? It would really help, I think, if the applicant could show us the intersection slide, and then we can just –

[Off-mic discussion]

MR SMITH: I think it's slide 5. Yeah. Don't feel the need to wait, Mr Johnson, but hopefully it will help once that's up.

MR JOHNSON: Okay. I think we're nearly there. I'll just wait a second.

MR SMITH: There we go, so we've got Valley Drive.

MR JOHNSON: Can we go on? I think it must be slide 6. Keep going and I'll tell you when to stop. I must have mis-noted – that's it. That's the one. That's it. Thank you. So you can see on that slide Henhurst Road, Valley Drive, triple roundabout where they meet the A2, and in the yellow, the new connecting road.

So traffic coming down the connecting road is liable to meet traffic coming up Valley Drive. Valley Drive, non-stop flow of traffic onto the A2 westbound in the morning.

Conversely, and this is my third point, in the evening, traffic leaving Valley Drive backs up onto the A2 almost daily, in the rush hour. The congestion there is already considerable. So in terms of mitigations, some thought needs to be given to issues such as putting traffic lights onto the roundabout, as is done at the Ebbsfleet junction, but my real concerns are two-fold, in summary. Firstly, it's the congestion there. The second is the diversion of traffic rat running through Henhurst. Thank you.

MR SMITH: Thank you very much, Mr Johnson. Now, with apologies to Ms Dablin for Port of Tilbury London Limited, it's one of the hazards of being hidden behind a very long list of speakers in the virtual room, but I do believe we have your yellow hand showing. So Ms Dablin, can I introduce you?

MS DABLIN: Thank you. Alison Dablin for the Port of Tilbury. I don't have any comments on the layout of the junction in particular. One thing that did occur as Ms Blake for TCAG was speaking, however, is she mentioned that you would have to pay the toll twice. It would be useful if the applicant could confirm exactly what the rerouting would be, because it appears that under the current design, the junction that is immediately to the north of the tunnel would not be available to turn around, which I believe would then force traffic to go on to the A13, around the Orsett Cock roundabout, back onto the A13, and then onto the Lower Thames Crossing to return southwards.

So it might be useful, purely to clarify the extent of the diversion were road users to inadvertently join the Lower Thames Crossing. Thank you.

MR SMITH: Thank you very much, Ms Dablin. Now, can I check – my understanding is that we have received now all of the spoken interventions from those who wished to respond on agenda item 3. I'm seeing no yellow hands in the virtual room, and I'm seeing no more hands in the physical room, so I'm going to return

this item to Mr Tait for the applicant, and we'll bring this item to a close, and Mr Tait, in closing it, go to your high points but be conscious that you have your response in writing.

MR TAIT: So we're very conscious of that because there has been a large number of issues raised there, and we think that most of them would be better served to respond to those in writing, as part of the post-hearing submissions. But there are three points that I think that I can ask Dr Tim Wright, to my left, the head of consents, to pick up. Those relate to the point raised by KCC and others about the reduction in lanes on the A2, Mr Bedford's question about 3D modelling, briefly, and thirdly, about wrong choices in signage, if I can call it that. Dealing with those in turn, please, Dr Wright.

DR WRIGHT: Thank you. Tim Wright for the applicant. First of all, I wanted to talk about the use of the A2, and I think our point about moving local traffic onto the connector roads, in terms of capacity, has been made and understood, but I wanted to make it clear that we also see a safety benefit as well. This is traffic that is making short journeys. It's joining and leaving the road network, and therefore, moving it on to a connector road will lead to safer journeys for those people, and for people who are travelling on the mainline because of less traffic coming on and off that mainline. They will also experience safer journeys. I just wanted to make sure that point was understood from us.

In terms of the 3D model, I wanted to talk and perhaps clarify a bit of understand around what we have. Clearly, we do use CAD, and we have built the engineering for the scheme through CAD, and that comes together in our model, but that model is a very technical model designed for engineering purposes, and for checking interfaces and so on. It's not really designed for the type of interrogation and understanding that, I think, is being requested, and whilst we have used it for the basis of our fly-throughs, which we've produced online – people will have seen that information – that is a very heavily computer graphics layer that is placed over that engineering model and requires a lot of work.

So it's not what – you might see a 3D model that you can fly around and look at it. It is a layer of some quite complex CAD models, and recognising that the examining authority did ask us to provide clarity about some of the areas concerned, so we did, of course, put in the enhanced cross sections at deadline 2,

which I believe, so far, we haven't received a comment back on. I haven't seen one, but maybe. So that, I think, is the best way to understand the scheme.

MR SMITH: Briefly, Dr Wright, in relation to that – because I think the examining authority has a distinct engagement with this discussion as well – we have been repeatedly scratching our heads about the best way to resolve the best level of detail to assist us to make recommendations to the secretary of state, noting that all of this very substantial CAF digital material is available underneath the fixed representations of the scheme, as set out in the document set that had been submit as the application documents.

One of our dilemmas is that if we ask for the submission of all of that information, all of that information is then within the examination, or it needs, legally, to be within the examination. We then need a technology that enables every party to interrogate it in all respects.

That is an extraordinarily large ask in computing power terms, in cost terms, and we did do some diligence of our own about the degrees to which we could reasonably make such a request, not just of this applicant, but A. N. Other applicant within the NSIP field at present, and be able to make that material available through the digital gateway that we have to the world, which is the National Infrastructure Planning Portal, and we would also have to capture that material so that the Planning Inspectorate owned it, because if it was left in the hands of the applicant, the applicant would have the opportunity to adjust that material in real time, and affect the material on which the judgements that we, and indeed then the secretary of state, must make.

There is a principle of our evidence that it must be, essentially, fixed in time so that the secretary of state does have certainty about which he or she is making a judgment upon. So we ended up concluding that we had to carry on using fixed representations, rather than asking for dynamic access to a large area digital model.

We may or may not have made the right call on that, but we believe, at present – and if anybody wishes to put anything in writing to us on that at deadline 4 then do – but we believe at present that we have broadly made the correct call, because the alternative is extraordinarily difficult, extraordinarily complex, and expensive to deal with, and also throws up a whole load of data integrity issues, and

data government issues, that frankly haven't been fully and easily resolved within the framework of an examination such as this, under the 2008 CAF.

So that's why, in our view, we are where we are, and we, at the moment, feel that we have got, essentially, the right cut between the amount of information we need to support ourselves and the secretary of state and not being overcomplicated here. So that, I thought, was an explanation that the participants in this examination deserved.

Dr Wright, back to you.

DR WRIGHT: Tim Wright. Thank you, sir. That was a helpful explanation of your position. The final point is in relation to signage, and all I wanted to say on that is National Highways operate the strategic road network up and down the country, and whilst, yes, these junctions do have a number of connections, as we've heard today, they're not dramatically different to other highways' connections up and down the country, and National Highways has a lot of experience in putting signage in place that supports people in making their journeys around.

That's not to say that people won't, occasionally, take the wrong line, but the experience of National Highways, its designers, and its constructors, to put in place signage that supports journeys, supports the end-to-end journey from the customers, will allow people to navigate their way through these junctions, and avoid taking wrong turnings, to the extent that it's feasible, given the way some people do make mistakes.

I wouldn't want to correct some of the route points that have been made. They are being correctly made about the divergency routes that you would take. There is a point to note though, that in many cases, the route would be no longer, in the future scenario, than it is today. It's simply that the decision point has been moved. So broadly the routes would remain the same length, but the decision point at which you might take the wrong turn, if you failed to follow the signage, would be moved.

MR SMITH: Okay. I'll check with my colleagues if there's anything else that needs clarification on those closing submissions from the applicant.

MS LAVER: Thank you, Dr Wright. I just wanted to pick up the point that Ms Dablin raised. Do you intend to deal with that in writing? Because if so, we'll put it as an action. I think she raised a valid point: what does happen if you don't get signage, you miss it for whatever reason, and you end up in Essex – what do you do then?

And I'm happy for it to come at a later date than it to be put on the spot, but I just want to clarify.

DR WRIGHT: Tim Wright for the applicant. Just to answer at a high level, there is no direct return from the A13 junction, so it would actually take you on to the local road network. I think we can supply the reasonable return routes in writing.

MS LAVER: Thank you.

MR SMITH: Thank you very much. Anything further? No. In which case, that has brought agenda item 3 to its conclusion. I did flag that we would break for lunch at about 1.15, and that's my remaining intention, so I think now we know the drill, we've done this once, we're going to do it again, but we're going to move this time, notionally, through the tunnel, reserving all matters 'tunnel' to a future issue-specific hearing, to Essex, and could I ask, then, the applicant to introduce agenda item 4 A13 A1089 LTC intersection, and we will, I think, find this easier to do, now we know what we're doing.

MR TAIT: Thank you, sir. So this is, again, Mr Hodge, on the review of function and travel movements, and the additional material pursuing to your decision.

MR SMITH: Thank you very much. Mr Hodge, when you're ready.

MR HODGE: Hello, sir. I'll just go through the same set of slides and the colours and everything are identical to the ones for the A2. So if I go to the first slide. So this is the strategic connections at the A13, A1089 and LTC junction. So the first connections are the connections for the Lower Thames Crossing through the route, so that was the northbound, and then you have the southbound, which crosses the A13 at this location here. The next slide shows the A1089 northbound onto the Lower Thames Crossing, and the second one here is going northbound on the 1089, and going round and coming back southbound onto the Lower Thames Crossing. This, obviously, is a key connection from the 1089 and Tilbury Port.

The next connection is to show the existing connection from the 1089 westbound to the A13, and the alternative – the opposite route, which goes from the A13 eastbound and down into the 1089.

So those are the core strategic [inaudible]. This shows coming from the A13 westbound. Here, this is a new connection, so it's shown solid. So we've removed this connection from the A13 to the 1089, so the way that that movement would be provided is that you'd go round the Orsett Cock roundabout, go on to the A13 slip road, which goes back on to the A13, and then has a diverge, which then

goes and joins the A1089 southbound, and the other movement is if you're coming northbound out of the 1089, and going eastbound onto the A13.

So that is the major connections.

MR SMITH: Can I ask a reasonably detailed question at that point? Because it was on my list of questions to ask there, that, essentially, the west to southbound movement from the A13 onto the A1089 now becomes a partially indirect movement, because it comes off at the Orsett Cock, and then it continues through the new slip on the 1089 southbound. Whereas the northbound movement is retained as a direct slip to the main line of the A13. I may have missed it somewhere in the many millions of words that we've read, but I don't have, crystallised in my head, an understanding of why the distinction. Why was it viewed as necessary to keep the direct connection northbound, but the southbound was one was felt able to be an indirect connection using Orsett Cock?

MR HODGE: The main reason for that is because of the slip roads, the layout of the slip roads on the south side of the A13 are – in a previous version of this, we did have a direct connection of the A13, which was the A13 southbound and the A13 northbound. We then took a direct connection off that, but what that did was it prevented local traffic from the Orsett Cock roundabout accessing the 1089 southbound, because unless they were on the A13 to the east of Orsett Cock roundabout, they would not be able to access the 1089.

MR SMITH: And this also runs to the question of port access to DP World London Gateway, and Manor Way, because thinking about how they would move to the 1089 if they wanted to, they would need to make that movement.

MR HODGE: If that was a desired movement they'd want. It depends where they're starting from and also going to. Yes, that's right, sir. Yeah.

MR SMITH: Okay. Yeah, please continue.

MR HODGE: So the next route shows the connection from the A13 westbound to the Lower Thames Crossing northbound, and so that is using the new link road, which is to the west of the Orsett Cock roundabout, and coming off and using this new slip road that goes up through here. The next route is the southbound Lower Thames Crossing link, when then joins into the A13 before the Orsett Cock roundabout, and then there's the two from the south, so the A13 westbound to Lower Thames Crossing southbound, and then the Lower Thames Crossing

northbound, with the loop slip road and coming back, and joining the connection from the LTC southbound, and running onto the A13.

So that's the strategic and then the major connections, so if I now go into the local connections. So again, if you're on the 1089 and you want to join either Lower Thames Crossing either northbound or southbound, you can. So there's a junction further down. There's obviously the Asda roundabout junction as well, where people can get on and they can come up and join LTC northbound, or LTC southbound.

The next connection – this is the one that I'd like to just explain, because this is where if you're on the A13, again, if you're to the east of Orsett Cock roundabout, you're able to join LTC northbound, but if you are at Orsett Cock roundabout, you have not got a direct connection onto LTC northbound or southbound, and that's because of the slip roads to the west of the junction. The slip road from the Orsett Cock roundabout goes over the top of the exit slip road on the A13, and then the link from LTC southbound, and here you could either come off to go onto the A13, or you also join the Orsett Cock. So that I'll put that in as a local connection, rather than a main.

So the connections to Lower Thames Crossing southbound is the same. You would have to be to the east of the Orsett Cock junction to be able to join Lower Thames Crossing southbound, but you do have the same access of coming northbound on Lower Thames Crossing. You can then join both the A13 and Orsett Cock.

This slide is really just to show the local roads where – the existing ones are shown in dotted, whereas the realigned ones are shown in solid. We have to realign the 1013 through here to be able to fit the slip roads in between the 1013 and the A13, and we have to move Baker Street, because of the implication of it. Baker Street goes through the actual junction, so we have to realign that one, and these are the traffic movements.

Again, the purple is the route, and if there's a changed route on the [inaudible] scheme, it's shown in red. So again, we picked some points. They are just representative of route paths that we thought might be useful. A point I'd like to make here is this is [inaudible] A13. On the slides that we provided, actually, yesterday, there's a wrong title on those. It's a –

MR SMITH: So you will seek to replace it.

MR HODGE: We'll replace that, yeah. Certainly. So this shows going from A to B. This is the A13 going eastbound, and then the other direction, and then with the scheme, there is no change. By 'no change,' I mean there's no change in route, so – then [inaudible] Orsetts – sorry, Orsett, here, to Little Thurrock. This route goes down the high street of Orsett and then down Baker Street, down the 1013, and that's the reverse. With the scheme, it's slightly changed, because of the realignment of Baker Street and the 1013, but it is a very similar route.

MS L BLAKE: Sorry to interrupt, sir. I just think that I'm hearing from some people in the room a bit of confusion over these, and it did confuse me as a lifelong resident of Thurrock this morning, when I first looked at these. Little Thurrock, if you look at it and you're thinking the Deneholes roundabout, or Blackshots roundabout on this map, and on the previous maps, if you think [Stifford Clays?], because, although we've mentioned it's National Highways ongoing through the consultations, they still intend on labelling Stifford Clays and Blackshots as Little Thurrock. So that might help, actually, for some people to get their head around what we're looking at.

17 MR SMITH: Indeed, yep.

- 18 MS L BLAKE: Thank you.
- 19 MR SMITH: Thank you very much. Noted.

MR HODGE: Sir, I'll just run on to the next slide, which is A13 to Alsmitt[?], so that's coming from the point B on the slide through the Orsett Cock roundabout and using Retory[?] Road to go to Horsehead[?]. There are alternative routes to do this. You could go up through the A28, but we've taken this particular route, just to show the impact. Obviously, going reverse, it's the same route. With the scheme, that route would still be available.

Then from Orsett down to point E – sorry, from A13 to point E, this would use the A13 westbound through Orsett Cock and along the 1089. This route and going back would be the same route in reverse. Then what we've got with the scheme is that there's a slight difference, in that there's a realignment to the 1013 and that would be the same for the return journey.

The next one is the A13 to 1089, which is the one that we showed in the functional plans. That goes from A13 westbound down to the 1089, currently, and the other movement is this loop slip road that goes round and joins the A13 eastbound. With the scheme, this one would have to come off at Orsett Cock and

use the new link road that would be provided through the junction, to go down to the 1089, and the other direction is unchanged.

So that finishes the traffic movement. We have got some movements here for the Port. Would you like me to carry on with those, or...?

MR SMITH: Yes, no, that would be very, very useful, and I think probably when you've finished painting that picture in principle, we might call lunch, which would then leave item B: siting and land taken, the design rationale, to after lunch, and then we will obviously hear from parties. So, over to you.

MR HODGE: Thank you, sir. So, this is showing access from Thames Gateway Port, which is just slightly off the map, as Manor Way roundabout is about this location here. So they come up the S10.14, along the A13, and they join the new link road to get access onto LTC northbound, and they would again come this way to connect us onto LTC southbound. And then, from the Lower Thames Crossing, they could come down, join the A13 at the A13 junction, using the A13 eastbound to go into the port, and with the north, they could come up and around and do the same movement. So you do provide all movements from the east. So access from Tilbury Port, again it's coming up the 1089 and directly onto Lower Thames Crossing northbound, and the other movement is, again, the same as before. It comes onto the loop slip road and southbound onto Lower Thames Crossing.

The access into the port from the M25 would be from junction 30, along the A13 and use the existing routing. Obviously, this link here would have less traffic on it, and this point up to the connection with LTC would have less traffic and the Dartford Crossing would have less traffic on it. That is seen as the main route back into the port. However, there is another alternative, which would be using Lower Thames Crossing going northbound, going around the loop to get back onto the Orsett Cock roundabout, around the Orsett Cock roundabout and then using the southbound link into the 1089. Obviously, it' a longer route and you're going through traffic signal controls here, but that is an option, and then the same with the southbound, you could come down and go through the Orsett Cock and down to the 1089. That's the links that we've shown, sir.

MR SMITH: Okay.

MR SHADAREVIAN: I think Dr Wright can add on the ports point, in relation to the volume of traffic predicted to be making those movements on the last two slides.

MR SMITH: Look, I think, in terms of pitching where to take a sensible break, it would be very useful to get the complete story told from the applicant, as you see it, so we can then open the conversation about it after lunch. So yes, Dr Wright.

DR WRIGHT: Tim Wright, for the applicant. So in terms of our own position about connectivity to the ports, with one exception that we've talked about but I'll come back to, the ports retain all of their existing access that is already in place, except that along the A13, junction 30, the traffic is reduced and therefore that access route is improved for them. The one exception is the direct link from London gateway through down the 1089 to the Port of Tilbury, so westbound and southbound, where initially they would have been able to come directly off the A13 onto the 1089, and now they route through Orsett Cock, for reasons that my colleague, Mr Hodge, explained.

In terms of additional routes, then, we provide a number of additional routes, and most of them are free flow, provide good free access out for the ports and for DP World good free flow into the port, as well. In terms of routes into Port of Tilbury, obviously there is this route that could use Orsett Cock roundabout, but our traffic modelling indicates that actually, it's not a preferred route and the preferred route would continue to be to use the M25 and junction 30 and the A13, taking advantage of the reduced traffic on those routes.

And to give some sort of basis to that statement, we've pulled off from our modelling the use of the – traffic that comes through Orsett Cock roundabout and leaves by the link onto the A1089 southbound. And in 20.30 in the a.m. peak to the p.m. peak, that is between 245 and 309 PCUs, if I can use that as a shorthand for volume, and then when you get to 20.45, that's 327 up to 433 in the p.m. peak, so it is relatively little used. By the nature of how these junctions work, there are obviously a significant number of routing options that you could take, all over the highway network. But our modelling shows that this isn't a preferred route, and so we see, and would sign, that using the M25, Dartford Crossing and Junction 30 as being the prioritised route to the Port of Tilbury.

PARTICIPANT: [Inaudible].

MR SMITH: Okay, fine. Okay, thank you very much, Dr Wright. Mr Shadarevian, I see your hand on your light.

MR SHADAREVIAN: We do have a few minutes, so I'm just wondering whether it would be possible for the applicant just to show, as a matter of completeness, because it may be relevant, how –

MR SMITH: Mr Shadarevian, can I just ask you to hold for a second?

MR SHADAREVIAN: Sorry, apparently my mic wasn't in the right position, so I hope people can hear me now. I was going to suggest that what we see is, where traffic goes travelling south on the Lower Thames Crossing in order to get to places Little Thurrock and Chadwell St Mary, because there is additional traffic that is not accounted for, probably unassigned, and it may assist in tomorrow's discussion about that just to show how those movements operate.

MR SMITH: Thank you, Mr Shadarevian. Is that something, Mr Tait, that your team can assist with in the gap between –

MR TAIT: We'll ascertain exactly what it is that Mr Shadarevian is looking for and then we will come back as soon as we can on that.

MR SMITH: Okay, well then maybe in that case we have reached a point where we might break, because you can have those conversations after the break, then we can return and hopefully clarify on that point. By the time we've finished, it will be 1.10. Can we resume, please, at 2.10.? Does that meet everybody's needs? Good, in which case we are broken until 2.10. Agenda item 4 is part-heard and we will resume where we left off. Thank you very much, ladies and gentleman.

## (Meeting adjourned)

MR SMITH: Ladies and gentlemen, it is now just passed 2.10 in the afternoon, and so we are resuming issue-specific hearing 3 on design-related matters. We are partheard through agenda item 4; the applicant had completed its submissions on items A through to A3. So we will go back to the applicant to enable us to hear their submissions on 3(b), and then in the same way that we did this morning, I will then move and introduce the other speakers on these items. Just before we do, can I just make a polite request that when there is a speaker using the roving microphone, we have had requests from outside the room that perhaps they stand up to speak. Because apparently the cameras aren't capturing speakers using the – if we're on these front desks, we can easily be seen as somebody who is speaking, but yes, somebody speaking using the roving microphone isn't being

picked up particularly well on camera, so I will just relay that request. Mr Tait, I'm going to return the submissions to you for the applicant.

MR TAIT: Thank you, sir. Just before the break, there was a question from Mr Shadarevian, which has been clarified during the break, and I'm going to ask I think Dr Wright to respond to that. Is that right? He's accepted that.

DR WRIGHT: Tim Wright, for the applicant. Quick conference there on who was actually going to speak. So, we had a talk to London Gateway Port to understand their ask, and they've asked us to just clarify around the movements in relation to Orsett Cock junction. So if we could just move to the next slide, or bring up these images, which I think are the best background, but I won't actually be – and the next one, please? There we go.

So if you'll recall, we were talking about movements from Lower Thames Crossing northbound, Lower Thames Crossing southbound, can leave and join onto the Orsett Cock roundabout, and we talked about them then travelling down the A1089. The clarification we were asked to provide and happy to is, of course, there are other local connections that are available from Orsett Cock.

So as well as the A1089, you can join the A128 northbound, you can join Brentwood Road southbound and you can join the A1013, both westbound and eastbound, and in fact the A13 westbound from Orsett Cock roundabout. So I did give numbers before and I will again. I'm not going to break them down by turn in movement entirely, but to give a sense of the overall traffic using those routes, in the do minimum – sorry, in the 20:30 model, do something, in the a.m. and p.m., that would range between 1178 and 1687 PCUs, and in the 20:45 a.m. p.m., it would range from 1459 to 2038, using that movement in total.

Now, obviously, some of those would be vehicles that are taking advantage of the new route and making a journey through Orsett Cock roundabout that they wouldn't have done previously, but many of those will be journeys that would have otherwise come across the Dartford Crossing, travelled along the A13, come off at Orsett Cock and made that journey anyway, so those numbers I give are a combination of the existing usage that would happen in minimum and existing users choosing to take that route.

MR SMITH: On that point, without making a detailed point that moves into too much detail, are you able to give a kind of rough sense of the split there, between those that would be new uses of the Orsett Cock and those who are just being

transitioned from one mode of passing through it into another mode of passing through it? Because obviously it's the former that are the potential increase in utilisation that might be relevant in thinking about how it performs.

DR WRIGHT: Tim Wright for the applicant. I'm afraid I don't have those numbers in front of me now, but I'm happy to follow up on that response.

MR SMITH. Right. Excellent. Right.

MR SHADAREVIAN: Those numbers are quite important, as you might imagine, and you've hit the nail right on the head. Those figures are important for you and your colleagues have before you in making any determination about the capacity of that junction, and its utility and any impact it may have on the operation of the port and other impacts on the local road network.

So it's important that we get that information as soon as possible, and obviously it's important that tomorrow's proceeding should be caveated on the basis that, in the absence of that information, it makes discussion that much more difficult.

MR SMITH: Yes, both those things are noted. And in that respect, given that, Mr Shadarevian, there have been productive conversations, I trust, over the lunch break that led you to where we have currently just heard from Dr Wright, if it's possible to speak either in the break this afternoon or after the conclusion of this afternoon's hearing with a view to getting some figures in for tomorrow, because Mr Young will be going back through Orsett Cock in more detail – we are trying to understand the big picture and the traffic movements here, whereas Mr Young will probably be able to go into matters in more detail. So yeah, if we could get something discussed before we commence tomorrow, I think that would be very helpful. Mr Wright, is that going to be achievable?

DR WRIGHT: We'll endeavour to do so, but until I've actually checked from my colleagues, who would have to and extract that data for me, I can't firmly commit to that. But I understand the ask and why it's being made.

MR SMITH: Okay. Mr Shadarevian, does that help?

MR SHADAREVIAN: I'm grateful for that. I'm going to just say this as well, in advance of tomorrow. There is a real issue with modelling at the moment and the amount of information that's available, which again is going to impact on proceedings tomorrow, and we are running out of time. And we do need to advance the modelling between the parties in order to understand what those impacts are.

Bearing in mind we are a party who are in support of this proposal, subject to those issues being resolved, because of the importance of this on the operation of the port and the park, it is a matter of great concern to us that there is still considerable delay, in getting a model, an appropriate model, together which accurately identifies the impact on that junction. That is both Manor Way and Orsett Cock in combination, having regard to the impacts of Orsett Cock. So I just make that point now, sir. MR SMITH: You have made it indeed, and accelerated it in the minds of many around the table. I'm sure we will come back to that, and hopefully we can come back to that in a way that delivers a productive solution that helps us to move forward during these hearings, rather than afterwards. Yes, Ms Blake. MS LAURA BLAKE: Thank you, sir. Laura Blake, Chair of Thames Crossing Action 

AS LAURA BLAKE: Thank you, sir. Laura Blake, Chair of Thames Crossing Action Group. Can I just ask, as well, that we get some clarification on whether these figures are actually taking the expansion at Tilbury Port into account? Because on the uncertainties log, I'm unable to see anything about the Freeport and Tilbury 3 and 4, so I just wondered if the figures being quoted include that, or if they are just as they are now?

18 MR SMITH: Rest assured that Mr Young has that issue on his list for tomorrow.

19 MS LAURA BLAKE: Thank you.

MR SMITH: I do see Thurrock.

MR MACKENZIE: George Mackenzie for Thurrock Council. The first – we were indeed also planning to deal with these matters tomorrow, but given the matter has been raised now, for Thurrock, we just – I wanted to just effectively emphasise our support for what Mr Shadarevian has said, and to add the following top spin, which is that if these numbers are going to be produced and shared – and we say they must be – then we would like to see the model and quantitative outputs from local microsimulation models, as opposed to the LTAM strategic model. And that's a point that we've made in our written submissions, but I felt that it was necessary to emphasise it at this point, sir. Thank you.

MR SMITH: Thank you very much. Well, we have taken a tour around those matters, and to a degree –

MS DABLIN: Apologies, I don't wish to interject. I had my hand up. Sorry, Alison Dablin, for the Port of Tilbury.

MR SMITH: Apologies, Ms Dablin. One of these days I will see yellow in the screen in front of me as well as a physical hand in the room. Ms Dablin, please do continue.

MS DABLIN: Thank you. It was just a very short point in terms of the data that would be very useful in terms of the Orsett Cock roundabout. Dr Wright gave some numbers before the break as to the number of PCUs that were connecting with the A1089, and then he has just given some numbers overall. And if I have noted things down and done the maths correctly, it looks like approximately 20% of all traffic on the Orsett Cock will be seeking to connect with the A1089, and that seems like a very large figure and it would be useful to have the data in front of us in written form, in order to be able to analyse it correctly. Thank you.

MR SMITH: Thank you, Ms Dablin. Okay. That point is noted and hopefully can be taken into account before whatever emerges before tomorrow emerges. But I am going to return to Mr Tait now.

MR TAIT: Thank you, sir. If I can now ask Mr Roberts, in relation to item 4 to pick up siting and land take, before moving on to Ms Clare Donnelly.

MR ROBERTS: Thank you, Mr Tait. Steve Roberts, for the applicant. As Mr Tait notes, I will be working with my colleague, Ms Donnelly, here, to take this agenda item. I'll start with the more engineering matters, perhaps. So I will structure my answer, if I may, in the same way, as I did to item 3B. That's under the three headings of: firstly, seeking to maximise scheme benefits by providing appropriate connectivity and to achieve the required capacity to coordinate the forecast traffic flows; the second point being taking account of existing site constraints; and the third, achieving a safe layout, compliant with relevant standards. So, starting with connectivity, there are 16 possible connections that could be made between the A13, the A1089 and the proposed Lower Thames Crossing. Four of these are existing connections, which we saw this morning, between the A13 and the A1089. Of these, we've decided to prioritise 10 of these, so four of which are existing. So six new movements and we believe that these new movements would provide the greatest benefit, and in balance with, had we proposed an all-movements junction at this location, it would have resulted in much greater land take and impact on existing constraints. Clearly there are benefits to provide some links between Lower Thames Crossing and both the existing A13 and the existing A1089.

However, having considered carefully the forecast traffic flows, we have determined that the east-facing links onto the A13 would provide the greatest benefit. It then follows, in terms of the siting of Lower Thames Crossing in relation to the existing connections, that by placing the main line of Lower Thames Crossing to the east of the A1089, it meant that we could make those east-facing connections to the A13, without having to cross the A1089, either under or over.

This also meant that Lower Thames Crossing was kept to the east side of the existing junction, and therefore having less impact on the communities to the west. We also recognise the importance to connect connections to the 1089. And our decision therefore was to site the proposed junction as close as possible to the A1089, to simplify and minimise the length of connections to it. So we could have possibly sited a junction further to the east, subject to finding a suitable location within existing junction, but then our connections back to the 1089, which we wanted to make, would have been longer and more circuitous and possibly more impactful.

So, going onto the constraints around this junction, there are many existing constraints, as you might imagine, at the A13-A1089 Lower Thames Crossing junction, including the communities to the west, around Grays, Blackshots, Deneholes, but also to the north and east, particularly Baker Street and towards Orsett. There are various clusters – smaller groupings of properties – mainly residential, to the south and east, including the Whitecroft care home. Environmental constraints in this area include various heritage assets and also the Blackshots nature area, which is to the west. There are significant utilities in this area, which provide constraints on the design. And there – as we've discussed just before lunch, there are various local roads which provide important local connections which need to be accommodated within the overall design.

Moving on to design standards, as I say, the strategy here was to make a connection with the A13, with east-facing connections. The standards are – the design standards are such that placing an entirely new junction between the A1089 and the Orsett Cock roundabout would be difficult to accommodate, and therefore our strategy was to modify and add to the existing connections already provided around the A13, A1089. So in design terms, our strategy was to try

and over-replicate some of the existing features in the junction, such as the loop slip roads that you see to the northwest, and to try and contain the junction within that northwestern access and east-west axis, towards Orsett Cock junction. So we've tried to keep to – perhaps use the word, slender, but narrower corridors, then perhaps if we'd gone for a more traditional junction design, if you like.

So if I now may move to the point that you ask about, 'how did the relationship between this intersection and the settlements at Baker Street come about?' So we recognise that our proposed junction layout brings Lower Thames Crossing and associated connections closer to the nearby communities, particularly around Baker Street.

MR SMITH: Yes.

MR ROBERTS: One alternative to reduce that impact on communities, as I mentioned earlier, would have been to site the mainland Lower Thames Crossing to the west of the 1089. But, as I said, that would have meant that connections back to the East would have had to cross and would have a greater vertical scale at the junction, compared to the layout that we have got. And I think that concludes the key points I wanted to make.

MR SMITH: Can I just explore that particular point for a moment? Because, I mean, clearly on any measure, the proximity of this particular intersection as designed to Baker Street, as a settlement, as a community, is very close indeed, and the effects upon it are weighty matters that we will have to deliberate very carefully upon, and we have felt a need to understand, better than we think we currently do, what drove you to that particular very close physical proximity.

Now I do understand what you have then said about the nature of needing to cross the 1089; the fact that if the main line of the LTC had been further to the west that you would have ended up needing multiple crossings of the 1089 at depth, so you'd have ended up with a taller junction structure, one that would have been a potentially more substantial impact in landscape terms. You would also have ended up with an A13 main line that was physically closer to the pre-existing settlements directly to the west and the south.

But would one have ended up with something that, in impact terms, was equivalent to the effects that are being delivered to Baker Street? It's a moot point and what we are not seeking to do is to essentially orally redesign that which is before us, because we have to make a recommendation to the Secretary

of State on that which is before us, but we do have to appreciate why the specific nature of the adverse effects, particularly on Baker Street, have ended up essentially being recommended to us as acceptable in circumstances where they are quite substantial, looking at the land available in the gap between the two settlements. So if you are able to shine any more lights on that at all, it would assist us.

MR ROBERTS: Thank you, sir. Steve Roberts, for the applicant. I think what I would say, is that the – what we are trying to weight up here is perhaps an alignment to the west, which would have those connections that we've just touched on, but closer to the communities to the west, versus an even closer link to a smaller number of affected properties around Baker Street.

So I would say that, had we put the main line to the west, we would have been further from the existing communities than we are at Baker Street, but we would have been affecting a greater number of people, and that's what we've weighed up, and that, in combination with the, as I say, the desire to have these east-facing connections and not have them cross over the A1089, led us to prefer the arrangement which is closer to Baker Street.

MR SMITH: Okay. I'll just check with my colleagues. Any other follow-up on that before we move on? Okay, thank you very much. So please then do move onto the subsequent element of your submissions.

MR ROBERTS: Thank you, sir. I'm going to handover to Clare Donnelly at this point, who will cover some of the mitigations that we've put in place.

MS DONNELLY: Okay. Clare Donnelly for the applicant. Just going to change the slides. So once again, we plan to discuss mitigation measures through key examples of how mitigations have been incorporated and implemented around the junction, through its design evolution. However, before we commence that, I think it's very important that we should note the unavoidable impacts that we are having on cultural heritage in this location, particularly the loss of listed buildings and the impact on an ancient scheduled monument.

We have discussed these in detail with Historic England, who concede that these impacts, while substantial, do not outweigh the benefits of the scheme as a whole. And while we are focusing on the design of the junction today, we would note that we are still continuing to make considerable efforts to limit cultural heritage impacts through the development of the construction

methodology for both highways and utilities works. In the past, this has included the avoidance of another scheduled ancient monument, the Iron Age enclosures, which are to the north-east of the junction. So I'm not going to engage too much more with the cultural heritage mitigation, but we understand the seriousness of that.

Okay. So I'm going to take you through, once again, through one of our aerial views. First of all, for orientation we are now looking at the existing A13 junction from the north, looking back south towards the river. You can see the A13 running east-west across the page. Important features to note on this view are obviously Baker Street, which runs straight north-south down through here; the Baker Street windmill, which is a local landmark; the Whitecroft care home here, as well.

The junction – existing junction is also located with surrounding open spaces, which is very important. That includes Blackshots Nature Reserve, also known as Ron Evans Memorial Park, and also the Orsett Showground, which is just off to the left of this image, which I will talk a little bit more about, later.

Now if I take you to the statutory design layout of the junction. Throughout, efforts have been made to reduce the overall layout of the junction. Through course of design development, and response to stakeholder feedback, the applicant has sought to reduce the impact of the works on spaces in and around the junction. For example, the design was modified between statutory and supplementary consultation to remove the requirement to realign Rectory Road, which is, once again, off to the east of this image, which greatly reduced our impacts on the Orsett Showground.

But to concentrate on impacts we can see in this image – supplementary consultation then – we tightened up the design of the slip roads north, so if we can concentrate on this area here, I will focus back – we pulled those slip roads north to reduce our impacts on Blackshots Nature Reserve. We also, if I could just draw your attention then again to Whitecroft care home, which I'm going to go back through existing for - here, we go, it's in this location. Through the course of design, between statutory and supplementary design, we managed to pull those slip roads away from those key facilities, in order to reduce and mitigate those effects.

In terms of the mitigation designs for residual effects, much of the work for mitigation at this junction has been done through planting design. So the – you will note, if we go back to the existing slides, the typology of landscape through this location is generally flat, open land. It is slightly more rural to the north of the A13 than the south of A13. The A13 acts as a natural barrier, and planting along this corridor is read as a sort of wooded ridge line along the horizon, and when it is viewed from either side. This is what gave support to our strategy that we would do extensive woodland planting around each of the junctions.

Statutory consultation, with regards to specific impacts. You can see that we had quite large structures here located exactly on the fringe of the Baker Street area. We have sought to reduce those visual impacts through implementation of additional earthworks and mitigation. So in this version, which is our design at DCO, you can see here, we have got a false cut, which has been provided on the edge. We have reduced the scale of the structures, but we've also provided that additional mitigation to screen the junction for properties on Baker Street through here. In addition, and similarly, we provided an earthwork fund, outside Whitecroft residential home, in order to mitigate the visual impacts through there. There is extensive use of earthworks throughout the junction, with some bunds rising up to 9m high above the surrounding ground level.

We thought it might also be useful at this point to talk about views of the junction from the other way, just to show the other ways that we have incorporated earthworks. So here we have Orsett Cock roundabout in the foreground. This picture was taken when there was roadworks being done on it in the past, and you are looking towards the A13 junction with Blackshots Nature Reserve here, and Grays in the background. This image shows how we have used pockets of planting in the pockets between the various slip roads to screen the works, but also how it is majority in cutting and it is particularly clear in this image on the Chadwell link and the approaches coming into the junction, the use of false cutting, which would screen the road from surrounding views.

The integration of those earthworks are particularly important, and we wanted them to appear as contextual and tailored to its location as possible. So careful integration of these earthworks is secured through the design principles,

S 11.01, which describes how earth bunding should be planted to appear more 2 naturalistic, and S 11.05, which specifically refers to the use of planting to 3 reduce visual impacts and integrate acoustic bunding within the junction. These 4 are in addition to project-wide landscape principles to retain existing vegetation 5 as far as possible and integrate visual screening. Together with the tree planting 6 of the junction, we believe this design has successfully balanced the function of 7 the junction with the mitigation of significant effects. That concludes our 8 response. 9 MR SMITH: So, then, running to our final question there, I'm taking it that it is your 10 submission that the design, as put before us, is therefore the best achievable 11 resolution in policy terms. 12 MS DONNELLY: Yes. Yeah. 13 MR SMITH: Okay. Any final probes from my colleagues before we open this up? Now, 14 looking to those who are here to speak on this item, just as before lunch we were 15 very much south of the river in Kent, we are now north of the river in Essex, in 16 Thurrock. So what I am going to do is I'm going to go to Essex County Council 17 first, then I'm going to come to Thurrock, who as a unitary I'm sure will have 18 most to say, but I will go to the county council first, so can I ask for Essex County 19 Council's observations on this item, please? 20 MR MACDONNELL: Gary MacDonnell, Essex County Council. Given that Thurrock 21 are the highway authority within the area, it probably would, if I may say, be 22 sensible for them to kick off, in terms of response on this. 23 MR SMITH: Okay. 24 MR MACDONNELL: I think that that might also save us a little bit of time, because 25 we'll probably end up supporting some of the points that they make within their 26 submission. 27 MR SMITH: Okay. In which case, let's cut to the chase. Thank you for that offer and I 28 will go to Thurrock, then, first. 29 MR MACKENZIE: George Mackenzie for Thurrock Council. Thank you, sir. Sir, the 30 way that we would like to deal with this, with your permission, is, I'm going to 31 ask Kirsty McMullan, seated to my right, to address you on, effectively, the 32 detail, and when she has done that, I'm going to look behind me and see if any

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of the other wider team have any other comments to add at the end. But before

I hand over to Ms McMullan, I'd like to make two sets of preliminary observations, if I may.

The first set of observations concerns the visualisations that we've been dealing with today, and in particular the traffic flow diagrams. We are – firstly we recognise that the applicant hasn't, perhaps, had much time to produce these, and nor have we had much time to digest them. As and when further digestion takes place over the forthcoming weeks, it would be enormously helpful for us to understand precisely what the applicant means by the three different categorisations of connection type. Strategic, major and local. At this point, that's not clear, but we would welcome further clarification of that matter.

The second, kind of linked point under this head is we would also like to know whether the strategic connection type shown on the plans are coterminous with the proposed extent of the strategic road network, or not. And then the third point in relation to these documents is this: that at this point today, we have heard, as yet, nothing about public transport, and the way in which public transport modes will circulate around these junctions, and perhaps it's a point that will be addressed later, in writing, perhaps, but it's something that we flag as a concern at this stage. Thank you. So that's the first set of observations to do with these documents.

And then the second observation I make is to pick up on a point made by Mr Bedford KC for Gravesham earlier this morning in relation to the access to the 3D models, and so well understand the positioning that the authority has come to, following consideration of effectively the request in relation to the kinetic and dynamic models, and clearly there are practical and wider concerns in relation to that, which we well understand. But what we say would be enormously helpful to have access to, which hopefully avoids all of those concerns are — is access to zoomable PDFs of the entire route. And at the moment the position is that zoomable PDFs have only been provided in relation to specific junctions, but we assume that a full set of zoomable PDFs exists.

That's effectively a 2D non-dynamic model, or data set, which we say would be enormously helpful for us to understand at the fine grain level effectively what is going on, and if we can effectively seek access to that data set, we'd be very grateful. So those are my preliminary observations, and at this point, I will, as I said, invite Ms McMullan to address you, if I may.

MR SMITH: Mr Mackenzie, just before you do, on that final point about zoomable PDFs, because of course that is essentially through us, prospectively an additional information request that we could make of the applicant, would you like us to take that away and deliberate on it as a procedural decision? And if so, before we do, in fairness to the applicant, we need to hear their position on it, as well.

MR MACKENZIE: Yes, of course, sir.

MR SMITH: Okay. So I will just flip that back to the applicant. Is there anybody else who needs to speak on it? You don't need to repeat what Mr Mackenzie has said, but before we go to the applicant, is there anybody vehemently opposed to this – the usefulness of this idea or with a different consideration that they want to bring forward?

MR BEDFORD: Michael Bedford, for Gravesham Borough Council. No, we're not opposed to that, in the sense that any additional information that enables better interrogation of the visual impacts of the proposal would be welcome, so we would support the request that's been made, but we will in our post-hearing submissions add some further thoughts on other ways in which taking on board the points that you have made and that Dr Wright made about our original suggestion. We will add some additional thoughts in our post-hearing submissions about other things that may hopefully move us forward, as well.

MR SMITH: Okay. We have apparently just lost the live stream, so I will just briefly put this hearing onto hold until we can be informed that that has been remedied. And if I could ask for a signal from the technical team in the rear of the room once it's clear that we are able to resume.

Ladies and gentlemen, we seem to have service restored, in which case we are returning, after a very brief break, to agenda item 4 and to a discussion, effectively, on a point raised by Thurrock Council about the possible usefulness of zoomable PDF material that might be submitted by the applicant. Now, we'd heard from Mr Bedford, and I believe we had a – Mr Bedford, was your point sufficiently finished? Okay. Ah, it looks as though we are offline again. So bear with us, ladies and gentlemen. As soon as it's known that we are service restored, I will resume.

Can I just ask for an update? What are we – what do we think is the -okay, I've just been advised on behalf of the technical team that there is a matter that is taking some time to resolve, so I'm going to call a 15-minute adjournment.

So can we resume, please, ladies, and gentlemen, at 3:05 pm, and we will attempt at that point to take a straight run and that may mean we cut out what otherwise would have been an afternoon break. Thank you very much, ladies and gentlemen.

(Meet

## (Meeting adjourned)

MR SMITH: We're good to go. Excellent, and the relevant [inaudible] slides have been removed from the virtual room. Ladies and gentlemen, Rynd Smith, panel lead, returning to chair this afternoon's session and apologise for the brief and unplanned intermission. Occasionally, digital technology, which does wonderful things for us, doesn't perform quite as well as we would like. It is important that we do try and make sure that those who have relied on the virtual technology are able to be with us to the extent that we can have them with us, and we understand that their participation is now fully restored.

So we're returning to agenda item 4 and we were moving into the start of Thurrock's submissions and we were resolving a question about access to essentially one or more Zoom-able PDFs and I'd received various submissions and I believe I was going to go to Mrs Thacker just before we broke, so can I just go to Mrs Thacker? Just before I do go to Mrs Thacker, can I just check that there is nobody else who wants to address us on this point once we've heard Mrs Thacker because I will then put it to the applicant? Good. It's just you, Mrs Thacker.

MRS THACKER: Thank you. Jackie Thacker, local resident, opposite Baker Street area. During many of the consultations over the years, I've frequently requested that there be an actual physical model of the project so that the visual impact can be appreciated by the general public, especially those that don't have the technology or the ideas to actually initiate the programme and use it sufficiently, and it's been denied so far. Is there any reason for this, please?

MR SMITH: Okay, right. What we're then going to do is we're going to just put that back to the applicant. I mean, essentially, as we understand this request, it would be whether or not the design of the scheme could be resolved into a single – or possibly two or three – Zoom-able PDFs. That would still leave a meaningful amount of data visible to avoid the dilemma that I know we all face, which is

running through individual sheet by individual sheet to follow the design. Dr Wright, I'm assuming you're going to respond on this point.

DR WRIGHT: Tim Wright for the applicant. So we took advantage in the break to speak to Thurrock Council and understand a little bit more of their ask and we can confirm that we would be able to produce our engineering drawings on a Zoomable PDF. We will look at doing further of the general arrangements which they also asked for. That may be challenging in terms of the resolution of information, but we will look at that. What I would say is they're going to be quite large drawings, so I think I would ask for a conversation with the case team about the best mechanism to submit these into the process.

MR SMITH: Absolutely, because if we're going to accept them – and the reason we've been very [inaudible] so far is that we need to have publishable documents that are downloadables and so therefore the case team needs to be convinced that they can receive them and that they can disseminate them onwards through the examination library. Assuming we can solve those problems, then, yes, it sounds like we have the core of a usable solution on both sides, so Thurrock agreeable as well to that solution. Let's make a target to try and solve these matters by deadline 4 if we can.

MR WRIGHT: Tim Wright for the applicant. I'll confirm back to you whether that's feasible.

MR SMITH: Thank you very much. Much appreciated. In which case, let's return to the substance of this afternoon's hearing and Thurrock Council and the observations that they were going to make on agenda item 4.

MS MCMULLEN: Thank you very much, sir. Kirsty McMullen on behalf of Thurrock Council. The applicant has covered all of agenda item 4 in one go, splitting it down into three pieces. There's a lot there to cover. Conscious of time, but also we've got a lot to say. At this stage, we'll have to make a written submission for further detail, but I will go through our points. So in terms of the function of the junction, as Mr Mackenzie said, we are concerned that there hasn't been any mention of public transport or active travel to date, and how road users – all road users – would be able to navigate through the junction, how they would be impacted both in terms of journey time, reliability for public transport services, how they could be impacted in terms of the commercial viability of public

transport services, given the congestion and delay that is shown on the localised modelling of this junction that we've been reviewing.

I won't dwell on modelling. We'll cover that tomorrow. So we would request that the applicant provides – as well as the submissions that they've made last night – clear evidence in terms of how all road users would use the junction. Turning on to the junction itself, so one of the council's key concerns is that it's clear from those route diagrams that the LTC requires the use of Orsett Cock in order to function and Orsett Cock is part of the local road network. What the modelling is showing is that there would be an increase of 14% in the a.m. peak, 19% in the p.m. peak by 20.45 in terms of traffic increase using that part of the local road network.

It was recently upgraded as part of the A13 widening scheme to support economic growth in Thurrock. The council is concerned that the project utilises that recently provided capacity that was intended for Thurrock growth as well as for the growth of the ports, and given the congestion shown within modelling, that it would stifle that growth rather than support it, which is one of the objectives of the scheme. Turning to the other aspects of function, we've raised a number of very detailed road safety points with regard to the design of the scheme, none of which have been responded to by the applicant. They're set out at appendix C, annex 2 of the LIR, which is rep 1284.

There are a couple of examples of this that I'll give you. One in particular is the short weaving length between the eastbound approach of Orsett Cock Junction, and it requires vehicles leaving LTC to merge with traffic on the eastbound A13 offslip. That's just to the west of Orsett Cock as they're approaching Orsett Cock. Those two streams of traffic would have to weave over that 90 metre distance on their approach. Both of these links, we understand, are subject to national speed limit while they're making that weaving in 90 metres. This has been raised as part of the modelling work stream, which we can come on to tomorrow, but what we're concerned about is that the modelling has been done in isolation to the design of the junction and they don't actually correspond.

So in order to respond to this concern that we've had, the model has extended that weave length to over 200 metres, but that hasn't been replicated and updated within the design of the junction. The next point – one key point

that we've raised – is about the actual gyratories, the tight radiuses of some of the movements that have been designed within the junction. Currently, on the A1089 – this is shown in slide 7 of their pack – I don't know if it's easier to get it up – but at present there's a 270 degree gyratory.

MR SMITH: Would it be possible to get slide 7 onto the screen, please? Thank you. No, please continue.

MS MCMULLEN: That's alright. That's fine. So the A1089 as you're going northbound and you're trying to travel eastbound on the A13, currently, you can see that tight gyratory. So that's the current movement that traffic has to make, including port traffic. There have been lots of incidents of toppling of HGVs, and in order to resolve that, a number of years ago the National Highways implemented a scheme – and you can see it on the ground – whereby there's a maximum 30 miles an hour speed limit.

There are signs warning of toppling as vehicles are going around that tight gyratory. What we're concerned about is that effectively that's been mirrored, you can see, just to the north. So on slide 29 – if that's able to be put up – they've introduced another very tight 270 degree gyratory – even tighter radius, we understand – and we don't know – have they sent, in terms of what the design speed is at that part of the junction, how that complies with DMRB standards and what alternative design configurations have been considered.

One of the scheme objectives is to improve safety, and we are concerned that the detailed points – they are just two points I've raised – there are a number of points that we've raised – safety concerns and design the junction – that are not being addressed now and they may not be able to be addressed within the order limits at detailed design stage, which we don't have any input to. The accident analysis shows that there is forecast to be eight additional fatalities within Thurrock over the accident analysis time frame of 60 years and an increase of 35 serious casualties. To our understanding, this is the only National Highway scheme that actually increase accidents once the scheme is in place, rather than reduces them.

Moving on to the local road network – I've explained about Orsett Cock and that being an integral part of the scheme – fundamentally, we're very concerned that the design has been fixed and it isn't integrated within the modelling. We need that localised modelling and support, kind of what DP

World was saying, that we still have a long way to go with that localised model and we can go through it in detail tomorrow, but they need to speak to each other. The design and that localised modelling really do need to speak to each other and we need to have those designs updated to reflect that localised modelling.

In terms of the ports, one concern that we've raised a number of times is about Tilbury Link Road. I'll come onto it in a bit more detail under the land take aspect, but in terms of the local refinement consultation that was in May 2022, the applicant stated at that time that the new operational access of Tilbury has been designed in consultation with us with future development in mind and helping to involve potential disruptive rework at a later date.

So whilst we're talking about this junction in particular, we see in terms of design evolution and option testing, there's a real relationship between Tilbury Link Road and this junction and the ability for Tilbury Link Road to mitigate some of the impacts and harm that are shown and demonstrated within the design of this junction. We've been told and reassured within that consultation – the local refinement consultation – that the operational and emergency access has been designed to cater for that future port traffic, but we've been given no evidence to demonstrate how that could happen in the future without a total rework of the design of that junction, the operations and emergency junction.

Going on to the siting and the land take, the junction is extremely complex and usability has been mentioned this morning – we've got real concerns with that – but we have a lot of concerns in terms of the land take that it takes up. So we've estimated that it takes around 112 hectares. It's difficult to try and put that into context, so we've tried to come up with a comparison. So as a comparison, Spaghetti Junction takes up less than 20 hectares. So this junction is effectively six Spaghetti Junctions. We were trying to work out how many football pitches it was, but I'm not very good at football.

MR SMITH: And to be clear, that's Spaghetti Junction, Gravelly Hill Interchange, on the M6 in central Birmingham.

MS MCMULLEN: Exactly, I shouldn't call it by its [inaudible].

MR SMITH: I don't mind it being referred to as Spaghetti Junction. I think we all know about –

MS MCMULLEN: Exactly, junction 6 of the M6. So this is six times the land take that is being taken up by that junction, the famous Spaghetti Junction in Birmingham. So we contend that we're still not at the position where we've got localised modelling that is showing what we consider to be severe impacts that need to be addressed with further design iteration and potentially further land take. We're not sure that that can be achieved within the order limits that have been defined by the applicant, but the other aspect goes to design evolution and we're not disputing that there has been an element of design evolution. That's summarised within the application documents. We'd also previously received a summary from Mr Hodge of a design evolution of this junction in May 2021.

What we're concerned about is that there hasn't been a transparent and effective way of option assessment, looking at the function of the junction and how that would meet with the scheme objectives. How those different option testing of different permutations of this junction, how they may reduce harm, how they would reduce the impact on the environment, reduce impact on land take. There was mention, I think, by Mr Roberts, about there being 10 movements that have been accommodated out of the 16 potential movements. We've seen no evidence of why those 10 movements, why that could not be rationalised to less movements, could be increased to other movements and different option testing could be undertaken with the LTAM model.

We're not asking for detailed micro-simulation modelling. So the LTAM model could have been used to look at and to assess different options and movements and how they compare. We asked for this for a long time and eventually the applicant agreed to assess a limited number of options for us. So they are set out. We've done our own analysis of that – quite detailed analysis of that information, those LTAM runs – and they all include the Tilbury Link Road, but different configurations of this junction and different movements and that's set out in detail in appendix B of the LIR, which is rep 1282.

Now, interesting, what that shows us is that – based on all of those options – there's no real difference in the relief that's being given to Dartford Crossing compared to the preferred option. They all provide a very similar level of relief, but they have different levels of harm, different levels of land take and different impacts. So what we require – and is missing – is that option testing of this junction so that that planning balance can be considered. The only mention that

has been made of this is whereby in – I think it was in response to our LIR, which was rep 1281 - the applicant stated that they've used professional judgement informed by the traffic model, rather than undertaking a sequence of detailed models of all possible alternatives as proposed by the council. So that is the only response we've received to the assessment that we've undertaken. So it is the council's view that there are alternative junction designs that include the Tilbury Link Road that would better meet the scheme objectives and would reduce the harm in this area and these options should be developed and assessed as part of an integrated alternative option, including a package of supporting sustainable transport measures. 

Just moving on to the next point, which is – and we've got more detail to say about Baker Street, but it's connected to what I've just been saying about this option testing – that we've just heard from the applicant and Mr Roberts about the justification for the siting and land take of the junction and how that relates to Baker Street. This goes back to this option testing, that actually it assumes that all of those 10 out of the 16 movements were required. Had there been a detailed assessment and a comparative assessment that was transparent and looked at the different options and the function of this and how that meets the scheme objectives, we may end up with less land take, less movements, a more rationalised junction that may have less harm to Baker Street, so it's all interconnected with that point.

MR SMITH: Can I just explore that very briefly, because when we reached a similar point in Mr Bedford QC's submissions for Gravesham, I did say, 'Well, in the best of all possible worlds, you're saying the scheme would not proceed, but then if we're looking at restructuring, reframing, redesigning this junction' – essentially, in a nutshell, he said, 'Don't fiddle with it,' whereas I take it that your submissions are very opposite to that.

MS MCMULLEN: Very opposite, yeah.

MR SMITH: It is your principal submission that the scheme will not proceed. However, if it does, you think there are a broad range of distinctly still mitigable adverse effects that you would urge upon the applicant as needing to be addressed.

MS MCMULLEN: Precisely.

MR SMITH: Yes, and it's in that sense that you are pushing us towards the idea that you would like to see further option appraisal.

MS MCMULLEN: Mr Stratford would just like to add a few comments on Baker Street, but I think I've covered the main points that we wanted to make on this junction and we'll put the rest in writing.

MR SMITH: Indeed. Well, Mr Stratford, just wait until you have the microphone and then the rest of the room can hear you.

MR STRATFORD: Chris Stratford for Thurrock Council. Thank you. I want, perhaps on behalf of the residents of Baker Street, to make an emotive plea, if anything, but the significant construction impacts at Baker Street are quite well summarised by the applicant in their community impact report, which is ap. 549, and if I can just summarise what they might be, and if you could maybe put yourself in the position of a Baker Street resident. Baker Street will be closed several times in different locations for five years – five years – south of the A13 for road realignment. 10 months in – well, the time period is less relevant – but for 10 months, there are utility modifications for seven months, weekends for bridge works and for alignment changes.

There is also a range of access restrictions, traffic, bus, pedestrian, cycle diversions for various periods. Bus journey times would increase on affected routes, and there would be – presumably – noise and air quality and cultural heritage effects as well. Now, that's the situation as explained by the applicant. Now, two years ago, we were given a very interesting presentation by the applicant about different ideas they might have for how to treat Baker Street after this is all finished. They were interesting ideas. There was a whole range of ideas about parking provision, enhanced cycle provision, enhanced pedestrian provision, planting, traffic calming – a whole range of things – and we never heard anymore.

So then when we found out about all these construction effects, we then said, 'Well, okay, let's go back, please, and find out what you want to do,' and the applicant has unilaterally and wholly taken the decision to do nothing. So, in other words, Baker Street residents – which arguably are probably the worst affected – get no legacy, they get no enhanced mitigation. They get basic mitigation, or what might be called embedded mitigation, certainly. So if a footpath is shut, it'll be diverted, but nevertheless, at the end of it, it's just a reinstatement job, it's nothing else, and we believe this is unacceptable, and as

1 Kirsty has mentioned, there might be other options that would lessen the scale 2 of impact. That was it. Thank you. 3 MR SMITH: Thank you very much. 4 MS MCMULLEN: Sorry, I just wanted to raise two very quick points before I finish, if 5 that's okay, sir. One was a further request for information in terms of - as well as the public transport and active travel and the routes through the junction, if 6 7 we could have diagrams – we think it would be very helpful – that shows the 8 elements of the network that are strategic or the elements of the routes that are 9 part of the strategic road network and local road network, as opposed to the diagrams that have been provided to date, and then the only other aspect was 10 11 that Mr Roberts – when we talked about the south of the river – alluded to the 12 fact that the design philosophy of the junction to the south of the river has been 13 different to the design philosophy and the approach taken to this junction, and 14 we're not sure if that's been answered in terms of what that difference was. 15 MR SMITH: Okay, well, the applicant obviously is going to respond globally to all of 16 the submissions on this point. I'm then just going to check. Mr Mackenzie, 17 does that conclude submissions for Thurrock? 18 MR MACKENZIE: George Mackenzie for Thurrock Council, sir. Yes, thank you. I 19 believe it does. 20 MR SMITH: Thank you. In which case, I am going to offer Essex County the 21 opportunity to come back on this before I check who else in terms of the 22 statutory parties wishes to speak and then – 23 MR YOUNG: Can we ask a few questions on what you've said? 24 MR SMITH: Yes, pardon me. Apologies, just before I release you, Mr Mackenzie, and 25 your team, Mr Young. 26 MR YOUNG: Dominic Young, panel member. Just to clarify, so it's clear in my head, 27 Thurrock's position on this. You're arguing that one of the big drawbacks of 28 the A13 injunction is the lack of a direct connection to the A1089, but then on 29 the other hand, you then seem to suggest that we ought to be taking more links 30 out, so I'm a little bit confused. You're sort of criticising for not providing that 31 one link that it hasn't provided, and then you're suggesting that we could be 32 taking even more links out, and I just wondered, if we are taking more links out, 33 could you be a bit more specific about what those would be, that the applicant

might be able to respond to those?

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MS MCMULLEN: Kirsty McMullen on behalf of Thurrock Council. I would point towards the study that was undertaken in appendix B of the LIR, rep 1282. What we're saying is that there was a huge amount of land take with this junction and we are concerned that there isn't a sound evidence base for the junction design and we haven't seen that option testing. So we are not necessarily saying that certain movements need to be taken out or added in; we're saying that evidence hasn't been put before us. We have done four option tests and we've summarised those within appendix B and we've recommended that two of those should be explored further based on our analysis, and off the top of my head—I'm trying to remember which two they were—

- MR YOUNG: You can send it in writing.
- 12 MS MCMULLEN: Yeah, that's fine.
- 13 MR SMITH: Excellent, okay. Anything further?
- 14 MR YOUNG: No.

- 15 MR SMITH: In which case, I'm going to move back to Essex County Council, so...
  - MR MACDONNELL: Thank you. Gary MacDonnell on behalf of Essex County Council. I'll keep it relatively brief. There are a lot of points raised there by Thurrock. There are three that we support and would absolutely like to see further information brought forward on. First of them is around active travel and public transport. The current documentation is almost silent on those matters throughout and a lot more could be done and could be brought forward around that, in our opinion.

We absolutely share the concerns that Thurrock have expressed this afternoon around the increase in traffic movements and increase in congestion, noting that that is likely to have an adverse effect within the Essex County Council network as well, so we absolutely share that concern, and finally, the Tilbury Link Road, we all understand why that was removed from the scheme. However, it is short sighted and there is an opportunity there for the scheme to be so much better if that was just reinstated back into the scope of the project.

MR SMITH: Clear and succinct. Any questions from the remaining local authorities? My working proposition has been that nobody south of the river wants to speak on this item, but I will just briefly check whether London Borough of Havering – it's a long way from their territory – whether they might wish to...

MR DOUGLAS: Daniel Douglas, London Borough of Havering. We've got no comments to make on this particular item, sir.

MR SMITH: Okay, and I will make the same quick check with Transport for London for the same reason.

MR RHEINBERG: Matthew Rheinberg, Transport for London. No further comments from us on this junction either. Thank you.

MR SMITH: Okay, thank you very much, which then takes us – noting that we have no parish councils represented north of the River Thames to the statutory parties.

Can I just see by show of hands on screen or in the room whether any of the ports – Port of Tilbury, London Limited, London Gateway or Port of London Authority and the Port of Tilbury – wish to speak? I do see Alison Dablin for Port of Tilbury. Mr Shadarevian, are you...?

MR SHADAREVIAN: I'm grateful, but nothing more from us today.

MR SMITH: Nothing more from you today, so I'm going to go to Ms Dablin then.

MS DABLIN: Thank you. Alison Dablin for the Port of Tilbury. This junction is fairly key in terms of the Port of Tilbury's concerns. The junction in its present design – we've considered the function and the design of the junction and our conclusion is that it will have adverse effects in respect of providing access to the Port of Tilbury and Tilbury 2. Three out of four connections to the A1089 southbound are indirect, all of which necessitate a route via the Orsett Cock junction.

This includes the removal of the existing direct connection from the A13 westbound, which leads to a net disbenefit in relation to access, and in addition, the proposed rerouting via the Orsett Cock junction induces congestion and substantial delays at the junction and any vehicle movements through the Orsett Cock roundabout lead to an increase in journey times due to the congestion, as well as the additional journey distance through routing to and from the east via the A13.

Inevitably, this will result in unreliable travel times, disruption and uncertainty for port users. One thing that we did note in the applicant's submissions as to the considerations as to the design of the junction was that they didn't mention considering the connectivity of an access to the ports as one of the main considerations, although this is what is provided for in government policy in the form of the port's NPS.

We agree with the submissions of Thurrock and Essex that the removal of the Tilbury Link Road is short sighted and the view of the Port of Tilbury is that there are significant mitigation benefits – in respect of the issues surrounding the A13/A1089 LTC junction – that the mitigation is provided by the simple expedient of providing the Tilbury Link Road or, as a minimum, a 'Tilbury Link Road ready' solution. We've provided more detail in that respect in our written representation.

In terms of the Orsett Cock roundabout itself, transport consultants have suggested that there are a number of improvements that could be made to help mitigate the impacts of the A13 LTC junction on the Orsett Cock roundabout, including an additional lane on the eastbound slip, signalisation of the A128 approach, which is from the north, an additional lane southbound and northbound on the overbridge section, signalisation of the A1013 approach and signalisation of the Brentwood Road approach, which is from the south.

In terms of access to the port generally, it is currently accessible by road only via the A1089, which is a single point of failure, and it was very interesting to review the slides this morning to note that there are three slides that show the connection from the A1089 onto the Lower Thames Crossing, noting that this is the same route as both on slide 5 as a strategic connection, slide 10 as a local connection and slide 30 showing access from the Port of Tilbury, and yet, when you consider what is clearly an important route in reverse, the connection from the Lower Thames Crossing to the A13 is at best on slide 9, a major connection though this stops before the Orsett Cock roundabout and does not proceed to the A1089.

And in fact, the only slide showing how one connects from the Lower Thames Crossing to the A1089 is that of slide 32, which shows what is an extraordinarily convoluted route that adds significant amounts of distance beyond what a direct connection would require and also a significant amount of distance beyond what would be needed were a Tilbury Link Road in situ. I don't wish to go into too much detail as to the traffic modelling at this point. However, I did note that Dr Wright made some submissions before, I believe, the first break, suggesting that the benefit to the Port of Tilbury is reduced congestion on Dartford. He then provided some figures showing the amount of use that would nevertheless be made of the extremely convoluted route to connect from the

Lower Thames Crossing to the A1089, suggesting that this shows that it isn't going to be particularly well used.

We would argue that that is not what those figures demonstrate. We would suggest that what it instead shows is that despite the routing being so convoluted with the additional distance and the additional complexity, the desire to use the Lower Thames Crossing to connect to the A1089 is so desirable – and it makes sense as it is the reverse of what is a key strategic route – that even with the additional distance, the induced delay and the congestion at Orsett Cock, it is still preferred by some users – likely those to the southeast – to utilising the Dartford Tunnels.

Now, in our response to deadline 2 submissions, we did some initial high level review of the data that had been provided, which suggested that up to 7% of all traffic on the Lower Thames Crossing travelling from the south —so travelling north — would seek to connect with the A1089, and from the submissions of Dr Wright today — and some early playing with the figures — it looks like that could in fact amount for a significant proportion of the traffic that is going to be utilising the Orsett Cock junction.

So the Port of Tilbury strongly supports the submissions made by Thurrock, that a Tilbury Link Road represents a significant mitigation for the problems that are inherent in the current design of the A13/A1089 LTC junction and for these reasons we have been seeking to find solutions whereby even if the Tilbury Link Road is not brought forward within the Lower Thames Crossing scheme, a plug and play solution can nevertheless be secured in order that the legacy value of the Lower Thames Crossing scheme is fully realised to the greatest extent that is now possible. That concludes my submissions. Thank you.

MR SMITH: Thank you very much, Ms Dablin. Right, let us then move on. I believe that's brought us to the end of statutory parties who expressed a wish to speak on this item. Do we have others present in the room? And I do see TCAG, Ms Blake, but just let me check around and Mr Beard. I'm going to go to TCAG first and then I'm going to go to you, Mr Beard. So Ms Blake, the roving microphone is yours.

MS LAURA BLAKE: Thank you very much, sir. Laura Blake, Chair of Thames Crossing Action Group. Just a few quick points. Hopefully not going over

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anyone else's comments too much. I'd like to start by saying when we were actually looking and National Highways were telling us about the impacts of this junction on the local communities, there was no mention to the travellers site. They are part of our community. They are part of our group that we represent. So the fact that that wasn't even pointed out, considering the close proximity to the junction to the travellers site, I think is something that I just wanted to bring up, and I think I'd be doing my job as Chair if I didn't represent that part of our community by mentioning it.

Secondly, the comment about the fact that it would be the preferred route for port traffic and A1089 traffic to use the M25 rather than the long route that would be the alternative option. Just to touch on what other people have said by the fact that if that's the case, why are we also progressing with the Tilbury Link Road as another needed road? And also the fact that would the M25 Dartford Crossing really be realistic as an alternative, considering that we still believe it will be over design capacity, and if the applicant is talking about taking it back to journey times of 2016, in 2016 it was already over capacity.

We were already suffering, so why would drivers – especially professional drivers accessing the port on a regular basis who know the history of that road and experience it on such a regular basis – be looking to take that route? So we don't feel that that is adequate. Also, we note that the routes shown at this junction completely have missed the point of the fact that whilst they try and sell the benefits of this project – of the local communities having benefits from it – where were the routes that show us how locals in Thurrock could connect to the LTC? They've avoided it because they don't want to have to show the fact that we'd have to go via the Stanford detour – as we know it – going down the A13, up and around the roundabout, down at the A1014 Manorway Junction and come back to access it.

All of the places we're looking on in the local vicinity that are impacted the greatest are not going to have access. That's obviously not to say that as a group we support this project in any way; we don't want it. However, I just want to highlight that up there and also, the other thing that I don't feel has really been mentioned to any extent is the fact, as with south of the river, there's no actual inclusion of how traffic will migrate when there are incidents – not if, but when

there are incidents – at the Dartford Crossing and there are not adequate connections at this junction to fulfil that.

If, for instance, there's an incident at the QEII bridge and traffic comes off the M25 onto the A13, it would have to go down and take the Stanford detour to come back to get on the LTC. If instead it actually came off the M25 onto the southbound LTC, that's five lanes of M25 traffic at that point going onto two lanes southbound, and alternatively, if there was an incident at the Dartford Crossing and the traffic comes down the A2, not only has it got that one single lane bottleneck to get through, then when it comes up, if it wants to go westbound on the A13 again, it has to come up and go round the Orsett Cock as a U-turn. So there are many different examples of why that is missing the adequate links. Thank you.

MR SMITH: Okay, thank you very much, Ms Blake, and then finally, Mr Beard.

MR BEARD: Robin Beard, local resident. I've already made my opposition to this particular junction clear in the open floor hearings a couple of months ago, and I submitted what I think was quite a compelling case against it back in July, but I'm sure you don't want me to reiterate the points I've already made.

MR SMITH: Absolutely not, no. Apologies, but those points were clearly made and we have them on board.

MR BEARD: Okay, well, just based on what I've heard today, I do have one or two additional things that I'd like to say, because we heard from the applicant – they said that part of the reason why they chose this particular location for the junction is because they wanted to provide access to the A1089, but we've just heard that most of the links to the A1089 involve going via the Orsett Cock roundabout. So even though they did build the junction at this location, they haven't really provided very good access to the A1089, and I believe that they could have provided better access than that if they built the junction somewhere else.

We've also – where is it? Yes. I don't think that they chose this particular location because of the A1089 at all. I think they chose it because the original goal of the Lower Thames Crossing project was to try and reduce congestion at the Dartford Crossing, and if you want to do that, it makes sense to build a new crossing somewhere nearby so that all the vehicles that are queuing for hours at the Dartford Crossing have got an alternative route that they can take somewhere

within easy access and if you look at the early designs for this junction, they had slip roads that were going to and from the west – connecting to the A13 – which makes sense.

All the cars and lorries from the Dartford Crossing would be able to come along the A13 and use this crossing instead if Dartford was too busy, but back in 2016, I think it was, they changed the design of this junction and got rid of those west facing slip roads. Now, I asked them why they did that at the time and they said that they'd run a computer simulation – back then – and the computer simulation told them that connecting to the west here via this junction would be a bad idea. I can't tell you why. I wish I'd asked them to go into more detail, but I didn't. But anyway, that's what I was told back then.

However, if you look at the documents that have been submitted as this DCO just recently, they don't mention a computer model. They say that one of the reasons why they did not provide access to and from the west is because there wasn't enough space at this location. Now, they must have known when they changed it in 2016 that there wasn't enough space because they wouldn't have changed it otherwise surely. So at that point, they should have recognised that building the junction here was not a good idea and they should have looked into building it at other locations. That's what I did and that's why I came up with my alternative just down the road, but when I pitched my alternative to them in 2018, I think it was, they said to me then that they didn't have the authority to change the location. Once this location at Orsett had been chosen, it was set in stone and they were lumbered with it essentially.

They didn't use such injudicious language, but that was the impression that I got, so they might make the case that they deliberately chose to build it here because it was the best place to provide access to the A1089, but I'm not convinced. I think they chose to build it here because they originally wanted to connect it to the west, so as to reduce the congestion at Dartford, and then when they found out that they couldn't do that, they had to build it here anyway because it was too late to build it somewhere else and, if that's the case, then it doesn't say much for this particular junction because I'm sure they've done their best under the circumstances. But you can't have a good junction at a bad location, and that's, I think, all I want to say.

MR SMITH: Mr Beard, thank you very much. So I believe that then brings us to the end of submissions on this agenda item, other than, of course, the applicant's right of response, where again, I will remind them of their ability to deal with all matters of detail in writing. So, again, Mr Tait, to the highlights, please.

MR TAIT: Certainly just the highlights, sir. We well understand that and just by way of preface, before bringing in Dr Wright on those seven or so highlight points, as well as Mr Roberts, one point was made that there are certain matters not mentioned in the presentation – the travellers' site, for example, or public transport. It has of course been a highly condensed explanation and we will refer to all the places in the submission material, where those matters are picked up, and we'll deal with that in writing.

MR SMITH: Indeed and in doing that in writing, it will be very useful for us because one of the matters that we're giving very careful consideration to is the nature of the agendas for potential additional hearings in both October and November, and I think, when we're talking about a broad range of topics from impacts in relation to the traveller community, right the way through to active travel and transport, we are not yet finalised on the question of what we will further examine orally. So that's something that we're giving careful consideration to as well. Over to you then.

MR TAIT: Dr Wright.

DR WRIGHT: Dr Wright, for the applicant. So there were a number of points that I'd like to pick up, starting with some signposting, though I have quite a large number of references here, so I think a lot of them will be better provided in writing afterwards. But just a flag on public transport, we do set out the impacts in the transport assessment and then we talk about our position on future use of the scheme for transport, in the statements of common ground and the response to Thurrock Council's local impact report. All of those references we'll provide in writing afterwards, including IDs and section references, so that that can be found. Similarly, on active travel, we talk about the impacts in the transport assessment and also the HEQIA, but we talk about our overall position and what we provide in terms of active transport in the planning statement, and we respond of specific concerns from Thurrock Council in the statement of common ground and the response to the local impact report, and again, we'll provide those references.

In terms of Tilbury Link Road, I think we've stated our position a number of times, so I won't reiterate that here, but there was a particular point that was picked up on whether the design is suitable for use for a future operation, and again, a signposting. We've set out our position in the statement of common ground under item 2.1.167. Again, we can provide that in writing afterwards, essentially setting out that, because of the uncertainty of what might need to connect in future, we cannot give a categoric answer on that until such time as a firm proposal is brought forward for what the Tilbury Link Road might be, notwithstanding that National Highways continue to develop the Tilbury Link Road as a separate project.

In terms of the extent of the road network, and particularly the strategic road network versus the other highways in the area, I wanted to draw attention to the classification of road plans, which set out the nature of the highway, the road that we proposed to designate as strategic road network and the road that we be proposed to designate as other highways, and to note that, where no designation is shown on that map, that indicates no change is proposed to be made to the current designation. But perhaps that would be helpful as a source of information there.

I then wanted to come to three more in principle positions and just put forward our perspective on this. So the first one really relates to the benefits of the project in relation to Thurrock Council and in relation to the performance of the A13 junction. Our economic appraisal does show that there's significant economic benefits that accrued to Thurrock through the development of the Lower Thames Crossing, and those are reflected by the better connectivity that we provide to the ports in terms of their access and out onto the network, and in terms of where we don't provide additional connectivity by the more freely flowing routes that they used due to the removal of such significant congestion, as has been referred. So our view is, on Orsett Cock roundabout, yes. We acknowledge that we do increase the traffic that's flowing through that, but a large part of that is traffic that is rising from the growth within Thurrock Council and serving the delivery of growth within Thurrock Council.

In terms of casualties, the reference was made to the number of casualties with the scheme. The reference made was correct, but there are a substantial number of re-routed journeys and, as we have been very clear in our application,

there is an increase in the number of total kilometres travelled by people, arising as a result of the new journeys the scheme makes possible. If you measure the casualties on a per kilometre basis, we see a fall and a reduction in the number of casualties.

In terms of safety, I just want to turn to my colleague, Mr Roberts, who I think has something to say on the safety matter. This is in relation to the radii and the [inaudible].

MR ROBERTS: Mr Roberts, for the applicant. So with regards to the safety concerns at the A13 junction raised by Thurrock Council, I can confirm that those concerns were received in writing by the Lower Thames Crossing design team. As part of our design process, we're required under the design manual for roads and bridges section GG-119[?] to undertake an independent road safety audit at different stages of the scheme design. So preliminary design, which is the basis of our DCO submission, we're required to commission a stage one road safety audit, which we did, and we shared with the auditor team the concerns raised by Thurrock Council. They were provided to the audit team. The outcome of the audit was then shared back with Thurrock Council. We, as a design team, are required to provide a designer's response to the audit, which we did, and we also shared that with Thurrock Council. So that is the position that we are at today.

MR SMITH: In terms of the consequences of that, if I can just be clear for the panel, it's therefore your underlying or remaining position that that design as submitted to us is therefore satisfactory in audit terms, and therefore you believe that there is nothing more that you would do to it to achieve a satisfactory safety performance.

MR ROBERTS: That is correct, sir.

MR SMITH: Okay. Right, so, Dr Wright, I take it you're not finished.

DR WRIGHT: One last that I wanted to come back on, which was Mr Beard's comments on the development of the scheme, and I would like to say that we have continuously monitored and ensured that, as we develop the design of the scheme, that it suits the purpose that it's meant to fit, and so I wanted to basically say we were not in a fixed position after preferred route announcement, that despite having made an announcement, we were no longer able to progress the scheme that we wanted to. This is the scheme that we wanted to progress. It serves to provide the connectivity to the A13 through to the A2 that is needed to

relieve the Dartford Crossing, and we're satisfied that the scheme we brought forward is the appropriate scheme and not high-bound by a previous decision.

MR SMITH: Thank you very much. Now, I do see Mr Taylor of the Examining Authority has a question.

MR TAYLOR: Yes, please. Ken Taylor, panel member. It's a question for the applicant, really. We heard from Thurrock Council a suggestion that you provide similar slides, that we've been looking at today, but for other users, so for users other than for vehicles, and so just wanted to have an understanding of the feasibility of that, because it's something that could well be a helpful additional pack of documents. The public rights of way —

MR SMITH: - and NMUs. Yeah.

DR WRIGHT: Dr Wright, for the applicant. We produced some public rights of way plans that were submitted at deadline three, and I think in the first instance it would be good to review those and identify whether there's any further requirement beyond that. Thank you.

MR SMITH: Yep. Okay. Ladies and gentlemen, I'm very conscious of the passage of time, that we lost some time this afternoon to unanticipated disruption, so I think it's worth just briefly reviewing where we are. We have agenda item 5, which must proceed. I think it's very important that we do that the same honour as we have agenda items 3 and 4. Agenda item 6 – again, it would be very useful if we could get to the end of that by the end of today. Agenda item 7 can rest on the table and be a matter that we return to in subsequent hearings, unless anybody has a burning observation, that they have come here desperately for that and nothing else and that they would be terribly disadvantaged by us not proceeding with that orally today.

So that's going to be my proposal, that we deal then with agenda items 5 and 6, but we allow ourselves to return to agenda item seven at a later hearing, to deal with the loss of time that's happened this afternoon. Is everybody content with that? I'm not seeing any hands raised and I will just check with my colleagues as well to see if everybody's content. Okay. That gives us a target to meet.

If we then look at proceeding into agenda item 5, at risk of delaying us even further, I am going to suggest that we do take another 15-minute break because, although there has been disruption, we have been in session for a very

long time. I think people's thoughts, people's participation will be more focused if we come back refreshed. So I'm going to suggest that it is now approximately 4.15, that we resume at 4.30, and that is when we take agenda item 5, which means we will sit on past 5.00 p.m., I'm afraid, ladies and gentlemen. But I think in these circumstances it's worth our taking the steps necessary to complete the remaining elements of the agenda, so returning at 4.30.

## (Meeting adjourned)

MR SMITH: It is now 4.30, my name is Rynd Smith, panel lead, and we are returning to issue-specific hearing number 3 at the start of agenda item 5. We all know what we are now doing. I'm going to turn to Mr Tait and ask him to bring us through this material.

Now, before you do, Mr Tait, I will make clear that our expectation is that we won't take quite as much time with this item as we have with the other two main items, not to diminish the importance of this particular intersection, but it is simply a smaller and more limited intersection design.

MR TAIT: That's correct, sir, yes. We will be speedier on this. So turning to item 5, M25/LTC intersection, starting with Mr Hodge, and this is obviously the last segment where there is the additional material pursuant to your procedural decision. Mr Hodge?

MR HODGE: Hi, sir. Right, I'll just take you through the visual representation for the M25 and LTC interchange, and it's obviously in the same format as we did previously. So I will go to the first slide. The actual keys and everything are also the same. So the first strategic connections that we've got are the LTC northbound going to the M25, and then we've got the existing M25, which comes through the junction and connects – remains on the M25. Southbound M25 to LTC comes down and it just comes off on the spur at the bottom of the slide, and the existing M25 just goes through, so there's no other strategic connections in that. So the only other strategic connections we've got are from the A127, both southbound onto the M25 and also the northbound connection, and then we've got the opposite, coming from the A127 from the east, which goes northbound and southbound.

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PARTICIPANT: Roberts next?

29 MR SMITH: Indeed, same pattern as before.

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32 MR ROBERTS: Mr Roberts, for the applicant.

MR SMITH: Thank you very much.

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MR SMITH: That's better. Thank you.

Then, if I just add in the major connections which we've got coming from the M25, you can go westbound onto the A127 and you can also go eastbound, and then in the opposite directions, you can come southbound on M25 and go eastbound and also go westbound.

So this takes me just to show where the local roads are, so we've got Orpington Road towards the bottom of the slide; St Mary's Lane – they're the key roads that cross the M25 at this location.

So if I now go to the tracking, moving the slides, I'll do the existing first, which is M25 to M25, and then if we have a look at that with the scheme there is no change. If we go to the M25 to the A127, existing, you can see that the connection to the A127 on the M25 is towards junction 29 at the top here, and then that's the reverse route.

If we go to with the scheme, there is a difference here. What we've had to do in this location, because junction 29 on the M25 is close to this connection, we've had to put another parallel link road on the west side of the scheme because we haven't got enough length on the main line to accommodate the weaving, so what it means is that any traffic coming up the M25 northbound has to come off in between the point where the Lower Thames Crossing joins the M25 and connects onto this connector road, which then joins into junction 29. So that means that anybody coming up the M25 wanting to get off at the 127 would have to come off at this point. They could not now get off at the – because we've removed that connection.

Then that just shows in the other direction, going southbound. We have also, at the junction 29 put dedicated left turns on the northbound off to the A127 westbound, and from the A127 eastbound, southbound onto the M25. That shows the key routes at that particular junction.

MR SMITH: You're a little faint. If you could possibly...

MR ROBERTS: Sir, I'll take the usual pattern with my three points: connectivity to achieve scheme objectives, maximising scheme benefits, then existing constraints, and then achieving a safe layout compliant with relevant standards, and my colleague here has just put a plan on the screen to help if we need to orientate ourselves at any point.

So firstly, in terms of connectivity, quite simply at the M25 tie-in, we're proposing relatively straightforward connection with north-facing links only, so it's not an [all-movements?] junction. Turning to constraints in this area, a significant constraint is the Upminster and Grays branch railway, which you can see on the plan is orientated in a north-west/south-east direction. As Mr Hodges explained, we wanted to bring the junction as far south as possible to give us the best merging/weaving length with the M25, but we wanted to avoid having to cross the Upminster and Grays railway twice, as it would require us to do, and indeed cross the M25 as well, so hence we've sited the junction just to the north.

In terms of geometry and compliance with standards, what we're seeking to achieve here is a suitable horizontal radius to bring the road around and under, and importantly we're trying to minimise the impact of this location by going underneath the M25, and we're balancing the horizontal radius to tie back into the M25 and minimise land take, but also not have the crossing under the M25 too skewed. We could have a tighter radius at this point, but that would mean a more skewed angle of the structure under the M25, which would be complex to build and possibly more disruptive as well.

So those are the main points that we considered with the siting and the land take for this junction. I think now I'm going to turn to my colleague, Ms Donnelly.

MR SMITH: Thank you very much. Ms Donnelly?

MS DONNELLY: Clare Donnelly for the applicant. Okay, so once again, I'm going to talk you through some of the key mitigations at this site, examples of these. Unfortunately, for this junction, I don't have one static image that we visualised all the way through the different stages of design evolution, so I'm just going to have to talk you through a little bit more the context for each of those.

Okay, so the context for the M25 junction – so this is a view taken to the south of the junction, and we're in an area which we call Ockendon Open Farmland, which is predominantly arable land looking north upwards to what's

called Thames Chase Forest, which is on the higher ground towards Upminster and Brentwood. Obviously, key features of this landscape in this photograph are the north/south route of the M25 and the railway line, which you can see at the crossing point here.

Our design at statutory consultation is shown here, and by the time we've got to this point, as my colleagues noted and described in the project design report part G, which is referenced at 514, many of the significant moves to reduce the visual and noise impact had already been made between preferred route alignment and statutory consultation. Crossings above the M25 and the railway line were removed, with all slips moved to the east of the railway line, and the northbound A13 to M25 slip now going underneath the M25 instead of over it.

Therefore, and having reduced those impacts, we were free to pursue our general strategy of reinforcing the junctions and screening them with tree-planting. This was particularly appropriate in this location, as we have – I'll just go back again, you see slightly on the horizon – the Thames Chase Forest, which is in this – can you see my cursor? Okay, great – which is in this location on this image.

In the development – we haven't really talked about the development and people and movement around any of these sites, but I would like to touch on it for the development of our landscape proposals in and around the M25 junction. This is a slide from the Green Infrastructure Study, which is submitted as part of the planning statement, appendix H, application reference 503. This highlighted several third-party strategies and projects for improving green infrastructure in the immediate area of Thames Chase Forest Centre. One move was to improve forest links between pockets of forest woodland north up to a more extensive area of forest planting in that higher ground I pointed out.

Another was to link routes east/west to what they call the forest loop and out into the Mardyke Valley. This connectivity had previously been stymied by both the M25 and the railway line, which creates a degree of severance east/west across the landscape.

The works to the junction at the M25 junction 29 raised an opportunity for the applicant to act in accordance with the national policy statement, which notes: 'The government expects applicants to identify opportunities to invest in

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MR SMITH: Okay, fine.

infrastructure in locations where the national road network severs communities and acts as a barrier to cycling and walking.'

So I'm going to take you back now to another view. So this is a view slightly further north – it's as existing of the one I saw you before, we've just moved north on the M25. The railway line is through here, and you can see Thames Chase Forest Centre, which is bisected by the M25. The only crossing of that forest centre is by a culvert at the northern extent through here. Therefore, we sought to provide structures and routes around the junction that addressed the historic severance, as well as that created by the new A122 through the provision of a new footbridge that connects both halves of Thames Chase Forest Centre, and you can see it in the proposals here.

Other landscape mitigation practices we looked at were the provisions of extensive areas of forest planting going back to that aspiration to link those woodlands of pockets all the way up to junction 28 – is it 28? 29, sorry, of the M25, but I am going to talk about junction improvement works at that northern extent of this junction as part of agenda item 6.

Extensive earthworks once again were also used within the area to screen the junction from surrounding receptors, and similarly to the A2 junction, we modified our strategy of tree-planting, this time in response to a landowner request from [Mr Mi?], who requested that this pocket here be retained as a hayfield, so we have just put our tree planting to the edges of that.

Other key mitigations we have chosen in order to safeguard existing vegetation within Thames Chase Forest Centre include much steeper embankments than we have elsewhere, which have allowed us to reduce our construction footprint and retain as many of their trees as possible.

That was going to be how we concluded that item, but we would like to return to the item on the integration of structures within the junction, for which I'm going to return to Mr Roberts.

MR SMITH: Yes, Mr Roberts.

MR ROBERTS: Mr Roberts, for the applicant. So with your permission, we actually think it might be best, given the time, to wrap that into agenda item 6, and we'll cover it then.

MR TAIT: It's a general point that also came up under item 4 about sufficient design resolution. It might be easier just to bring it all together under item 6.

MR SMITH: By all means. Okay, so Mr Tait, does that lead you to the end of your...

MR TAIT: That concludes item 5 from our...

MR SMITH: Okay, now in terms, then, of who wishes to speak on item 5 for the assembled interested parties, from a local authority perspective, quick show of hands, who wishes to speak? We have Thurrock and then we have Essex County Council. Can I just check to see if we've got London Borough of Havering as well wishing to speak on this item? I believe you are online.

Right, well in terms of the best and most logical order to do this, because it's shared spaced, isn't it? Some of it's Thurrock; some of it's Havering. Is any of it actually directly in Essex? Apologies for...

MR WOODGER: Mark Woodger, Essex County Council. Yes, is the straightforward answer to your question. It is, sir, and you're right to assume that this junction is probably not quite as complex as some of the ones that we've discussed today, but nevertheless it is a really important junction, because every motorway has to start somewhere and finish somewhere, and if there's congestion either side it has an obvious effect on the function of the road network itself.

But yes, some of it is. The spur that goes to the western side of the M25 and then down to the county boundary, which is probably about 500 metres south of the railway line – of the main east coast railway line that runs parallel with the A12 – is in Essex, so we think that's really important. But we've made our comments in our local impact report, and I don't necessarily wish to repeat those today again because of time, but what I would like to say is in response to Mr Jung's comments today about our representation at the LIR, which is your reference REP1226, in that we've requested that the southbound of LTC is increased to three lanes, and this morning I believe you said did the parties have any evidence to back that up, and the answer is that we do not, but what I would say to you as the Examining Authority is that in my lifetime, I've never seen a motorway reduced in size; I've only seen motorways that are increased in size, so therefore, to me, it suggests that if you had a two-lane motorway, there is potential to extend it to three, and if it's not done here, then what's the best place to put it from public money to do that? So that's my only comment.

Also, to add to this, there is the added complication to not necessarily the strategic highway network, but also the local highway network in relation to the relationship between Lower Thames Crossing and Brentwood Enterprise Park. Brentwood Enterprise Park, as you know, and you will see when you go on site, is to the south-west of the M25 A127 junction, and this would preclude access.

Just to let you know that we're still in discussions with National Highways and Lower Thames Crossing and Brentwood Borough Council, with the idea to rectify any issues that you have and try and make sure that access is safeguarded, and we would update the Examining Authority in due course, at various deadlines, when we reach that decision. Thank you.

MR SMITH: Thank you very much. Anything further to add for Essex? No.

MR WOODGER: Mark Woodger, Essex County Council. No, sir, thank you.

MR SMITH: Thank you. In which case, I am then going to go to London Borough of Havering and then I will come to Thurrock at the end. So, London Borough of Havering, please.

MR DOUGLAS: Good afternoon, sir. Daniel Douglas, London Borough of Havering. I just wanted to start off by reiterating the council's formal position on the project, just so everyone's aware of that. So, as has been stated in our written representation and in our Local Impact Report, the council does support the crossing in principle, and we have done for some time. That said, the council does continue to have a number of concerns around the impact the project will have on the local area and on our residents, and those issues will be aired during hearings and through our written representations.

In terms of the particular junction that's being discussed under this item, a few points I wanted to make. One is the issue of severance and the impact that the northbound LTC road, as it goes underneath Ockendon Road on towards the northbound stretch of the M25, will have on Upminster Cemetery in our borough, which is located just to the west of where the new LTC road is going to be located.

Upminster Cemetery and South Essex Crematorium, as we've set out in a lot more detail in our Local Impact Report in section 9 – that's REP1249, so I won't go into too much detail on it – other than to say it's the eighth busiest crematorium in the country, and we have 3,000 cremations annually there, and as it currently stands, Ockendon Road, in order to accommodate the scheme

elements, most notably that northbound lane that I've just referred to, will be fully closed for a maximum of 10 months just around where the road goes over the railway line. Now, whilst that's a reduction from the 19-month closure that the applicant was initially stating – and we do welcome that reduction – from our perspective, it's still too long.

Furthermore, around 17% of cremations at the crematorium come from the north-east or the east of that site, and most likely will use Ockendon Road to access it. So there's a real concern, from Havering's point of view, of our ability to perform our statutory function in terms of running that crematorium over that closure period, and there's also a real concern around the emotive and emotional impacts that closure is going to have on grieving families either coming to visit graves of loved ones or trying to attend funerals and cremations.

We are continuing to talk to the applicant about that particular point, and we're looking to have a discussion with the appointed contract for the northern section of the route – Balfour Beatty – in the next few weeks to try and see if we can find a way to reduce that closure further.

The other point I would want to make about this particular junction is, as it goes through the Thames Chase site onto linking up with the M25 northbound, that is an area of designated open space in Havering's local plan, and again, further detail of that can be found in our Local Impact Report. The applicant has put forward replacement open space lands towards the north of that existing site and towards the south-west, which is welcome, and the overall net-gain for Havering in terms of open space replacement, compared to loss over the entire route – because there's a bit of open space further north that we're going to lose – we are thankfully going to get a bit more back than we're going to lose, which is also welcome.

But the point, I guess, I do want to make is in our local plan, policy 18, open space and recreation, where open space is to be lost, it has to be replaced at equivalent or better standard, and that comes onto the point about accessibility to it. So the area of open space towards the north of that junction – and I expect we'll go onto this maybe in item 6, around [Hole Farm?] – there's a real issue around how we access that site, which is still outstanding. So I won't go into any more detail on that on this item, but I did want to actually make that particular point.

The other points that I want to just touch upon were: representatives have been made earlier on in this hearing around the issue around traffic modelling around junctions that have been discussed and the challenge of getting an understanding around how junctions operate at a local level and the lack of information that there's been, in some cases with regards to that. We've raised similar concerns with the applicant around the impact this scheme is going to have on our local road network, particularly where the junction is and how that impacts on junction 29 further north, and then on some of the roads to the west along the A127.

The applicant did carry out some local junction modelling at our request, which was welcome. Ourselves and Transport for London had concerns about the ability of that modelling that's been produced to get us the clarity that we need, because flows, to be put into that model, were taken from the LTAM strategic model that National Highways have produced, so Havering and TfL undertook our own local modelling work, and that's been submitted to the panel at deadline 1, and that's REP1247, so I won't go into any more detail on that, because that's already been submitted, but that does highlight where Havering feels there is going to be an impact on some of our local junctions.

The other point I wanted to make, and it kind of follows on from Mr Woodger's comments from Essex County Council earlier about the southbound road from the M25 being currently two lanes, compared to three, as it was originally proposed. In terms of the southbound road being two lanes, that isn't a matter that Havering's specifically objected to. However, we do recognise submissions from Brentwood Borough Council around the lack of the strategic model that National Highways have produced, including some of their forecast growth, particularly the Brentwood Enterprise Park, and I think that's particularly important when trying to understand what the overall impact is going to be of the southbound Lower Thames Crossing lane being two lanes as opposed to three.

Those are the main points that I wanted to make, but I'll just invite my colleague, Lee, to add anything in further if he wants to.

MR WHITE: Thank you, Mr Douglas. I mean, I think you've covered all the points quite thoroughly there. I think some of the other matters we've got will fall into item 6 at a later date, as you say. I've got nothing more to add, sir. Thank you.

MR SMITH: Thank you very much. In which case, then, can we move directly to Thurrock.

MS MCMULLAN: Thank you, sir. Kirsty McMullan on behalf of Thurrock Council. Just one quick point. It was interesting to hear Mr Roberts say in discussion with the design iteration of this junction that the weaving length had been maximised on the approach to the M25. Obviously, when we were discussing the previous junction in item 4, I was raising concerns with weaving length, and the response that we received was that, 'There's been a safety audit, we've received a safety audit.' What we would like is to have — what we haven't received is — I'm assuming the safety audit's been done of this junction as well. It would be helpful if we could have the brief that was provided to the auditors with the departures of standards for this junction and the A13 LTC A1089 junction so that we can get to the bottom of this weaving and the discrepancies between weaving lengths, that one's maximised and one's very short, so that we can then understand it from a safety perspective in terms of two different parts of the scheme and how they've been dealt with in different ways. Thank you, sir.

MR SMITH: Thank you very much. Anything else to be brought out from Thurrock or are we done? Okay, well now then, looking at the statutory parties, before going onto anybody else, I note there is no hand, but I did just want to check with Transport for London if they are still present. Oh, I do see Transport for London.

MR RHEINBERG: Thank you, sir. Matthew Rheinberg, Transport for London. Just a quick check from me, really, whether our issues are associated with junction 29 and whether you would like to cover those here, or under item 6(b), I guess.

MR SMITH: Yes. I think ideally 6(b), if you don't mind waiting on.

MR RHEINBERG: That's fine by me.

MR SMITH: Because I think we would like to wrap this particular item up together if we can. So moving on, then, to any other statutory parties who wish to speak on this particular intersection. I don't see it as necessarily one for either of the ports or Port of London Authority, and we've got no interested parish councils here. So then, if I can move to the rest of the room, I do see Thames Crossing Action Group. Is there anybody else? Have we got a Mr Wharton on screen? Well, I will go to Thames Crossing Action Group first, so Ms Blake.

MS LAURA BLAKE: Thank you very much, sir. Laura Blake, Chair of Thames Crossing Action Group. Just a few quick points to make – just showing on the impacts that were presented there, I noticed there was no mention of Cranham Solar Farm, that would be demolished if the LTC goes ahead. For a road that's professing to be the greenest road at the built, to actually destroy a solar farm in the name of environmental mitigation should be noted. Also, the fact that Thames Chase community involved a lot of planting by the community as a form of compensation for the M25 when it came through.

So the fact that that's now being impacted again by another road project is something that volunteers there aren't too impressed by, and also just touching on the fact we've heard about the closures of Ockendon Road on the crematorium, but also the impact that would have on routes to schools. A lot of children use that route to go to school with a bus service going through there, which would involve a long diversion, and that would impact the times you're closing a large percentage of a child's school schooling time, and that obviously has impacts on them having to get up earlier, getting home later, so making them a lot more tired and less concentrating at work.

Just finally, I know we're going to jump onto the bits in between the junctions in the moment, but I just think I'd like to say a note of all three of the junctions that we've seen today. Every single one of them has had restrictions. Every single one of them has problems, and I think, on behalf of my group, I would just like to say that I think that just stresses the fact, this is the wrong crossing in the wrong location. Thank you.

MR SMITH: Thank you very much. Now I am going to move, with no further ado, to Mr Wharton, who is an associate director for transport for Bellway Homes Limited. Mr Wharton.

MR WHARTON: Thank you, sir. I'll keep it reasonably brief. We have made representations for Bellway Homes through the written reps at various different stages. Bellway Homes have a land interest in the first parcel of land the Lower Thames Crossing is proposed to pass through, but as you move to the east from the M25, just to the bottom right of the screen, as you can see below, effectively the Lower Thames Crossing severs the land into two parcels – a larger southern parcel and a smaller northern parcel. Bellway has been promoting the land at south Ockendon since 2018, as part of the emerging[?] Thurrock local plan.

During this time, a number of very positive meetings have been held with planning officers at Thurrock Council, who have been supportive of the approach we have taken to date. They've also intimated to us that the site is likely to be allocated for a housing-led, mixed-use development, when the preferred options, through reg 18 consultation, as published later on this year.

We are close to entering a planning performance agreement with Thurrock Council to assist with the delivery of the development and we consider that the future development of the site is an important material consideration for the LTC. Bellway Homes considers it is reasonable that the planning conditions are imposed on the LTC, that require detailed design to be tested and reviewed against Bellway's emerging masterplan, to establish agreed detailed design to ensure Bellway's scheme is not prejudiced, and both schemes can provide huge public benefit.

I'll very briefly summarise the consultation that we've had to date with the applicant. With regards to the technical impacts of the LTC route, our representations have been set out in deadline 1 reps, dated 18 July. We acknowledge that the applicant has responded in document 9.53, which is rep 1-312. Subsequent to that response, a meeting has been held between Bellway Homes and the applicant team to further resolve the areas of concern. Whilst the discussions are positive and ongoing, there is no statement of common ground between the parties. As a result, our representations regarding noise concerns of the LTC on the development site, the drainage implications, particularly of the northern parcel of land severed by the LTC, concerns over the permanent land take associated with a public right of way network on North Road, and requests and requests to minimise easements and consultation zones of utilities, diversions or replacements are still outstanding.

We're expecting to continue to liaise with the applicant on these matters in due course, to see confirmation of the extensive impacts and to minimise the effects the LTC may have on the development quantum of a key site within Thurrock Council as a major local plan. However, we felt it was important that we bring these matters to your attention in this forum and that's it. Thank you for the opportunity to speak.

MR SMITH: Thank you for that contribution. Is there anybody else wishing to speak from the assembled interested parties? I'm seeing no further hands, either online

or in the room, so I'm going to return this item to Mr Tait for the applicant's response, and again, in the normal way, detailed in writing, please, Mr Tait.

MR TAIT: Sir, it'll all be detailed in writing, I think, on this occasion, having regard to the time as well.

MR SMITH: I'm grateful. In which case, let's move on to agenda item six, which is going to be the last substantive item today. So again, we know what we're doing. We've asked the applicant to lead on the questions on the paper as identified. So, if I can move to Mr Tait, and ask him to introduce the applicant's submissions on these items, please.

MR TAIT: Thank you, sir, and it'll be Ms Clare Donnelly who will be talking to this.

MR SMITH: Okay. Ms Donnelly.

MS DONNELLY: Okay. So, Ms Donnelly, on behalf of the applicant. Let me just get to the right slide. Okay. So we've taken, in response to this question, three different instances of mitigation on the three links between the junctions. Our overarching strategy for the mitigation design between the junction is one that we call landscape-led. By which, we mean it responds to the specific context and characteristics of each place through which the project passes, unlike the junction strategy, where we've done the same thing, but it's been the same response. It's generally been quite heavily wooded treatment around each of the junctions.

This has underpinned several project-wide approaches. So while we have used planting and earthworks to screen the road from view wherever possible, and contextual, which includes the extensive of use of false cuttings along each of the embankments, we have tailored these so that they sit well within the local landscape character. For example, we have used planting that does not necessarily reinforce the linearity of the alignment of the road, and instead responds to local and natural features, such as block planting at field woodlands and other natural features in the landscape. This approach extends to other elements of the road works, for example through the provision of naturalistic landscape and drainage ponds, as secured by the design principles.

So the first example I'm going to use today is going to be everything from the north of Thong Lane. We're back down in the south of the alignment. The A2 junction is behind us, but we're still looking north towards the river in this location. It's a very narrow crossing here between the edge of Gravesend and

the village of Thong. The character area that we defined here is called Chalk Sloping Farmland, which then falls down via Shorne Marshes to the Thames. The A226, which is broadly along this line here, broadly separates those two character areas. As noted previously, we also have to either side of us, those with hilltops. I think an important part to note about this particular part of the alignment as well is that we have recreational amenity in the form of Cascades Leisure Centre and the now redundant Sun Valley Golf Course.

So at statutory consultation, as we noted earlier, we already had the provision of a narrower green bridge. I think it's also important to note that between preferred route alignment and our proposals at statutory consultation, the portal, which you can see glimpsed here at the back, had already moved 600 metres north, to reduce our impacts on the image of Thong. But most, as you can see of the road has been in cutting. However, the fact that the portal was right up against the A226, did lead to a severance impact between Chalk and Gravesend East, which we attempted to resolve at this stage of the design through footpaths, which you can see – foot bridges, which you can see here, which were very high above the cutting.

Between statutory consultation and supplementary consultation, the portal was moved a further 350 metres further south. This would help reduce, once again, the impacts on Chalk and Gravesend East. It also allowed better recreational links between Gravesend and Shorne Woods via a new, semi-natural, open space, which we call Chalk Park, which also provides essential mitigation for the works. While shortening the cutting also reduced the volume of excavated material produced as part of the works, Chalk Park also makes beneficial use of these cutting materials to provide a wooded hilltop park, appropriate to this local typology, with views out and over the estuary, which also helped to mitigate the project's traffic impacts during construction.

Further refinement was done post supplementary consultation to reduce the impacts of utilities on surrounding properties, so if you could just draw your attention to these two properties here and the location of the pylons. This allowed us to retain those properties in place and reduce our land take, and as noted previously, we had removed and refined the locations of our ponds to avoid archaeology that had been found further down valley. We also refined the pattern and type of tree planting, increasing the wooded blocks and trying to

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break up the linearity, as I say. So we've gone for patches of planting, which don't draw attention to this cut through the landscape and hopefully integrate it successfully into its context. Shall I move on to the next –

MR SMITH: Yes. Do, please. I think we'll proceed through your sections and then I'll open it up to the rest of the interested parties.

MS DONNELLY: Okay. Alright. My second example is what we call the Chadwell link, which is between the Northern Tunnel portal and the A13 junction. We are at the moment we're overlooking Linford and East Tilbury, towards West Tilbury. Important things to note are the link at Muckingford Road through here, the Tilbury Loop railway line - obviously we're looking towards the river through here – and also Hoford Road, which is noted as a protected laneway, which is a sunken character and nature with a wooded corridor. I think another important landscape character feature of note through here is the Chalk escarpment through in this area, where we have a slight rise to the land and that forms a – there's a scrub, woodland ridge shallow valley, which goes along this line through here.

Up to the design of development between preferred route alignment and statutory consultation, focussed also on making sure optimising the alignment so that we avoided as many of these lines of pylons, which you can just see in this image as well, which would have greatly increased the cost and disruption during construction, should we have had to realign or cross them. The resulting alignment, if I show you – so this is our design at supplementary consultation and to orient you, this is the Tilbury viaduct crossing over the Tilbury Loop railway line. It comes down and enters into cutting. It goes underneath a new green bridge on Muckingford Road and then continues down through here and then under another green bridge on Hoford Road.

The treatment of the landscape in this particular area through here shows what we mean by landscape-led. Our planting follows the existing topography of that Chalk escarpment and the shallow valley, rather than trying to reinforce the linearity of the road by planting right up to it. We've planted [scrub woodland?] within the valley, which also has the benefit of linking pockets of woodland at Ashen Shaw and Rainbow Woodland. Other key mitigation measures in this area are also – we have managed to provide new areas of open

mosaic habitat, with the idea of trying to link habitats along the alignment and provide pockets for that invertebrate mitigation.

The green bridges are Hoford Road and Muckingford Road are key elements of mitigation. They're required for ecological purposes, but also to improve the user experience, particularly for walkers, cyclists and horse riders who are transitioning and trying to make those east-west routes. The design of those was further developed and refined as we approached DCO with further and more detailed planting arrangements to help screen the new road and provide boundaries along its alignment.

I will then move on to the Ockendon link, which is between the A13 and the M25 junctions. Okay. So this is the Orsett Fen character area. It's characterised by long views across a flat landscape in the Mardyke valley. This is the Mardyke running through the site, through here. A little bit like the M25, I'm afraid I don't have a lovely, consistent image. I can take you through all the stages, but I will try and orient you as we go. This view is once again looking north and you can see a higher ground around Brentwood and the Thames Chase areas in the distance. Much of this area is in flood zone three, and it is one of the last remaining areas of fenland that was drained and is now in prime agricultural use, but you can see through some of the damper areas through here that it's still a fairly wet landscape.

The alignment running through this area is elevated approximately 8.5 metres above and surrounding ground level, as we're in flood zone three. So we're on viaduct and embankment throughout this area. If I go then to the next slide – so you'll have seen the slide before as part of the Thames Chase item. Whilst we've made extensive use of false cut elsewhere in the project, the flat, open character would make that incongruous and landscape earthworks are not permitted in the flood zone. Therefore we needed to take a more contextual approach to the design of the foregrounding views for our new viaduct. The Essex Wildlife Trust had identified restoration of the wetland landscape as an aspirational project, which we have found through the Green Infrastructure Strategy. So you can see here Bulphan Fen and Orsett Fen identified as potential projects by them for future rewetting. This very much helped inform our mitigation proposals.

At supplementary consultation we show – sorry. This is the different view. This is as existing, slightly tighter in, and the Mardyke is now running in this orientation through here. I will go back. At supplementary consultation we showed the viaduct passing through a wetland landscape, created largely by altering the drainage regime and creating scrapes with some blocks of woodland planting, to break up linearity of the road alignment. I'm going to go back to our old existing view, and show you again. Then finally, our design at DTO moved on considerably. Through a process of stakeholder engagement, it became clear that the water vole habitat mitigation, previously located close to the Thames was – its location was at risk of tidal flooding. We're looking for a new location for this.

The Mardyke valley, with its wetland character, was the natural location for this new habitat creation. The new habitat also works well with the flood design, acting as floodplain compensation. Other watery aspects of the design – the project drainage ponds – were refined to minimise their land take and integrate them into the existing field pattern of the area. So these were the existing field boundaries, and so the ponds were split and put either side of the road to fit in with that. As noted, while this mitigation provided appropriate foreground setting for the viaducts, it's exposure in the landscape makes the design of those viaducts, and the preservation of views under and around it, particularly important. It was for this reason that the Mardyke and Orsett Fen viaducts were designated as Project Enhance. Okay. So that's part of the alignment choices. The M25 is item 6(b).

MR SMITH: Indeed.

- 25 MS DONNELLY: Go straight to that?
  - MR SMITH: Go straight to that and then, as I've indicated before, I'll move directly to the interested parties who wish to speak on all of the items, and then we'll, I think, move through them as efficiently as we can, given the time.
  - MR TAIT[?]: Yes, sir, and then a very concentrated answer to a sufficient design resolution. She touched upon that briefly, and Project Enhance structures. I'll come back to this.
- 32 MS DONNELLY: Apologies. I have skipped over –
- 33 MR TAIT[?]: Ms Donnelly, propose the M25 design.

MS DONNELLY: Okay. Alright then. So now we're looking at improvements around junction 29 of the M25. These works sit quite firmly in the Thames Chase Woodland character area of the work and we have pockets of ancient woodland in and around the junction. Also a note in this particular slide is the site through here, which is the site of the Brentwood Enterprise Park application at the moment. At statutory consultation, our proposals were shown like this and here you can see the free-flowing slips that were designed in and around the junction. That was particularly important for us, and an important consideration, because previously, though it could not have been considered safe, walkers, cyclists and horse riders have been coming across the junction on the south side and crossing these slip roads, in order to be able to take journeys east to west.

At supplementary consultation, as with our junctions at the A13 and the A2, we sought to try and refine the design and pull those slip roads in, tightening up the alignment and trying to reduce our impacts in these particular locations. I'll just flick in and around for these through there. I think an important point then – once we had identified this issue with the east/west movement, it became important to identify opportunities to remedy this severance. So that was made through the introduction of two footbridges. I'm afraid I'll have to zoom out because they're actually quite far-spaced[?] around – one in the east, at Brentwood Enterprise Park and one in the west. These have the benefit, combined with crossings on the northern side of the junction, of allowing people who are walking or cycling along the A127, who have been able to cross to the north side, pass through the crossings, come along here and then pass through the south side, improving the historic severance created by the A127 as well.

At the moment there is an at-grade crossing on the A127, which I've used, and it's a bit hairy. So I think this is particularly important improvement. I think there are some secondary benefits of providing this too. You'll notice on here, as part of our ancient woodland compensation measures, we are proposing to infill blocks of woodland up and down the Thames corridor, linking to the new community woodland being created. That whole farm is a combination of ancient woodland compensation and NDEP[?]. This bridge through here, connecting as it does up through Folkes Lane, improves access to those new areas of woodland from Thames Chase all the way up to the new woodland at

1 Hole Farm, via the other bridge, which is just off the north. That concludes my 2 main presentation. Moving to structures – 3 MR TAIT: So, Mr Roberts, very briefly on design resolution for the structures in the 4 various locations we've looked at. 5 MR SMITH: Yes. Just before we move on, Ms Laver had a question on that last 6 submission. 7 MS LAVER: Yeah, thank you. Jeanine Laver, Panel member, speaking. While we've 8 got that slide on and we've got the Brentwood Enterprise Park shown, their reps 9 have suggested that your footbridge impacts a potential bridge as part of their planning application. I'm wondering if, while we're here with this slide, I know 10 11 that you've put in a change request for a change to the limits of deviation for 12 that, and I don't want to talk about that specifically. I just want to understand 13 with this slide what the implications are for the planning application for their 14 proposal for a bridge. 15 MR ROBERTS: Steve Roberts, for the applicant. I'll try and summarise quite a 16 complicated picture in – 17 MR SMITH: Very brief – time. 18 MR ROBERTS: So we've had very good, active engagement with the landowner, the 19 developer, St Modwen, Brentwood Borough Council and Essex County Council, 20 and we continue that engagement. We've looked at the scenarios where the 21 Brentwood Enterprise Park is brought forward before Lower Thames Crossing 22 and what that might mean for amending our design to be compatible with theirs, 23 and equally, in the eventuality that Lower Thames Crossing goes ahead before 24 Brentwood Enterprise Park, or if one or other doesn't happen. So we're trying 25 to cover off all bases and ensure that the infrastructure provided is mutually 26 beneficial and not overlapping. 27 MS LAVER: I've got a follow-up on that. Your bridge proposal is for just walkers, 28 cyclists and horse riding – yes – but their proposal is for a traffic bridge. I recall 29 reading, possibly in the St Modwen submission, why would we have two bridges 30 here? Would we not just build one bridge that serve two purposes? I don't know 31 if it was in their representation that I read that, but I'm wondering if you could 32 just explain what the implication would be for two bridges across the A127. 33 MR ROBERTS: Steve Roberts, for the applicant. It's a question of timing on when

which comes first. So what the St Modwen development team are proposing is

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that if their application comes forward first, then they wish to construct a new vehicle access over the A127 into Brentwood Enterprise Park, and then they wish to repurpose the existing bridge that crosses the A127 at that location as a dedicated bridge for walkers, cyclists and equestrian users, and in that eventuality, the Lower Thames Crossing bridge proposal would not be required, and there's quite a detailed design principle which covers this. I'm just being handed a reference – design principle – S1422.

MS LAVER: Thank you, that's really helpful. That's what I thought would be the case. I realised there was a timing issue. Their representation did suggest that. Obviously, it's who comes first, but I wanted to understand if your bridge essentially fell away and you've just given me that answer, so thank you.

MR TAIT: So staying on now, Mr Roberts, you're going to deal with sufficiency of design resolution for the structures in general.

MR ROBERTS: Thank you, Mr Tait. Steve Roberts, for the applicant. So very quickly, reaching back to agenda items 4(c) part 2 and 5(c) part 2, which ask, 'Is there sufficient design resolution for the structures at the junctions?' Essentially, they were asking there. Our response to that question is essentially, yes. We believe there is sufficient design resolution. Let me explain why.

Firstly, the preliminary structures designs are set out in the various DCO application documents, but most notably the project design report, part F, which is application document 513, and the book of plans which cover the engineering drawings for the structures, which is application documents 043 and 044. So with regards to bridges generally, and I'm going to pass back from Ms Donnelly here in a second to talk about Project Enhance structures, but structures generally – the key technical parameters and constraints for each bridge were developed in accordance with the design manual for roads and bridges, and other relevant standards, to establish structural options and space-proofing requirements for each. These reports investigated different span arrangements, common forms of construction materials and options we'd[?] develop, which were reasonably conservative and use normal span to depth ratios and limitations on skew angles, etc, to give some tolerance for the detailed design development.

Deck widths for each bridge have also been extensively reviewed, with respect to design for both vehicles, non-motorised users, and in the case of green bridges, planting zones, and as a result we have included specific space-proofing

requirements within the design principles, which is application document 516. So overall, to summarise on general structures, the primary features of the preliminary design for each structure in its location, the scale and the massing, including headroom clearances, have been resolved to what we believe is an appropriate level of detail for this stage of design, but maintaining a degree of flexibility to allow final details on structural form, materials and appearance to be developed by the contractor teams, who themselves will bring industry, expertise, best practice, such as design for off-site manufacturer, low carbon innovations, etc, and their detail designs will be guided by the design principles.

Then turning, if I may, to the Project Enhance structures – so I'm going to quickly outline where we have what we consider to be Project Enhance structures, and then, Ms Donnelly will explain a bit more about what they are. So in the south, between the A2, the M2 junction and the southern tunnel portal, we have two Project Enhance structures. That is the Thong Lane green bridge over Lower Thames Crossing and the southern tunnel portal structure. Moving into the north, at the north tunnel portal on the A13, we have the north tunnel portal structure and the north portal access overbridge, and then we have also the Fen and Mardyke viaducts and finally the Thames Chase footbridge in the very northern most section of the route. I'll hand over now to Ms Donnelly to explain a little bit more about Project Enhance structures.

MR SMITH: Thank you very much, Ms Donnelly.

MS DONNELLY: Thank you. I think it's important to note, and when we're talking about Project Enhance structures, that it's not only the Project Enhance structures that we care about in terms of design quality. There are a number of design principles in the structure section of the design principles document that cover all structures. That includes bridges, retaining walls and then other structures along the alignment, such as STR01, which requires a landscape integrated approach to structures along the project route, STR07 requiring a consistent approach to bridge structures, and that includes a common materials pallet for all of them. STR09, which talks about the integration of noise barriers, and STR17 which looks to ensure that we don't have bolt-on utility structures on our bridges in the future – that that is all designed and consistent as part of the approach upfront.

It has to be said, though, in the development of our contextual proposals, we did identify certain bridges which we felt were particularly sensitive. Sorry – bridges and structures, because we do include the portals – and in the PDR part F, section 3.3, we note that these are at particularly sensitive locations or key thresholds along the project route, and that means essentially as you enter the A122 from the north and the south, when you're on the main alignment, having got past the junction – so we have designated therefore in the north Thames Chase a footbridge as the first Project Enhance structure you enter from the north, and Thong Lane north green bridge, as you enter from the south. The portals themselves are obviously very key thresholds in the project, marking that transition as you go into the tunnel and under the river, and associated with the north portal, the access bridge in such close proximity and the design and composition of the approach roads and ramps make it important that that one was also designated a Project Enhance structure.

I believe I also addressed the reasons why the Mardyke and Orsett Fen structures were designated as Project Enhance structures in our previous response. There are a number of different requirements for Project Enhance structures, that they have an even more consistent approach, that they feel like they're a part of an overall consistent design language for the project, as well as location-specific requirements. So, for example, structures 04, which is about the Mardyke and Orsett Fen viaducts. It talks about having a smooth, curved and haunched beam profiles, and that really is about making sure that you get views underneath the viaduct. So we're maximising those because, as I said previously, the main character of that area is those long views across the flat landscape to the higher ground beyond.

Similarly, Thames Chase – we wanted to have this idea that you would have the footbridge spanning between these two pockets of woodland, that being the overriding character, and therefore we have asked that there'd be no primary structures –

MR SMITH: I'll just interrupt very briefly. It has become a little distracting that there's a side conversation happening on the Thurrock benches, I'm afraid. If there's any means of enabling that to continue using electronic media, that would be massively appreciated because I think we do need to move through this material

quite swiftly, which includes hearing it accurately. So, apologies for interrupting, Ms Donnelly, but I will return to you now.

MS DONNELLY: I was very near the end. Just to make that point that we have a number of, as I say, completely structure-specific design principles for those Project Enhance structures, as well as the project-wide approach. They complement those. They're not singled out. It's not only those ones where we're going to want the quality of good design, and I think through this calibrated approach, the design that we've presented and the design will go forward should achieve the high quality we're expecting in the future. Thank you.

MR SMITH: Thank you very much. Now, I'll just check with my colleagues whether there are any other matters that they wish to pursue. Yes, Mr Pratt.

MR PRATT: Good afternoon. Ken Pratt, panel member. It's only a very quick question regarding the various presentations that you've made today, and I just want to check with regard to the drainage impact, the drainage channels and ponds that you've illustrated. Your intention is to have them natural looking, or – because many of them in today's presentations are looking very engineered.

MR SMITH: Natural form water channels then or –

MS DONNELLY: Sir, I will say, when we talked about design resolution at preliminary design, we haven't fully naturalised these ones, and we have put that in a design principle. I'd need to find the reference that we're asking and expecting the contractors to do more work on the naturalisation and the appearance of those ponds post DCO.

MR SMITH: Okay. We will consider it further. I'm now then going to seek contributions from interested parties and in the normal way we'll go to the local authorities first. Now, the scope of that material covered the entirety from Kent all the way up to the London Borough of Havering. Can I just see a quick show of hands from those who do want to participate? Now, we've clearly got Thurrock. We've clearly got Gravesham. What about Essex and Kent Counties? No. Yes. Sorry, Kent. We do have Kent County, and then we do have the London Borough of Havering. I have one more hand on the virtual room that I'm afraid I'm unable to see the name for. Could one of my case team colleagues assist me, please? We've got Mr Douglas and then we've got one more person, Susan Lindley. Okay. Right. Well, let's probably start in the south. So what I'm going to suggest we do is we go to Kent County Council, then to Gravesham.

Then I'll come to Thurrock and then we'll move on in that direction. So Kent County Council, please.

MR RATCLIFFE: Thank you, sir. Joseph Ratcliffe, Kent County Council. Is it possible just to put the slide back up for visual reference for each section as you go through? It'll just help. I'll be very brief. Obviously, over the years of design change, we've welcomed the moving of the tunnel portal further the south to protect the village of Chalk, but in doing that, does impact Thong greater. I think that might have been a slight error in the presentation. Green bridges, obviously, we welcome, but we have made some comments on our local impact report and written rep, reference rep 1 243 and 241, that we do not feel that they are adequate and will provide the level of ecological connectivity between different habitats. I note National Highway's response to us on that, which disagrees. That pretty much is the way things are going, isn't it? So I'll just bring up again, and any structures that form part of the local road network, which you require KCC to take on, will need to be funded through commuted sums, as would be the expectation the other way round. I'll leave it there in the interest of time. Thank you.

MR SMITH: Thank you very much. So I'll move to Mr Bedford, please, and Gravesham Burrough Council.

MR BEDFORD: Thank you, sir. Michael Bedford, Gravesham Borough Council. So can I just first of all clarify a small point of detail on the way that the agenda is set out? I had read item 6A, first bullet point, as not limiting itself only to, as it were, the north/south corridor between the A2 and the southern portal at Thong, but also including the east/west of the A2/M2.

MR SMITH: Absolutely, and I mean, clearly the focus of the applicant is taken and in the interests of proceeding reasonably swiftly in time terms, we've accepted so far there's a focus on the new, but if you do have a relevant point that you want to raise on the existing east/west, A2/M2 corridor, then –

MR BEDFORD: Well, absolutely. Albeit that the route, as it were, utilises an existing transport corridor, the nature of the works in that route obviously significantly changes the character of the area, and you will appreciate there is an AONB and aspect to that, as well as there is a green belt aspect, as well as there is a landscape and cultural heritage aspect – all of that – because all of those changes impact on those other areas of the environment. So dealing with the points and

trying to keep them as headline as I can, we had understood that the focus of your question, routing directly as you've sourced it in paragraph 4.31 of the National Network's MPS, was really looking at – and since both sides of the equation – in order to understand whether this represents good design in terms of the applicant's proposal, both sides of the equation being obviously, to what extent does it adequately address the identified problems by improving operational conditions? I wasn't going to say anything significant about that this afternoon because that's really more a matter for tomorrow.

You're aware, obviously we have concerns about that, but putting that, as it were, just down as a marker, the more important issue for this afternoon is, to what extent has the applicant's approach minimised the adverse impacts which its proposals will result in, and that's across all environmental disciplines, in order for it to represent good design? In other words, has the applicant done as much as it can, properly and realistically, in the context of the constraints – and it's there that we see that we don't answer the question in the way the applicant would. We don't think that what is currently before you represents good design.

We set out in the Gravesham local impact report our key concerns on landscape impacts, including the AONB and its setting, cultural heritage impacts, impacts on the openness of the green belt and also the particular details, in terms of structures, the treatment of the green bridges. I don't obviously rehearse all of that, but I draw your attention to those points and so we're not persuaded that the design takes a holistic approach across those environmental disciplines, and so we don't consider that, in this corridor – that's the A2/M2 and up to the southern tunnel portal at Thong – we don't consider that represents good design as sought by para 431 of the MPS. We don't think there is sufficient consideration of the adverse impacts or proper amelioration mitigation of them.

There's also then a related point, but because it's a different point I'll just identify it specifically. It concerns also an environmental impact, but it's a community impact. It's the impact on the two traveller sites. That's the two traveller sites within Gravesham, on the south side of the A226, in the vicinity of obviously the southern portal, horse show meadow and viewpoint and effectively, we describe and discuss the issues of those at paragraphs 13.46 to 13.48 of the local impact report, and effectively the applicant's proposal is to offer no mitigation in relation to the impacts of constructing the project on those

two sites, and we consider that is an area where clearly there is a failure of mitigation. So that's a specific point and because it was very localised to that, I thought I'd draw it out as a particular point. So those therefore are our principal submissions on this agenda item.

MR SMITH: Okay. Thank you very much, Mr Bedford. Now, noting that I would normally then move directly to the principal local authorities north of the river, however, we do have Shorne Parish Council Councillor Lindley, and I think before we leave Kent, it's sensible to hear Councillor Lindley certainly. Councillor Lindley.

MS LINDLEY: Thank you very much, sir. Good afternoon. Obviously, we support the comments that were just made by Gravesham about the poor ambience of the A2/M2 corridor. Regarding the landscaping between the Lower Thames Crossing, junction two and the portal, which is what you can see on your screens presently, we were quite happy with the original wooded design, and a bit puzzled when it suddenly changed to the open design that you can see there. Although it was said something about there being wooded hilltop on both sides of the LTC line and we can't see that there was one on the west, so we're not quite sure what was meant about that.

But our main point really is that we feel that the design should be primarily aimed at protecting the residents locally and providing high ambience with the new footpaths which, given them that they're along the sides of the chasm, aren't going to be necessarily very pleasant. So I'm not convinced that an open vista is in the best interests of the local residents and the future ambience of the area. So that's all we wanted to say really. Thank you.

MR SMITH: Thank you very much. In which case, we will pass through the proposed tunnel and come then to Thurrock.

- MR STRATFORD: Thank you, sir. Chris Stratford, for Thurrock Council. Also in the interest of time well, firstly, apologies for the conflab going on. It was sometimes not possible to do it electronically in preparation.
- MR SMITH: I do appreciate it's hard, but it just had reached a point where colleagues were remarking on it and it was becoming distracting, so I think –
- MR STRATFORD: Okay. Two small points then. Firstly, I take Clare's point about Project Enhance structures not being the only game in town and the fact that there are other concerns, but we have raised the point, probably over two or three

years now, that the Tilbury viaduct, which is quite a large structure and it is quite visible over the top of the Tilbury Loop line, it's near future areas of housing and a number of other impacted areas. Not least of which is one of the scheduled monuments, and yet it is not a Project Enhance structure. We have asked and each time it's been refused, and perhaps you could ask.

The second point, which we can come to in more detail in our written representation is that we're not entirely certain which of the two levels of guidance might be taking primacy in respect of the WCHs – the walker, cyclist and horse-riding routes. Is it DMRB[?], or is it – we think it should be – [BLTN 120?], which is certainly more current? It's more specific and it's run by Active Travel England. It'd be interesting to understand whether they have in fact had any independent design review of the routes and the diversions. It's something we can come to in more detail. We have actually put some information in our LIR – Appendix C, annex two, sub-annex 2.5 – about the 13 bridge crossings in Thurrock, and we have reached a measure of agreement with the applicant, but on a number of occasions we have not, in respect of two routes for buses and a number of widenings of bridges in respect to provision for pedestrians and cyclists, and that's been mentioned many times today anyway – the lack of clear provision. We'll cover it. I just wanted to pick it up now. That was it. Thank you.

MR SMITH: Thank you very much. Now, anything further from Thurrock before I proceed further to the north and the London Borough of Havering? I believe we have Mr Douglas.

MR DOUGLAS: Good afternoon, sir. Daniel Douglas London Borough of Havering. Before I go through a few points that's I'd like to raise, I just wanted to support Mr Ratcliffe's comment from Kent, regarding commuted sums for assets that local highway authorities are being asked to take over. We have a similar situation in Havering, where the applicant's asking Havering to pick up responsibility for a section of footpath 252, as it goes over the Essex Thames-side line, and the Council just isn't in a position financially to do that.

We've now reached a bit of an impasse with the applicant on that particular matter. We've gone into further detail on why we're not in a position to do that in our submission – rep 3186 – where we go into some detail as to how Havering, as a London borough, is at quite a disadvantage compared to local authorities

outside of London around highway maintenance funding arrangements. The other points I just wanted to pick up on from Mr Stratford from Thurrock, concerning design standards for foot and cycling bridges. We share the view that the NMU bridges that are proposed should be designed to LTN 120 design standards, and that's certainly the standard that Havering as a local highway authority are expecting to develop its own structures too. So we would expect certainly any structures within our borough to be designed to that standard.

The other points I'd just like to pick up on – the new non-motorised user bridge that the applicant's proposing to the west of the M25, junction 29. So that's the bridge that will be a pedestrian cycling and horse-riding bridge, that'll go over the A127 and connect Folkes Lane with Moor Lane in the borough of Havering, just the left of that junction, as you can see on that slide. As a new non-motorised user connection, it's something that we support and we've said so in our previous submissions. The issue that we have got, that I briefly touched upon in the earlier item, is around accessibility to and from it. As it currently stands, non-motorised users are going to have to use Folkes Lane to access Folkes Lane woodland to the north on that slide, and ultimately across to the new community Forest in the borough of Brentwood at Hole Farm.

Havering's firmly of the view that that road isn't suitable for a significant increase in non-motorised users. It's a road that currently suffers from issues around speeding. There are lots of businesses down the road with large vehicles and for some time now we've been in discussion with the applicant around whether a suitable alternative non-motorised user route can be provided. That will take NMU users off that road on a separate path to access Folkes Lane woodland, to the east of where the businesses are. Those discussions are ongoing.

I think the point I really want to make about that particular matter is, Havering certainly feels that any new NMU route should be secured as part of the project, rather than outside of the LTC process. At the moment, the applicant's position is that any new non-motorised user route that's created will be secured through their designated funds pots. Havering doesn't view that that is acceptable, one main reason being there's a lot of uncertainty at the moment as to whether designated funds are going to be in existence post-March 2025 in

order to give Havering the surety that it needs, that that route will be put in place. We feel it's really important for it to be secured through the actual project.

The other reason why we're pushing for that route to be secured through the project is because that footbridge that's being created, we would suggest that the Panel, is being created as a mitigation measure. The applicant's already gone into some detail to explain the severance issues that the changes to the southern section of the junction 29 are going to create, which has meant that they've had to put forward new links for non-motorised users to the northern section of junction 29. The footbridge is going to be put in place to provide users with access to those new facilities, so we feel that access to that footbridge should be part of that wider mitigation proposal.

The other point I'd finally like to make is in relation to the footbridge that links Folkes Lane woodland with the community woodlands that's going to be produced in Hole Farm. At the moment, that footbridge isn't suitable for non-motorised [inaudible]. Again, we have been working with the applicant to secure improvements to that footbridge and I know the applicant is working on proposals to improve the parapets at that bridge and we'll obviously continue to work with the applicant to hopefully secure the improvements that we need at that site. Thank you.

MR SMITH: Thank you very much. Now, is there anybody else who we haven't yet heard from representing a local authority? Yes, I'm coming to the non-statutory parties in a second, Ms Blake. I was sure that you would probably wish to speak for TCAG, but before I leave the local authorities and the statutory parties, I thought I would check. So Essex County Council, please.

MR MACDONNELL: Gary MacDonnell, on behalf of Essex County Council. Just very briefly, LTN 120 – we would support the view expressed by Thurrock and by Havering in terms of the design standard should be LTN 120, and certainly what we are designing to within Essex, and that would be our expectation.

MR SMITH: Thank you very much. Now, moving on briefly with statutory parties, any port authority, etc, who wishes further to speak? I do see Matthew Rheinberg of Transport for London. So just to finish on our statutory parties, could I have Transport for London, please? Mr Rheinberg.

MR RHEINBERG: Thank you. Yes, Matthew Rheinberg, Transport for London. I'll be fairly brief because some of what I would have said has already been covered

by others. Just starting off on junction 29 of the M25 – just to note that there is some further work that is proposed there as part of the project that wasn't mentioned, but things like widening the circulatory carriageway and fully signalising that junction. The point I really wanted to make was just that, as others have commented, that work really needs to be coordinated with the proposals for Brentwood Enterprise Park, who also would require amendments to that junction. We're regarding the changes to the walking and cycling routes around there. TfL supports that move to the northern route round the junction and the walking, cycling and horse-riding bridge that is proposed to the west of M25, junction 29. We understand the need for that, given the direct route between the northbound M25 and LTC, and the westbound A127 and the level of extra traffic on the A127 that the scheme generates.

Regarding the design resolution though, with particular reference to that bridge, that has given us some reasonably significant concerns. We had been hoping we'd be able to get some more development of the design, but we understand the applicant's position, but that won't happen until the contractor develops that further at the detailed design stage. The issue we have with that is that it makes it really difficult for us to understand the maintenance requirements for a structure that we, as the local highway authority there, are being asked to maintain. So from our understanding, the structures plans show that it's illustrative only. We understand, as was mentioned by the applicant, that the structural form, the materials used could change and that can have a fundamental impact on how you maintain that structure, which in turn can impact on the amount of land required around that structure to maintain it, and it is very tight the DCO red line boundary around that structure in at least a couple of places. So that is a concern that we have certainly raised as part of our written representation.

Overall, I should say, we are reasonably satisfied that local highway authorities will be consulted on the design of structure, as part of requirement three for the DCO, but we do consider that protected provisions for local highway authorities, such as Transport London, are needed to ensure that we can be fully comfortable with the process that we go through and what we'll be asked to adopt in the future. That does include the need for a commuted sum, as has been mentioned by other parties. So one thing I thought that I might like to

suggest to the Panel is whether the need for protected provisions for local highway authorities could be something to cover at issue-specific hearing 7, I think, on Monday.

MR SMITH: That is a noted point, Mr Rheinberg. I will review – the agenda for that has been deliberately drafted in a loose fashion to enable matters raising from these hearings to be slotted in and it seems like it would be a sensible matter to slot in. Thank you very much.

MR RHEINBERG: Thank you.

MR SMITH: I do, I think, see a wish to respond on that point by the applicant, Mr Tate.

MR TATE: Sir, I wasn't going to respond on all matters. If I could respond on LTN 1/20, because that was a specific point raised –

MR SMITH: Indeed. Well, no, just before you do – if these are remarks in general response, we haven't quite finished the floor and I definitely – Ms Blake has been sitting there for a very long time patiently. Just before, Ms Blake, I ask you to take the floor, can I just check, so that we know the scope of this? Is there anybody else from the interested body party? I see Ms Thakkar[?] and I do see Mr Beard. Yes, sorry, apologies, Mr Beard. So Ms Blake, Ms Thakkar, Mr Beard and then I will come to the applicant, who can respond globally and then finish.

MS LAURA BLAKE: Thank you very much, sir. Laura Blake, chair of Thames Crossing Action Group – and, yes, you are right. I always have a say on something. Just to cover on these points as quickly as I can – I know there will be a lot of overlap as well on Friday's hearing on environmental matters and mitigation. Just to mention, in the presentation from National Highways on the Ockendon link saying about the wetness of the lands across there, there are concerns over the fog and the winds as well, with it being low lying and open across there, and what impact that might have on the route with the weather impacts.

And also, the mention of the water vowel habitat – when we know from research that we've done into other local planning applications that there are mink in that area, which for those that don't know are one of the main predators of water vowels – protected species – so we have concerns on that.

I notice that, obviously with the interests of time, a few slides were skipped over. I notice the wilderness was in there. I'd just like to comment on that little section there and say about the fact that North Ockendon is an area of

conservation and obviously that will be greatly impacted if the road goes ahead. And with the wilderness, it is our belief that National Highways are trying to avoid going through the landfill, which would be very expensive and time consuming – instead going through the wilderness. But as I say, I know that will come up on Friday as one of the items on the agenda.

Regarding the cutting, the level of the cutting by North Road to the north of the route – we know that that has been raised. We believe that is to reduce carbon emissions, but we are also aware that in south of the river in Shorne Country Park the cutting is actually made deeper for the protection of the trees to better reduce the impact of pollution on the trees. So we would question why it's being raised near to a residential area and close to homes.

And also, with regard to North Road, when the work is being carried out there and there are road closures along that section, we would just highlight that the diversion would actually push traffic into the ULEZ zone now. So that is something else that we wonder if it has been considered, because obviously those users would have to go through and pay ULEZ zone. So I'll keep it to that for now and pass over to Ms Thakkar, if you'd like. Thank you.

MR SMITH: Thank you very much. Ms Thakkar –

MS THAKKAR: Just quickly, bearing on something that Laura's just said, have you – can you tell me what measures have been taken in your design with the viaduct over the Mardyke with the exceedingly high wind velocity we get there? Yeah, it's on a regular basis. It isn't just occasionally. The winds whip across there very often and also the marsh fogs. And that's it from me. Thank you.

MR SMITH: And then finally Mr Beard –

MR BEARD: Robin Beard, local resident. Can I request that the image of the viaduct across the Orsett Fen from the supplemental consultation is put up on screen, please? We heard the applicant talking about how they tried to mitigate the impact of the road by disguising or trying to preserve the long-distance views, like through the legs of the viaduct, but all of that would be unnecessary if the road were to take a slightly different route. If you look at the field at the top of the image there – the one that the viaduct just clips the corner of – that field is several metres higher than the surrounding land. You can't tell just by looking, but if you check a topographical map, it is.

They were saying that they were using a landscape-led approach to building the road, but mother nature has given us a readymade embankment right there and the LTC is not using it. Instead, it's going straight across the middle of the Orsett Fen and that obviously requires embankments and viaducts that would not be necessary otherwise. Thank you.

MR SMITH: Thank you very much. That I believe brings us to the end of our requests to speak on these items, so it is now the applicant's turn to respond, again, running to matters of detail in writing please, so the highlight matters in oral response please, Mr Tate.

MR TATE: Just two points, thank you, sir – the first – LTN 1/20 was mentioned by a number of contributors and the WCH routes are required to be designed in accordance with LTN 1/20, pursuant to the design principles set out in table 4.1PO.04. But secondly, Mr Henderson is able to respond to the matter raised by TfL about protected provisions for local highway authorities.

MR HENDERSON: Thank you. Tom Henderson for the applicant. I just wanted to respond briefly on the comments that were made about the protected provisions. The applicant has had regard to comments from a number of local highway authorities about this and we will be advancing for deadline for the applicant's preferred set of proposed protected provisions for the drafting of a consent order. So I just wanted to signal that, really to say that we're content for that to be added to the agenda for issue-specific hearing seven, when we can elaborate on what's proposed.

MR SMITH: Thank you very much, Mr Henderson. Okay. We've taken a note, so we'll make sure that does come forward, albeit briefly, in issue-specific hearing number seven. So that brings us to the end of agenda item six. As I indicated earlier on in the afternoon when our delivery was disrupted by digital issues, we are holding over agenda item seven to a later hearing to be held in either October or November or more likely a subcomponent of one, because it will not be a full hearing in of itself, which then takes me on to agenda item eight, where simply I will refer to the fact that we have at least 10 actions that have emerged that have been kept through notes by my colleagues as we've moved through the day.

We will be publishing an action list in what I hope now is understood as the normal manner, because we have done so with our previous issue-specific

1 hearings, and we will try to have that publication done swiftly as we may, but 2 given that we're in quite a busy week, it may be two or three days before 3 publication actually occurs. I'm not going to work through that action list in 4 detail now. 5 So it then remains only to say that this has been issue-specific hearing 6 number 3 and we have, subject to the caveat that I have reserved on agenda item 7 number 7, completed all of the business in this agenda. Is there anything else 8 that anybody needs to raise relevant to this agenda, in which case hands up now? 9 Alternatively then, it seems that we will close this hearing. I'll remind you that 10 we'll be back in this room, both virtually online and physically, at 10.00 a.m. 11 tomorrow for issue-specific hearing number 4 – traffic and transportation – that 12 my colleague, Mr Young will be leading. And until then, ladies and gentlemen, 13 let me wish you all a good evening and, for those of you that we will be seeing

That's goodbye from me.

16 MS LAVER: Goodbye from me.

MR YOUNG: Goodbye from me.

18 MR TAYLOR: Goodbye from me.

19 MR PRATT: Goodbye, everybody.

20 MR SMITH: Thank you very much. The hearing is now closed.

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(Meeting concluded)

tomorrow, I look forward to seeing you tomorrow, as indeed do my colleagues.